

United States Department of the Interior
National Park Service**National Register of Historic Places Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of PropertyHistoric name: Mauna Kea Traditional Cultural Property and District (preferred)Other names/site number: Mauna KeaName of related multiple property listing: N/A

(Enter "N/A" if property is not part of a multiple property listing)

2. LocationStreet & number: N/A; Mauna KeaCity or town: N/A State: HI County: Hawai'iNot For Publication: ☐ Vicinity: ☐**3. State/Federal Agency Certification**

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this ___ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property ___ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___national ___statewide ___local

Applicable National Register Criteria:

___A ___B ___C ___D

Signature of certifying official/Title:**Date**_____
State or Federal agency/bureau or Tribal Government

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In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official:

Date

Title :

State or Federal agency/bureau
or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

___ entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

Signature of the Keeper

Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

Private:

☒

Public – Local

☐

Public – State

☒

Public – Federal

☐

Category of Property

(Check only **one** box.)

Building(s)

☐

District

☒☐

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Site

Structure

☐

Object

☐

Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing

Noncontributing

buildings

sites

structures

objects

Total

The living temple that is Mauna Kea is comprised of dynamic, living, intertwined cultural landscapes, seascapes, and skylines whose boundless and unbroken whole constitutes its significance, integrity and qualifications as a Traditional Cultural Property (TCP) and district. The summit region and adjoining boundless cultural landscape have an integral relationship to traditional Hawaiian cultural practices and beliefs, a connection that persists through the continued living cultural practices and beliefs of contemporary Kānaka 'Ōiwi (Native Hawaiians). The tangible and intangible resources that contribute to the significance and integrity of Mauna Kea as a TCP and district are critical to the history and evolution of Kānaka 'Ōiwi culture and people; the connection between Kānaka 'Ōiwi and the mountain cannot be severed because it is first and foremost a genealogical one - to deny this relationship is to deny the ancestry of a lāhui (nation). It is culturally inappropriate and anathema to Hawaiian spirituality, culture, traditions, and practices - as well as literally impossible and scientifically inaccurate - to divide, parse, or quantify the infinite tangible and intangible components of this supremely sacred space (see Ching 2016:1; Pisciotta 2016:2; The Kali'uokapa'akai Collective 2021:5). The intertwined, contiguous tangible and intangible features of Mauna Kea include **but are not limited to:**

- intentionally secretly-interred iwi kūpuna (Hawaiian ancestral remains) and moepū (associated funerary objects), sacred objects, and koehana (objects of cultural patrimony),
- wahi kūpuna such as ahu (shrines), heiau (places of worship), locations used for celestial observation and navigation,
- other wahi pana (storied places),
- view planes,
- all manifestations of wai (fresh water),

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- all other weather and environmental phenomena associated with Mauna Kea, and its wao (inland regions), inclusive of flora and fauna unique to Hawai'i, including some unique to Mauna Kea
- the mana (divine power) of the iwi kūpuna secretly interred there and the sacred nature of their moe loa (eternal rest)
- Mauna Kea's role, relationship, and significance to Kānaka 'Ōiwi creation, genealogies, and both traditional and living Hawaiian cultural practices and beliefs.

Given these realities, the tangible and intangible Hawaiian cultural heritage in the summit region and adjoining boundless cultural landscape that compromise Mauna Kea are non-quantifiable.

Number of contributing resources previously listed in the National Register

1 - "Mauna Kea Adze Quarry" (National Register Site 66000285; State Inventory of Historic Places # 50-10-23-04136)

Importantly, McCoy and Nees (2013:i, 3-27) note the SHPD designated Pu'u Līlinoe, Lake Waiau, and Kūkahau'ula TCPs in 1999; however, attempts to secure records confirming these designations and attempts with the SHPD in June 2023 were unsuccessful. Tom King, co-author of *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties*, the NPS guidance on TCPs (Parker and King 1998), issued testimony during a contested case hearing supporting the designation of Mauna Kea as a TCP (King 2003: 6,7).

6. Function or Use

Historic Functions

(Enter categories from instructions.)

Domestic - single dwelling, multiple dwelling, secondary structure, temporary and permanent Hawaiian habitation places, especially in the wao kānaka (*inland region where people reside*)

Trade - basalt sourcing and adze manufacturing locations; sourcing of 'āina mauna resources such as but not limited to numerous wood and plant species, manu (*birds*), feathers

Education - space for the generation and transference of ancestral knowledge through the perpetuation of living Hawaiian cultural practices and beliefs

Religion - ceremonial site; sacred umbilical cord of the land; wao akua (*mountain region inhabited solely by the gods*); revered ancestor of all Hawaiians; space for Hawaiian cultural astronomical observation, navigation; ritual and ceremonial space; shrines and heiau (*temples*); burial places; sacred bridge to the ancestral realm

Funerary - cemetery, burial mounds, graves

Culture - a special ancestral space and place where Kānaka 'Ōiwi maintain relationships to the past and foster their identity and well-being in the present; a sacred, contiguous, and boundless spiritual, cultural, and ecological storied landscape comprised of tangible and intangible Hawaiian cultural heritage inclusive of all weather and environmental phenomena; associated with famed individuals such as but not limited to Wākea (*Sky Father*), Papahānaumoku (*literally, the firmament or wide place who gives birth to islands*), Ho'ohōkūkalani (*Creator of the stars*), Mo'oinanea, Poli'ahu (*snow*), Lilinoe (*mists*), Waiau

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(lake atop Mauna Kea), Kalauakolea (fog drip), Kāne, Līloa, 'Umi, Lilinoe, Kūkahau'ula, Kamehameha I, Kamehameha III, Queen Emma; Hawaiian traditional cultural property that exists as a physical anchor for the retention, transmittal, and performance of Hawaiian cultural beliefs and practices

Subsistence - space for foraging, gathering, and harvesting of various natural resources

Transportation - interlaced with a network of traditional trails and roads

Current Functions

(Enter categories from instructions.)

As a Hawaiian traditional cultural property and district comprised of tangible and intangible cultural resources, and as detailed in the nomination text, all the above historic functions are aspects of living Hawaiian cultural practices and beliefs that persist through the present and into the future.

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7. Description

Architectural Classification

(Enter categories from instructions.)

Other: Mauna Kea Traditional Cultural Property and District

Materials: (enter categories from instructions.)

Principal exterior materials of the property: N/A

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

Standing at over 10,210 meters (approximately 33,500 feet) when measured from its base in the ocean depths to its peak, the summit of Mauna Kea on the island of Hawai'i is revered as the piko kaulana o ka 'āina - *sacred umbilical cord of the land* that connects the land and Native Hawaiians to the progenitor gods, Papahānaumoku and Wākea (Edith Kanaka'ole Foundation in Ho'akea, LLC 2009:i; Maly and Maly 2005:7,8; Abad 2016:11; Flores 2016:18, 20; NOAA 2023; Figure 1 and Figure 2).

The mountain is most commonly known by the name Mauna Kea, however, there are a number of variations of its name including Maunakea, Mauna a Wākea, and Mauna a Kea (Poepoe 1906:1; Kanahale 2019:1; Fujikane 2019:25; Abad 2016:10; Flores 2016:18; Rios 2016:1; Maly and Maly 2005:v,8; Pukui and Korn 1973:17). Kanaka 'Ōiwi scholar, cultural expert, and author Mary Kawena Pukui lists the mountain as "Mauna Kea" whose literal translation is "white mountain" (Pukui et al. 1974:148). Kanaka 'Ōiwi scholar and Hawaiian language and studies professor Larry Kimura explains in his 2008 article in the Office of Hawaiian Affairs newspaper *Ka Wai Ola* the reasoning for spelling Maunakea as one word:

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Hawaiian names, both personal and place names, are usually made up of several root words combined together to represent the person or place. Hawaiian tradition is to write these words together as a single word, for example, Kamehameha not Ka Mehameha, Kalākaua not Ka Lā Kaua, Waikīkī not Wai Kīkī, Keauhou not Ke Au Hou. The Hawaiian tradition is different from the English one, as in English the parts of a place name are sometimes written separately, e.g., Mount Vernon, New York, Red River Valley. It is also common in English to write "native" names as separate words: Sitting Bull, Crazy Horse. Red Cloud.

The Hawaiian tradition is based in the Hawaiian grammar of the oral language that marks separate words differently from names. In the case of the two mountains on Hawai'i Island that scientists from outside Hawai'i have come to dominate, Maunakea and Maunaloa, American English spelling traditions have been imposed on earlier Hawaiian spelling traditions. The earlier Hawaiian spelling traditions can be seen in places with the same name where American scientists have not had much of an influence, e.g., Maunaloa on Moloka'i, Maunakea Street in Honolulu, and the Maunakea family name. Older Hawaiian writings also include examples of Maunakea and Maunaloa written as one word when referring to the mountains on Hawai'i. [Kimura 2008:16]

In addition to Mauna Kea and Maunakea, another important name for the mountain is Mauna a Wākea, which many Kānaka 'Ōiwi use to refer to the mountain (Kanahele 2019:1; Fujikane 2019:25; Flores 2016:18; Rios 2016:1). Kanaka 'Ōiwi professor, consultant, cultural practitioner and expert Kalani Flores explains the origins of the name Mauna a Wākea:

Mauna a Wākea is the *inoa* (name) reverberated by the ancestral guardians connected to this sacred mountain. In English, it literally means, "Mountain of Wākea." It's within this name that unfolds the understanding of the significance of this mountain. Wākea (Sky Father) is personified in the atmosphere and heavenly realm that envelops Papahānaumoku (Mother Earth). As such, this mountain, unlike any other in the Pacific, pierces above the clouds into the realm of Wākea. [Flores 2016:18]

Mauna Kea. Mauna a Wākea. Maunakea. Each *inoa* 'āina (*place name*) is rooted in intentionality and ancestral knowledge because each describes the critically significant mountain revered by Kānaka 'Ōiwi - ka piko kaulana o ka 'āina. For the purposes of this nomination, the name Mauna Kea will be used. It is important to note the other variation of names not only to better understand the importance of Mauna Kea but also to acknowledge the valid use of those names in any direct quotes used in this nomination.

The entirety of Mauna Kea, inclusive of its summit and adjoining cultural landscape, is critically important to Kānaka 'Ōiwi. As Native Hawaiian organizations the Royal Order of Kamehameha I and Mauna Kea Anaina Hou (2000:4) state in their report on restoring balance to Mauna Kea:

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“Mauna Kea in every respect represents the zenith of the Native Hawaiian people’s ancestral ties to Creation itself.” As the first descendant of progenitor gods Wākea (Sky Father) and Papa (Earth Mother), Kānaka ‘Ōiwi descend from ‘āina (Keaulumoku 1978:78). Mauna Kea continues to shape Hawaiian lifeways and informs Kānaka ‘Ōiwi behavior and interactions with ‘āina at large, specifically, as a sacred landscape (Pisciotta et al. 2016:3,4; Kanaka‘ole et al. 2021:43). Mauna Kea is also a wahi kūpuna - a special ancestral space and place where Kānaka ‘Ōiwi maintain relationships to the past and foster their identity and well-being in the present (The Kali‘uokapa‘akai Collective 2021:4). As cultural anchors to place, ancestral knowledge, and practices, wahi kūpuna are strikingly similar to traditional cultural properties (TCPs) defined by the National Park Service (NPS) as places associated with the cultural practices or beliefs of a living community that are both rooted in a community’s history and important in maintaining its continued cultural identity (Parker and King 1998:1).

Tangible significant cultural features of Mauna Kea include **but are not limited to** intentionally secretly-interred iwi kūpuna (*Hawaiian ancestral remains*) and moepū (*associated funerary objects*), sacred objects, and koehana (*objects of cultural patrimony*), wahi kūpuna such as ahu (*shrines*), heiau (*places of worship*), locations used for celestial observation and navigation, other wahi pana (*storied places*), as well as view planes, all manifestations of wai (*fresh water*), all other weather and environmental phenomena associated with Mauna Kea, and its wao (*inland regions*). Previously-recognized tangible (and arbitrarily, artificially bounded) components of the Mauna Kea TCP contiguous district recognized in this nomination include the following wahi kūpuna: Keanakāko‘i Adze Quarry (National Register Site 66000285; (State Inventory of Historic Places [SIHP] # 50-10-23-04136), Pu‘u Waiau SIHP# -21440), Pu‘u Kūkahau‘ula (SIHP# -21440), and Pu‘u Līlīnoe (SIHP# -21439). Intangible significant cultural features of the TCP of Mauna Kea include **but are not limited to** the mana (*divine power*) of the iwi kūpuna secretly interred there and the sacred nature of their moe loa (*eternal rest*) its role, relationship, and significance to Kānaka ‘Ōiwi creation, genealogies, and both traditional and living Hawaiian cultural practices and beliefs.

This nomination of Mauna Kea to the Hawai‘i Register of Historic Places (HRHP) and National Register of Historic Places (NRHP) as a Hawaiian historic property (HRHP only), TCP and district (HRHP and NRHP) aligns both with national precedence for the NRHP listing of sacred mountains and their associated cultural landscapes as historic properties and TCPs, as well as state-level official recognition of Mauna Kea as an HRHP and NRHP-eligible TCP. Patricia Parker, co-author of the National Park Services’ (NPS) guidance on TCPs – the *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties* – noted in an NPS guidance publication on TCPs in 1993:

The authority to protect properties important to maintaining community traditions is not new...Mount Tonaachaw in Micronesia was listed on the National Register in the early 1970s. It is the location where Chuukese society took form, whose top is the metaphorical head of a giant octopus with tentacles that link hundreds of islands into the empire of the warrior-god Sowukachaw. The mountain as a whole,

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as well as specific locations upon it, are physical manifestations of events recorded in traditional narratives still used in ceremonial occasions in Chuuk today. [Parker 1993:3]

Previous sacred mountains and their associated cultural landscapes that secured NRHP listing as TCPs specifically include the Kuchamaa (Tecate Peak) NRHP Nomination (Reference Number 92001268; Unknown Author 1992), the Spirit Mountain Traditional Cultural Property (Reference Number 99001083; Unknown Author 1999), and the pending San Francisco Peaks nomination (Bureau of Land Management n.d.). Previous official State of Hawai‘i recognitions of Mauna Kea and components of Mauna Kea as a TCP were issued by the State Historic Preservation Division (SHPD), and more notably by Tom King, co-author of the *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties* (Parker and King 1998). SHPD staff in the late 1990s under Dr. Ross Cordy, a former Branch Chief of Archaeology, understood the summit of Mauna Kea was eligible for HRHP and NRHP listing and was pursuing a nomination at the time, led by Dr. Holly McEldowney (personal communication, Dr. Ross Cordy). The Keanakāko‘i Adze Quarry was listed on the NRHP (National Register Site 66000285) in 1962; McCoy and Nees (2013:i, 3-27) note that the SHPD designated Pu‘u Līlinoe, Lake Waiau, and Kūkahau‘ula TCPs in 1999; attempts to secure records confirming these TCP designations with the SHPD in June 2023 by Huliuaapa‘a staff were unsuccessful. In 1999, the SHPD deemed the summit region of Mauna Kea “eligible for inclusion in the National Register as an historic district because it encompasses a sufficient concentration of historic properties (i.e. shrines, burials and culturally significant landscape features) that are historically, culturally, and visually linked within the context of their setting and environment,” (Hibbard 1999:5; PHRI 1999). King issued testimony during a contested case hearing supporting the designation of Mauna Kea as a TCP (King 2003: 6,7). The 2009 *Mauna Kea Comprehensive Management Plan* noted that the Mauna Kea Summit Region Historic District is eligible for inclusion on the NRHP (Ho‘akea, LLC 2009:5-23). Lastly and most recently, during the March 18, 2023, meeting of the Hawai‘i Historic Places Review Board (HPRB), HPRB Vice Chair William Chapman stated that in his mind, the nomination of Mauna Kea as a TCP is “textbook,” further elaborating that “if you look at Tom King’s stuff early on, this is exactly what he was talking about.” Administrator of the SHPD Dr. Alan Downer replied to Chapman’s statement: “I certainly agree...” (HPRB 2023). The State Inventory of Historic Places (SIHP) maintained by the SHPD recognizes as significant historic properties the following wahi kūpuna that are components of this HRHP and NRHP Nomination for Mauna Kea as a historic property, TCP, and District: Keanakāko‘i Adze Quarry (National Register Site 66000285; (State Inventory of Historic Places [SIHP] # 50-10-23-04136), Pu‘u Waiau SIHP# -21440), Pu‘u Kūkahau‘ula (SIHP# -21440), and Pu‘u Līlinoe (SIHP# -21439). At the time of research for this nomination, listing dates for all the pu‘u were unavailable from the SHPD.

Regarding integrity, Parker and King (1998:10) write “...there are two fundamental questions to ask about integrity. First, does the property have an integral relationship to traditional cultural practices or beliefs; and second, is the condition of the property such that the relevant relationships survive?” **Kānaka ‘Ōiwi perspectives on Mauna Kea attest to its continuing traditional**

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cultural importance and therefore its historic integrity. Mai ka wā kahiko (*from the ancient times*) through the present and for future generations of Kānaka ‘Ōiwi, Mauna Kea as a living temple and wahi kūpuna remains a cultural anchor to place, ancestral knowledge, practice, and identity. Kānaka ‘Ōiwi continue to engage in ancestral practices on Mauna Kea such as depositing piko (*umbilical cord*), visiting iwi kūpuna (*ancestral remains*), conducting celestial observations, navigation, participating in the ongoing cultural relationships between existing and new wahi kūpuna, wahi pana, and their landscape contexts, and performing rituals and ceremonies. As such, the tangible and intangible Hawaiian cultural heritage that contribute to the significance and integrity of Mauna Kea and its intertwined cultural and spiritual importance are critical to the history, evolution, and perpetuation of Hawaiian culture and Kānaka ‘Ōiwi.

An abundance of Hawaiian oral traditions sourced from traditional through contemporary Hawaiian cultural practitioners discussed in this nomination evince that Mauna Kea currently maintains its integrity of relationship as well as condition as a TCP and district eligible for HRHP and NRHP listing. Mauna Kea maintains its integrity of relationship to Kānaka ‘Ōiwi through a myriad of pilina (*relationships, connections*) that persist through centuries and generations via channels of cultural significance as a profoundly sacred place, home of many gods, the sacred piko (*naval, summit*) of Hawai‘i Island, respected elder, and one of the oldest ancestors of the Hawaiian people. The aforementioned are all cultural practices or beliefs of living Kānaka ‘Ōiwi that are both rooted in Hawaiian history and important in maintaining the continued cultural identity of Kānaka ‘Ōiwi. Mauna Kea also maintains its integrity of condition via its natural location, setting, and tangible evidence of Kānaka ‘Ōiwi workmanship, and materials such as kuahu (*shrines, altars*) heiau (*temples*), and ala loa (*trails*). Two points are important to note: The first is that all tangible and intangible elements related to Kānaka ‘Ōiwi cultural practices and beliefs, past, present, and future, are supremely important in maintaining and perpetuating the cultural identity of Kānaka ‘Ōiwi and are therefore aspects of its integrity of association and condition. The second is that the living and dynamic nature of Kānaka ‘Ōiwi culture establishes room for the understanding and reality that additional traditional cultural practices and beliefs may emerge through the revelation of cultural practices and beliefs via wider sharing of oral traditions passed within ‘ohana or lineages of Kānaka ‘Ōiwi knowledge and ways of knowing, as well as ethnohistorical records, newly-translated oral traditions, and other cultural knowledge streams. As recorded in the ‘ōlelo no‘eau (*poetical saying or proverb*) “‘A‘ohe pau ka ‘ike i ka hālau ho‘okahi,” (“*All knowledge is not taught in the same school*”), further annotated by Mary Kawena Pukui to note that in Kānaka ‘Ōiwi culture, traditions, practices, and beliefs, ancestral knowledge and ways of knowing, “[o]ne can learn from many sources,” (Pukui 1983: 24, #203).

The above listed truths align with Parker and King’s definition of integrity (1998:11; below) as well as precedent established by other NRHP-listed TCPs that is acknowledged by the NPS¹. Of TCPs and integrity, Parker and King write that:

¹See the 1992 Kuchamaa (Tecate Peak) NRHP Nomination (Reference Number 92001268; Unknown Author 1992), for which the NPS (2023) acknowledges: “Despite modern intrusions,

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Assessing the integrity of the relationship between a property and the beliefs or practices that may give it significance involves developing some understanding about how the group that holds the beliefs or carries out the practices is likely to view the property. **If the property is known or likely to be regarded by a traditional cultural group as important in the retention or transmittal of a belief, or to the performance of a practice, the property can be taken to have an integral relationship with the belief or practice, and vice-versa.** [Parker and King 1998:11]

Parker and King (1998:12) also note: “the integrity of a possible traditional cultural property must be considered with reference to the views of traditional practitioners; if its integrity has not been lost in their eyes, it probably has sufficient integrity to justify further evaluation.”

Historical desecrations to Mauna Kea such as ranching features and observatories and their associated infrastructure are non-contributing factors to its nomination both to the HRHP as a historic district and TCP and to the NRHP as a TCP and district. Ranching features and observatories and their associated infrastructure are desecrations of the sacred living temple that adversely impact its integrity of relationship and condition, especially but not limited to its setting and environment.

Despite the aforementioned desecrations, Mauna Kea retains its integrity of relationship and condition as a Hawai'i Register of Historic Places (HRHP) and National Register of Historic Places (NRHP)-eligible Hawaiian historic property (HRHP only), TCP, and district through its strong historical and continued connection to traditional Hawaiian cultural practices and beliefs. Mauna Kea, as the physical anchor, is important in the retention, transmittal, and performance of Hawaiian cultural beliefs, identity, and practices. Anchored by the significant tangible cultural features that persist, Mauna Kea's intangible cultural features contribute equally to its ongoing integrity of relationship and condition.

As documented in detail in this nomination, Mauna Kea is an ideal candidate for inclusion on the Hawai'i Register of Historic Places (HRHP) and National Register of Historic Places (NRHP) as a TCP. The tangible and intangible Hawaiian cultural heritage contributing to the significance and integrity of Mauna Kea as a TCP and its intertwined cultural and spiritual importance are dually critical to the history and evolution of Hawaiian culture and people because the relationship that exists between the mountain and Kānaka 'Ōiwi is one that cannot be separated. This nomination explains how Mauna Kea retains its integrity and significance while exceeding the eligibility requirements for listing on the HRHP as a historic property, district, and TCP and the NRHP as a Hawaiian TCP and district (HAR §13-198-8; 36 C.F.R. §60.4; National Park Service 1995; Parker and King 1998). The nomination text is structured like this summary paragraph. The Hawaiian tangible and intangible contributing factors to Mauna Kea's integrity, significance, and eligibility

the tribal perspective on its integrity supports the continuing traditional cultural importance of the place.”

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are first presented through a holistic, expansive Kānaka ʻŌiwi (Hawaiian) lens. Content bridging Kānaka ʻŌiwi perspectives with Western frameworks and valuations states how Mauna Kea exceeds eligibility thresholds for HRHP and NRHP listing as a historic property (HRHP), TCP and district.

Narrative Description

Mauna Kea is eligible for HRHP and NRHP listing as a TCP and district due to its deeply sacred cultural significance to Kānaka ʻŌiwi from the past through the present, an integrity of relationship spanning centuries and generations. Historical and modern development diminish the mountain's integrity of condition, which it still maintains despite these factors. The ongoing traditional cultural importance of Mauna Kea is inextricably intertwined with the integrity of its tangible and intangible features. These include but are not limited to wahi kūpuna such as ahu (*shrines*), heiau (*places of worship*), trails, view planes; the purity of its water in the wao akua (*mountain region inhabited solely by the gods*) generated in the piko (*naval, summit of a mountain*), which has yet to flow down to the wao kanaka (*inland region where people reside*) (Kanahēle 2019:149-151); all manifestations of wai (*fresh water*); all other weather and environmental phenomena associated with Mauna Kea wao (*inland regions*); and its role, relationship, and significance to Kānaka ʻŌiwi creation, genealogies, and traditional and living Hawaiian cultural practices and beliefs.

The content below describes Mauna Kea's historic and current physical appearance, the condition of the property, and the combination of tangible and intangible Hawaiian cultural resources that contribute to Mauna Kea's significance, integrity, and HRHP as well NRHP listing eligibility as a historic property (HRHP), TCP and district. Also discussed are the non-contributing resources (telescopes, modern infrastructure and buildings, historical ranching features) present on Mauna Kea and whether the property has historic integrity.

Mauna Kea is strongly associated with ancestral traditions through contemporary Hawaiian cultural beliefs and practices of a living community that are important in maintaining and continuing Hawaiian cultural identity (Fujikane 2019:26-31; Maly and Maly 2005; Maly and Maly 2022). Expansive evidence drawn from primary Hawaiian sources - oral historical, historical, and ethnographic - provided herein attests to the historical and traditional cultural significance and integrity of Mauna Kea to past and present Kānaka ʻŌiwi, and to the perpetuation of Hawaiian culture (Maly and Maly 2005; Maly and Maly 2022; Kanakaʻole et al. 2021).

Kānaka ʻŌiwi descend from a highly-skilled oratory tradition through which they retain and transmit information in litanies of chants and stories that are passed down from generation to generation through the present. Traditional epithets utilized by Kānaka ʻŌiwi in oratory practices offer insight built upon generations of practice. The worldviews embedded within these oral traditions and practices embody the cultural and religious practices that inform Kānaka ʻŌiwi ways of life and wellbeing. The below excerpt of a mele hānau (*birth chant*) is one example of oratory excellence and recounts the creation of Mauna Kea, described in this mele hānau as ka mauna a Kea (*mountain of Kea*), the first-born mountain child of the progenitor gods, Papa (*Mother Earth*)

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and Wākea (*Sky Father*), and affirms the mountain’s status as an akua (*god*) itself (Kanaka‘ole et al. 2021:14). This chant was composed for Kamehameha III to highlight his lineage as an ali‘i (*chief*) by intertwining his royal lineage with the creation of the world. By acknowledging Mauna Kea as an ancestor, Kamehameha III’s birth chant informs Kānaka ‘Ōiwi of their shared genealogy with the mountain and the kuleana (*responsibility*) that stems from that familial bond, and influences how Kānaka ‘Ōiwi nurture that relationship and articulate their identities as descendants of the gods themselves (Case 2019:9). Additionally, this chant also reaffirms that Mauna Kea is sacred (Kanahele 2017:3).

- | | |
|---|---|
| 81. O hanau ka mauna a Wakea | <i>The mountain of Wākea is born</i> |
| 82. O puu a‘e ka mauna a Wakea | <i>Wākea’s mountain pushes up and out</i> |
| 83. O Wakea ke kane o Papa, | <i>Wākea is the male, the supple, powerful</i> |
| o walinuu ka wahine | <i>female entity is Papa</i> |
| 84. Hanau Hoohoku he wahine | <i>Hoohoku is generated, a female</i> |
| 85. Hanau Haloa he alii | <i>Hāloa is generated, a chief</i> |
| 86. Hanau ka mauna, | <i>The mountain is born,</i> |
| he keiki mauna na Wakea | <i>it is the spatial mountain progeny of Wākea</i> |
| 87. O ka lili o Wakea o ha‘i ka hala | <i>For aeons the vibrations of Wākea set it in its place</i> |
| 88. O ke kuku a ka manene | <i>Standing tall with trembling sensations</i> |
| 89. I hoouka ai i loko o kahiki-ku | <i>It is in the uplands and towering beyond the diverse strata of space</i> |
| 90. Hee Wakea, ka lewa kona ohua | <i>Wākea slips down through the atmospheric levels with his offsprings</i> |
| 91. Kuamu ia e Kane, kuawa ia e Kane | <i>Land shaved off by Kāne and shaped into valley, and inlets by Kāne</i> |
| 92. Ho‘i mai o Kane a loko o | <i>Then Kāne returned to activities of the upper elevation</i> |
| lanimomoe | |
| 93. Moe Wakea moe ia Papa | <i>The relationship of Wākea and Papa continues</i> |
| 94. Hanau ka la na Wakea | <i>Born is the sun belongs to Wākea</i> |
| 95. He keiki kapu na Wakea | <i>A sacred child for Wākea</i> |
| 96. O ka uluna o Wakea, na Wakea no | <i>The head rest of Wākea belongs to Wākea</i> |
| 97. Hanau ka mauna | <i>The mountain was born</i> |
| 98. He makahiapo kapu na Wakea | <i>It is the sacred, eldest child of Wākea</i> |
| 99. Oia hoi o ka Mauna | <i>It is indeed the mountain</i> |
| 100. Hanau ka Mauna | <i>The procreation of the mountain is complete</i> |
| 101. O ka mauna la hoi auanei ko lalo nei | <i>The mountain is indisputably here, below</i> |
| 102. O wai la hoi auanei ko luna la? | <i>Who is the one above</i> |
| 103. Owai la? O ka la | <i>Who indeed, clearly, it is the sun</i> |
| 104. Aia, aia hoi ha! | <i>And so it is!</i> |

Na Hehena.

By Hehena.

[Hehena 1866 in Kanaka‘ole et al. 2021:14].

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In addition to reaffirming Kamehameha III’s chiefly status, his mele hānau illustrates the importance of Mauna Kea as the first ancestor of Kānaka ‘Ōiwi and the holistic praxis that emerges from the intimate and genealogical relationship that Kānaka ‘Ōiwi hold with ‘āina (Kiyuna 2020:2,3).

Mauna Kea’s foremost role in Kānaka ‘Ōiwi genealogies is well-documented in various other mele and mo‘olelo (*tradition, history, chronicle, record*), including *The Kumulipo* (Fornander [Thomas Thrum, trans.] 1917:12; Malo [Emerson, trans.] 1997:23, 24; Pukui 1979:26; Keaulumoku 1978:1-78). *The Kumulipo*, a two thousand line chant, is the supreme mele of creation that describes the evolutionary process of the world’s creation. Beginning with the creation of the cosmos and ending with the birth of the ali‘i, Kalaninui‘āiamamao², *The Kumulipo* serves a similar dual purpose as Kamehameha III’s mele hānau: to primarily highlight Kalaninui‘āiamamao’s chiefly lineage and to inform Kānaka ‘Ōiwi of the creation of the world (Serme 2021:5). Linking a chief’s genealogy to powerful forces of creation and progenitor gods imbues that lineage with sacred power.

After birthing Mauna Kea, Papa and Wākea become the progenitor gods for Hawaiian civilization (Kanahele 2017:3; Kanahele 2016:2; Abad 2016:10; Maly and Maly 2005:7,8). Papa and Wākea serve as the most important reference point; they are the culmination of all the cosmogonic genealogies that started before them, and the ancestors to all the future generations of ali‘i (*chiefs*) and lāhui (*nation*) that came after them (Keaulumoku 1978:70-78; Fujikane 2019:25). Their union is the taproot of Hawaiian genealogy to which all Kānaka ‘Ōiwi trace their genealogies and as a result, trace their ancestry to ka Mauna a Wākea (*the mountain of Wākea*), and the elemental deities that reside on the summit (Maly and Maly 2005:7-8; Cleghorn 2016:1; Rios 2016:1; Ching 2016:1,2). Whereas these elemental forces once reaffirmed power and prestige for our ancestors, the familial connection that Kānaka ‘Ōiwi trace to the environment now reaffirms the sanctity and sacredness of Mauna Kea as an ancestor, the first-born child of Papa and Wākea (Kanahele 2017:3; Abad 2016:10; Kiyuna 2020:4). Mauna Kea is a source of inspiration for the lāhui. Mauna Kea is the most respected elder and considered one of the oldest ancestors to Kānaka ‘Ōiwi. Therefore, it is imperative to mālama (*care for*) Mauna Kea as a wahi kūpuna so that future generations can continue to build pilina (*connection, relationship*) to this ‘āina and their identities as Kānaka ‘Ōiwi.

Cultural Historical Background

Hānau ka ‘āina, hānau ke ali‘i, hānau ke kanaka (*Born was the land, born were the chiefs, born were the common people*) (Pukui 1983:56, #466).

Oral traditions hold that Mauna Kea was created in the time when the akua (*deities*) were giving birth to the ‘āina. Cultural experts assert that ka‘ao (*sacred records*) inform us that the Hawaiian islands are themselves the descendants of Wākea (*literally, “Zone of Kea”*) and Papahānaumoku

² Kalaninui‘āiamamao was an ancestor of Queen Lili‘uokalani, the last reigning monarch of the Hawaiian Kingdom (McGregor and MacKenzie 2015:757).

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(literally, “the firmament or wide place who gives birth to islands”) (Malo 2020 [Langlas and Lyon, trans.] 319-324; Kepelino 2007:179, 182; Edith Kanaka‘ole Foundation in Ho‘akea, LLC 2009: i). As Kamehameha III’s mele hānau informs us, pō (*night*) came first, followed by the birth of Hawai‘i Island. Ao (*daylight*) came next with the formation of clouds and the atmosphere, and then the birth of Mauna Kea, the first born mountain-child (Kanaka‘ole et al. 2021:15; Kanahele 2017:3).

Rising to over 10,210 meters (approximately 33,500 feet) when measured from base to peak, Mauna Kea is the tallest mountain on Earth (NOAA 2023). Anchored in the seafloor and extending into the atmosphere, the sheer magnitude of Mauna Kea and its ability to touch all things reaffirms the mountain’s sacredness. The summit of Mauna Kea stretches into the ‘āpapalani stratum, the uppermost stratum of the atmosphere, which is understood by some Kānaka ‘Ōiwi as “the realm of Wākea” (Flores 2016:18; Kanaka‘ole et al. 2021:34, Figure 3). Wākea encompasses the atmosphere and immensity of the celestial dome. Ho‘ohōkūkalani (*Creator of the stars*), is the celestial daughter of Papa and Wākea and “in union with her father she provides the celestial womb from which the native population ensues” (Ho‘akea, LLC 2009:1-2). Therefore, Mauna Kea serves as a kuahu (*altar, shrine*) for this sacred union (Ho‘akea, LLC 2009:1-2).

The word kuahu can be broken into two parts: kū (*to stand, upright*) and ahu (*shrine, altar, pile*) (Pukui and Elbert 1986: 8, 167). Kuahu, especially those found on Mauna Kea, are one or more stone uprights fashioned on either a prepared foundation or an elevated area within the natural landscape (McCoy and Nees 2014:31). Kānaka ‘Ōiwi oral boundary commission testimony record kuahu of many varieties, including those for manu, defined as an “altar or ceremonial site for bird catchers,” (Maly and Maly 2022:56), and pigs/boundary markers as a traditional cultural practice that occurred in multiple places on Mauna Kea (Kahue 1880 in Maly and Maly 2022:62-64, 87-88; Waiki 1874 in Maly and Maly 2022:59; Ho‘akea, LLC 2009:5-6). Kuahu historically originate from the practice of hula and serve as an elevated structure for Laka (*forest deity important to hula*), and is a conduit for hula dancers to engage with the akua and environment (Kealiikanakaoleohaililani et al. 2020:330). As kumu hula (*hula master*) Kekuhi Keali‘ikanaka‘ole (2020:330) further explains: “kuahu practice is not bound to a specific type of physical structure or location, but rather is that which allows learners to establish a sacred space for organic yet structured engagement of the natural world.” The ceremonial functions of kuahu remain intact and operate as elevated places where rituals are conducted and offerings are made, including on Mauna Kea (Ho‘akea, LLC 2009:5-6; Rios 2016:2; Maly and Maly 2022:13). Historical records from the sovereign Kingdom of Hawai‘i evince a kuahu was also constructed in 1882 to commemorate Queen Emma’s ascent of Mauna Kea (Alexander 1892a in Maly and Maly 2022:40).³

Secondary to Hawaiian oral traditions and practices, historical accounts by foreigners to Hawai‘i further document kuahu as a traditional cultural practice. An excerpt from the 18th century account

³ Hawaiian oral traditions and ethnohistorical accounts, buttressed secondarily by archaeological and historical lines of evidence, establish kuahu as another Hawaiian ancient and historical through contemporary cultural practice and tradition associated with Mauna Kea - see the expanded discussion in this nomination under “Practices/Ceremonies” - “Importance of ahu (shrines) for traditional practices on Mauna Kea.”

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of botanist Archibald Menzies’ travels in Hawai‘i describes kuahu in the forests and up the mountain of Mauna Loa. Menzies noted:

...that here and there, on the sides of the path, they have little Morais, or spots consecrated to their deity, which none of them ever pass without leaving something—let it be ever so trifling—to obtain his good will, and they were highly delighted, indeed, when we followed their example in throwing a nail or a few beads, or a piece of tapa, before their deity, which the women were not allowed to pass without uncovering their breasts and shoulders. [Menzies 1920: 85]

As a kuahu, Mauna Kea serves as a bridge between the heavens and the earth and lends to the mountain’s sacred significance (Figure 4). The physical prominence of Mauna Kea and its proximity to the realm of Wākea lends to the spiritual significance for the Kānaka ‘Ōiwi that can be encapsulated in its station as a kuahu (*sacred altar*) (Ho‘akea, LLC 2009:15). As the Hawaiian culture-based non-profit Edith Kanaka‘ole Foundation provides in their “Cultural Anchor” portion of the Comprehensive Management Plan for the mountain: “Mauna Kea is where heaven, earth and stars find union. Not just any heaven, but Wākea, not just any earth but Papahānaumoku (literally, the firmament or wide place who gives birth to islands), and not just any constellation of twinkling lights, but Ho‘ohōkūkalani (Creator of the stars), whose children descend and return to the stars,” (Edith Kanaka‘ole Foundation in Ho‘akea, LLC 2009: i).

Wao Akua

Kānaka ‘Ōiwi historically considered Mauna Kea sacred as ancestral knowledge dictates the mountain as a sacred piko (Flores 2016:18). As Kanaka ‘Ōiwi professor and cultural practitioner Kalani Flores (2016:18) explains: “Early Polynesians believed their highest points of land were the most sacred; and Mauna Kea, having the highest mountain top in all of Pacific Polynesia, was considered the most sacred place of all.” Mauna Kea is designated as a wao akua (*mountain region inhabited solely by the gods*) and treated as such. Despite the misuse of and construction on the summit, Mauna Kea retains its integrity because the mountain remains critical to the persistent traditional and cultural beliefs that the summit is a wao akua, home to the gods. In Hawaiian ideology, akua (*deities, gods*) are not invisible beings but the life-creating forces that make up the biocultural landscape of Hawai‘i (Kananele 2017:3). Some of the akua that inhabit the summit of Mauna Kea and comprise the wao akua are Poli‘ahu (*snow*), Lilinoe (*mist*), and Kalauakolea (*fog drip*). These deities are exclusive to the ‘āina mauna (*mountain lands*) in the way that not all snow is Poli‘ahu, only the snow that coats Mauna Kea and Mauna Loa; not all mist is Lilinoe, only the mist that blows across Mauna Kea; and not all fog drip is Kalauakolea, only that seen in the ‘āina mauna (*mountainous region*). These akua exist exclusively in the high elevations that Mauna Kea can provide and are well-documented in mo‘olelo (*tradition, history, chronicle, record*) as residing here rather than other areas of high elevation such as Haleakalā, Maui (Abad 2016:10-11; Brown 2022:49, 98; Maly and Maly 2022:13; Taylor 1931 in Maly and Maly 2005:53; Maly and Maly 2005:vi,29,40-50). As home to these gods, Mauna Kea is a wao akua.

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To ascend, and even descend, Mauna Kea is an arduous journey. Historically, journeys to Mauna Kea were well-documented by foreigners whose trips often spanned over days at a time and were led by Kānaka 'Ōiwi familiar with the trails and conditions of the mountain (Alexander 1892b:1; Baldwin 1890:54,55). Foreigners were often surprised at the sometimes harsh conditions of the mountain region in comparison to the temperate climate of Hawai'i as a whole. However, the Kānaka 'Ōiwi were accustomed to the drops in temperatures and understood when it was inappropriate to ascend any further than their temporary camps (Goodrich in Ellis 1963:292).

As a sacred space reserved for the akua, it was not appropriate for kānaka (*humans*) to live in the wao akua (Figure 5 and Figure 6). Unlike other places in the world where snow, mist, and fog are prevalent, Mauna Kea is one of only three places in Hawai'i that experiences the harsh conditions that these elements can pose. During the winter months and especially during and after large storms, Mauna Kea has drastically colder temperatures and can undergo blizzard conditions, making the 'āina mauna unsuitable for permanent residency. For some Kānaka 'Ōiwi, Mauna Kea is so revered that they consider travel on the mountain to be trespassing on what is inherently sacred (Ho'akea, LLC 2009:1-4). For others, recognizing that Mauna Kea is an ancestor and that the summit area is sacred is satisfying enough, and there is no further desire to go there or to disturb the area (Ho'akea, LLC 2009:1-4). Access to Mauna Kea was historically limited to specific purposes and for a specific length of time (Kanahele 2017:3; Kahakalau 2016:3). There are, however, historical accounts of kānaka staying along the slopes and at the summit of Mauna Kea for extended periods of time:

1. One of the most well-documented historical human activities on Mauna Kea is the use of the adze quarry, Keanakāko'i. Archaeological studies show that various kinds of structures were prevalent in the adze quarry to provide shelter, indicating that kānaka did not immediately descend after harvesting pōhaku (*stone*) or crafting adze (McCoy 1976:138). To account for the remoteness of Keanakāko'i, shelters were necessary for Kānaka 'Ōiwi to spend extended periods of time at the adze quarry. The shelters provided protection from the elements, however, they do not suggest permanent habitation. Keanakāko'i is situated around the 12,400 foot elevation, sparing just over 1,000 feet in elevation between the site and the summit, which historically was coated in snow for prolonged periods of time (McCoy 1976:140; McCoy 1977:223). One researcher asserts that the work season only occurred during the warmer months of July through October when there would be little to no snow to avoid harsh conditions (McCoy 1976:140).
2. The 15th century ali'i, 'Umi a Līloa, is famous in Hawaiian history for being the first ali'i (*chief*) to unify Hawai'i Island under a singular rule. 'Umi a Līloa was a religious chief and was known to have erected a number of ahu (*shrines*) throughout the 'āina mauna to make offerings to the akua (Kana'ole et al. 2021:33). Mauna Kea is a sacred ancestor to 'Umi a Līloa and after unifying the island, 'Umi a Līloa chose to live in the 'āina mauna with his people rather than returning to the lower ahupua'a (*land divisions*) where kānaka typically lived. During his reign, he placed a responsibility on his people and his descendants to uphold the sacredness of Mauna Kea (Lindsey-Ka'apuni 2016:1). His residency in the 'āina mauna will be further discussed in Criterion B.

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3. Described as “[a]n undated account from the archive collections of the Bernice Pauahi Bishop Museum, translated by Mary Kawena Pukui,” “A Tale of a Royal Couple who Froze on Mauna Kea” tells of the Waimea chief, Kūkahau‘ula and his wife, Lilinoe, and their inevitable end on Mauna Kea (Maly and Maly 2022:27,28). Kūkahau‘ula took to wife, Lilinoe of Ka‘ū, however, because his people resented her, the couple went to Mauna Kea to live in peace. They lived in a cave above Lake Waiau and it was in that cave that their bodies remained until Poheepali, the very last of the family of retainers who served these chiefs, hid their frozen bodies (Maly and Maly 2005:51). It was said that Lilinoe’s body was so well-preserved that not even her hair had fallen out, however, others claim that her body was too well-hidden to be found (Kamakau 1961:285; Maly and Maly 2005:29).

Akua in the Region/Water cycle

“Relatively untouched” Teale 2016:3 by kānaka, the ‘āina, wind, rain, and air of Mauna Kea are pristine (Kanahele 2016:3; Edith Kanaka‘ole Foundation 2009:ii). The limited human activity makes these areas and the elements therein important, specifically medicinally, which lends to the reality that much of the pilgrimages to the sacred summit are reserved for ceremonial practices and for communing with the akua therein (Ching 2016:2; Teale 2016:2-3; Cleghorn 2016:1; Kahakalau 2016:3). The akua that reside on Mauna Kea play critical roles in the health and wellbeing of Hawai‘i Island, particularly, with regard to our most precious resource: water (Kanahele 2016:2,3).

Kānaka ‘Ōiwi view Hawaiian akua (*gods*) not as invisible beings that exist in the heavens but as environmental elements and elemental phenomena (Kealiikanakaole and Giardina 2016:63). As an oratory tradition, Hawaiian traditional knowledge was historically transmitted via stories and chants. Using this method, scientific knowledge critical to understanding environmental processes was captured in poetic form and story that could be easily understood and accurately passed on.

In *The Kumulipo*, and other chants of creation, the natural environment from the skies to the ocean consists of the kino lau (*physical manifestations*) of gods (Maly 2005:4). The chant “E O Mauna Kea” names specific water akua: Poli‘ahu (*snow*), Lilinoe (*mists*), Waiau (*lake atop Mauna Kea*), Kalauakolea (*fog drip*), and Kāne (heat) (Kanahele 2017:4)(Figure 7, Figure 8, and Figure 9). As Maly and Maly explain, Kānaka ‘Ōiwi developed a “cultural attachment to the natural world and heavens above that defines and shapes the beliefs, traditional cultural properties, and cultural practices,” (Maly and Maly 2005:10).

Mauna Kea is vital as a water source for Hawai‘i Island and feeds as many as five aquifers (Kanahele 2016:2,3; Pisciotto 2016:10; Rios 2016:4). Kānaka ‘Ōiwi are informed by ancestral teachings that Mauna Kea is responsible for collecting, storing, and distributing water to Hawai‘i Island. The forested slopes of Mauna Kea and the mountain itself are pahu wai (*water storage basins*) that collect and store water that is used to recharge the aquifer (Kanahele 2017:8). Before Hawai‘i Island was named as such, its original name was Lononuiakea, a name of Lono, the deity of weather, rain, and clouds (Kanahele 2019:2). As described by Kanaka ‘Ōiwi author, scholar,

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and cultural expert, Pualani Kanaka'ole Kanahele (2019:2): "Maunakea is the buffer for clouds to drop rainwater allowing descending and ascending water cycles to begin again."

In many mo'olelo, the deity Kāne is often associated with wai (*fresh water*), specifically with creating wai. The creation of fresh water, however, is dependent on heat; the sun makes the hydrologic cycle work. Accordingly, Kāne is also associated with heat, Kānehoalani being his form as the sun. The aforementioned akua: Poli'ahu, Lilinoe, Waiau, Kalauakolea, and Kāne, as well as other akua such as Kūkahau'ula (*pink-tinted snow*) (Taylor 1931 in Maly and Maly 2005:53) are found on Mauna Kea. These water akua in particular are most prominent on Mauna Kea and contribute to the hydrologic cycle of Hawai'i Island. As such, the ancestors designated Mauna Kea as sacred not only because it is a wao akua but to maintain the purity of the water (Kanahele 2016:3).

Kalauakolea, the constant fog drip on the summit, feeds the root systems of the plants growing on Mauna Kea and trickles down into the aquifer, and also fills the river systems. Although Mauna Kea does not experience heavy rainfall, Lilinoe and Kalauakolea's presence on the mountain are constant, and it is these sources that supply the island aquifers (Kanahele 2017:3). As further evidence of Mauna Kea's role in hydrology, Waiau is also a pūnāwai (*water spring*), which indicates ancestral knowledge of the relationship of the movement of water on Mauna Kea (Kanahele 2017:5). Another example of this is the fog drip and its movement into the soil, eventually recharging the aquifer or spring system (Kanahele 2017:3).

Mauna Kea is the po'o wai (*water source, spot from where water begins to flow*) of Ka'ohe. Ka'ohe is an ahupua'a (*land division*) that extends from Mauna Kea on the Hāmākua (northeast) side of the island. Ka'ohe means "the bamboo." Bamboo is a natural water collector and by naming the ahupua'a into which Mauna Kea's sacred waters flow, Ka'ohe is indicative of the ancestral knowledge that Mauna Kea collects and stores water (Kanahele 2017:12). Through ancestral memory and teachings, Kānaka 'Ōiwi understand that water will always be found in this region. As the water travels down the slopes of the mountain and through Ka'ohe into the wao ma'ukele as it extends into Hāmākua, the wao ma'ukele becomes saturated with water. Wao ma'ukele are rainforests and their grounds are full of water (Kanahele et al. 2016:13). Between 1865 and 1891, Kānaka 'Ōiwi from Humu'ula and Pi'ihonua knew of other places where water could be found at Kaelewa as well as at Kupuna, Kapohopaele, and Papaikou (Maly and Maly 2022:56, 60, 73).

As mentioned in Kamehameha III's mele hānau, the sun is a causative factor for evapotranspiration and cloud formation, however, it is Mauna Kea that attracts the clouds to the island. *The Kumulipo* informs us that the forests along the slopes of Mauna Kea are pahu wai for the water to collect and recharge the aquifer (Kanahele 2017:3; Okuhata 2022:2). These chants, like many others, denote the vital role of Mauna Kea for the island's water cycle.

E Ō E Maunakea describes the role of the mountain in gathering clouds to recharge the island's aquifer:

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<i>E ō e Maunakea ke kupuna o luna nei ē</i>	<i>Maunakea, ancestor above</i>
<i>Kuhikuhi iā Kānehoalani i ka lewa lani</i>	<i>Pointing to the sun in the upper atmosphere</i>
<i>Ke akua hou ‘oe i nā ‘ōpua</i>	<i>Deity that pierces through the clouds</i>
<i>Ka ‘ōpua ehu, ke ao pōpolo, ka ‘ōpua pehu</i>	<i>Yellow clouds, dark clouds, swollen clouds</i>
<i>Ho ‘ūluulu i kou alo lani i Kumukahi</i>	<i>Gathering before your heavenly presence</i>
<i>Na ka makani Kumukahi i halihali iā lākou</i>	<i>The Kumukahi winds transport the clouds</i>
<i>I ka pae ‘āina a ana ka makewai o nā moku</i>	<i>To the islands, to quench its thirst</i>
	[Kanahele 2016:3]

The matriarch from which all akua mo‘o (*reptilian deities*) descend, Mo‘oinanea, appears in many traditions and is linked to Lake Waiau as well as having a close kinship with Kāne (Brown 2022:49; Taylor 1931 in Maly and Maly 2005:53). In the Keaomelemele tradition, Mo‘oinanea is described as having power over clouds, able to command and place the masses of condensed water vapor wherever she pleases (Manu [Pukui trans.] 2002:113-115). She is acknowledged as the guardian of Lake Waiau and her ability to control cloud movement is indicative of both her great power and why she is the guardian of the most sacred water of Kāne.

Several types of rain, mist, and wind with layered, contextual definitions and meanings are associated with places, kupua (*demigods, cultural heroes*), and legendary figures of Mauna Kea. Please note this is not a comprehensive list, but a discussion of those that came to light during background research for this nomination. They embody Hawaiian cultural beliefs, practices, ancestral knowledge, and relationship to place integrated into the dynamic and storied Hawaiian cultural landscape of Mauna Kea. Under NPS TCP parlance and defining criteria, these phenomena are intangible contributing factors to the significance and integrity of Mauna Kea as a TCP. These include but are not limited to:

- **‘Ehu** (Akana and Gonzalez 2015:22)
 - “‘ehu’. Or ehu. Similar to ‘ehuehu. Spray, foam; mist that is lighter than the uhiwai, noe and ‘ohu, but heavier than the ‘ehuehu,” (Akana and Gonzalez 2015:22).
 - A mele inoa (*name chant*) for Albert Ka Haku O Hawai‘i published in the Hawaiian language newspaper *Ka Nupepa Kuokoa* in 1861 describes the qualities and geographic range of the ‘ehu rain as extending from the forest to “the face of Maunakea,” (Paauilo 1861 [Akana trans.] in Akana and Gonzalez 2015:22):

Me he manu lā nō ka ua e ka‘akepa nei
E wili nei i luna a ka lā‘au
Luhe ke oho o ke kukui mā‘e‘ele i ka ua
Naku ka ua ho‘okawewe i ka moana
Olokē, oloolokē, pi‘oloke ka leo o ka palila

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Kūkūkū ka **‘ehu** o ka ua i ka nahele
E kāpapa ana i ke alo o Maunakea
Palalē ka leo o ka ua i luna o ka lā ‘au
E hiohio haole ana i ke alo o nā pali
Ka ua ho‘okina, ho‘okinakina, ho‘okikina
[Paauilo 1861 in Akana and Gonzalez 2015:22]

*Like a bird, the rain swoops diagonally
Swirling above the trees
The leaves of the kukui droop, numb from the rain
The pouring rain roils the ocean
Ruffled, flustered, frightened is the voice of the palila bird
The **‘ehu** mist of the rain rises to the forest
Extending to the face of Maunakea
The voice of the rain on the trees is indiscernible
Speaking gibberish near the face of the cliffs
The constant, unceasing, persistent rain.
[Translation by Collete Leimomi Akana]*

- **Kēhau**, an ua, makani, and adjective (Akana and Gonzalez 2015:73,74). A type of Nāulu rain, discussed further below (Akana and Gonzalez 2015:73,74, 189,190).
 - “Kēhau. Same as *Tēhau*; related to *hau*. Dew, mist; associated with Maunakea, Hawai'i and with Mount Ka'ala, O'ahu, and found in other areas. Also the name of a wind. Kēhau is both the name of a specific rain and a generally descriptive term; its various usages are determined by the context,” (Akana and Gonzalez 2015:73,74).
 - Lines from a mele māka'ika'i (*travel chant*) composed in commemoration of Emalani Kaleleonālani's (Queen Emma's) journey to the summit of Mauna Kea mention reference the ua named Kēhau (Nogelmeier 2001 and Kaanaana 1894 in Akana and Gonzalez 2015:73,74):

E aha 'ia ana Maunakea
Kuahiwi 'alo pū me ke ke **Kēhau**

Aloha ia uka pūanuanu
I ka ho'opulu 'ia e ke **Kēhau**
Ha'ina 'ia mai ana ka puana
Pulu 'elo i ka wai a ka Nāulu
[Nogelmeier 2001 and Kaanaana 1894 in Akana and Gonzalez 2015:73,74]

*What is happening with Maunakea
Mountain that dwells with the [**Kēhau**] mists*

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*Beloved is that lofty highland, ever cold and damp
Wetted, as it is, with the [Kēhau] mist and dew
Let the tale be known through the telling
Soaked by the water of the sudden Nāulu rains.
[Translation by M. Puakea Nogelmeier]*

- **Lilinoe** (Akana and Gonzalez 2015:163)
 - “Fine mist associated with mountains and cliffs of Hawai'i and Maui. Also the name of a goddess of mists,” (Akana and Gonzalez 2015:163).
 - “Then we have **Lilinoe** who is the kupua of the mists. And you can see **Lilinoe** as she comes down over the mountain sometimes. When you're driving from Saddle Road up to Hale Pōhaku, you can look over and see **Lilinoe** in some of the valleys. She flows up and over, very gently, very soft, like very fine kapa, white kapa. She fills in the valleys and you can see her hands just filtering out very thinly into the valleys,” (Vredenburg 2002 in Akana and Gonzalez 2015:163).
- **Nāulu**. The nāulu rain is a sudden shower that shares its name with a cloud and wind (Akana and Gonzalez 2015:122, 196).
 - Uhi po'ipū ke ao **Nāulu** hākumakuma i ka piko o Maunakea
‘Ōlapa uila ke ahikao lele ‘oā‘oaka mālamalama nā kūkulu poepoe honua
Nakulu pa‘apa‘a‘ina, nākolokolo ‘u‘ina akula nā pōhaku a ka hekili, wawalo nā
paia lanī
He mau hailona, he mau kāhoaka ia na ke kilo hōlona ka li‘ulā
E ho‘omā‘ike mai ana e ‘ike kūmaka i kona welo, i kona iwikuamo‘o
He ‘ōiwi kā ho‘i na ke kilohana pio ‘ole i ka pehia e nā kuāua **Nāulu** a ka loko
‘ino ē
‘O ia, he ‘oia‘i‘o
[Sheldon 1988 (Nogelmeier, trans.) in Akana and Gonzalez 2015: 189, 190]

*The thick, dark **Nāulu** clouds engulf the summit of Maunakea
Fireworks flare up like the flash of lightning, illuminating the horizons of the
earth
Rumbling, snapping, roaring, crackling rocks of thunder, echoing on the walls of
heaven
These are the signs, heavenly portents, to even the novice seer of mystical images
Revealing, that all may see, his ancestry, his lineage
A native born to excellence, inextinguishable in the pelting of the
merciless **Nāulu** showers
It is so; it is true
[Translated by M. Puakea Nogelmeier]*
- **‘Ohu** (Akana and Gonzalez 2015:213)

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- “Fog, smoke, light cloud on a mountain; mist that is lighter than the uhiwai and noe, but heavier than the ‘ehu and ‘ehuehu,” (Akana and Gonzalez 2015:213).
- A pau lākou i ka hiamoe, pā maila ka makani maika‘i ma ka ‘āina mai, ho‘ololi a‘ela ‘o Kūapāka‘a i nā wa‘a a me ka pe‘a, a holo pono i Hawai‘i. I ia lā a pō, a ao a‘e, ‘ike akula lākou i ka piko o Maunakea i loko o ka ‘**ohu**, e mā‘alo ana me he ‘ōpua lā.
[Fornander 1919-1920:125]

When they had all gone to sleep, a favorable wind from the land blew; Kūapāka‘a altered the course of the canoes and the sails and headed straight for Hawai‘i. It took them all that day and night until the following day before they saw the top of Maunakea rising out of the ‘ohu, passing by like a cloud.
[Translated by Collete Leimomi Akana]

- **Noe.** “Same as *Noenoe*. Fog: mist that is lighter than the uhiwai, but heavier than the ‘ohu, ‘ehu, and ‘ehuehu... Also the name of a wind. ‘Noe’ is both the name of a specific rain and generally descriptive term; its various usages are determined by the context. An ua associated specifically with Poli‘ahu (Lohiau 1861 in Akana and Gonzalez 2015: 208).
 - Līlī luna Poli‘ahu i ka ua ‘o **Noe** (*The top of Poli‘ahu shivers in the cold of the Noe rain*), (Lohiau 1861 in Akana and Gonzalez 2015:208).
- **Pa‘ūpili** “means ‘to soak pili grass,” and is an ua associated specifically with Lilinoe (Lohiau 1861 in Akana and Gonzalez 2015: 222). He ua noe **Pa‘ūpili** hau no Lilinoe (*An icy Pa‘ūpili mist of Lilinoe*) (Lohiau 1861 in Akana and Gonzalez 2015:222).

‘Āina Mauna

The natural and cultural resources of Mauna Kea make that landscape a biocultural one and thus, the overall integrity and well-being of the mountain, from the summit to the shoreline, is dependent on sufficient Hawaiian knowledge, utilization and engagement of those spaces (Figure 10). ‘Āina mauna (*mountain lands*) describes the mountain lands surrounding and including Mauna Kea.

The ‘āina mauna represent the physical manifestations of the various akua and creative forces of nature that set the foundation for the relationship between Kānaka ‘Ōiwi and the environment (Maly and Maly 2022:3). The numerous place names on the Mauna Kea landscape demonstrate the relationship of the ‘āina, the akua that feed it, and Kānaka ‘Ōiwi that revere and interact with both (Figure 11). This familial relationship that Kānaka ‘Ōiwi hold with the environment evidences their knowledge of these spaces, the sites and features therein, and the proper protocols necessary to adequately interact with the environment.

As previously stated, Kānaka ‘Ōiwi transmitted information through a highly-skilled oratory tradition. Mo‘olelo (*traditions, histories, chronicles, records*) offer critical insights about the

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environment in which Kānaka 'Ōiwi exist while the place gives veracity, truth, and deeper connection to Kānaka 'Ōiwi in re-experiencing the mo'olelo. Mo'olelo are an anchor for memory. The akua, natural features, and environmental functions all play roles in mo'olelo as important characters in the protagonists' ultimate journey, depicting the cultural and historical value embedded in the mo'olelo.

One such mo'olelo that provides a detailed account of the place names and practices in the 'āina mauna is The Tradition of Ka Miki, the story about two supernatural brothers, Ka-Miki (*the quick, adept*) and Maka-'iole (*rat eyes*). Ka-Miki is a long and complex story gathered by Kānaka 'Ōiwi historians and is an amalgamation of Hawaiian traditions, tales, and family accounts that tie together pieces of the history of the 'āina mauna that were passed down from generation to generation (Unknown author 1914-1917 [Maly trans.]). A version of the story of Ka-Miki was first published serially in the Hawaiian language newspaper *Ka Hoku o Hawaii* between 1914-1917 by an unidentified author. Below are excerpts from the mo'olelo of Ka-Miki.

Set in the 1300s, Ka-Miki and Maka-'iole were supernatural brothers who traveled around Hawai'i Island using the ancient ala hele (*trails*) that encircled the island. Throughout their journey, the brothers competed against 'ōlohe (*experts in fighting or in other competitions such as running, fishing, debating, or solving riddles*) and challenged priests for their dishonorable conduct against the akua (Unknown author 1914-1917 [Maly trans.]). The brothers' ancestress, Kauluhenuihikoloiuka (*The great entangled growth of uluhe fern that spreads across the uplands*), empowered and instructed the brothers on their journey. Ka-Miki and Maka-'iole are the children of Pōhaku o Kāne and were born 'e'epa (*strange form*). Maka-'iole was taken to his paternal grandparents to be cared for while Ka-Miki was left for dead in the cave, Pōnahanaha. Kauluhenuihikoloiuka retrieved Ka-Miki and trained him in the uses of his supernatural powers. They were subsequently joined by Maka-'iole and they were trained to be 'ōlohe in preparation for their journey around Hawai'i Island.

On their journey, Maka-'iole was instructed to collect 'awa of the akua, Luanu'u at Waipi'o and Kauluhenuihikoloiuka instructed Ka-Miki to go to the hālau ali'i (*royal compound*) of one of their older relatives, Poli'ahu, on Mauna Kea where Poli'ahu and her companion, Lilinoe guarded Waiau and the sacred water of Kāne therein. The water and 'awa were to be used for their 'ai lolo ceremony (*ceremony marking the end of training*) in which the sacred nature of the brothers would be commemorated and the two would officially become 'ōlohe. Kauluhenuihikoloiuka instructed Ka-Miki "to fetch the water of Kāne which is there atop the summit of the mountain (Mauna Kea), at the royal compound of Poli'ahu, Lilinoe, and their ward, Ka-piko-o-Waiiau. The water is there below the ledge of the platform of Pōhakuakāne, from where you may look down to Pōhakuloa, they are your family through your father's genealogy," (Unknown author 1914-1917 [Maly trans.]). Before separating to go about their individual tasks, the brothers went together to Waimea to meet their ancestress, Lanimamao (Unknown author 1914-1917 [Maly trans.]). Lanimamao questioned the brothers about their tasks and asked Ka-Miki about the location of the water that he needed to fetch to which Ka-Miki replied, "It is the sacred water of Kāne and Kanaloa at the

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sacred platform of Pōhaku-a-Kāne, overcome by the mists, Kākīkepa, that is like the steaming mists of the woman [Pele] who dwells at the crater..." (Unknown author 1914-1917 [Maly trans.]).

To ensure that the two were prepared to meet the challenges ahead, Lanimamao cast the supernatural net, Ku'uku'u, also known as Kanikawī - Kanikawā (*the thick rain belt fog*) that trapped many travelers on the windward side of Waimea (Unknown author 1914-1917 [Maly trans.]). She instructed the brothers to leap into the net, which she then pulled closed and placed in the rafters of her house; effectively trapping them. Ka-Miki quickly pulled on the lines causing the net to open, freeing himself and Maka'iole. Ka-Miki was the first to ever escape the net and because he was clever enough to do so, Lanimamao decreed that Ka-Miki, in addition to fetching the water of Kāne, must fetch the 'awa of Luanu'u, not Maka'iole (Unknown author 1914-1917 [Maly trans.]).

After Ka-Miki retrieved the 'awa and sacred 'awa container, Kapāpāiaoa, he presented them to Lanimamao who then gave Ka-Miki the kānoa 'awa ('*awa bowl*), Hōkū'ula, to fetch the sacred water of Kāne and Kanaloa at Mauna Kea (Unknown author 1914-1917 [Maly trans.]). Ka-Miki leapt and disappeared into the mist that crawled through the forest growth and arrived at the spring, Ka-wai-hū-a-Kāne (*The Overflowing Waters of Kāne*), where Ka-Miki dipped the ladle into the water of Kāne and began filling the 'awa bowl, Hōkū'ula. The guardians of the water, Pōhakuakāne and Pōhakuloa, saw the water rippling and overflowing and went to the spring to investigate. The water overflowed because Ka-Miki scooped the water (Unknown author 1914-1917 [Maly trans.]).

Afterwards, Ka-Miki joined Maka'iole at Holoholokū and brought with him the 'awa bowl, Kapāpāiaoa. As the pair of brothers traveled through the hilltops, the wind goddess, Waikōloa (*Water carried far*), caused the water to splash out of the 'awa bowl. Some of that spilled water formed a new spring near Pu'u Keke'e where Pōhakuakāne fetched water. This place is called Waiki'i (*Water fetched*) because Pōhakuakāne fetched the water there. He then took it to the base of Mauna Kea, dug into the area of Pōhakuloa and placed the water there. From Pōhakuloa, the water flowed underground and emerged as springs in various other places such as Ana-o-Hiku at Hanakaumalu, Honua'ula, and Kīpahe'e-wai on Hualālai (Unknown author 1914-1917 [Maly trans.]). More than just describing the adventures of these two brothers, this mo'olelo serves as another example of how knowledge is traditionally passed down by detailing where water can be found and how water travels in the 'āina mauna.

While much focus is placed on the summit of Mauna Kea for its proximity to the realm of Wākea as ka piko kaulana o ka 'āina (*the famous umbilical cord of the land*), the expansive 'āina mauna that makes up the landscape below the summit is equally significant to Kānaka 'Ōiwi for traditional and cultural practices (Maly and Maly 2022:4). The lower regions, extending from the 6,000 foot elevation to the shore, were historically covered in dense forests and provided a resource repository where Kānaka 'Ōiwi practitioners would responsibly gather plant resources, birds, and food (Maly and Maly 2005:32; Emerson 1895:101). Kānaka 'Ōiwi frequented the 'āina mauna to travel across the island and to access the upper regions of Mauna Kea for a variety of reasons that include but are not limited to gathering stone, gathering water, ceremonially burying piko (*umbilical cords of*

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newborns), burying family, engaging in traditional practices, performing ceremonies and worship (Maly and Maly 2022:4, 6).

In Hawaiian ideology, the 'āina mauna, like all “volcanic, geological, meteorological, and biological phenomena and environmental regions,” (Maly and Maly 2022:3) and are part of the family system. The inherent responsibility that Kānaka 'Ōiwi have to mālama 'āina, as an elder family member, informs how they interact with 'āina. As an extension of Mauna Kea with whom Kānaka 'Ōiwi share a direct genealogical relationship, the 'āina mauna are considered significant to Kānaka 'Ōiwi. Kānaka 'Ōiwi ethnographers and cultural experts Maly and Maly (2022:3) explained the diametrically opposite western understanding of the 'āina mauna as seeing “the landscape as being valued because of what may be extracted from it, and because it can support scientific research.” The personal and universal respect of the akua, the creative forces of nature, so heavily inform Kānaka 'Ōiwi worldview and way of life that it is entirely disrespectful and near impossible to consider the 'āina mauna, sacred land, as an extractable resource. Traditionally, failure to respect the akua that lend to the sacredness of the 'āina mauna “often ended in the death of those who broke the kapu (*sacred prohibitions*) and kāmāwai (*laws*) governing wahi pana and the 'āina mauna,” (Maly and Maly 2022:3).

The 'āina mauna are most commonly separated into two ahupua'a: Humu'ula and Ka'ohe, whose bounds were known traditionally, but not formally distinguished in the western context until 1891. While native testimonies and early surveys described both Humu'ula and Ka'ohe as taking in the summit region, the western-controlled system of land settlement cut Humu'ula off in 1891, ending at the 9,000-foot elevation. Thus, Ka'ohe came to encompass the entire summit region (Maly and Maly 2022:4). While Ka'ohe encompasses the summit of Mauna Kea, Ka'ohe is not limited to the summit (Maly and Maly 2022:54, 55, 57). Ka'ohe touches Waiau, bounds Humu'ula, extends to Hāmākua, and bounds Humu'ula from Pohakuhanalei (Maly and Maly 2022:55, 58, 61, 62). Humu'ula extends to Kaluakāko'i (*the adze quarry*), encompasses Poli'ahu, and extends to the shore where the ocean bounds the ahupua'a (Maly and Maly 2022:58, 62).

These two ahupua'a (*land divisions*) are among the largest in the pae 'āina (*Hawaiian archipelago*) (Maly and Maly 2022:4). Named for the red jasper stone, a material used to make ko'i (*adze*), “Humu'ula extends from sea level to the 9,000-foot elevation on Mauna Kea” (Maly and Maly 2022:4). Ka'ohe extends from Mauna Kea on the Hāmākua (*northeast*) side of the island. This ahupua'a was named Ka'ohe due to the presence of Kāne (*deity of fresh water*) and Kanaloa (principle deity in Hawaiian pantheon) waters in that area and because 'ohe is a form of Kāne and Kanaloa (Kanahele et al. 2016:12). Naming this ahupua'a Ka'ohe indicates that Kānaka 'Ōiwi ancestors understood Mauna Kea and this ahupua'a function as pahu wai (*water storage basins*).

There was no clear boundary on the upper elevation because as Maly and Maly (2022:45) note: “'āina [land] retained by the Aupuni [government] were not required to be brought forward to Commissioners.” Between 1865 and 1891, kama'āina (*native-born*) witnesses and residents of Hawai'i Island provided testimony regarding the boundaries of the ahupua'a and moku in which they lived (Maly and Maly 2022:44). Testifiers detailed their individual ahupua'a boundaries and

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the 'āina mauna as extending to the ocean to emphasize that there is no way to isolate the 'āina mauna and its features as they are all connected and understood to be so mai ka wā kahiko (*from the ancient times*) (Maly and Maly 2022:49). In 1891, the Boundary Commission officially determined that the Humu'ula boundary would end at the 9,000 foot elevation line and the summit of Mauna Kea would be considered part of Ka'ohe (Maly and Maly 2022:4).

Oral traditions and historical Hawaiian accounts compiled by Kānaka 'Ōiwi cultural historians, ethnographers, and record keepers Kepā and Onaona Maly describe the ahupua'a of both Humu'ula and Ka'ohe as having once been covered in dense forests in the areas extending from the 6,000-foot elevation down to the shoreline that were frequented by native practitioners who gathered plant resources, birds, and food (Maly and Maly 2022:4).

The 'āina mauna was home to an extensive network of alahele (*trails and roads*) that provided access across the island and to Mauna Kea from five of the six districts that comprise the moku-puni (*island*) of Hawai'i. Travel to Mauna Kea and throughout the 'āina mauna required intention and knowledge of the landscape to survive. Temperatures can drop quickly and steeply, sometimes to below freezing and the fog can be so heavy that travelers can be lost for hours on end. Alahele were often placed near treacherous terrain - near peaks and bodies of water as well as across and around craters (Alexander 1892b:1; Bingham 1969:377,378; McCoy and Nees 2010:2,22).

Traditionally, trails were direct and ran straight to the desired destination regardless of topography (Maly and Maly 2022:12). Maly and Maly (2022:57,75) write that trails and roads are recorded in testimony from the shore to mountain zones and were "used to travel between districts, and for practices such as collection of stone for adze making, bird catching, bullock hunting, and collection of other resources," (Maly and Maly 2022:57). Trails also existed for hauling finished canoes makai (*sea*) (Maly and Maly 2022:71, 85). Trails throughout the 'āina mauna proved vital for Kānaka 'Ōiwi for a variety of reasons, most notably, access across the island and resource gathering (Maly and Maly 2022:7). Despite being plain in appearance, it was clear that much work was done to maintain the trails (Maly and Maly 2022:12).

Oral traditions relay that following the 1782 Battle of Moku'ōhai in Ke'ei, South Kona, the ali'i (*chief*) Keawemauhili, his wife, Ululani and their daughter, Kap'iolani, traveled from Kona to the uplands, across Mauna Kea and down to Pā'auhau on the northern coast of the island. The family continued to move across the 'āina mauna for safety, passing Mauna Kea and continuing on another mountain trail to Hilo on the east side of the island (Maly and Maly 2005:50, 51).

Between 1920 and 1924, the Hawaiian pastor Stephen Langhern Desha published installations of "He Moolelo Kaao no Kekuhaupio, Ke Koa Kaulana o ke Au o Kamehameha ka Nui" (*A Tradition of Kekuhaupio, the Famous Warrior in the time of Kamehameha the Great*) in the Hawaiian language newspaper *Ka Hoku o Hawaii* (*Star of Hawai'i*). Desha's version of the mo'olelo recounted one of Kekūhaupi'o's trips with Kamehameha I from the southern district of Ka'ū to Mauna Kea. They traveled towards Kīlauea and to 'Ōhaikea before crossing the 'āina mauna to reach Mauna Kea. After crossing the 'āina mauna, they climbed up another mountain trail until

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they reached the summit of Mauna Kea and Kamehameha makes a ceremonial offering near Lake Waiau before descending (Desha 2000:94).

Several ancient trails that lead to the summit became accessible by government roads and were used throughout the 1920s (Maly and Maly 2022:11). Primary access points include the 'Umikoa-Ka'ula Trail, Kemole-Pu'u Nanahu Trail, and the Kalai'eha-Waiau Trail (Maly and Maly 2022:11). Portions of these sophisticated trail systems were later improved or overlaid beginning in the Hawaiian Kingdom and 1854 through modern times (Maly and Maly 2022:9, 10, 13). By the early 1870s, the trail between Kalai'eha and the summit was improved into a horse trail by lessees of the 'āina mauna (Maly and Maly 2022:11).

In his 1912 writing about a journey through the mountain trails of Hawai'i Island, *Pacific Commercial Advertiser* associate editor Sol. Sheridan included Eben Low's account of adze makers traveling to Mauna Kea and the trails they utilized (Sheridon 1912:331-333 in Maly and Maly 2022:11-12). Included in his writings is an account of trail building undertaken by 'Umi a Liloa:

The road by which we went down into Kona from our dry camp in the lava is a road that has been traversed by few men now alive. Long ago, before the history of these Islands began to be written, it is said that the natives went that way to get stone forms for their adzes from the hard rock of Mauna Kea, but that is a tale only. [Sheridon 1912:331 in Maly and Maly 2022:11]

Another section of the account reads:

Eben Low and a native assistant went that way once, and marked the way. It was by this marked way that "Rawhide Ben" led us out again... We have traveled several hours from our dry camp when we struck Umi's trail, plainly marked across an old a-a flow upon which a forest had grown up. The trail was plain, and showed that much work had been done upon it. Like all Hawaiian roads of the olden time—or most of them—it ran straight away toward the point that it was desired to reach, regardless of the topography of the country. Umi was a trail builder, up to this date. Where the a-a was level, his men marked their way across it by smooth going. Where there were depressions in it, they were filled up to the general level, much as a modern engineer would fill them. Where there were hillocks to be crossed, they were cut away if not too high and passed over in a straight line if their altitude forbade grading. And this road, as smooth and as easy as though built yesterday, was constructed so long ago that in the center of it, through the rotten lava, lehua trees had grown up, having the girth of a strong man. Umi's slaves marched this way to the quarries of Mauna Kea, and his couriers went this way and his armies marched this way, it is probable, to battle with the men of the Waimea and Kohala country... This road, or maybe another, ran from Kailua straightaway to Hilo, and old tales are that the kings living at Kailua would have mullet caught for them in

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the ponds of Waiakea in the morning, and would eat them at night, relays of swift couriers carrying them across the island. [Sheridon 1912:332 in Maly and Maly 2022:12].

Other predominant historical uses of the 'āina mauna were for travel across the island, hunting, and resource gathering, all of which these alahēle supported. The 'āina mauna continue to provide access for travel across the island and resource gathering for traditional and cultural practices. Resources were carefully managed, allocated, and guarded, and therefore close attention was paid to traditional land boundaries and resource gathering zones (Maly and Maly 2022:56, 61, 69, 70, 74, 85, 112, 136). Ohakee [Ohaku], a canoe maker from Kalopa, Hāmākua, Hawai'i residing in Weha at the time of his testimony described resource allocation: "We could not live on one land and take things off another, without having our property taken away by people of the other lands..." (Ohakee 1873 in Maly and Maly 2022:85).

Kānaka 'Ōiwi Boundary Commission testimonies record a wide array of 'āina mauna resources being cultivated, gathered, and utilized. Multiple generations of bird catchers and canoe makers such as Koapunini, his son Eekamoku, and testifying grandson Waiki (Waiki 1873 in Maly and Maly 2022:65), as well as Kalauāloha (Kalauāloha 1873 in Maly and Maly: 74) and Kamohaiulu (Kamohaiulu 1873 in Maly and Maly:71) mentioned their skilled practices while detailing the boundaries of Humu'ula. Kalo (*taro*), sweet potatoes, gourds, and mai'a (bananas) were grown in the 'āina mauna (Maly and Maly 2022:56, 121, 135). Mamaki (mamake) was cultivated as well as gathered from patches in the woods (Maly and Maly 2022: 57, 76). Sandalwood was harvested (Maly and Maly 2022:57, 63, 133, 135, 136). Koa trees were harvested for canoe making, and trails installed for hauling finished canoes makai (*towards the sea*), including one present near Humu'ula at Mauiana (Kamohaiulu 1873 in Maly and Maly:71; Maly and Maly 2022: 57, 85).

Kānaka 'Ōiwi Boundary Commission testimonies also record traditional and cultural practices associated with the 'āina mauna. These include burials, cultural and spiritual practices, pōhaku sourcing and knapping, bird catching, hale (*house*) construction, and canoe making (Maly and Maly 2022: 50-80).

In the present day, ahu (*shrines*) that evince cultural and spiritual practices are still found along the trails that cross Mauna Kea and lead across the 'āina mauna, including Pōhaku o Kāne, a structure of upright stones (Maly and Maly 2022:9). Kānaka 'Ōiwi continue to travel throughout Mauna Kea by way of trail systems to access these ceremonial sites and shrines (Ching 2016:13).

Generations of dual specialist bird catchers and canoe makers resided in the mauna and forest wao of Mauna Kea (Waiki 1873 in Maly and Maly 2022:65; Kalauāloha 1873 in Maly and Maly: 74; Kamohaiulu 1873 in Maly and Maly:71). Construction of kauhale, which were Hawaiian settlements/homesteads in mountainous and forest wao, as well as kauhale manu (*bird-catchers' houses*) and kauhale kalaiwaa (*canoe makers' houses*) at Waipahoehoe and Waipunalei, Laupahoehoe to Pu'ukole, Puakala Gulch, and Kaiaki are well-documented (Waiki 1874 in Maly and Maly 2022:61; Maly and Maly 2022:56, 61, 65, 66, 69- 71; Pukui and Elbert 1986:135).

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Nineteenth century Hawaiian scholarship discusses the cultural importance of bird feathers, the cultural practice of bird catching, and uses of different species in recorded oral traditions, ethnohistorical Kānaka ‘Ōiwi lines of evidence that further contextualize cultural practices that occurred and resources that were present on Mauna Kea. Noted nineteenth century Hawaiian scholar and historian David Malo (1951:106) stated: “The feathers of birds were the most valued possessions of ancient Hawaiians.” Malo goes on to state: “The feathers of the mamo were more choice than those of the *oo* because of their superior magnificence when wrought into cloaks (*ahu*) (Malo 1951: 106)(Figure 12). Malo also described an array of cultural practices of *kia manu* (bird catching) and cultural uses of birds and bird feathers ([Langlas and Lyon, trans.], 2020:125):

The *moho* [Hawaiian rail] is a flightless bird, one that simply moves in the bush, because it has such short feathers. It has beautiful eyes. It is similar perhaps [in size] to the *‘alalā*. It is caught by use of the sliding snare. It is a bird that is eaten. These birds do not fly to the shore, but stay only in the bush, because their feathers would become heavy if wet from seawater. [Malo (Langlas and Lyon, trans.), 2020:125]

Late nineteenth century historical accounts record King Kalākaua’s efforts to locate Moho, Mamo, and “O-o”, underscoring the birds’ cultural importance and significance as well as Kānaka ‘Ōiwi Hawelu’s procurement of five Moho specimens for Western researchers (Hawelu n.d. and Wilson 1899 in Walther 2022:78).

Historical accounts by foreign visitors provide an outsider’s perspective on bird catching and use in the sovereign Kingdom of Hawai‘i. Writing in 1848, visiting naturalist and artist Titian R. Peale noted Hawaiian cultural uses of the ‘Ō‘ō:

The yellow tufts of coastal feathers on this beautiful bird, furnished the material for the splendid and costly royal robes, capes, and “lei’s,” or head-dresses of the Hawaiians in former days. The bunches of feathers called *hulu*, ... are still prepared and received in payment of a poll tax to the King; they are afterwards made up primarily in “lei’s,” or headbands worn by the ladies, and are beautiful but costly ornaments; but few can afford to wear them. The mantle made up of these feathers, were, until lately, considered the principal treasures of the crown; now they are not to be seen; the labour of collecting the feathers and attaching them to a network base - a labour of years-being too great. [Peale 1848 in Walthers 2022:90]

Many kama‘āina and Kānaka ‘Ōiwi testified to the Boundary Commission that their families and others in their ahupua‘a engaged in bird catching in the ‘āina mauna and would use the trails that led from their respective moku into the ‘āina mauna to do so. The now extinct ‘ō‘ō (*native*

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honeycreeper) and mamo birds were popular for their brightly colored feathers and were collected to create royal adornments for ali'i. Bigger birds like the ua'u (*Hawaiian petrel*) and nēnē goose were hunted for subsistence (Maly and Maly 2022:7). Malo (2020) writes of nēnē hunting occurring in mountain lands. An excerpt from his discussion reads:

...There is the nēnē. [Hawaiian goose]. The nēnē is one of a kind: it is as big as the foreign duck, with speckled feathers and long legs and a long neck. When its feathers molt and it walks on the ground, it is pursued by bird chasers in the mountains and that is when it is caught. Its feathers are made into *kāhili* [feathered standards] that are much traded. Its flesh is good to eat.
[Malo (Langlas and Lyon, trans.), 2020:108]

Malo describes other birds associated with mauka lands:

Here are the wild birds that are smaller in size. Some are the size of a half-grown chicken and some are smaller yet. The 'ō'ū is the size of a half-grown chicken and has green feathers. It is good to eat. It is caught by using *kāpili kēpau* [ensnaring with sticky gum].

The 'ōma'o [Hawaiian thrush] is a bird similar to the 'ō'ū. It has black feathers. It is good to eat. It is caught by the *kāwili* method [ensnaring with sticky gum] or by the sliding snare. The 'ō'ō and the *mamo* are two birds similar to each other, smaller than the 'ō'ū. They have black feathers and pointed beaks. They are good to eat. Their feathers are made into large *kāhili* for *ali'i*. The feathers beneath their wings and of their tails are beautiful yellow feathers that are made into *'ahu 'ula* [feather cloaks], the garment worn by soldiers in time of war. They are also made into *lei* for female *ali'i* and prominent women, and into *lei* for the *makahiki* god. Many things are done with these birds. *Kāpili kēpau* [use of sticky gum] and the *kia* are used to catch them.

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The 'iwi [usually 'i'iwi] is a bird with red feathers and a long beak. Its feathers are made into 'ahu 'ula. It is good to eat. It is caught by kāpili kēpau. The 'apapane and the 'akihi pōlena have red feathers. The 'ula is a bird with black feathers and red beak, eyes, and legs. It lies sideways on its nest. It is a bird celebrated in chants. The u'a is a bird similar to the ō'ū. The 'ākohekohe is a bird that sits on a nest on the ground. The mū is a bird with yellow feathers. The 'amakihi and the 'akihi a loa are birds with yellowish feathers and are good to eat. They are caught with kāpili kēpau.

[Malo (Langlas and Lyon, trans.), 2020:109]

Malo specifically describes forest birds associated with mauka (*uplands*) lands:

The 'elepaio is a bird that is eaten. The 'iao is a bird similar to the moho, which looks as if its eyes are in the back. The kākāwahie is another bird. The kī is a bird smaller than all the others. All of these birds live only in the forest, without flying to the shore.

[Malo (Langlas and Lyon, trans.), 2020:109]

A large number of 'ua'u (*dark-rumped petrel*) bones were recovered at the Mauna Kea Adze Quarry and at the Pōhakuloa Training Area, evincing their abundance in the saddle area and on Mauna Kea, which was confirmed to be where large numbers of 'ua'u historically nested and are nesting again today (McCoy 1990:91, 105; Moniz 1997:40; Hart Lab 2023). Nēnē were historically found on the northeastern flanks of Mauna Kea and were most abundant in that area down to the Kona region (Baldwin 1945:28). Although widely distributed on Hawai'i Island, nēnē were seasonally abundant in the 'āina mauna in the summer months at the four to five thousand foot elevation (Baldwin 1945:30).

The dense, resource-rich forests of Humu'ula and Ka'ohe Ahupua'a consisted of various native trees such as koa that were harvested for canoe making, with alahele (*trails, roads*) created to transport the canoes from the forests to the shore. These forest trails did not descend from mauka (*uplands*) to makai (*seaward*) but instead, connected to the existing trails in the 'āina mauna. Kamohaialu, a bird catcher and canoe maker, describes an "old canoe road of Humuula at Mauiana," and the gulch "where we used to live and catch birds, and make canoes, [a] canoe road," (Kamohaialu 1873 in Maly and Maly 2005:65). 'Ōhi'a lehua trees were abundant in the moist forested areas of Ka'ohe and were the home of choice for many of the birds that kia manu (*bird catchers*) sought (Emerson 1895:104). Kia manu would begin their work early in the mornings,

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reaching their chosen hunting grounds before the sun could fully illuminate the summit of Mauna Kea (Emerson 1895:106).

As with manu, Hawaiian primary sources record and contextualize the rituals, skills, and beliefs associated with the Hawaiian cultural practice of sourcing wood for canoes, which occurred in the 'āina mauna of Mauna Kea; the passage below evinces and richly describes the cultural practices and traditions. The canoe making that occurred on Mauna Kea was a highly ritualized process that also required specialized artisan expertise, adze selection, and the sourcing of raw materials. Malo details some cultural practices and beliefs concerning canoe making, including journeying upland to find koa, ceremonies performed on the 'āina mauna, the selection and blessing of the canoe-carving adze, and rough-hewing the canoe in preparation for transport and completion at a hālau (*long house for canoes or hula*) further makai (*seaward*)(Figure 13):

Concerning the canoes of Hawai'i:

1. The *koa* is the tree that Hawaiians have carved into canoes from ancient times. The *'ulu*, *kukui*, *'ōhi'a hā*, and *wiliwili* are other trees that were carved into canoes, but less often. The *koa* was the tree usually carved into canoes.

2. Canoe carving was an activity that involved religious service to a god. After a *koa* tree had been spotted, and the *kahuna kālai wa'a* [canoe-carving expert] has been told that there was a good, large *koa* tree, he went to the *mua* for the night to perform a sign-seeing ritual [*ho'omoe*] in his *heiau*, so that he might perceive something in a dream by which his God would tell him whether that [tree] would be good for a canoe or would be rotten.

3. During his sleep that night, if he saw something in his dream, a man standing naked without his *malo* or a woman without her *pā'ū*, and if the person's hand was on the genitals, when the *kahuna* awoke he knew that the *koa* was rotten. The *kahuna* would not go into the uplands to carve that canoe.

4. Instead he looked for another *koa*, and having found it, he went again to the *mua*, to the *heiau*, to perform a sign-seeing ritual. If he saw in a

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dream a good-looking man or a good-looking woman standing clothed in a fine-looking *pā'ū*, and draped in a fine-looking *kapa*, when he awoke, he knew for certain that it would make a good canoe.

5. Then they prepared to go to the uplands to carve that *koa* into a canoe. When they went up, they took with them a pig, a coconut, a red fish, and *'awa*. When they arrived in the uplands, they performed a sign-seeking ritual [*ho'omoe*] that night, offering those things as sacrifices to the god, carrying out the religious service and praying, and then they would sleep.

6. The next morning, they cooked the pig in an *imu* made close to the base of the *koa*. When the pig was cooked, they ate it. Having finished eating, they went to inspect the *koa*. One of them climbed up to measure the place for the inside of the canoe and for the keel and the length of the canoe. And when this was done,

7. then the *kahuna* grasped the stone adze and offered it to the god, saying, "Oh Kūpūlupulu, Kū'ālanawao, Kūmoku'hālī'i, Kūka'ie'ie, Kūpalalakē, Kūka'ōhi'alaka." When he had finished calling on the male gods, then he called on the female gods, "Oh Lea, Kapūoalaka'i. attend all of you to the adze. This is the adze that will hew the canoe." And when the offering was finished,

8. then the *koa* was cut down for a canoe. This is how the cutting was done: approximately three feet were left between the cut, one above and one below; then the cuts were enlarged both above and below; then splits were made lengthwise along the length of the timber [between the cuts] so that splinters broke loose.

9. And so the cutting was continued. If there were only one *kahuna*, it would take many days

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to cut, and then the tree would fall. If there were many *kāhuna*, the *koa* would fall soon, even in one day. When the *koa* made a cracking sound as it was about to fall, speech was suspended; no one could speak aloud.

10. When the *koa* fell, the *kahuna* who was in charge of the hollowing out climbed on top of the trunk of the *koa* with the adze, and turned his face to the base of the *koa* that was laid below him, with his back to the top of the *koa*.

11. Then he called with a loud voice, "*E kū a ea! Hō mai he malo!* [Stand up and rise up! Give me a *Malo!*]" Then, the wife of the *kahuna kālai wa 'a* gave him his *kahuna malo*, a white one. Then the *kahuna* girded himself in his *malo*, and turned his face to the top of the *koa* and his back to the base.

12. Then he walked a little way up the *koa*, and from that place a little farther up, he called with a loud voice, "*E kū a ea! Hō mai he wa 'a!* [Stand and rise up! Give me a canoe!]" Then, a cut was made with the blade of the adze, one blow at that spot. When that was done, he walked farther on, and called again with a loud voice. Thus he continued calling until he reached the spot where the top of the *koa* was to be cut off.

13. Then he wrapped with *'ie 'ie* the spot where the top was to be cut off. And then he made offerings again to the god for cutting the top of the *koa*. And when the offerings had been given, talk was again forbidden. When speech had been hushed, the top was chopped off. Then the *kahuna* made the service *noa*, proclaiming, "*O ho 'olele wale ka 'aha* [Let the service be sent on its way]." Then the men might speak aloud because at the end of these religious rituals it was *noa* [no longer *kapu*].

14. Then the canoe was carved. This is how

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the carving was done: the front and back of the canoe were cut to taper the prow and the stern. Then the sides were carved, and the keel below, and the top of the canoe was made flat. Then the outside was finished, and then the inside of the canoe was measured.

15. When it was time to measure so that the inside would be properly made, only the *kahuna* did the measuring. When that was all done, the work on the canoe was *noa* [i.e other workers could do the work].

16. Then the inside opening of the canoe was pecked out with a small adze, and the *kumu pepeiao* [side projections inside the hull] were shaped. When that was done, the carving of the canoe was continued. Then a neck called the *maku 'u* was made at the stern of the canoe. That is where the rope was tied to haul the canoe down to the shore.

17. When the time came to haul the canoe to shore, the *kahuna* came to attach the line. The line was tied at that spot called the *maku 'u*.

18. Before the time came to attach the line to the *maku 'u*, the *kahuna* called upon the god like this:

*Oh Kūpūlupulu, oh Kū 'ālanawao,
Oh Kūmokuhāli 'i,
Protect this canoe.
Protect the front of the canoe.
Protect the back of the canoe.
Until it reaches [sic] the shore.
Protect it until it is placed in the hālau [canoe house].*

When the prayer had been finished,

19. then the men got ready to haul the canoe. While it was hauled, only the *kahuna* would be behind the canoe, at a distance of perhaps ten fathoms [sixty feet]. All the men went in front

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of the *kahuna*. None of the men could walk back there.

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20. The hauling of the canoe had to be done with care: in those places where it was precipitous and the canoe moved too fast, someone would protect it from getting cracked; and in places where it could get stuck, someone would lift it up. That is how it was done until the canoe reached the shore and entered the *hālau*...
[Malo (Langlas and Lyon, trans.) 2020:207; 206-213).

Some practices described above, the locations they took place in, and the resources involved have ultimately ceased to exist due to ranching and decimation of the landscape and native species. Although the landscape has changed and some places and resources have been obliterated, Kānaka 'Ōiwi believe these places still exist but in a different stratum. Note Maly and Maly (2022:4): "This belief that the mana (*spiritual power and essence*) remains in the honua ola is deeply ingrained in Hawaiian culture". The mo'olelo and historical documents feed into the oratory tradition of Kānaka 'Ōiwi demonstrating the inherent sacredness of these wahi pana (*sacred places, storied places*) to persist and feed the deeply rooted connection that Kānaka 'Ōiwi have to the 'āina.

As stated previously, resources present on Mauna Kea that do not contribute to its significance or integrity as a Hawaiian TCP and district include historical ranching features, telescopes, modern infrastructure and buildings.

Mauna Kea should be listed and officially recognized as a TCP on the National Register of Historic Places because it is integral to the cultural identity of Kānaka 'Ōiwi. This nomination highlights and holistically frames the inseparable cultural, spiritual, and physical attributes of Mauna Kea that together contribute to its significance and integrity. Further, this research and nomination is intended to first center on and showcase Kānaka 'Ōiwi perspectives - the Hawaiian worldview - and second, to honor our pilina (*cultural attachment*) to this wahi pana (*storied and sacred place*).

Practices/Ceremonies

As previously explained, Kānaka 'Ōiwi have a well-developed understanding and relationship with 'āina (*land*), which derives from Kānaka 'Ōiwi's familial relationship to 'āina as descendants (Kiyuna 2020:2). This deeply familial understanding of the environment intimately weaves kānaka life cycles - living, reproducing, dying - with the landscape, in particular, Mauna Kea (Kiyuna 2020:2). Depositing a newborn's piko on Mauna Kea facilitates the child's first connection to land whereas interring ancestral remains on Mauna Kea facilitates the transition of Kānaka 'Ōiwi back to 'āina. Kānaka 'Ōiwi life cycles are inherently tied to the 'āina and it is part of Kānaka 'Ōiwi's

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kuleana (*responsibility*) to maintain these connections and cycles (Kanahele et al. 2016:2). Accordingly, Mauna Kea is essential to the retention and continuation of cultural beliefs and practices for Kānaka 'Ōiwi who share an integral relationship with Mauna Kea (Abad 2016:11). Despite the substantial modifications to Mauna Kea, the landscape retains its condition of integrity and is still considered sacred and important to cultural practices associated with Kānaka 'Ōiwi long-held traditions and beliefs.

Practices associated with interring iwi kūpuna (ancestral remains) and depositing piko (umbilical cord) on Mauna Kea

Water purity is important, particularly for certain ceremonial practices such as religious healing practices (Kanahele 2017:4). The waters of Lake Waiau are considered the sacred water of Kāne and considered to be pure. Historically, Kānaka 'Ōiwi would go to Lake Waiau to collect water for ceremonial use, a practice that Kānaka 'Ōiwi continue to undertake for uses including spiritual and medicinal use (Ching 2016:2).

Historically, Kānaka 'Ōiwi families would make pilgrimages to Lake Waiau to deposit the piko of their newborn children. Both the practice of depositing piko and collecting water to conduct ceremonies are continued by Kānaka 'Ōiwi today. Burying ancestral remains on Mauna Kea is a ceremonial ritual that was historically practiced by ali'i and maka'aināna (*commoners*) alike (Maly and Maly 2005:51; Maly and Maly 2022:13, 39; Abad 2016: 11; Ching 2016:13, Lindsey-Ka'apuni 2016:1).

Kānaka 'Ōiwi iwi kūpuna (*Hawaiian ancestral remains*) and moepū (*associated funerary objects*), sacred objects, and koehana (*objects of cultural patrimony*), were intentionally secretly-interred **throughout** Mauna Kea, which is imbued with the mana (*divine power*) of the iwi kūpuna and the sacred nature of their moe loa (*eternal rest*). Recorded in oral traditions and primary historical sources, the secret interment of burials, in part to protect their mana (*power*), is a well-documented traditional cultural practice and belief that pertains to Mauna Kea (Malo [Langlas and Lyon, trans.] 2020:178; Kamakau 1964: 38-42; S. Kauahipaula 1880 in Maly and Maly 2022:86; Kahue 1880 in Maly and Maly 2022:88; Malai 1866 in Maly and Maly 2022: 129; Maly and Maly 2022: 13, 20, 50). Traditionally, human remains were interred in remote areas to protect the iwi (bones) from desecration (Collins and McCoy 2014:16). Traditional and historical burial sites included Pu'uokūka'iau, Pu'uokihe, Keahuonaiwi, 'Iolehaehae, and other unspecified areas (Maly and Maly 2022:50). Other pu'u on Mauna Kea such as Pu'u Kūkahau'ula and Pu'u Mākanaka are locations where funerary practices were traditionally performed and where piko were hidden (Ho'akea, LLC 2009:1-2).

Kamakau provides a history of Hawaiian burial practices:

There were many ways of disposing (*kanu ana*) of corpses. In the very ancient times corpses were buried in graveyards (*kanu ma na ho'oilina*), and those graveyards were well known throughout the islands. The corpses were laid out straight in

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wooden troughs (*holowa'a*) and buried. That was in the time of peace and tranquility in the land; that was when corpses were actually buried. During the time of wicked, traitorous, and desecrating chiefs, the bones of the dead were dug up out of the grounds to be used for arrows for rat shooting and for fishhooks, and the bones and bodies of the newly buried were dug up for food and bait for sharks. For this reason, consternation arose in every family, and they sought places of concealment for the bones of their grandparents, parents, children, chiefs, and relatives. They searched for deep pits (*lua meki*) in the mountains, and for hiding pits (*lua hina*) and hiding caves (*ana huna*) along the deep ravines and sheer cliffs frequented by *koa'e* birds. [Kamakau 1964:38]

Kamakau (1964: 38-42) states that different burial locations were reserved for common people and ali'i and discusses the importance of honoring the desire of a person to have their bones concealed upon death. Kamakau's account is one of many Hawaiian oral traditions and primary sources documenting Hawaiian cultural practices, beliefs, and traditions that were also practiced on and applicable to Mauna Kea (S. Kauahipaula 1880 in Maly and Maly 2022:86; Kahue 1880 in Maly and Maly 2022:88; Malai 1866 in Maly and Maly 2022:129; Maly and Maly 2022:13, 20, 50).

The Hawaiian oral tradition of 'Ōlelo No'eau (proverbs), which is reproduced through strict protocol, and often "part of sacred learning or tradition," (Kikiloi 2010:79) convey some Hawaiian cultural beliefs appropriate to share here regarding the secret interment of burials:

Mai kaula 'i wale i ka iwi o nā kūpuna (*Do not dry out the bones of the ancestors.*)
Do not discuss your ancestors too freely with strangers, for it is like exposing their bones for all to see. [Pukui 1983:225, #2069]

O Ulumaheihei wale no, iāia o loko, iāia o waho (*Ulumaheihei knows everything inside and out*).

One who knows everything. Ulumaheihei was a very close friend of Kamehameha, who renamed him Hoapili. He was the king's most trusted friend and knew every affair of the kingdom. It was to him that Kamehameha entrusted his bones after death. [Pukui 1983:277, #2541]

'A'ohe e nalo ka iwi o ke ali'i 'ino, o ko ke ali'i maika'i ke nalo (*The bones of the evil chief will not be concealed, but the bones of the good chief will.*)

When an evil chief died, the people did not take the trouble to conceal his bones. [Pukui 1983:17, #135]

Kamakau (1964: 3) also writes of the different ways the bodies of good and bad chiefs were treated: "Chiefs who did evil were known, and when they died, their bodies were cast away, apart from the chiefs who had ruled well."

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Iwi kūpuna (*Hawaiian ancestral remains*) of ali'i and maka'āinana (*commoners*) alike are interred in secret locations throughout the summit and the 'āina mauna regions of Mauna Kea. While burial ceremonies and the location of remains are typically kept private, there are historical accounts of people important to Kānaka 'Ōiwi history of Mauna Kea that are known. Among those who are interned on Mauna Kea is Kūkahau'ula, buried at the summit (Maly and Maly and Maly 2005:51; Lindsey-Ka'apuni 2016:1). Throughout the generations, many of his descendants have also been buried at the summit (Lindsey-Ka'apuni 2016:1). In one account, Kūkahau'ula lived on Mauna Kea with his wife, Lilinoe for a period of time before they both passed away while living there (Maly and Maly 2005:51). Lilinoe herself was an important ancestral figure, particularly for the favored wife of Kamehameha I, Queen Ka'ahumanu who attempted to retrieve Lilinoe's remains in 1828 (Maly and Maly 2005:29). Kūkahau'ula bears the same name as a pu'u associated with burying ancestral remains and Lilinoe also bears the name of the akua of mist known to frequent Mauna Kea. These are not mere coincidences but are indicative of the inherent, familial relationship that exists and continues between Kānaka 'Ōiwi and Mauna Kea and contributes to the significance that Kānaka 'Ōiwi ascribe to the mountain.

Mauna Kea as a place for conducting worship and ceremony

As a sacred landscape, many Kānaka 'Ōiwi revere Mauna Kea as a place of worship and religious practice and go there to exercise traditional and customary practices, engage in cultural protocols, participate in ceremonial gatherings, make offerings, and engage in prayer (Ho'akea, LLC 2009:4-6; McCoy and Nees 2010:66; Ching 2016:13; Cleghorn 2016:1). Kānaka 'Ōiwi make the journey to Mauna Kea to engage in these practices at various shrines and cultural sites.

There are a number of ahu (*shrines*) that exist on Mauna Kea, some that have been recently erected and those that have withstood time and can still be seen today, such as Pōhaku o Kāne (Maly 2022:9) (Figure 14). Ahu are typically constructed out of rock material but may take various forms, as seen in Keanakāko'i adze quarry (McCoy and Nees 2010:66) (Figure 15). Ahu may be used singularly, as in the case of the ahu that 'Umi a Līloa erected for his ceremonial worship purposes, however, as Kanaka 'Ōiwi ethnohistorian Kēhaulani Abad (2016:13) explains, ahu "with uprights traditionally were commonly used in tandem with one another or with other parts of the natural setting." Skilled practitioners were able to mark the creation of those alignments to identify natural phenomena such as the rising sun during the summer solstice, relocate a natural feature, or a significant natural resource. This practice of using natural features and ahu to mark celestial alignments and other natural phenomena occurred, and continue to occur, on Mauna Kea and is common throughout Hawai'i (using natural features and ahu to relocate fishing grounds; uprights used to demarcate the path of the sun during solstice in oceanside communities) (Maly and Maly 2022:10). As previously discussed, Kānaka 'Ōiwi have an intimate pilina (*connection*) with the environment. This is exemplified through practices, including kilo hōkū (*astronomy, to observe stars*). Studying the stars, planetary movement, and alignments was important for decision-making and understanding the nuance of seasonal changes, environmental changes, natural phenomena, and adapting and conforming accordingly.

Importance of ahu (shrines) for traditional practices on Mauna Kea

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As previously stated, 'Umi a Līloa was a religious chief and constructed ahu and heiau (*temples*) throughout the 'āina mauna. Among his constructions were Ahu a 'Umi, situated between Mauna Loa and Hualālai; Ahu o Hanalei (*Altar of Hanalei*) built below Pohaku Hanalei; Puukekee (also written as Puu Keekee) on the eastern side of Mauna Kea; and an ahu at Mauna Halepohaku near to which 'Umi a Līloa dwelt with his people (Maly 2005: 26,27).

Hawaiian oral traditions and ethnohistorical accounts, buttressed secondarily by archaeological and historical lines of evidence, establish kuahu as another ancient Hawaiian cultural practice and tradition associated with Mauna Kea that persists through contemporary times. Historical testimony details ahu constructed for bird catchers and potentially other purposes at specific locations throughout Mauna Kea, and are illustrative of the practices' persistence. In 1862, a Commission of Boundaries was established to determine the boundaries of ahupua'a as a result of the Māhele⁴ (Maly 2022:44). Boundary Commission testimony issued by Kānaka 'Ōiwi identify Pu'u Poli'ahu and Pu'u Līlinoe as "heiau and 'ahu - ceremonial sites, shrines, and places where mele (*chants*) and offerings were presented," (Maly and Maly 2022:13). The same may be true of an ahu or cairn at the summit of Mauna Kea at Pu'u o Kūkahau'ula (Maly and Maly 2022:50). Kānaka 'Ōiwi Boundary Commission testimony records that Kuakini constructed an ahu for bird catchers that came to be called Keahu o Kuakini, near Puumanu (Maly and Maly 2002: 62). On Humu'ula, a "large ahu called Makanaka" was "higher than a man" and Ahuapoopuaa was the name of an altar and hill at Humu'ula and also served as "the boundary at the base", likewise at Kaiwilohilohi (Maly and Maly 2022:63). Ceremonial worship at ahu persists through the present, as do the ahu themselves. Write Maly and Maly (2022:10): "There remain to this day examples of small shrines, upright stones (Pōhaku o Kāne) and other features along trails across the mountain plateau, leading across the 'āina mauna, and to the summits of Mauna Kea and Mauna Loa." The word kuahu can be broken into two parts: kū (*to stand, upright*) and ahu (*shrine, altar, pile*) (Pukui and Elbert 1986: 8, 167). Kuahu, especially those found on Mauna Kea, are one or more stone uprights fashioned on either a prepared foundation or an elevated area within the natural landscape (McCoy and Nees 2014:31). Historical records from the sovereign Kingdom of Hawai'i evince a kuahu was also constructed in 1882 to commemorate Queen Emma's ascent of Mauna Kea (Alexander 1892a in Maly and Maly 2022:40).

While ahu are of critical cultural importance, the view planes on Mauna Kea are significant and contribute to its integrity of relationship and condition. The cultural value of view planes on Mauna Kea contribute to the mountain's integrity of relationship between Mauna Kea and Kānaka 'Ōiwi as it is absolutely necessary for the traditional and cultural practice of kilo (*observation*). These view planes are used in ceremonies conducted in conjunction with ahu and other physical features in the environment both on Mauna Kea and abroad (Figure 16 and Figure 17). It is crucial that the visual alignment between various pu'u such as Pu'u Poli'ahu and Pu'u Kūkahau'ula with the hundreds of shrines located at and near the summit of Mauna Kea is not obstructed (Flores 2016:9).

⁴ The Māhele occurred in 1848 wherein King Kamehameha III divided all land in Hawai'i, reserving one third for himself and his heirs (Crown lands) and designating one third to the chiefs and konohiki (*head of a land division whose rank was less than a chief*), and the remaining third to the tenants of the land (Chinen 1958:15,16; Osorio 2002:44-46).

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Although the presence of telescopes on Mauna Kea interfere with the view planes, Kānaka 'Ōiwi continue to conduct practices reliant on these view planes and therefore, Mauna Kea presently retains its integrity of condition and significance (Figure 18). Continued development on Mauna Kea, however, will negatively impact Kānaka 'Ōiwi's ability to engage in the traditional and cultural practices tied to Mauna Kea.

In addition to being able to view the alignment of different landmarks and locations on-island, unobstructed view planes on Mauna Kea are important for celestial observation and navigation beyond Hawai'i Island. This type of endless view plan is particularly important for solstice and equinox observations, which are inextricably linked to Mauna Kea as the highest seat to the heavens, that continue to be practiced by Kānaka 'Ōiwi today (Ching 2016:13; Pisciotto 2016:7). Use of upright stones in conjunction with other uprights or other natural features allow skilled observers to mark alignments to later situate and identify environmental phenomena (e.g. the rising of the sun at summer solstice), relocate a natural feature (e.g. a cave opening that had been sealed and hidden), or a significant natural resource (e.g. an abundant fishing spot) (Abad 2016:13).

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8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- ☒ A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- ☒ B. Property is associated with the lives of persons significant in our past.
- ☒ C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- ☒ D. Property has yielded, or is likely to yield, information important in prehistory or history.

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Criteria Considerations

(Mark "x" in all the boxes that apply.)

☐

A. Owned by a religious institution or used for religious purposes

☐

B. Removed from its original location

☐

C. A birthplace or grave

☐

D. A cemetery

☐

E. A reconstructed building, object, or structure

☐

F. A commemorative property

☐

G. Less than 50 years old or achieving significance within the past 50 years

Areas of Significance

(Enter categories from instructions.)

Ethnic heritage - Hawaiian, Pacific Islander

Period of Significance

From the time of Papahānaumoku and Wākea (the beginning of time and Hawaiian creation)
through the present and on to future generations

Significant Dates

From the time of Papahānaumoku and Wākea (the beginning of time and Hawaiian creation)
through the present and on to future generations

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Significant

Person

(Complete only if Criterion B is marked above.)

Wākea (Sky Father), Papahānaumoku (literally, the firmament or wide place who gives birth to islands), Ho'ohōkūkalani (Creator of the stars), Mo'oinanea, Poli'ahu (snow), Lilinoe (mists), Waiau (lake atop Mauna Kea), Kalauakolea (fog drip), and Kāne (heat), Līloa, 'Umi, Lilinoe, Kūkahau'ula, Kamehameha I, Kamehameha III, Queen Emma

Cultural Affiliation

Hawaiian

Architect/Builder

Papahānaumoku and Wākea

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

Mauna Kea exceeds HRHP and NRHP listing eligibility thresholds as a historic property, TCP, and district under #2 and #3 (HRHP) and as a TCP and district under criteria A through D (HRHP and NRHP). Hawai'i Revised Statutes (HRS) §6E: defines "historic properties" as "any building, structure, object, district, area, or site, including heiau or underwater site, which is fifty years old" (HRS §6E-2 1976). Hawaiian oral traditions and resources affiliated with Mauna Kea that establish the mountain as a TCP detailed throughout this nomination clearly, exponentially exceed the threshold for qualification as a historic property. The National Park Service defines a "district" as something that "possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development" (NPS 1995). The interrelated Hawaiian tangible and intangible resources that constitute Mauna Kea as a TCP and contribute to its significance and integrity also qualify Mauna Kea as a district according to the criteria set forth by NPS. The concentration of sites, buildings, and structures within Keanakāko'i Adze Quarry; concentration of pu'u and other natural features that Kānaka 'Ōiwi traditionally ascribe cultural value and significance to; and the concentration and continuity of sites such as ahu, heiau, and kuahu throughout Mauna Kea at which Kānaka 'Ōiwi continue to practice traditional and cultural practices contribute to the significance of Mauna Kea as a historic district. Underscoring this is the 1999 SHPD recognition of the summit region of Mauna Kea "eligible for inclusion in the National Register as an historic district because it encompasses a sufficient concentration of historic properties (i.e. shrines, burials and culturally significant

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landscape features) that are historically, culturally, and visually linked within the context of their setting and environment,” (Hibbard 1999:5; PHRI 1999). Its period of significance is from the creation of Mauna Kea, the first-born mountain child of the deities, Papa (*Earth Mother*) and Wākea (*Sky Father*) described in Hawaiian oral traditions through to the present. Regarding criteria considerations, iwi kūpuna (*Hawaiian ancestral remains*) interred on Mauna Kea and their presence reflects and contributes to Mauna Kea’s significance as a TCP (S. Kauahipaula 1880 in Maly and Maly 2022:86; Kahue 1880 in Maly and Maly 2022:88; Malai 1866 in Maly and Maly 2022: 129; Maly and Maly 2022: 13, 20, 50).

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

As the most sacred mountain to Kānaka ‘Ōiwi, Mauna Kea meets HRHP and NRHP criteria “A”, since the mountain’s traditional cultural significance is derived from the role that the mountain plays in the cosmology of Kānaka ‘Ōiwi and the ongoing community’s historically rooted beliefs, customs, and practices. Mauna Kea is eligible for listing under Criterion A, “Association with events that have made a significant contribution to the broad patterns of our history,” as appended by Parker and King (1998:12) to include traditional oral history. The fact that Mauna Kea is of paramount religious and cultural importance to Kānaka ‘Ōiwi past, present, and future is conveyed through Hawaiian traditional oral history, embodied and perpetuated by a continuum of cultural beliefs, practices, and recurring tangible physical phenomena, and anchored by the ahu (*shrines*), heiau (*places of worship, temples*), trails, spaces for celestial observation, and markers Hawaiians placed and continue to utilize on Mauna Kea.

A brief introductory overview of the depth, breadth, and ever-evolving dynamism of Hawaiian oral traditions as streams of knowledge within vibrant, living Hawaiian culture is necessary. Kanaka ‘Ōiwi scholar and associate professor Kekuēwa Kikiloī (2010:78) defines Hawaiian oral traditions as “verbal testimonies or reported statements concerning the past,” and ‘ike kūpuna (*ancestral knowledge*). This nomination heavily utilizes types of Hawaiian oral traditions identified by Kikiloī (2010:79) - oli (*chants*), mele (*songs*), ‘ōlelo no‘eau (*proverbs*) which are short, reproduced through strict protocol, and often “part of sacred learning or tradition,” and mo‘olelo (*narratives*) and ka‘ao (*histories*), which are more flexible in structure, version, and meaning.

Resources published in Hawaiian language newspapers, books, maps, correspondence, and other materials commenced in 1820. Nogelmeier (2010:28) writes that both Hawaiian oral and written knowledge, like all knowledge, “...is fractured and multi-threaded...”, elaborating:

There are oral and written lines of knowledge that have extended over time via families, through communities, social or cultural groups, and intellectual lineages of mentors and their proteges. In addition to writing and new technologies, knowledge is transmitted through stories, poetry, dances, music, artifacts, practices, and the anecdotes that contextualize or illuminate each form. [Nogelmeier 2010:28]

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As noted by Roberts (2023:introduction) “Hawaiians embraced literacy in 1820, and their written record is massive.”

Mauna Kea should be listed and officially recognized because it is integral to the cultural identity of all Kānaka ‘Ōiwi. Further, this research and nomination is intended to center and showcase Kānaka ‘Ōiwi perspectives first and honor the pilina (*connection, relationship*) of Kānaka ‘Ōiwi to this wahi pana. Mauna Kea is a source of inspiration for the lāhui (*nation of Kānaka ‘Ōiwi*). Mauna Kea is our most respected elder and considered one of the oldest ancestors to Kānaka ‘Ōiwi. Therefore it is imperative that we mālama (*care for*) this wahi kūpuna (*ancestral landscape*) so that future generations can continue to build pilina to this ‘āina and their identities as Kānaka ‘Ōiwi.

Mauna Kea is of supreme religious and cultural importance to Kānaka ‘Ōiwi, past and present. Many Kānaka ‘Ōiwi acknowledge ‘āina as an ancestor and present themselves as descendants of ‘āina, particularly tracing their lineages back to Mauna Kea and or the akua that are found there (Rosendahl 1999:19; Ho‘akea, LLC 2009:5-1; Kanahele 2016:1). Kamehameha III’s (*Kamehameha III*’s) genealogy is infamously tied to Mauna Kea to unequivocally prove his divine origin and chiefly status (Hehena 1866 [Kanahele, trans.] in Kanaka‘ole 2021:14). In doing so, not only is his position as a high-ranking ali‘i solidified but his descendants are able to trace their genealogies back to the mountain, thereby granting them a direct connection to the gods. As *The Kumulipo* and numerous mele and mo‘olelo inform us, Mauna Kea is the first child of the progenitor gods, Papa-hānau-moku (*Papa who gave birth to the islands*) and Wākea (*Expanse of the heavens*), and is the first child in Hawaiian cosmology. The lāhui at large have an intergenerational understanding of this mo‘okū‘auhau (*genealogy*), and many Kānaka ‘Ōiwi identify as descendants (Kanahele 2016:1; Flores 2016:19; Rios 2016:1). Other families, such as those of Kamehameha III, identify as lineal descendants who claim descendancy from Mauna Kea itself, from the akua that inhabit and comprise the landscape of Mauna Kea, such as Poli‘ahu and Kūkahau‘ula, and/or those who are buried on Mauna Kea (Pisciotta 2016:1; Lindsey-Ka‘apuni 2016:1; Ching 2016:1, 2). Mauna Kea serves a critical role in Kānaka ‘Ōiwi’s historically rooted religion and beliefs that the mountain is an ancestor.

The upper regions and the summit are a wao akua (*godly realm*) home to a number of akua, elemental forces of creation, that shape and comprise the landscape, as well as the meeting place of the creator gods, Papa and Wākea (Kanahele 2016:1,2; Kanahele 2017:3; Pisciotta 2016:2; Kahakalau 2016:3). It is a living temple, one of the most sacred places in Hawaiian cosmology (Ching 2016:1; Pisciotta 2016:2) (Figure 19 and Figure 20). Ceremonial protocols and practices continue to be performed for and on Mauna Kea in recognition of the importance and sacredness of the mountain. Kānaka ‘Ōiwi make pilgrimages to Mauna Kea to perform religious rituals, cultural protocols, spiritual practices, as well as to collect important resources for ceremonial use (Maly and Maly 2022:7; Ching 2016:2; Kahakalau 2016:3; Rios 2016:1,2; Cleghorn 2016:1; Ho‘akea, LLC 2009:1-2)(Figure 21). As Kanaka ‘Ōiwi cultural practitioner and traditional knowledge keeper Kealoha Pisciotta (2016:10) notes, “Lake Waiau is considered among other

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things to be a door way into the Po (the Heavenly Realms of the Ancestors)," (Figure 22). Understandably, Lake Waiau is one of the sacred repositories for Kānaka 'Ōiwi to deposit the piko of their newborns (Ching 2016:13; Ho'akea, LLC 2009:1-2). Lake Waiau dually houses the sacred water of Kāne, which is collected and used for ceremonial purposes both on and off the mountain. There are numerous pu'u scattered throughout Mauna Kea, some of which are similarly used as repositories, however, instead of depositing piko of newborns, Kānaka 'Ōiwi inter the remains of their deceased (Maly and Maly 2022:7, 92, 95; Ho'akea, LLC 2009:1-2; Abad 2016:11; Ching 2016:13; Lindsey-Ka'apuni 2016:1; Kahakalau 2016:3). Imbued with the mana (*divine power, privilege*) of those newly born and recently passed, Mauna Kea is important to Kānaka 'Ōiwi not just as an ancestor but as a significant site for Kānaka 'Ōiwi historically-rooted customs and practices.

Historically, ali'i understood the importance of Mauna Kea as a sacred landscape and seat of power as evidenced by the journeys of various ali'i from ka wā kahiko (*the ancient time*) throughout the monarchy era. Recorded in genealogical accounts is the history of 'Umi-a-Līloa ('Umi), a chief of Hawai'i Island and progenitor of many Kānaka 'Ōiwi families living today. 'Umi was a pious ali'i from Hāmākua and was infamous for unifying the entirety of Hawai'i Island, which was previously governed district by district under various ali'i, under his singular rule. He erected a number of places of worship including ahu (*shrines*) at various points on Mauna Kea, some sites remaining to this day (Kānaka'ole et al. 2021:29).

Between 1920-1924, *He Moolelo Kaa no Kekuhaupio, Ke Koa Kaulana o ke Au o Kamehameha ka Nui* (*A Traditional Story of Kekuhaupio, the Famous Warrior in the Time of Kamehameha the Great*) was published in the Hawaiian language newspaper, *Ka Hoku o Hawaii*. This story recounted Kekuhaupio's travels with Kamehameha I from Ka'ū to Mauna Kea. During this trip, Kamehameha I made two ceremonial offerings on Mauna Kea; the first was made in the 'āina mauna and the second was made at Lake Waiau (Desha 2000:94).

As described in the 2009 Mauna Kea Comprehensive Management Plan UH Management Areas:

Ho'ohōkūkalani's name means "Creator of the stars," and in union with her father she provides the celestial womb from which the native population ensues. Thus, in a Hawaiian context, Mauna Kea can be viewed as the kuahu (shrine) to this union and considered an ancestor to the Hawaiian people. This lineage carries a birthright and responsibility commensurate with Mauna Kea's status as first-born, whose resources need to be protected for the growth and well being of all. [Ho'akea, LLC 2009:1-2]

This relationship lends to the strongly held belief that Mauna Kea is sacred. One particular event that will be discussed further in Criterion B is Queen Emma's well-known journey in 1881 to Mauna Kea to bathe in the sacred waters of Lake Waiau (Ho'akea, LLC 2009:1-2; Unknown author 1881 in de Silva and de Silva 2006:1; Maly and Maly 2022:21, 22, 35-41). Accordingly, Mauna Kea as an ancestor to Kānaka 'Ōiwi, a sacred landscape necessary for certain traditional customs,

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and as a symbol of sovereign authority, serves a critical role in Kānaka 'Ōiwi's historically-rooted religion, beliefs, customs, and practices. Through this integral relationship with the historically rooted beliefs, customs, and practices of Kānaka 'Ōiwi, Mauna Kea retains its integrity and despite substantial modifications to the landscape, Mauna Kea retains its religious and cultural importance and integrity of condition.

Criterion B. Person

As ka piko kaulana o ka 'āina, the famous umbilical cord of the land, Mauna Kea is revered by Kānaka 'Ōiwi as the most sacred and direct connection to the akua (*gods*). Mauna Kea is associated with the lives of persons significant in Kānaka 'Ōiwi past, present, and future: revered akua (*gods*), ali'i (*chiefs*) who ruled in the ancient times, and monarchs of the kingdom era. These akua and ali'i, and the stories of their treatment of and interactions with Mauna Kea, continue to inform Kānaka 'Ōiwi of the importance of Mauna Kea as their ancestral, sacred, and most significant landscape.

Mauna Kea is eligible for listing on the HRHP and NRHP under Criterion B "Association with the lives of persons significant in our past," as modified by Parker and King (1998:13) to include "gods and demigods who feature in the traditions of a group," because it is associated with paramount gods who are associated with the creation of the Hawaiian people and feature in Hawaiian cultural traditions and practices as well as with ali'i who recognized and reinforced their connections to the gods and Mauna Kea. As the first child of the Hawaiian creator-gods, Mauna Kea is imbued with power and serves as the pinnacle of sacredness for Kānaka 'Ōiwi (Ching 2016:1; Edith Kanaka'ole Foundation in Ho'akea, LLC 2009:i; Flores 2016:18). As Kanaka 'Ōiwi scholar and cultural expert Kalani Flores (2016:18) noted, "according to *ike kupuna*, indigenous knowledge and ancestral insight, the top of Mauna Kea is one of the three most sacred and significant places on Hawai'i Island." The mountain's sacredness and significance have been historically recognized by prominent ali'i (*chiefs*) from the ancient times, monarchs of the kingdom era, and Kānaka 'Ōiwi at large (Maly and Maly 2022:35; Lindsey-Ka'apuni 2016:1; Ching 2016:1,2; Unknown author 1881 in de Silva and de Silva 2006). Additionally, the mountain serves as home to the deities that make up Mauna Kea's mythological landscape. Inoa 'āina (*land names*) memorialize and reinforce Mauna Kea's associations with significant Hawaiian akua (*gods*) and their functions (Maly and Maly 2022:12-13; Kanahēle 2017:5, 11-12).

Nā Akua (the gods):

In Hawaiian mythology, Mauna Kea is home to deities that comprise the wao akua (*godly realm*): Poli'ahu, goddess of snow; Lilinoe, goddess of mist; and the mo'o akua (*reptilian deity*), Mo'oinanea, to name a few (Maly and Maly 2005:13, 53; Brown 2022:49; Kanahēle 2017:4). These deities are associated with the summit of Mauna Kea and are fundamental to learning and understanding the biocultural landscape and ecological functions of Hawai'i. They have a continued significance for Kānaka 'Ōiwi as part of the storied landscape of the mountain not only as the elements they represent, but also as physical landmarks on the mountain which bear their

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names-e.g. Pu'u Poli'ahu, Pu'u Līlinoe, Pu'u Kūkahau'ula, and Waiau (Kanahele 2016:2-3; Kanahele 2017:3; Kanahele 2017:4; Pisciotto 2016:10). As an oratory tradition, Hawaiian traditional knowledge systems utilize stories and chants as a conduit for transmitting scientific knowledge. These mo'olelo (*traditions*) have become valuable tools for understanding Mauna Kea's unique cultural and ecological landscape, and the importance of the akua that comprise that landscape (Kanahele 2016:3; Kanahele 2017:3, 11).

In the legend of Keaomelemele, Mo'oinanea has command over clouds and is able to move and place them at will (Manu [Pukui trans.] 2002:113-115). The mana (*divine power*) that Mo'oinanea possesses to move clouds, masses of condensed water vapor, reaffirms her status as a high-ranking reptilian water deity and in other mo'olelo, informs the decision of Kāne to place Mo'oinanea as guardian of both Lake Waiau and his daughter, Poli'ahu, on Mauna Kea (Maly and Maly 2005:13).

In one genealogy of the akua wahine (*goddess*) Poli'ahu, she is the daughter of Kāne (heat, sun, fresh water) and Hina, goddess of the moon (Kanahele 2017:12). As Kanaka 'Ōiwi cultural practitioner, researcher, and teacher Ku'ulei Kanahele (2017:12) noted, Poli'ahu is "the relationship of water, of the snow, to both Kāne, the sun, Kāne the water form, and Hina as the moon." In one mo'olelo, Poli'ahu is said to be the favorite child of Kāne and Hina and was set apart as kapu (*sacred*) atop Mauna Kea (Maly and Maly 2005: 51). Famous for her beauty, men would travel to Mauna Kea to meet with Poli'ahu but during each encounter, Lilinoe would envelop the pursuers with her mist and block access to Poli'ahu (Taylor 1931 in Maly and Maly 2005:53).

In 1931, Hawaiian Historian Emma Ahu'ena Taylor published a mo'olelo of the deities, Poli'ahu and Kūkahau'ula (Taylor 1931 in Maly and Maly 2005:53). In this mo'olelo, Poli'ahu was restricted to Mauna Kea by Kāne with her nurse, Līhau (*chilling rain/frost*), who never left her side. Kāne created Lake Waiau as a silvery swimming pool (Figure 23) for Poli'ahu and placed the shape-shifting mo'o, Mo'oinanea there to keep guard of Poli'ahu and Waiau so that Poli'ahu could enjoy swimming in Lake Waiau without danger of being seen by a man. Kūkahau'ula (*Kū of the pink-tinted snow*) was chosen as a husband for Poli'ahu and would appear every morning with the rising sun, and every afternoon when the sun would set (Figure 24). Kūkahau'ula saw the lovely Poli'ahu and the sacred waters of Waiau each time he rose and set with the sun, however, Poli'ahu's tenants drove him away; Lilinoe with her fine mist, Līhau with her chilling frost, and Kīpu'upu'u (*hail*). Despite their efforts, Kūkahau'ula appeared every day and eventually, Mo'oinanea determined that Kūkahau'ula's affections for Poli'ahu were true and allowed him to finally embrace Poli'ahu (Taylor 1931 in Maly and Maly 2005:53).

Inoa 'āina (*land names*) are indicative of the greater importance of 'āina as more than just land (Figure 25). Deities, gods, are so significant to the overall sacredness of Mauna Kea that they are memorialized as physical landmarks on the summit, each with a specific function:

Lake Waiau, a source from which ka wai kapu o Kāne (*sacred water of Kāne*) could be collected, is the home to Mo'oinanea and the water deity, Waiau. This is where the umbilical cords of

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newborn children were traditionally deposited to ensure long life for the child and is a practice continued by Kānaka 'Ōiwi today (Maly and Maly 2005:13)(Figure 26).

Pu'u o Kūkahau'ula is a hill named for one of the forms of the god, Kū. This pu'u was traditionally used to deposit the umbilical cords of newborn children (Maly and Maly 2005:13).

Pu'u Poli'ahu and **Pu'u Līlinoe** are large mounds (*hills*) that are named for the snow and mist deities of Mauna Kea (Maly and Maly 2005:13).

Kūkahau'ula and Līlinoe:

There are other people associated with the mountain recorded in historical accounts that bear the same names as the deities that inhabit Mauna Kea. In one account translated by the late Kānaka 'Ōiwi scholar Mary Kawena Puku'i entitled, "A Tale of a Royal Couple who Froze on Mauna Kea," Kūkahau'ula was a chief, not the pink-tinted snow and Līlinoe was his wife, not the mist (Maly and Maly 2005:51). The legend states that Kūkahau'ula was a chief from Waimea who took Līlinoe, a woman from Ka'ū, as his wife. His people resented Līlinoe and so the couple chose to dwell on Mauna Kea, where they lived in a cave above Lake Waiau. It is said that during the time that the couple lived on Mauna Kea, two strangers went to the mountain to visit. They were thirsty and came across a woman wrapped in layers of kapa (*traditional cloth*) and asked for water to drink. Līlinoe replied that there was no water, however, the sun was shining brightly and the strangers saw the reflection of water on her chest. When they accused her of hiding water, Līlinoe simply replied that the water she was hiding was the water of Poli'ahu. Kūkahau'ula and Līlinoe died while living on Mauna Kea and their bodies were wrapped for burial and kept in the cave where they dwelt. During his reign, Kamehameha III went to Mauna Kea to visit and was the last ali'i to see these chiefs who were as Maly and Maly write, "practically turned to stone because they were frozen and so remained," (Maly and Maly 2005:51). The narrative records that a descendant of Kūkahau'ula's retainers, Pōhe'epali, hid their bodies following Kamehameha III's visit (Maly and Maly 2005:51).

Līlinoe was an important ancestral figure for ali'i, including Queen Ka'ahumanu, the favored wife of Kamehameha I. In 1828, Queen Ka'ahumanu traveled to Hawai'i Island in an attempt to recover the bones of Līlinoe on Mauna Kea where her body was said to have lain for more than a thousand years (Kamakau 1961:285). It was said that her body was preserved so well that her hair remained intact, however, others claim that her body was too well-hidden to be found let alone sure of such assertions (Kamakau 1961:285; Maly and Maly 2005:29).

Tangentially, and as noted previously, some of the above-named wahi kūpuna were previously-recognized as tangible components of the Mauna Kea TCP contiguous district discussed in this nomination. Previously recognized wahi kūpuna include Keanakāko'i Adze Quarry (National Register Site 66000285), Pu'u Waiau (State Inventory of Historic Places [SIHP] #-21440), Pu'u Kūkahau'ula (SIHP# -21440), and Pu'u Līlinoe (SIHP# -21439). Official SHPD records concerning these designations were not located during research for this nomination. Additionally, McCoy and Nees (2013:i, 3-27) note that the SHPD designated Pu'u Līlinoe, Lake Waiau, and

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Kūkahau'ūla TCPs in 1999, however, attempts to secure records confirming these TCP designations with the SHPD in June 2023 were unsuccessful. In 1999, the SHPD deemed the summit region of Mauna Kea "eligible for inclusion in the National Register as an historic district because it encompasses a sufficient concentration of historic properties (i.e. shrines, burials and culturally significant landscape features) that are historically, culturally, and visually linked within the context of their setting and environment," (Hibbard 1999:5; PHRI 1999) but a formal, official nomination and designation were not made.

'Umi a Līloa:

'Umi a Līloa, a famous 15th century ali'i, was a benevolent chief who was considered a chief of the people (Unknown author 1859:2). After uniting Hawai'i Island under his singular rule, he became well known throughout the pae 'āina (*archipelago*) and ali'i from other islands brought their favorite daughters to Hawai'i Island to marry him. 'Umi a Līloa took numerous wives and later became an ancestor of chiefs and commoners alike (Kamakau 1870:1). As a result, many Kānaka 'Ōiwi today can trace their lineage to 'Umi a Līloa (Kamakau 1870:1). As the famed Kānaka 'Ōiwi scholar, Samuel Mānaiakalani Kamakau recounted in the Hawaiian language newspaper *Ke Au Okoa*: "There is no commoner of Hawai'i who can say that Umi-a-Liloa is not an ancestor of theirs. And if there is someone who disagrees, it is because they simply do not know their ancestors," (Kamakau 1870:1).

During his rule as Mō'i (*King*), 'Umi retained a number of individuals of varying backgrounds to provide him with correct and sufficient information on their areas of expertise such as kilo hōkū (*astronomers*), kuhikuhipu'uone (*architects*), puihikaoka (*meteorologists*), and po'e kālai 'āina (*land dividers*) (Kānaka'ole et al. 2021:27). As Kānaka'ole et al. explain, "'Umi expanded knowledge of weather phenomena, aligned sun and star movement, aligned islands accordingly and marked land boundaries," (2021:33). 'Umi was considered an "ali'i noho mauna" - a chief who lived on the mountain (Kānaka'ole et al. 2021:33). He constructed numerous features throughout the 'āina mauna including Mauna Kea, Mauna Loa, Hualālai, and the saddle area between Mauna Kea and Mauna Loa that supported his kilo hōkū (*astronomy*) and kālai 'āina (*to divide land*) (Kānaka'ole et al. 2021: 27-29; Lindsey-Ka'apuni 2016:1).

Mauna Kea was sacred to 'Umi and he impressed upon his people and descendants a kapu on Mauna Kea to uphold the sacredness of the mountain (Lindsey-Ka'apuni 2016:1; Kānaka'ole et al. 2021:33). Mauna Kea is a sacred ancestor to 'Umi a Līloa and to his many descendants who lived during his reign and the Kānaka 'Ōiwi of today who are able to trace their lineage to him (Ching 2016:1). As part of his legacy, "'Umi put a kapu on Mauna a Wākea as part of his vast legacy which was to protect the sacredness of the mauna from desecration" (Kānaka'ole et al. 2021:33).

Kauikeaouli (Kamehameha III):

Another ali'i who is inextricably linked to Mauna Kea is Kauikeaouli (*Kamehameha III*), as captured in his mele hānau, which genealogically connects him and his lineage to the mountain (Kānāhele 2017:3; Maly and Maly 2005:8, 10). The association he holds with Mauna Kea is one

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that reaffirms the genealogical ties that Kānaka 'Ōiwi have with Mauna Kea and the significance of the mountain as part of Hawaiian cosmology and the genealogy of Kānaka 'Ōiwi (Kanahele 2017:3, 8; Ching 2016:1; Abad 2016:11; Maly and Maly 2005:7,8).

Queen Emma:

Queen Emma Kalanikaumakaamano Kaleleonālani Na'ea Rooke was the wife of King Kamehameha IV with whom she ruled Hawai'i from 1856 until his death in 1863. She descended from Kaua'i chiefs, her paternal grandmother being the cousin of Keōpūlani, one of Kamehameha I's wives, and her maternal grandmother was the daughter of Kamehameha I's younger brother, Keli'imaika'i (Kanahele 1999:4). Queen Emma was known for her humanitarian efforts, particularly her critical role in the founding of The Queen's Medical Center in 1859 (Greer 1969:111).

In 1881, Queen Emma traveled to Mauna Kea, specifically to bathe in the sacred waters of Lake Waiau (Maly and Maly 2022:35). As Kānaka 'Ōiwi ethnographers and cultural experts Maly and Maly (2022:35) noted: "It is believed that the Queen sought to demonstrate her lineage and godly connections, and to perform a ceremonial cleansing in the most sacred waters of Kāne." Accounts of Queen Emma's trip were widely documented at the time in Hawaiian newspapers and commemorated in a number of mele (*chants*) (Nogelmeier 2001:113-115; Maly and Maly 2022:35-41). The mele composed refers to Mauna Kea as the piko (*naval, umbilical cord*) of Wākea and recounts a number of sites throughout Mauna Kea (Unknown author 1881 in de Silva and de Silva 2006:1; Maly and Maly 2022:35; Unknown author 1881 in de Silva and de Silva 2006:1). Her trip was further commemorated by a pillar of stones that were erected on the southeast flank of the mountain (Alexander 1892b:1). Over 100 years later, accounts of Queen Emma's pilgrimage to Mauna Kea continue to be shared through mo'olelo and inoa (*names*) that the descendants of Queen Emma's travel companions were given to commemorate the occasion (Maly and Maly 2022:35).

Queen Emma's association with Mauna Kea extends beyond the accounts of her trip and acknowledgement of the deities found on the mountain that contribute to its significance. Her journey to Mauna Kea demonstrates the continued sacred cultural importance of both Mauna Kea and Lake Waiau for Kānaka 'Ōiwi in the nineteenth century through today. Ethnohistorical resources record Kānaka 'Ōiwi engaged in cultural beliefs and practices with tangible and intangible resources during and following Queen Emma's journey, including place naming, bestowing names to people, the construction of ahu, and the composition of mo'olelo and mele (Alex and Muir 1892 in Maly and Maly 2005:161; Unknown author 1881 in de Silva and de Silva 2006:1). The ahu constructed in commemoration of her pilgrimage is an example of cultural practice rooted in tradition that continues the furtherance of historic and contemporary function on Mauna Kea. Over 100 years after her 1881 ascent to the summit, the mo'olelo of her travels live on in and with 'ohana (*family*) and her journey serves as a model for how Kānaka 'Ōiwi conduct themselves on Mauna Kea (Ching 2016:2).

Criterion C. Design/Construction

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Mauna Kea is eligible for listing on the H/NRHP under Criterion C “Embodiment of the distinctive characteristics of a type, period, or method of construction,” through the distinctive ways Kānaka ‘Ōiwi resourced and manufactured stone tools, installed ahu and trails, and established temples that all uniquely exemplify master craftsmanship in their type, period, and method of construction. Equally important are the open spaces Kānaka ‘Ōiwi elected not to modify, and the view planes, observational practices, and other traditional Hawaiian practices and beliefs they facilitate and embody, which are inextricably connected to the significance and integrity of Mauna Kea as a TCP.

Pahu Manamana

The numerous structures that the chief ‘Umi built in the ‘āina mauna are called pahu manamana, which cultural experts define as “instruments of alignment from land to stars and back to land,” (Kanaka‘ole et al. 2021:29). Pahu manamana were used for kilo hōkū (*astronomy*) to record the rising and setting of stars, planetary movements, seasonal changes, solstices, and equinoxes (Kanaka‘ole et al. 2021:29,30).

Pahu manamana consist of stone uprights that align with volcanoes and other significant natural landscape features. The paepae (*platform*) that the pahu manamana stand on is made of dry stack pōhaku (*stone*) and anchor the lateral lines of the uprights with certain stars and planets, allowing the observer to track their rise and fall (Kanaka‘ole et al. 2021:31). The pahu manamana were tools that were used to observe and track the alignment of the pahu manamana to stars locating different islands, different parts of the island, and “the eventual movement of magma” (Kanaka‘ole et al. 2021:30). The pahu manamana and the paepae they are erected upon are of a distinctive method of construction and demonstrative of a highly-skilled tradition.

Keanakāko‘i - Adze Quarry

Keanakāko‘i, including the sites and the tools produced therein, embody distinctive characteristics of traditional Hawaiian stone tool manufacture of master craftsmanship. The construction of the shrines located within the quarry are distinctive and found in few other places in Hawai‘i (McCoy and Nees 2010:ii). The design, construction, and characteristics of the adze quarry and the shrines make Mauna Kea, as a district, significant under Criterion C. Oral traditions recorded by 19th century Hawaiian scholars record adze making and use as a heavily ritualized component of Hawaiian cultural beliefs and practices, underscoring the inclusion of Keanakāko‘i in this nomination under Criterion C as a significant and contributing component of Mauna Kea as a TCP (Kamakau 1964a: 136; Malo [Langlas and Lyon, trans.] 2020: 126, 206-213).

Keanakāko‘i (*Adze-maker Cave*) is a seven and a half-mile quarry located one mile south of Lake Waiau in a ledge of basalt (Alexander 1892:1; McCoy 1976:137). Adzes were an essential stone tool for Kānaka ‘Ōiwi and served a variety of purposes including ceremonial, and for cutting trees and carving canoes, weapons, bowls, and smaller tools (Malo [Langlas and Lyon, trans.] 2020: 90, 92, 93, 125, 126; McCoy 1990:112). Basalt was a favored adze-making material due to its density,

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and ability to hold a sharp edge. The majority of the primary resource mining locations are found between the 12,200 to 12,400 foot elevations, where the best quality basalt was found in the largest quantities (McCoy 1976:139). The high quality of the basalt in this elevation band may be due to "the unique eruptive conditions and cooling history of the flows," (McCoy and Nees 2010:7-23).

Mauna Kea Adze Quarry (Keanakāko'i) was designated as a National Historic Landmark in 1962 (NPS 2022; National Register Site 66000285). Traditionally known to Kānaka 'Ōiwi as Keanakāko'i or Kaluakāko'i, Keanakāko'i was a central place for traditional adze manufacturing on Hawai'i Island. Located on the south slope of Mauna Kea, Keanakāko'i is the largest quarry in the Pacific (Maly and Maly 2022:49, Mills et al. 2008:1). The entirety of the quarry stretches between 8,600 and 13,000 feet elevation and comprises a series of surface and subsurface quarries, manufacturing sites, shelters, and shrines (Mills et al. 2008:744). Keanakāko'i was used over a period of 500 to 700 or more years with radiocarbon dating indicating that the quarry was being used by 1000 A.D., and more intensively after 1400 A.D. through 1800 (McCoy and Nees 2010:ii; McCoy 1990:92). It is unknown when basalt for adzes ceased to be sourced from Keanakāko'i, however, evidence suggests the timing may have been prior to or around European contact in 1778 (Welch 1993:31 (McCoy and Nees 2010:7-24). Whereas other adze quarries functioned as harvesting sites, Keanakāko'i functioned more like a sourcing and manufacturing zone with different areas throughout the quarry being used for different aspects of adze making (McCoy 1977:226).

The practices of pōhaku harvesting and adze manufacturing were not restricted to the summit region, and occurred at Kaluakāko'i and Poli'ahu, where it was historically restricted to Humu'ula people, and numerous other locations where the resources were present (Maly and Maly 2022:62). Malo describes traditional pōhaku harvesting and sourcing practices evinced at Kaluakāko'i and other places in summit and 'āina mauna locations throughout Mauna Kea (McCoy 1976, 1990, 1999; Maly and Maly 2022:62). An excerpt from Malo's description of Hawaiian adze manufacture and use details the cultural knowledge and specialized skill required to source and manufacture adzes. It reads:

Concerning the Stone Adze and the New Adzes

1.The stone adze is the ancient adze of Hawai'i that derives from the people of old. The people who made adzes were highly regarded in former times in Hawai'i because it was from them that the adzes came that were used to cut down trees and carve wood for various uses. This is how the adze makers would proceed.

2.The adze makers would travel to the mountains or to other places to search for hard rocks suitable to make an adze. In their travels they

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would take with them some hard rocks, some sharp-edged and some rounded. These rocks were termed *haku kākō* 'i [hammerstones for adze making]. That is what was used to hew the adzes.

3. When they split the rock and a long flake came off, then they placed it in an herbal solution to soften it. When the rock was softened, the lower end was carved and then the upper end.

4. The rounded upper portion [used for striking] is called the *pipi*: the upper portion that connects to it [lashed to the handle] is called the *Hauhana*. Once [the lower portion] is bevelled, then you take a grindstone and drop some sand on top of it, sprinkle it with water, grind the bottom until it is finished, then grind the top. When that is done, then you sharpen the edge until the adze is sharp. Then you make a handle, perhaps of *hau* wood, perhaps of another wood.

5. Then, you braid lashing and place the adze on top of the handle, and place a cushion [on top], and lash everything together firmly. Then the adze is finished. When they were traded for various things, the adzes came into possession of those who carved canoes.
[Malo (Langlas and Lyon, trans.) 2020: 125]

Keanakāko'i differs from other adze quarries found throughout Hawai'i because it is a complex of sites that suggest intense adze manufacturing that exceeded local needs and contributed to the expansion of dryland agricultural field systems and other areas of practice important to Kānaka 'Ōiwi such as canoe carving (McCoy 1977:226; McCoy 1990:112). Different practices require different adze tools, which were manufactured at Keanakāko'i, further highlighting the highly specialized craft of adzemaking and the intense adze manufacturing that took place on Mauna Kea (McCoy 1990:112). Sites included temporary habitation shelters, religious shrines, and workshops (McCoy 1976:138). Notably, Keanakāko'i assumes further significance for its remoteness and high altitude, and the inferred organization and environmental adaptation that Kānaka 'Ōiwi historically needed to undertake to harvest and manufacture adzes on Mauna Kea. With the nearest permanent residential area to Keanakāko'i being roughly 25 miles away, temporary shelters were

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created (McCoy 1976:137). Rock shelters were small, natural overhangs with stacked-stone enclosing walls that were used for habitation and sleeping (McCoy 1976:138). Open-air shelters were low, walled enclosures that served primarily as workshops (McCoy 1976:138). Workshops varied in size and complexity, and housed dually varied amounts of debris such as flakes, cores, adze rejects, and hammerstones that in some workshops amounted to piles that are 20 to 30 meters across and 3 to 4 meters deep (McCoy 1976:138).

Multiple shrines exist within Keanakāko'i, some found in significantly sacred locations such as Lake Waiau and Pu'u Līlinoe (McCoy 1976:138)(Figure 27). Shrines found near these locations were simple constructions of upright stones fashioned from angular, flat slabs of rock set near a workshop if not on a high point (McCoy 1976:138). Regardless of their modern descriptions, all *kuahu* (*shrines*) have ceremonial functions. In an archaeological context, the shrines are categorized as "occupational" and "non-occupational" with the former being associated with adze production. Occupational shrines were built near workshops and have production related materials such as stone flakes and blades left on or near them. Non-occupational shrines, those not associated with adze production, could be found near open-air shelters and throughout Mauna Kea such as at Lake Waiau and near Pu'u Līlinoe (McCoy 1976:138).

Non-occupational shrines are found throughout the landscape of Mauna Kea and are used as ceremonial sites where offerings were historically presented, and continue to support practices today (Maly and Maly 2022:13). They range in complexity from small groups of upright stones to larger, prepared rock foundations with greater quantities of upright stones (McCoy 1977:231) (Figure 28). In some instances, they are features of the natural landscape, often pu'u (hills) such as Pu'u Poli'ahu, Pu'u Līlinoe, and Pu'u Kūkahau'ula. As of 1975, there were at least 25 shrines identified in the Keanakāko'i complex (McCoy 1977:229).

Trails:

Trails existed in five of the six major districts of Hawai'i Island that provided direct access to the 'āina mauna (Maly Maly 2022:7). Puna, which is cut off from the 'āina mauna by Mauna Loa, was the only district that did not have a direct access trail to the 'āina mauna (Maly 2022:7). Traditionally, trails were direct, and ran straight to the desired destination (Maly and Maly 2022:12) (Figure 29). Although trails were historically plain in appearance, they were durable in design and constructed to afford smooth passage and frequent use (Maly and Maly 2022:12; Figure 30). In their 1912 description of a journey along the 'āina mauna trail network, Sol. Sheridan mentions an account relayed to him about the adze makers from long ago who utilized 'āina mauna trails to travel to Mauna Kea. Also included in Sheridan's writings is an account of trail building done by 'Umi a Līloa (Maly and Maly 2022:11-13):

The road by which we went down into Kona from our dry camp in the lava is a road that has been traversed by few men now alive. Long ago, before the history of these Islands began to be written, it is said that the natives went that way to get stone forms for their adzes from the hard rock of Mauna Kea, but that is a tale only.

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...Eben Low and a native assistant went that way once, and marked the way. It was by this marked way that "Rawhide Ben" led us out again... We have traveled several hours from our dry camp when we struck Umi's trail, plainly marked across an old a-a flow upon which a forest had grown up. The trail was plain, and showed that much work had been done upon it. Like all Hawaiian roads of the olden time—or most of them—it ran straight away toward the point that it was desired to reach, regardless of the topography of the country. Umi was a trail builder, up to this date. Where the a-a was level, his men marked their way across it by smooth going. Where there were depressions in it, they were filled up to the general level, much as a modern engineer would fill them. Where there were hillocks to be crossed, they were cut away if not too high and passed over in a straight line if their altitude forbade grading. And this road, as smooth and as easy as though built yesterday, was constructed so long ago that in the center of it, through the rotten lava, lehua trees had grown up, having the girth of a strong man. Umi's slaves marched this way to the quarries of Mauna Kea, and his couriers went this way and his armies marched this way, it is probable, to battle with the men of the Waimea and Kohala country... This road, or maybe another, ran from Kailua, straightaway to Hilo, and old tales are that the kings living at Kailua would have millet caught for them in the ponds of Waiakea in the morning, and would eat them at night, relays of swift couriers carrying them across the island. [Maly and Maly 2022:11,12]

According to Maly and Maly (2022:57), the trails and roads extending from the shore to mountain zones were "used to travel between districts, and for practices such as collection of stone for adze making, bird catching, koa wood harvesting, canoe manufacture and transport, bullock hunting, and collection of other resources." Trails existed for hauling finished canoes makai (Maly and Maly 2022:71, 75, 85).

As Maly and Maly (2022:11) described: "Several ancient trails approached the summit of Mauna Kea, and were used by travelers through the 1920s. Most of these trails were accessed via the improved government roads around the mountain. Primary approaches included, but were not limited to the Kalai'eha-Waiiau Trail, the 'Umikoa-Ka'ula Trail, and the Kemole-Pu'u Nanahu Trail." Portions of these sophisticated trail systems were later improved or overlaid by modern routes (Maly and Maly 2022:13). By the latter half of the 1800s, many of the existing trails were improved by lessees of the 'āina mauna most notably for ranching, horse trails, and access (Maly and Maly 2022:11). There remain shrines along the trails that cross Mauna Kea and lead across the 'āina mauna, including Pōhaku o Kāne, a build of upright stones (Maly and Maly 2022:9). Kānaka 'Ōiwi continue to travel throughout Mauna Kea by way of these trail systems to access these ceremonial sites, shrines, and important land features (Ching 2016:13; Figure 31 and Figure 32).

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Criterion D. Association with traditional history, spirituality, and culture of the group that ascribes significance to it.

Mauna Kea is eligible for HRHP and NRHP listing under Criterion D through its association with Hawaiian traditional history and culture (Parker and King 1998:14) because the mountain yields critical information that contributes to our understanding of Kānaka 'Ōiwi history and pre-contact history. Mauna Kea provides critical knowledge of and physical evidence for Hawaiian traditions, culture, and history, and an exceptional opportunity to expand on that knowledge through continued cultural practice and use. To be considered significant under Criterion D, "a property must be associated with *human activity* and be critical for understanding a site's historic environment." Prior to discussing human activity on Mauna Kea, it is important to first understand what Mauna Kea is, and the importance of the mountain. Mo'olelo (*traditions, history*) reveal that Hawaiian place names are important records of knowledge of place. The names reflect the intimate relationship shared between the beliefs and culture of Kānaka 'Ōiwi, and the natural landscape in which their ancestors lived and they continue to inhabit. *The Kumulipo*, the Hawaiian creation chant, demonstrates the impressive knowledge that kūpuna (*elders, ancestors*) of Kānaka 'Ōiwi had of the spaces surrounding them and the genesis of their creation, and provides critical insight to the extensive knowledge gained both about and through Mauna Kea.

In *The Kumulipo*, Wākea is born in the fourteenth wā (*era*) as Paupaniākea (Keaulumoku 1978:70; Kanaka'ole et al. 2021:2). Paupaniākea can be translated as, "completely enveloped space" and establishes the boundaries for space and time (Kanaka'ole et al. 2021:2). Kānaka 'Ōiwi practitioners further elaborate on the meaning and spatial significance of Wākea:

For Hawai'i the definite universal points in time are north or summer and south or winter. The boundaries between north and south are the spatial indicators. Paupaniākea or Wākea, is the reality of all spatial levels and in the Hawaiian mind, this reality is male. [Kanaka'ole et al. 2021:2]

Papa has numerous meanings: flat surface, foundation, floor, layer; it is inherently feminine and serves as foundations for growth. Papahulilani encompasses the spaces of the atmosphere (moon, sun, stars, planets); Papahulihonua encompasses the earth and oceans, inclusive of its changes; and Papahānaumoku encompasses life of all living things, from their embryonic stage through death. While critically important to the creation of all life on earth, Papa cannot create life without the influence of Wākea. As cultural practitioners explain: "In the Kumulipo, Wākea is the only regenerative male reality of all spatial levels" (Kanaka'ole et al. 2021:2). Accordingly, Wākea is the regenerative male force that influences growth cycles of these spaces.

Mauna Kea, mountain of Wākea, is aptly named in recognition of the only "father" that the mountain could have. Mauna Kea is the embodiment of the progenitor life forces, Wākea and Papahānaumoku: the rock, soil, water and ice are female attributes while the elevation of the mountain is male in nature and brings the mountain closer to the realm of his father. The balanced

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male and female qualities of Mauna Kea establishes the mountain as sacred and creates the sacred piko (*center, naval*) of Hawai'i Island, the first-born child of earth (Papahānaumoku) and sky (Wākea). As an ancestor to Kānaka 'Ōiwi and being of Wākea, the progenitive force, it is critically important to protect Mauna Kea and its natural resources because to do so is to protect the growth and well-being for Mauna Kea and Kānaka 'Ōiwi who rely on it (Ho'akea, LLC 2009:1,2; Pukui 1979:26). As described in the *2009 Mauna Kea Comprehensive Management Plan*, Mauna Kea as the first-born child of the progenitors is:

The ancestral part of a traditional genealogy that later includes the birth of humans, with Wākea as father and his daughter, Ho'ohōkūkalanī, as mother. Ho'ohōkūkalanī's name means "Creator of the stars," and in union with her father she provides the celestial womb from which the native population ensues. Thus, in a Hawaiian context, Mauna Kea can be viewed as the *kuahu* (shrine) to this union and considered an ancestor to the Hawaiian people. This lineage carries a birthright and responsibilities commensurate with Mauna Kea's status as first-born, whose resources need to be protected for the growth and well being of all. [Ho'akea, LLC 2009:1,2]

As both an ancestor and shrine, distinct traditional practices associated with Mauna Kea are the depositing of piko (*umbilical cords*) of newborns, the burying of family remains, ahu construction and associated spiritual/cultural practices, as well as celestial observation, navigation, resource gathering, and ongoing cultural relationships and practices associated with existing and new wahi kūpuna, wahi pana, and their landscape contexts (McCoy 1976:138; Maly and Maly 2022:7, 92, 95; Ho'akea, LLC 2009:1-2; Ching 2016:13; Lindsey-Ka'apuni 2016:1; Kahakalau 2016:3; Kanaka'ole et al. 2021:29-39 Pisciotto 2016:7; Rios 2016:1). These practices in the summit region that continue to this day attest to the sacredness and significance of Mauna Kea to Kānaka 'Ōiwi and the importance of performing such activities in this place.

Nomenclatures were assigned only after precise, extensive ancestral observation and knowledge were collected (Kanaka'ole et al. 2021:6). The conceptualization of these time-space nomenclatures reaffirms the in-depth understanding that nā po'e kahiko (*the people of old*) had of their honua ola (*biocultural environment*). Later in *The Kumulipo*, elementals are introduced and recognized as necessary life-giving sources. Accordingly, the akua (*godly*) status is attached (Kanaka'ole et al. 2021:6). Generations of Kānaka 'Ōiwi historically performed the practice of kilo (*observation*) and observed the akua including their movements, cycles, forms, alignments, and boundaries (Kanaka'ole et al. 2021:6). Kilo was most influential in how Kānaka 'Ōiwi understood their surroundings and informed how Kānaka 'Ōiwi interacted with the environment (Kanaka'ole et al. 2021:29-39). While rooted in ancient tradition, this practice has evolved and continues to inform how Kānaka 'Ōiwi interact with their natural environment, assign significance to their surroundings, and strengthen relationships to natural resources. Kilo, particularly kilo lanī (*astronomy*), greatly differs from Western astronomy. Kilo lanī was a highly-skilled practice that helped Kānaka 'Ōiwi with other important practices, particularly navigation (Makemson 1938:375). Kānaka 'Ōiwi developed a sophisticated set of nomenclature that evidences their

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advanced understanding of the sky (Makemson 1938:372-374). Kilo lani allows Kānaka ʻŌiwi to understand the nuances of seasonal changes, environmental changes, and how to adapt and conform to such changes, whereas the pursuits of Western astronomy focus on breaking the limitations of nature, going further into the universe and discovering the most distant stars and planets (Makemson 1938:381-82). The two practices are diametrically opposite and their difference is reflected in how Mauna Kea is used to support both practices.

Wahi pana (*named places*) are one of many types of wahi kūpuna (*Hawaiian ancestral places*), that are component parts and/or entire contiguous Hawaiian cultural land, sea, and skylscapes (Pukui, Elbert, and Mookini 1974: x- xii; Oliveira 2014:78, 79; The Kali'uokapa'akai Collective 2021). Place names embody and perpetuate Hawaiian cultural history, knowledge, and practice. As explained by Oliveira (2014:78): "To Kānaka [Native Hawaiians] and other indigenous peoples who share a close connection to their land and use oral traditions to record their history, place names and landmarks serve as triggers for the memory, mapping the environment and ultimately the tradition and culture of a people." Wahi pana are special places and spaces. As noted by Maly and Maly (2022:14,15): "Names would not have been given to - or remembered if they were - mere worthless pieces of topography". Place names were intentional and specified important function, features, and in some instances, practices of a place - to understand the name of a place was to understand its function (Maly and Maly 2022:14,15).

Throughout Mauna Kea, various sites and features are named for different akua and the activities that Kānaka ʻŌiwi historically engaged in there. The occurrence of place names extending from the shore line to the summit of Mauna Kea is significant because it reaffirms the familiarity that Kānaka ʻŌiwi have with those sites, features, and varied elevations (Maly and Maly 2022:14, 15). The wahi pana associated with Mauna Kea also underscore its association with Hawaiian ancestral knowledge, culture, practices, and beliefs that are critically important to maintaining Hawaiian cultural identity today. As noted by Maly and Maly:

All natural and cultural resources (biocultural environment) are interrelated, and that all are culturally significant. Thus, when speaking of Mauna Kea, its integrity and sense of place depends on the well-being of the whole entity, not only the part of it that was convenient to the western colonizers. These wao (environment zones/regions) are evidence of the detailed knowledge that Hawaiians had - and which some maintain - for the honua. [Maly and Maly 2022:15]

There are several wahi pana atop Mauna Kea whose names correlate with different akua of the mountain and/or are indicative of the kind of activities that take place there:

-Pu'u o Kūkahau'ula is a hill named for one of the forms of the god, Kū: Kū of the red tinged snow. Mo'olelo tell us that Kūkahau'ula appears twice daily; once when the sun rises and again in the afternoon when the sun begins to set, causing the snow on Mauna Kea to be tinged red by the glow of the sun. Like Lake Waiau, Pu'u Kūkahau'ula was traditionally a site where the

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umbilical cords of newborns was deposited to afford those children long life and safety (Maly and Maly 2005:13).

-Pu'u Poli'ahu and Pu'u Līlinoe are named for the two water deities found on Mauna Kea (Maly and Maly 2005:13).

-Lake Waiau, an alpine lake that fluctuates in water level but always has water. Waiau means "a place where water runs continually," (Kiyuna, trans.). Lake Waiau serves as a source from which ka wai kapu o Kāne (*the sacred water of Kāne*; Kiyuna, trans.) could be collected and is where the umbilical cords of newborns are deposited (Maly and Maly 2005:13).

-Keanakāko'i is an adze quarry found at 12,400 foot elevation on Mauna Kea. The literal translation for Keanakāko'i is "adze making cave," reaffirming that traditional nomenclature can indicate, among other things, the function that the named locality serves (Kiyuna, trans.). Keanakāko'i, also known as the Mauna Kea Adze Quarry, is a National Historic Landmark that is located in what is now known as the Mauna Kea Ice Age Reserve on the southern slope of Mauna Kea (McCoy 1990; Mills et al. 2008). The HRHP and NHRP nomination encapsulates the bounded National Historic Landmark, and it integrates it into the larger expanse of Mauna Kea. Understanding Hawaiian cultural landscapes as contiguous, integrated, and layered with meaning and significance provides a remarkable opportunity to further develop and advance traditional knowledge systems that historically inform us of the significance of Mauna Kea and the activities performed there.

The Mauna Kea Adze Quarry is the largest rock quarry in the Pacific where high quality basalt adze was harvested and manufactured into tools. Notably, this adze quarry differed from other basalt adze quarries in Hawai'i due to its appearance as a manufacturing site with evidence of standardized adze tool making as well as ritual behavior that suggests that this was a highly specialized craft (Malo [Langlas and Lyon, trans.] 2020:125; McCoy 1990:87). Quarrying is one of the most historically documented human activities on Mauna Kea. Adzes were necessary tools for Kānaka 'Ōiwi and were used to cut trees, hull canoes, carve weapons, and fashion other tools among other uses (Malo [Langlas and Lyon, trans.] 2020:90, 92, 93, 125, 126). Studies of the Mauna Kea Adze Quarry Complex and archaeological surveys of the Mauna Kea Science Reserve have made significant contributions and have the potential to yield even more contributions to overall understanding of Hawaiian pre- and post-contact history (McCoy 1990; Mills et al. 2008; McCoy and Nees 2010:iii).

As an ancestral landscape, the summit of Mauna Kea is considered sacrosanct and the traditional and customary practices that Kānaka 'Ōiwi historically engaged in on Mauna Kea contribute to the continued belief that the mountain was only traveled to for specific purposes and for limited amounts of time. The nearest permanent residential area to the Mauna Kea Adze Quarry is roughly 25 miles away (McCoy 1976:137). Necessarily, there are multiple temporary shelters at Mauna Kea Adze Quarry, which included rock shelters, overhanging shelters, and open-air shelters (McCoy 1990: 90, 96). Although these shelters were prevalent in the quarry, it is important to note

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that they were not intended to be permanent residences. This is consistent with the Hawaiian classification of Mauna Kea as a wao akua, a sacred landscape not suitable for kānaka (*people*) to live but to travel to for specific purposes and for limited amounts of time (Kahakalau 2016:3).

Kilo was practiced in a number of locations throughout Hawai'i. Mauna Kea, however, provides the ideal landscape to perform particular kinds of observational practices such as solstice observation, navigation, and celestial observation (Kanaka'ole et al. 2021:29-39 Pisciotta 2016:7,8; Ching 2016:13; Rios 2016:1,2).

As previously expressed, the practice of observation has roots in prehistoric Hawaiian tradition, however, the practice has evolved with the living culture and continues to inform how Kānaka 'Ōiwi interact with their natural environment and assign significance to their surroundings. Kūpuna Kānaka 'Ōiwi (*Hawaiian human ancestors*) observed the movement of celestial bodies to track the changing seasons, particularly during the following seasonal changes:

Ke Ala Polohiwa a Kāne (*summer solstice*)

Ke Ala Polohiwa a Kanaloa (*winter solstice*)

Ke Ala'ula a Kāne (*spring equinox*)

Ke Ala Ma'awe'ula a Kanaloa (*autumnal equinox*) (Pisciotta 2016:8)

As Kanaka 'Ōiwi cultural practitioner Kealoha Pisciotta explained:

“These ceremonies are about tracking the motion of the sun across the sky throughout the year and were used by our people and most of the ancient people around the world to keep track of the year. The po'e kahiko (ancient Hawaiian people) are not alone in these ceremonies for keeping track of the motions of the celestial bodies and their relationship to the observers on earth...Tracking the sun is for growing and harvesting. But more important is the need to track the annual time in the context of a much greater time frame known as the precession, which is the 26,000 year cycle (although some used slightly different time frames). This cycle is the measure of the wobble of the earth's axis, and the time it takes for the wobble to make a complete cycle. The wobble was important to keep track of because relative to earth the pole stars appear to change over time. If the pole stars change it drastically impacts navigation. If the poles are changing then over time our knowledge must change to reflect these changes or we will get lost, and for us especially that means getting lost at sea,” (2016:7).

Kānaka 'Ōiwi continue to engage in this practice and perform solstice and equinox ceremonies atop Mauna Kea to observe the many akua, their movements, alignments, and phenomena (Kanaka'ole et al. 2021:29-33). Kānaka 'Ōiwi continue to ascend Mauna Kea for these purposes because the mountain serves a central role for the ceremonies (Kanaka'ole et al. 2021:29-39; Pisciotta 2016:7; Ching 2016:13; Rios 2016:1; Cleghorn 2016:1).

Nā Wāhine 'Āpapalani are Hawaiian female cultural practitioners who are lineal descendants of akua that reside on Mauna Kea and have conducted ceremony on Mauna Kea for thirty years, particularly during solstices and equinoxes, “the times of portal and special needs,” (Kanaka'ole

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et al. 2021:34, 38). These women honor their lineal relationships by maintaining the sanctity of Mauna Kea through "rituals forming connectivity to the sacred male and female deities of the mauna (Kanaka'ole et al. 2021:34). Nā Wāhine 'Āpapalani perform pule (*prayer*) and mele oli (*chants*) that honor the cloud forms and fresh water sources on Mauna Kea: Poli'ahu, Lilinoe, Waiau, Pōhakuakāne (Kanaka'ole et al. 2021:34).

The northern plateau of Mauna Kea is important not only for the shrine complexes therein but for observing the visual connections between Pu'u Kūkahau'ula, Pu'u Poli'ahu and hundreds of shrines at that elevation (Flores 2016:9). This area is dually important for resource gathering because this area is "relatively untouched" (Teale 2016:2). The 'āina, precipitation, and air in this area are clean due to the low human activity in that area, which makes it ideal for resource gathering for medicinal purposes (Teale 2016:2,3). The wind and rain patterns observed at the northern plateau are unique to that particular area, which means that the medicines of that area are different from anywhere else (Teale 2016:3). Disturbances to this area would harm the resources that certain Kānaka 'Ōiwi practitioners were taught to gather (Teale 2016:3).

Mauna Kea is inherently associated with the traditional history, spirituality, and culture of Kānaka 'Ōiwi. Mauna Kea serves as an integral part of Hawaiian ideology and understanding traditional knowledge systems, the same knowledge systems that continue to inform us of the significance of Mauna Kea (Maly and Maly 2022:3; Abad 2016:10,11; Kanahale 2016:2,3). In addition to being deeply rooted in a sophisticated and rich history, Hawaiian culture is a living and breathing culture that continues to evolve. Traditional knowledge systems inform how Kānaka 'Ōiwi view and interact with the environment, especially Mauna Kea (Ching 2016:2; Flores 2016:18; Ho'akea, LLC 2009:1-4; Kahakalau 2016:3).

In summary, and also in satisfaction of the threshold criteria for HRHP Listing under Hawai'i Administrative Rules Title 13, Subtitle 8, Chapter 198 #2 and #3, Mauna Kea significantly enhances the environmental quality of Hawai'i and its preservation significantly contributes to the understanding and enjoyment of the history and culture of Hawai'i and the Pacific.

The preservation of Mauna Kea, a state-designated conservation zone, enhances the environmental quality of Hawai'i due to its role as a major watershed and its role in recharging the aquifer, the preservation of its unique and distinguished viewscape, and its status as a place of continued Hawaiian cultural practice and knowledge generation (Kanahale 2017:3,4; Pisciotta 2016:10; Kanahale 2016:2,3). The latter include the observational practices that hinge on observations of processes, phenomena, and physical tangible aspects of the natural world unencumbered by development or desecration, and in the summit region, a sacred spiritual landscape and wao akua purposefully devoid of development (Flores 2016:18).

The preservation of Mauna Kea as a place of continued Hawaiian cultural practice and knowledge generation **contributes significantly to the understanding and enjoyment of the history and culture of Hawai'i and the Pacific for numerous reasons.** First, the upper regions of Mauna Kea are considered part of the wao akua (*realm of the gods*) (Pisciotta 2016:2; Kanahale 2016:2;

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Kahakalau 2016:3; Kanahele 2017:3). Mauna Kea is the home of divine major deities as well as familial and ancestral deities. Secondly, Mauna Kea, as the highest point on Hawai'i Island, is the physical point of connection between Papa and Wākea (Pisciotta 2016:2; Ho'akea, LLC 2009:1-3). Thirdly, as Kealoha Pisciotta (2016:10) explains: "Lake Waiau is considered among other things to be a door way into the Po (the Heavenly Realms of the Ancestors). It is said this is where the water of the sea and the water of the sky meet. The Lake is like a navigational gourd to view the heavens in, as the stars are reflected on its surface." For all these reasons and more, Mauna Kea is a living temple, and one of most sacred places in Native Hawaiian cosmology (Ching 2016:1). Mauna Kea is a unique space of continued cultural practice and Hawaiian knowledge generation (Kanaka'ole et al. 2021:31-34; Cleghorn 2016:1; Kanahele 2017:3; Ching 2016:13; Flores 2016:1; Rios 2016:2). Its preservation facilitates the perpetuation of Hawaiian cultural knowledge generation and the recognition of the sacred nature of Mauna Kea to Hawai'i's indigenous people (Edith Kanaka'ole Foundation in Ho'akea, LLC 2009:ii; Flores 2016:18; Ho'akea, LLC 2009:1-4). The designation of Mauna Kea as a TCP would validate Kānaka 'Ōiwi worldviews and their unique lifeways, and attests to the persistence of their living, dynamic, vibrant culture.

The social, cultural, educational, and recreational value of Mauna Kea, when preserved, presented, or interpreted, contributes significantly to the understanding and enjoyment of the history and culture of Hawai'i and the Pacific. Mauna Kea wahi kūpuna and wahi pana recognized and revered in oral traditions and their uses evidence a sophisticated and thorough understanding that Kānaka 'Ōiwi have of the biocultural environment (Maly and Maly 2022:3, 15; Kanaka'ole 2021:27-29). Mauna Kea has yielded critical information about the pre- and post-contact history of Hawai'i and is instrumental to the evolution of Hawaiian knowledge cultivation and practices. The mountain is a living temple (Cleghorn 2016:1; Pisciotta 2016:2).

In conclusion, the living temple and spiritual epicenter of Mauna Kea exceeds all HRHP and NRHP eligibility criteria as a historic property (HRHP), Hawaiian TCP and district that is critically important to historical, living, and future Hawaiian cultural practices, beliefs, and the perpetuation of Hawaiian culture. This truth aligns with previous testimony issued by King (2003:67) supporting the designation of Mauna Kea as a TCP, and previous efforts by the SHPD to recognize Pu'u Līlīnoe, Lake Waiau, and Kūkahau'ula as TCPs and the SHPD's decree that the summit region of Mauna Kea is "eligible for inclusion in the National Register as an historic district because it encompasses a sufficient concentration of historic properties (i.e. shrines, burials and culturally significant landscape features) that are historically, culturally, and visually linked within the context of their setting and environment," (Hibbard 1999:5; PHRI 1999).

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Previous documentation on file (NPS):

- ____ preliminary determination of individual listing (36 CFR 67) has been requested
____ previously listed in the National Register
____ previously determined eligible by the National Register
____ designated a National Historic Landmark
____ recorded by Historic American Buildings Survey # _____

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_____ recorded by Historic American Engineering Record # _____
_____ recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- ☒ State Historic Preservation Office
☐ Other State agency
☐ Federal agency
☐ Local government
☐ University
☒ Other

Name of repository: Living human repository of Hawaiian oral traditions transmitted through centuries and generations.

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property ~126,615 GIS acres

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates

Datum if other than WGS84: _____
(enter coordinates to 6 decimal places)

- | | |
|----------------------|----------------------|
| 1. Latitude: 19.82°N | Longitude: 155.47° W |
| 2. Latitude: | Longitude: |
| 3. Latitude: | Longitude: |
| 4. Latitude: | Longitude: |

Or

UTM References

Datum (indicated on USGS map):

☐ NAD 1927 or ☐ NAD 1983

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- | | | |
|----------|-----------|-----------|
| 1. Zone: | Easting: | Northing: |
| 2. Zone: | Easting: | Northing: |
| 3. Zone: | Easting: | Northing: |
| 4. Zone: | Easting : | Northing: |

Verbal Boundary Description (Describe the boundaries of the property.)

Mauna Kea is boundless. However, for the purposes of this nomination and per Hawaiian primary source records, the boundary of Mauna Kea as a TCP and district is set at roughly 6,500 amsl. Beginning in its northeast quadrant, along the boundary of Hilo and Hāmākua two moku (*land districts*), the boundary of Mauna Kea traces the boundaries of State Government and Department of Hawaiian Home Lands (DHHL) landholdings. The east to southeast flanks of Mauna Kea are part of the Hilo District whose TCP and district boundary bisects the mauka-most Government State and DHHL landholdings. The southern portion of the 6,500 amsl boundary includes a segment of Saddle Road, the major roadway that passes between Mauna Kea and Mauna Loa, as well as Pu'u Huluhulu, a wahi pana (*sacred, storied place*) southeast of Saddle Road and situated opposite of Mauna Kea. The entire western flank of Mauna Kea is part of the Hāmākua District and bounds State Government landholdings at roughly 6500 amsl.

See discussion below.

Boundary Justification (Explain why the boundaries were selected.)

It is important to acknowledge that it is culturally inappropriate and anathema to Hawaiian spirituality, culture, traditions, and practices - as well as literally impossible and scientifically inaccurate - to divide, parse, or quantify the tangible and intangible components of Mauna Kea, a supremely sacred space (see Ching 2016:1; Pisciotta 2016:2; The Kali'uokapa'akai Collective 2021:5). Given these realities, the tangible and intangible Hawaiian cultural heritage in the summit region and adjoining boundless cultural landscape that compromise Mauna Kea are non-quantifiable. For the purposes of this nomination, the boundary for Mauna Kea as a historic property, TCP, and district is public lands within the roughly 6,500 amsl. Establishing this boundary on what has been traditionally understood to be a contiguous landscape does not diminish the integrity of the relationship between Kānaka 'Ōiwi and the contiguous landscape of Mauna Kea, nor is the integrity of condition of Mauna Kea in its entirety diminished. These spaces have an integral relationship to traditional Hawaiian cultural practices and beliefs, a connection

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that persists through the continued living cultural practices and beliefs of contemporary Kānaka ‘Ōiwi.

The roughly 6,500 amsl boundary makes cultural sense because it encompasses the wao akua and a large portion of the ‘āina mauna – both spaces where traditional cultural practices occur, and important cultural resources are found that make Mauna Kea significant to Kānaka ‘Ōiwi. Although the tangible and intangible resources that contribute to the significance and integrity of Mauna Kea as a TCP and district exceed this boundary, a large and representative concentration of those intertwined, contiguous tangible and intangible features and resources are found in the cultural landscape of the summit region and adjoining ‘āina mauna within the chosen boundary. As Parker and King write: “In defining boundaries, the traditional uses to which the property is put must be carefully considered” (1998:18-19). Encompassed in the roughly 6,500 amsl boundary is the wao akua, a “distant area inhabited by gods” (Maly and Maly 2022:16), which Kānaka ‘Ōiwi attribute much of Mauna Kea’s significance to. As the first-born mountain child of the progenitor gods, Mauna Kea, particularly its summit, serves as the physical connection between the akua and Kānaka ‘Ōiwi. This sacred landscape is a piko (*umbilical cord, highest peak*) for Kānaka ‘Ōiwi and critically informs the traditions associated with Mauna Kea that Kānaka ‘Ōiwi continue to perform both in reverence for Mauna Kea and for worship and religious practice, ceremonial gatherings, making offerings, and engaging in practices deeply associated with the birth and death cycles (Pisciotta 2016:2; Kanahale 2016:2; Kahakalau 2016:3; Kanahale 2017:3). Included in this boundary are the view planes important to celestial observation and the fundamental practice of kilo (*observation*) that informs several aspects important to Hawaiian lifestyle and understanding. Including the entirety of Mauna Kea’s summit in the roughly 6,500 amsl boundary makes cultural sense because this portion of Mauna Kea is a necessary and crucial factor to the continued cultural practices and beliefs of Kānaka ‘Ōiwi. Its inclusion facilitates the perpetuation of Hawaiian cultural knowledge generation and the recognition of the sacred nature of Mauna Kea to Hawai‘i’s indigenous people (Edith Kanaka‘ole Foundation in Ho‘akea, LLC 2009:ii; Flores 2016:18; Ho‘akea, LLC 2009:1-4). Below the wao akua, the ‘āina mauna and its unique resources sustain traditional cultural practices and beliefs, including those that are elemental to Kānaka ‘Ōiwi spirituality and cultural identity, through to the present. There are oral testimonies, foreign accounts, and mo‘olelo (*traditions, histories, chronicles, records*) of the importance of the ‘āina mauna due to its unique resources, proximity to the wao akua and the traditional practices that took place therein, and the features and sites located throughout the ‘āina mauna that are important to Kānaka ‘Ōiwi history (Maly and Maly 2022:17). These cultural practices include but are not limited to kia manu (*method of bird catching*); resource gathering; interment of iwi kūpuna (*ancestral remains*), moepū (*associated funerary objects*), and koehana (*objects of cultural patrimony*); wa‘a (*canoe*) carving; ahu (*altar, shrine*) and heiau (*temple*) building and worship; hale (*housing*) construction; pōhaku (*rock*) sourcing and knapping, and food gathering and cultivation (Waiki 1873 in Maly and Maly 2022:65; Kalualoha 1873 in Maly and Maly:74; Kamohaiulu 1873 in Maly and Maly:71; Maly and Maly 2022:57, 63, 133, 135, 136; Kamohaiulu 1873 in Maly and Maly:71; Maly and Maly 2022: 57, 85; Maly and Maly 2022:4, 13, 20, 50-80; Malo [Langlas and Lyon, trans.] 2020:178; Kamakau 1964: 38-42; S. Kauahipaula 1880 in Maly and Maly 2022:86; Kahue 1880 in Maly and Maly 2022:88; Malai 1866 in Maly and Maly 2022:

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129). Relatedly, the 'āina mauna includes a number of pu'u significant to both traditional and continued cultural uses like interment of iwi kupuna, moepū, and koehana (*objects of cultural patrimony*), and construction and use of some ahu (Alexander 1892a in Maly and Maly 2022:40; Maly and Maly 2022:56, 121, 135). Additionally, the 'āina mauna was interlaced by a system of ala (*trails*) traveled to access Mauna Kea and the resources found in the 'āina mauna – cultural practices that persist through the present (Alexander 1892b:1; Bingham 1969:377,378; McCoy and Nees 2010:2,22; Maly Maly 2022:57 Ching 2016:13).

In determining boundaries for a TCP, Parker and King recognize that boundaries sometimes “must be defined more narrowly, even though this may involve making some rather arbitrary decisions” (1998:18). The roughly 6,500 amsl does not account for the boundlessness of Mauna Kea nor the totality of the traditional and continued cultural uses of the mountain, its significance, and connection with the contiguous biocultural landscape and beyond; however, it does include the wao akua and large portions of the 'āina mauna that inherently contribute to Mauna Kea's significance, integrity, and qualifying criteria as a traditional cultural property and district. As previously stated, the roughly 6,500 amsl boundary makes cultural sense because it includes a large concentration of the contiguous tangible and intangible features and resources that make Mauna Kea significant to Kānaka 'Ōiwi. While Hawaiian practices continue to evolve, many of the traditions associated with Mauna Kea continue to be exclusively practiced on Mauna Kea, specifically within the roughly 6,500 amsl boundary, as they have been for hundreds of years.

Historical precedence for state-level official recognition of Mauna Kea, and specifically the public lands encompassed by this nomination, as an HRHP and NRHP-eligible TCP, buttress the boundary of the Mauna Kea Traditional Cultural Property and District HRHP and NRHP Nomination at roughly 6,500 amsl. Previous official State of Hawai'i recognitions of Mauna Kea and components of Mauna Kea as a TCP were issued by the State Historic Preservation Division (SHPD), and more notably by Tom King, co-author of *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties*, the NPS guidance on TCPs (Parker and King 1998). SHPD staff in the late 1990s under Dr. Ross Cordy, a former Branch Chief of Archaeology, understood the summit of Mauna Kea was eligible for HRHP and NRHP listing and was pursuing a nomination at the time, led by Dr. Holly McEldowney (personal communication, Dr. Ross Cordy). McCoy and Nees (2013:i, 3-27) note that the SHPD designated Pu'u Līlīnoe, Lake Waiau, and Kūkahau'ula TCPs in 1999; attempts to secure records confirming these TCP designations with the SHPD in June 2023 by Huliauapa'a staff were unsuccessful. In 1999, the SHPD deemed the summit region of Mauna Kea “eligible for inclusion in the National Register as an historic district because it encompasses a sufficient concentration of historic properties (i.e. shrines, burials and culturally significant landscape features) that are historically, culturally, and visually linked within the context of their setting and environment,” (Hibbard 1999:5; PHRI 1999). King issued testimony during a contested case hearing supporting the designation of Mauna Kea as a TCP (King 2003: 6,7). The State Inventory of Historic Places (SIHP) maintained by the SHPD recognizes as significant historic properties the following wahi kūpuna that are components of this HRHP and NRHP Nomination for Mauna Kea as a historic property, TCP, and District: Keanakāko'i Adze Quarry (National Register Site 66000285; (State

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Inventory of Historic Places [SIHP] # 50-10-23-04136), Pu'u Waiau SIHP# -21440), Pu'u Kūkahau'ula (SIHP# -21440), and Pu'u Līlīnoe (SIHP# -21439).

11. Form Prepared By

name/title: Ku'upua Kiyuna Mossman, JD, Huliauapa'a Legal Specialist and Kali'uokapa'akai Collective Co-Coordinator; Rachel Hoerman, PhD, Huliauapa'a Historic Preservation Specialist; Kelley Uyeoka, M.A., Huliauapa'a Executive Director; and, Dominique Leu Cordy, M.A., Huliauapa'a Deputy Director, on behalf of KAHEA and Mauna Kea Anaina Hou
organization: KAHEA and Mauna Kea Anaina Hou
street & number: P.O. Box 37368
city or town: Honolulu state: HI zip code: 96837
e-mail: info@kahea.org
telephone: (808) 524-8220
date: November 7, 2023

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A USGS map or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: Mauna Kea TCP District

Mauna Kea Traditional Cultural Property
and District

Hawai'i County,
Hawai'i

Name of Property

City or Vicinity: Ka'ohe, Humu'ula

County and State

County: Hawai'i

State: Hawai'i

Photographer: Kelley Uyeoka, except where otherwise noted

Date Photographed: June 2016 - March 2023

Description of Photograph(s) and number, include description of view indicating direction of camera:

1 of 32. Map featuring the segment of the boundless wahi kūpuna (Hawaiian ancestral place) covered by the Mauna Kea Traditional Cultural Property and District HRHP and NRHP Nomination at 6,500 amsl, Hawai'i, the Hawaiian Archipelago (Figure by Dominique Leu Cordy, Huliauapa'a).

2 of 32. Map of Hawai'i Island, location of Mauna Kea, with photos keyed to their locations, with an inset featuring the 6,500 amsl boundary (for the purposes of this nomination only) of Mauna Kea with locations of photos keyed to their locations (Figure by Dominique Leu Cordy, Huliauapa'a).

3 of 32: Summit of Mauna Kea standing above the cloudbank in the "realm of Wākea" (Flores 2016:18) and touching the 'āpapalani, the uppermost stratum of the atmosphere (Kanaka'ole et al. 2021:34; Pisciotta 2016:2), view to the east/northeast (photo by Ku'upua Kiyuna Mossman).

4 of 32: Aerial view of the summit of Mauna Kea with Mauna Loa in the background, view to the east/northeast (photo by Kelley Uyeoka).

5 of 32: 1939 aerial photo of Mauna Kea (foreground) and Mauna Loa (background), view to the east/northeast (War Department, Army Air Forces 1941-1947).

6 of 32: View of northeastern flank of Mauna Kea from the coast off Hakalau showing the long distance between the wao kānaka (*human realm*) where people reside and the wao akua (*godly realm*), view to the northwest (photo by Kelley Uyeoka).

7 of 32: Poli'ahu present on Mauna Kea. Pu'u Haukea blanketed in snow (Poli'ahu), view to the south/southwest (photo by Kelley Uyeoka).

8 of 32: Northern view of lilinoe (*mist*) present in the 'āina mauna taken from Saddle Road, view to the northeast (photo by Ku'upua Kiyuna Mossman).

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9 of 32: Lake Waiau surrounded with the remnants of Poli'ahu's presence, view to the southwest (photo by Kelley Uyeoka).

10 of 32: Northeastern flank of Mauna Kea from summit to 'āina mauna, to the beginning of the wao kānaka (*human realm*) where people reside, view to the northeast (photo by Kelley Uyeoka).

11 of 32: Map of wahi kūpuna (*ancestral places*) within the Mauna Kea HRHP and NRHP Nomination Boundaries. Note, this is not an exhaustive compilation of the culturally significant places that comprise Mauna Kea as a historic property, TCP, and district (Figure by Dominique Leu Cordy, Huliauapa'a).

12 of 32: Nā hulu ali'i (*royal Hawaiian featherwork*) of ali'i associated with Mauna Kea. Top: Kā'ei kapu o Ka Lani Līloa (*sacred sash of Chief Līloa*; Marzan and Gon III in Caldeira et al. 2015:27).

Middle left: Close-up of kā'ei kapu o Ka Lani Līloa (*sacred sash of Chief Līloa*). A partial oli by Makue relays that Līloa bestowed the kā'ei (cordon or sash) upon his son 'Umi, another ruling chief associated with Mauna Kea (Fornander 1919-1920: 538; Kaeppler in Caldeira et al. 2015:57, 58). Comprised of feathers from moho and 'ō'ō bird species, human and fish teeth, and olonā (*Touchardia latifolia*) cordage, it is the only known complete surviving ali'i kā'ei (Marzan and Gon III in Caldeira et al. 2015:27; Hellmich in Caldeira et al. 2015:58). Middle right: 'Ahu'ula (cape) of Kamehameha I and Kamehameha II featuring red 'i'iwi feathers, as well as feathers sourced from yellow and black 'ō'ō (Caldeira et al. 2015: 180, 181).

Bottom left: 'Ahu'ula (cape) of Kamehameha III comprised of red 'i'iwi and yellow 'ō'ō feathers and olonā fiber (Caldeira et al. 2015: 185).

Bottom right: 'Ahu'ula (cape) worn by Queen Emma "as a child at the Chief's Children School in Honolulu," (Caldeira et al. 2015:200).

Malo (1951:106) noted " [t]he feathers of birds were the most valued possessions of ancient Hawaiians," and traditionally kapu to all but ali'i (Andrade and Kahanu in Caldeira et al. 2015:24). In addition to these valuable treasures' connections to ali'i with pilina (*relationship, association*) to Mauna Kea, they exemplify the cultural practice and resource of bird feathers harvested by kia manu (*bird catchers*) in the 'āina mauna and may even have been sourced from there.

13 of 32: Roughed out canoe at the 4,500' Elevation in dense Koa forest on the slopes of Mauna Kea, above Hilo, September 11, 1885, unknown vantage point (E. Arning Photo No. 1.172, in Collection of Hawaiian Historical Society; Copy Photo KPA-N1016).

14 of 32: Ahu constructed as recently as 2015 in the northern plateau of the summit, view to the north (photo by Ku'upua Kiyuna Mossman).

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15 of 32: Kuahu (*shrine*) composed of upright stones on an elevated foundation at Keanakāko'i Adze Quarry, view to the west (photo by Kepā Maly).

16 of 32: Photo taken from Keck Observatory of Pu'u Wekiu, Pu'u Haukea, and Mauna Loa in the background, view to the northwest (photo by Kelley Uyeoka).

17 of 32: Pu'u Wai'au with Mauna Loa in the background, view to the north (photo by Kelley Uyeoka).

18 of 32: Four telescopes on Pu'u Hau'oki partially blocking the view plane of Haleakalā, Maui in the background, view to the northwest (photo by Kelley Uyeoka).

19 of 32: Northeastern view of the summit of Mauna Kea at sunset piercing above the cloudbank and into the realm of Wākea, view to the northeast (photo by Kelley Uyeoka).

20 of 32: Pu'u Līlinoe with lele (*sacrificial altar or stand*) constructed atop it that is used for ceremonial purposes, view to the southwest (photo by Kelley Uyeoka).

21 of 32: Ho'okupu (*ceremonial offering, a tribute to one of higher standing*) laid at Lake Waiau. Offering ho'okupu is one of many ceremonial practices that continue to be performed on Mauna Kea, particularly at places of specific significance such as Lake Waiau. View to the southwest (photo by Kelley Uyeoka).

22 of 32: Close up view of the pristine waters of Lake Waiau reflecting the sky. As Pisciotta (2016:10) notes, "Lake Waiau is considered among other things to be a door way into the Po (the Heavenly Realms of the Ancestors)." View to the southwest (photo by Kelley Uyeoka).

23 of 32: Close up of Lake Waiau, the silvery pool that Kāne created for Poli'ahu to freely swim in without fear of being seen by man (Taylor 1931 in Maly and Maly 2005:53). View to the southwest (photo by Kelley Uyeoka).

24 of 32: The Poli'ahu (*snow*) of Mauna Kea being painted by Kūkahau'ula (*pink-tinted snow*), who appears on Mauna Kea every sunrise and sunset, view to the west (photo sourced from Honu Travel, LLC Facebook account).

25 of 32: Northwestern view of Mauna Kea from Hakalau using PeakVisor, a 3D compass able to identify key features of a mountain and measure their altitudes. Pictured are some of the many pu'u (*hills, cones*) found on Mauna Kea, view to the west (photo by Kelley Uyeoka).

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26 of 32: Lake Waiau, where traditional cultural practices of collecting ka wai kapu o Kāne (*sacred water of Kāne*) and depositing piko (*umbilical cords*) of newborns take place, view to the southwest (photo by Kepā Maly).

27 of 32: Close up of Pu'u Līlīnoe and the lele (*sacrificial altar or stand*) located at its summit, view to the south (photo by Kelley Uyeoka).

28 of 32: Kuahu (*shrine*) located in Keanakāko'i Adze Quarry, view to the northwest (photo by Kepā Maly).

29 of 32: Trail ascending Pu'u Līlīnoe ending at the summit where a lele (*sacrificial altar or stand*) is located, view to the south (photo by Kelley Uyeoka).

30 of 32: Ala Ko'i, meaning "adze trail." Although composed of the same stone as its surroundings, the trail is clearly laid and easily identifiable, view to the northeast (photo by Kepā Maly).

31 of 32: Humu'ula Trail leading to Lake Waiau with Pu'u Haukea on the left. At the start of the trail is signage indicating the sacred site of Lake Waiau, view to the southwest (photo by Kelley Uyeoka).

32 of 32: Mauna Kea Access Road that leads from Saddle Road to the summit of Mauna Kea with Pu'ukalepamoā to the right of the road, view to the southwest (photo by Kelley Uyeoka).

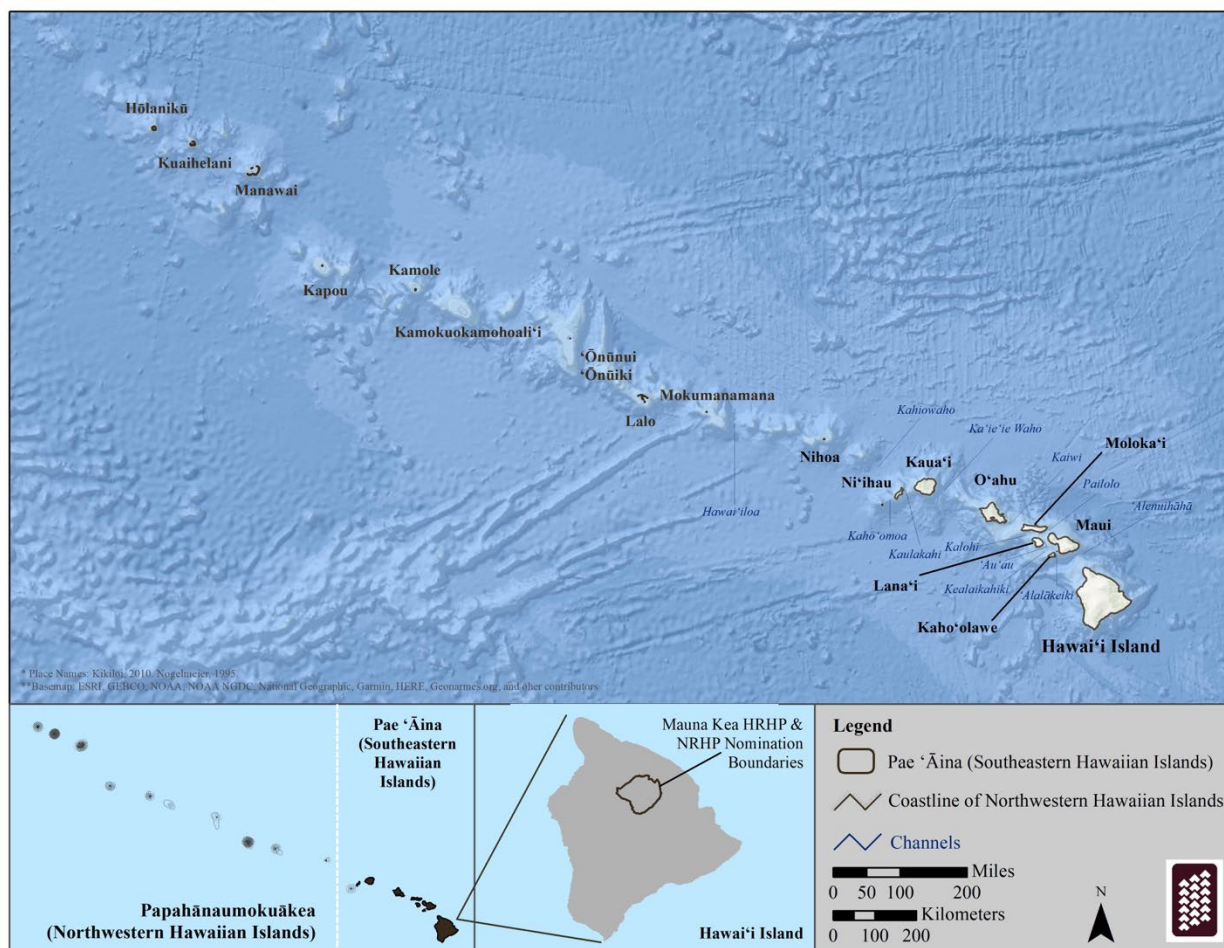
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Figure 1 Map featuring the segment of the boundless wahi kūpuna (*ancestral place*) covered by the Mauna Kea Traditional Cultural Property and District HRHP and NRHP Nomination at roughly 6,500 amsl, Hawai'i, the Hawaiian Archipelago (Figure by Dominique Leu Cordy, Huliauapa'a).



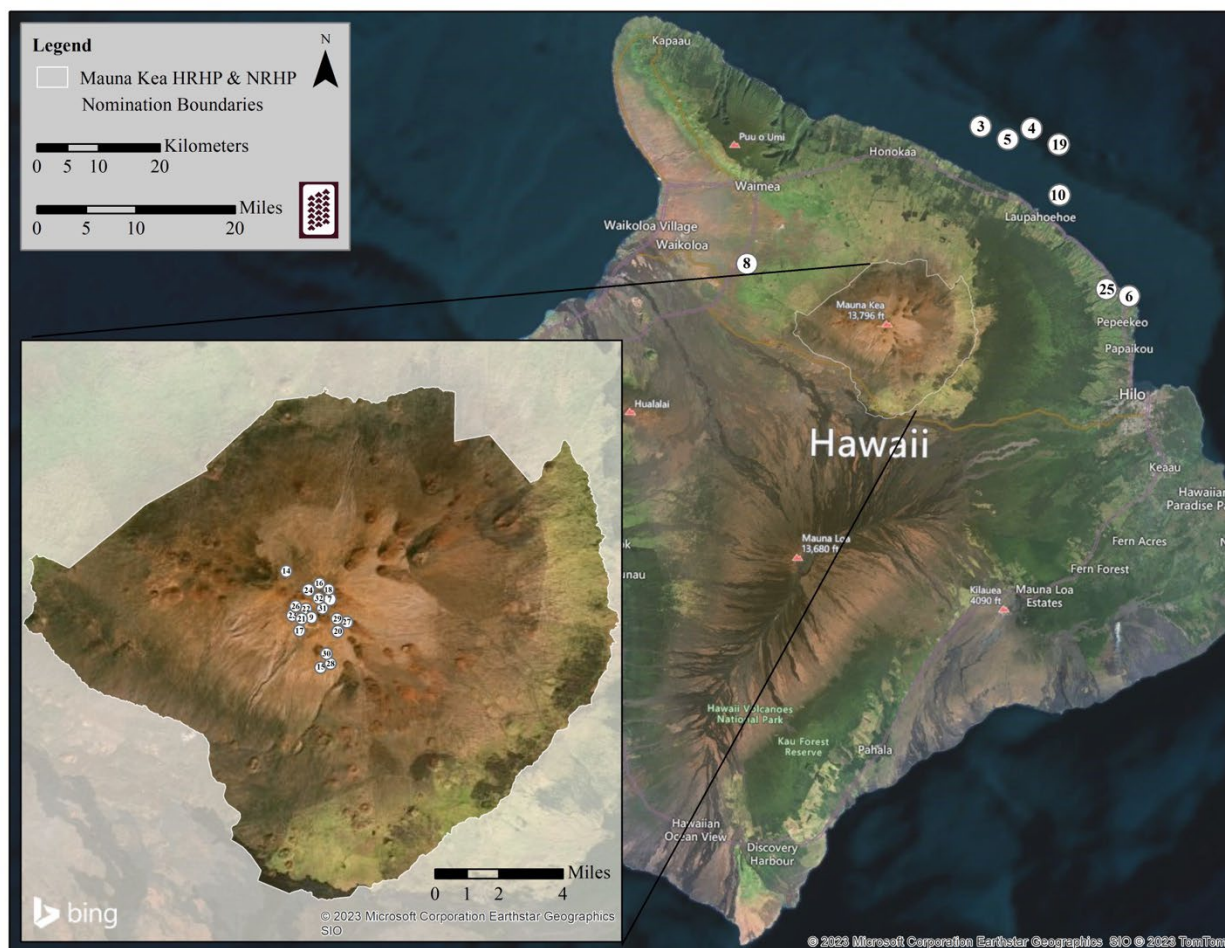
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Figure 2 Map of Hawai'i Island, location of Mauna Kea, with photos featured here keyed to their locations, with an inset featuring the roughly 6,500 amsl boundary (for the purposes of this nomination only) of Mauna Kea (Figure by Dominique Leu Cordy, Huliauapa'a).



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Figure 3 Summit of Mauna Kea standing above the cloudbank in the “realm of Wākea” (Flores 2016:18) and touching the ‘āpapalani, the uppermost stratum of the atmosphere (Kanaka‘ole et al. 2021:34; Pisciotta 2016:2), view to the east/northeast (photo by Ku‘upua Kiyuna Mossman).



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Figure 4 Aerial view of the summit of Mauna Kea with Mauna Loa in the background, view to the east/northeast (photo by Kelley Uyeoka).



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Figure 5 1939 aerial photo of Mauna Kea (foreground) and Mauna Loa (background), view to the east/northeast (War Department, Army Air Forces 1941-1947).



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Figure 6 View of northeastern flank of Mauna Kea from the coast off Hakalau showing the long distance between the wao kānaka (*human realm*) where people reside and the wao akua (*godly realm*), view to the northeast (photo by Kelley Uyeoka).



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Figure 7 Poli'ahu present on Mauna Kea. Pu'u Haukea blanketed in snow (Poli'ahu),
view to the south/southwest (photo by Kelley Uyeoka).



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Figure 8 Northern view of lilinoe (*mist*) present in the 'āina mauna taken from Saddle Road, view to the northeast (photo by Ku'upua Kiyuna Mossman).



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Figure 9 Lake Waiau surrounded with the remnants of Poli'ahu's presence, view to the southwest (photo by Kelley Uyeoka).



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Figure 10 Northeastern flank of Mauna Kea from summit to 'āina mauna, to the beginning of the wao kānaka (*human realm*) where people reside, view to the northeast (photo by Kelley Uyeoka).



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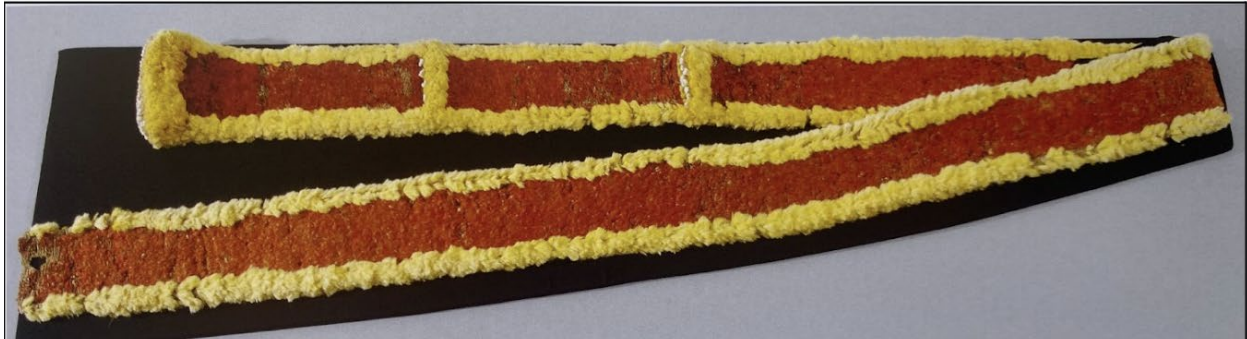
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Figure 13 Roughed out canoe at the 4,500' Elevation in dense Koa forest on the slopes of Mauna Kea, above Hilo, September 11, 1885, unknown vantage point (E. Arning Photo No. 1.172, in Collection of Hawaiian Historical Society; Copy Photo KPA-N1016)



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Figure 14 Ahu constructed as recently as 2015 in the northern plateau of the summit, view to the north (photo by Ku'upua Kiyuna Mossman).



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Figure 15 Kuahu (*shrine*) composed of upright stones on an elevated foundation at Keanakāko'i Adze Quarry, view to the west (photo by Kepā Maly).



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Figure 16 Photo taken from Keck Observatory of Pu'u Wekiu, Pu'u Haukea, and Mauna Loa in the background, view to the northwest (photo by Kelley Uyeoka).



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Figure 17

Pu'u Wai'au with Mauna Loa in the background, view to the north (photo by
Kelley Uyeoka).

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Figure 18 Four telescopes on Pu'u Hau'oki partially blocking the view plane of Haleakalā, Maui in the background, view to the northwest (photo by Kelley Uyeoka).



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Figure 19 Northeastern view of the summit of Mauna Kea at sunset piercing above the cloudbank and into the realm of Wākea, view to the northeast (photo by Kelley Uyeoka).



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Figure 20 Pu'u Līlinoe with lele (*sacrificial altar or stand*) constructed atop it that is used for ceremonial purposes, view to the southwest (photo by Kelley Uyeoka).



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Figure 21 Ho'okupu (*ceremonial offering, a tribute to one of higher standing*) laid at Lake Waiau. Offering ho'okupu is one of many ceremonial practices that continue to be performed on Mauna Kea, particularly at places of specific significance such as Lake Waiau. View to the southwest (photo by Kelley Uyeoka).



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Figure 22 Close up view of the pristine waters of Lake Waiau reflecting the sky. As Pisciotta (2016:10) noted, "Lake Waiau is considered among other things to be a door way into the Po (the Heavenly Realms of the Ancestors)." View to the southwest (photo by Kelley Uyeoka).



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Figure 23 Close up of Lake Waiau, the silvery pool that Kāne created for Poli'ahu to freely swim in without fear of being seen by man (Taylor 1931 in Maly and Maly 2005:53). View to the southwest (photo by Kelley Uyeoka).



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Figure 24 The Poli'ahu (*snow*) of Mauna Kea being painted by Kūkahau'ula (*pink-tinted snow*), who appears on Mauna Kea every sunrise and sunset, view to the west (photo sourced from Honu Travel, LLC Facebook account).



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Figure 25 Northwestern view of Mauna Kea from Hakalau Valley using PeakVisor, a 3D compass able to identify key features of a mountain and measure their altitudes. Pictured are some of the many pu'u (*hills, cones*) found on Mauna Kea, view to the west (photo by Kelley Uyeoka).



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Figure 26 Lake Waiau, where traditional cultural practices of collecting ka wai kapu o Kāne (*sacred water of Kāne*) and depositing piko (*umbilical cords*) of newborns take place, view to the southwest (photo by Kepā Maly).



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Figure 27 Close up of Pu'u Līlinoe and the lele (*sacrificial altar or stand*) located at its summit, view to the south (photo by Kelley Uyeoka).



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Figure 28 Kuahu (*shrine*) located in Keanakāko'i Adze Quarry, view to the northwest
(photo by Kepā Maly).



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Figure 29 Trail ascending Pu'u Līlinoe ending at the summit where a lele (*sacrificial altar or stand*) is located, view to the south (photo by Kelley Uyeoka).



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Figure 30 Ala Ko'i, meaning "adze trail." Although composed of the same stone as its surroundings, the trail is clearly laid and easily identifiable, view to the northeast (photo by Kepā Maly).



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Figure 31 Humu'ula Trail leading to Lake Waiau with Pu'u Haukea on the left. At the start of the trail is signage indicating the sacred site of Lake Waiau, view to the southwest (photo by Kelley Uyeoka).



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Figure 32 Mauna Kea Access Road that leads from Saddle Road to the summit of Mauna Kea with Pu'ukalepamoia to the right of the road, view to the southwest (photo by Kelley Uyeoka).



Paperwork Reduction Act Statement: This information is being collected for nominations to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.). We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

Estimated Burden Statement: Public reporting burden for each response using this form is estimated to be between the Tier 1 and Tier 4 levels with the estimate of the time for each tier as follows:

Tier 1 – 60-100 hours
Tier 2 – 120 hours
Tier 3 – 230 hours
Tier 4 – 280 hours

The above estimates include time for reviewing instructions, gathering and maintaining data, and preparing and transmitting nominations. Send comments regarding these estimates or any other aspect of the requirement(s) to the Service Information Collection Clearance Officer, National Park Service, 1201 Oakridge Drive Fort Collins, CO 80525.