

MAUNAKEA ORIENTATION PLAN

2009 Comprehensive Management Plan: Management Actions EO-2, P-4, C-7, & C-8
TMT CDUP HA-3568 (2017)

PURPOSE

The purpose of this plan is to describe how the University will provide those who work, conduct business, or visit UH managed lands on Maunakea with an overview about the cultural, natural, and historical resources; cultural significance; regulatory and compliance considerations; and health and safety considerations of the mountain. The orientations will provide those engaged in a permitted activity such as astronomy operations, commercial tours, or construction with additional context for understanding the applicable permit(s), management plan(s), leases, sub-leases, administrative rules, reporting requirements, etc. Education, awareness and understanding are necessary to instill safe, respectful, and sensitive behavior while on the mountain, encompassing both the summit region and Halepōhaku. This fulfills the requirements of Management Actions: *EO-2. Mandatory Visitor Orientation*; *P-4. Educate management staff and users of the mountain about all applicable rules and permit requirements*; *C-7. Education regarding historical and cultural significance*; and *C-8. Education regarding environment, ecology and natural resources* (Maunakea Comprehensive Management Plan, 2009). This also fulfills special requirements such as project-specific conditions imposed by the Board of Land and Natural Resources (BLNR) or Maunakea Management Board (MKMB).

Should infrastructure or access procedures to gain entry to UH Managed lands change, this orientation plan will require an update.

INDIVIDUALS AFFECTED

All individuals accessing University-managed lands on Maunakea are subject to the requirements herein except for emergency workers when on-duty, such as fire, police, or ambulance services. There are three broad groups of individuals identified, with different applicable orientation requirements. The orientation type required is dependent upon the purpose of a visit to UH lands (or as required by a permit). These include:

1. Visitor Orientation: all visitors including cultural practitioners to UH managed lands when not present under the auspices of a Conservation District Use Permit or permitted commercial activity (Management Action EO-2). This orientation requirement does not affect State of Hawai'i constitutional provisions protecting native Hawaiian cultural practices.
2. User Orientation: including individuals who work or conduct business on UH managed lands including, but not limited to observatory personnel, construction workers, vendors, and other commercial activities (such as tour operators). These individuals are typically present under the auspices of a permit, commercial, or scientific activity. Orientation of all mountain users is required under the Maunakea Comprehensive Management Plan (CMP) (Management Action P-4). See *Implementation* section below for additional detail.
3. Project Specific Orientation: The BLNR or MKMB may impose specific orientation requirements in the permit conditions on a project. For example, content specific orientation, duration or specified individuals.

CONTENT

Orientations - Generally

For all affected individuals, these orientations shall include information on health and safety, rules and regulations, concerns regarding sensitivity of cultural and natural resources, the Natural Area Reserve, Rangers as a resource, litter and debris control, prohibitions on vehicle use off of roads, and emergency procedures. To protect cultural resources, the orientations shall inform visitors to not alter or disturb cultural artifacts and provide guidelines for appropriate behavior on Maunakea, for example altering of historic properties is prohibited by law. The orientation will also instruct visitors to stay on marked trails, avoid crushing cinders, and to pack out all trash. It shall identify requirements and provide tips on preventing the spread of invasive species. To increase public safety, the orientations shall orient visitors to the potential hazards of high altitude environments, recommend acclimation time at the VIS, and educate drivers by including information on safe driving on the Summit Access Road.

The content of the orientations shall contain information about the resources or cultural practices that are documentable, for example, information found in historical literature, interviews with individuals with familial or cultural ties to Maunakea, research or scientific literature, plans, policies, rules and regulations. The criteria and qualifications for the cultural specialist who prepares the cultural content components shall be developed in consultation with Kahu Kū Mauna, in consultation with families with lineal and historic connections to Mauna Kea, kūpuna, cultural practitioners, the Office of Hawaiian Affairs, and other Native Hawaiian groups (CMP pg7-6).

Visitor Orientation

The orientation for visitors will require *less than* 15 minutes, will **not** include a comprehension assessment, and will briefly identify key cultural and natural resources and concerns while emphasizing appropriate behavior, safety, and best practices. This visitor orientation information will initially be available in printed brochures and made into video format for online, tour companies, Visitor Information Station, and other delivery upon demand. See CMP page 7-24 EO-2. Mandatory Visitor Orientation for additional content requirements (also copied below).

User Orientation

The orientation for management staff and users will require approximately 45-60 minutes to complete and include content on lease, sub-lease, and permit requirements as well as best practices for construction, research, and commercial activities. Two versions shall be available, an 1) in-person orientation (including an attendance option via webinar) and 2) on-line, on-demand video. The in-person session will not include an assessment but will allow for attendees to interact with the presenter(s) and ask questions. The on-line version will include assessment questions of which 3/4 of the questions must be answered correctly to document understanding of key messages communicated in the orientation.

Project-Specific Orientation

The BLNR or MKMB at its discretion, may impose specific conditions on a project including the content, duration, specified individuals, or other aspect of the orientation. For example, the BLNR may impose a condition requiring a minimum half or one days' training on cultural and natural resources. Project-specific orientations will expand upon the standard *User Orientation* and include additional cultural and historical context; more in-depth review of resources, policies, rules, requirements, and best practices; and review of the project's permit-specific considerations.

REVIEW & REVISION

Kahu Kū Mauna will be the primary entity for OMKM to solicit feedback. Initial releases of the orientation videos will typically be completed by Office of Maunakea Management (OMKM) staff. Periodic updates are anticipated, roughly concurrent with the CMP revision cycle if warranted (currently every 5 years). Other updates may also be warranted due to law, policy, or topical issue changes.

Minor revisions may be made at any time without consultation. Minor revisions include updates addressing specific laws enacted or approved policy revisions. Major updates, such as with the CMP revision cycle or additions or revisions to the cultural component will include consultation with Kahu Kū Mauna.

A mechanism for all attendees to submit feedback shall also be available, typically via a link on the OMKM website.

IMPLEMENTATION

Record Keeping & Certificates

For the *User* and *TMT* orientation, OMKM shall keep a record of all those who participated including name, date, type of orientation, the individual's affiliation (i.e., name of construction company, observatory, etc.) if appropriate, and email address. Certificates are provided as proof of attendance to all those attending the *User* and *TMT* orientation.

A *Visitor Orientation* record-keeping system shall be developed and implemented upon completion of suitable infrastructure improvements. Until the development the record-keeping system, individuals may voluntarily provide their names, date of the orientation, and other record keeping information for the record.

Frequency

For individuals accessing UH managed lands, either the *User* or *Visitor* orientation is required every 3 years of all affected individuals, prior to first arriving on UH Managed lands. More frequent orientation attendance may be required, such as conditions of a Conservation District Use Permit (i.e. TMT), as established by criteria under Administrative Rules, or as directed by the Maunakea Management Board or the Department of Land and Natural Resources.

Both *User* and (eventually) *Visitor* orientations shall be available on-line, on-demand and made available to partners such as permitted tour companies for independent use provided they provide records of attendance to OMKM upon request. OMKM is not responsible for internet outages and resulting delays for those required to attend a *User Orientation*. For those requiring the *Visitor Orientation* use of printed brochures (Maunakea Heritage and Natural Resources Guide) is an accepted substitute, although the substitution may only be used when unanticipated internet outage or equipment failure precludes use of the video version.

Individuals required to undergo a *Project-Specific* orientation must attend the Project-Specific orientation once (unless specified otherwise in the permit), and must also attend the *User* orientation on the frequency condition described above as a condition of the project's permit or as required by OMKM. *Project Specific* orientations may not be scheduled at frequent or regular intervals, but may be offered, for example, quarterly. It is understood that construction and operations will occasionally include short-term, substitute, one-time visitors, etc., but all project related employees must either

attend the *User Orientation* or the *Project Specific* orientation before entering UH Managed lands on Maunakea. Regardless of the date of attendance of the *User Orientation*, individuals are required to undergo the project's specified orientation at the first opportunity.

Common Questions

For individuals on Maunakea for work-related activities that are accompanied by Observatory staff at all times such as regulatory or safety inspectors, *potential* vendors on a site visit, *external* scientific review panels, etc.; the *Visitor Orientation* requirements may be substituted in lieu of the *User Orientation*. All others including vendors, contractors, student and faculty researchers, etc. must complete the *User Orientation* prior to arriving at Maunakea.

All individuals named on a Special Request, film permit, or similar application must complete the *Visitor* or *User Orientation*.

For project-specific orientation requirements (for example one-day orientations), any employee affiliated with the project or applicant as defined in the *Individuals Affected* section above for 30 (thirty) or more calendar days must attend the project-specific orientation at the first opportunity. Individuals working less than 30 days may attend only the *User Orientation* before accessing UH managed lands.

Coordination

A mandatory *User Orientation* shall be included as a condition of projects proposed or approved by the University (and DLNR). Attendance at the *User Orientation* (P-4) shall fulfill the requirement of a *Visitor Orientation* (EO-2); although the *Visitor Orientation* (EO-2) shall NOT fulfill the requirement of the *User Orientation* (P-4). The *Visitor Orientation* will be available at the Visitor Information Station, initially via brochures and in video format as soon as infrastructure is in place to provide a venue for viewing.

Typically, the *User Orientation* shall be presented in video format with OMKM staff present to answer questions as well as being available online, on-demand. In-person sessions may be led by a presenter rather than using the video. The *User Orientation* schedule will be posted on OMKM's website and announced via the Maunakea Road Conditions email list-serve.

Orientation schedule information and content, along with a copy of this plan, is available at the OMKM website, <http://www.malamamaunakea.org/>

Comprehensive Management Plan References

Page 7-6

4. All persons involved with construction activities, including, but not limited to, the construction manager, contractors, supervisors, and all construction workers, and all persons involved in operation and maintenance activities, including, but not limited to, scientists and support staff, shall be educated about the historical and cultural significance of the Mauna Kea summit area, and shall be given training as to what constitutes respectful and sensitive behavior while on the summit area. A detailed plan for complying with this condition (including both the content of training and the procedures for implementation, including, but not limited to, a means for certifying persons who have completed the training program) shall be developed by the Office of Mauna Kea Management following consultation with Kahu Kū Mauna or other Native Hawaiians or Native Hawaiian organizations known to have cultural ties to Mauna Kea, and reviewed and approved by the Department. A specialist or specialists in the field of Native Hawaiian culture shall be selected by the Office of Mauna Kea Management with the concurrence of the Department for the purpose of implementing the compliance plan, including, but not limited to, the conduct of educational and training programs for all persons described in this condition. To be qualified for appointment to this position(s), a person shall have worked as a Native Hawaiian cultural specialist and shall be knowledgeable of the types of cultural resources and practices relating to the summit of Mauna Kea. The criteria or qualifications for the cultural specialist shall be developed in consultation with Kahu Kū Mauna, in consultation with families with lineal and historic connections to Mauna Kea, kūpuna, cultural practitioners, the Office of Hawaiian Affairs, and other Native Hawaiian groups.

Page 7-14

1. All persons involved with construction activities, including, but not limited to, the construction manager, contractors, supervisors, and all construction workers, and all persons involved in the operation and maintenance activities, including but not limited to, scientists and support staff, shall be educated about the environment, ecology and natural resources of the Mauna Kea summit area, and shall be given training as to what constitutes appropriate behavior while on the summit area for the protection for the natural resources. A detailed plan for complying with this condition (including both the content of training and the procedures for implementation including, but not limited to, a means for certifying persons who have completed the training program) shall be developed by the Office of Mauna Kea Management following consultation with scientist and environmental organizations knowledgeable about the Mauna Kea summit area, and reviewed and approved by DLNR.

Page 7-23

The need for a mandatory visitor orientation, similar to what is required at Hanauma Bay, Oahu, has been identified on several occasions (Group 70 International 2000; Conant et al. 2004). The education and outreach plan should outline the process and discuss a venue for mandatory visitor orientation, and community consultations should play a part in development the orientation program.

Page 7-24

EO-2. Mandatory Visitor Orientation

One method to ensure that all visitors receive the information they need in order to better protect Mauna Kea's cultural and natural resources is to require everyone who visits the summit to participate in an orientation. The easiest form of orientation would be a video. There are several details that must be worked out before implementing an orientation program, including how often individuals would be required to attend the orientation (e.g., for each visit, annually, every five years, or each time video is updated); location of orientation (at VIS, elsewhere at Hale Pōhaku, 'Imiloa, commercial operator's vans, on the internet); and whether there will be any exceptions to requirements for an orientation. It is recommended that, at minimum, commercial tour operators and existing and potential future

observatory facilities staff be required to incorporate the orientation video into their program. This requirement can be included in the tour operators' permit conditions. Other details include working out how proof of attendance will be provided. Options include maintenance of a database of registered users, a colored armband or bracelet, a pin or button, a rear-view mirror tag, or a printed certificate with name and date of completion.

Contents of the orientation video must also be determined. At a minimum, the video should include information on health and safety, rules and regulations, concerns regarding sensitivity of cultural and natural resources, the NAR, rangers as a resource, litter and debris control, prohibitions on off-road vehicle use, and emergency procedures. To protect cultural resources, the video should inform visitors to not alter or disturb cultural artifacts, and should provide specific guidelines for culturally appropriate behavior on Mauna Kea (e.g., piling and stacking of rocks may be prohibited because it is disrespectful and "because the piles don't belong there"). Consideration should be given to providing a short reenactment of traditional cultural activities associated with Mauna Kea, as a way to increase visitor awareness of the significance of Mauna Kea to the Hawaiian people. It is recommended that the community (particularly kūpuna) be consulted in development of cultural aspects of the video. To protect natural resources, the video should inform visitors to stay on marked trails, to avoid crushing cinders, and to pack out all trash. It should also provide tips on preventing the spread of invasive species (e.g., instructing people to brush down clothes and shoes in a designated area at Hale Pōhaku prior to hiking or visiting the educational gardens). To increase public safety, the video should orient visitors to the potential hazards of high altitude environments, recommend acclimation time at the VIS, and educate drivers by including information on safe driving on the Summit Access Road.

Mandatory orientation training for tour operators, rangers, VIS staff, and volunteers should be required, regardless of whether mandatory orientation for the general public is implemented. This training program should be implemented immediately, and no rule-making authority is required to implement it.

Page 7-43

P-8. Commercial and Special Use permits

.... Permits shall be consistent with the provisions of the CMP, including a mandatory orientation, if implemented (see Section 7.1.3).

Page 7-51 – 7-52

C-7. Education regarding historical and cultural significance

All persons involved with the construction and installation of any future facilities including, but not limited to, the construction manager, contractors, supervisors, and all construction workers, and all persons involved in the operation and maintenance of future astronomy facilities, including, but not limited to, scientists and support staff, shall be educated about the historical and cultural significance of the Mauna Kea summit area, and shall be given training as to what constitutes respectful and sensitive behavior while on the summit area. A detailed plan for complying with this condition (including both the content of training and the procedures for implementation, including, but not limited to, a means for certifying persons who have completed the training program) shall be developed by OMKM following consultation with Kahu Kū Mauna, families with lineal and historic connections to Mauna Kea, kūpuna, cultural practitioners, the Office of Hawaiian Affairs, and other Native Hawaiian groups, and reviewed and approved by the DLNR. A specialist or specialists in the field of Native Hawaiian culture shall be selected by OMKM with the concurrence of the DLNR for the purpose of implementing the compliance plan, including, but not limited to, the conduct of educational and training programs for all persons described in this condition. To be qualified for appointment to this position(s), a person shall have worked as a Native Hawaiian cultural specialist and shall be knowledgeable of the types of cultural resources and practices relating to the summit of Mauna Kea.

C-8. Education regarding environment, ecology and natural resources

All persons involved with the construction and installation of any future astronomy facilities in the UH Management Areas, including, but not limited to, the construction manager, contractors, supervisors, and all construction workers, and all persons involved in the operation and maintenance of the future astronomy facilities, including, but not limited to, scientists and support staff, shall be educated about the environment, ecology and natural resources of the Mauna Kea summit area, and shall be given training as to what constitutes appropriate behavior while on the summit area for the protection of the natural resources. A detailed plan for complying with this condition (including both the content of training and the procedures for implementation including, but not limited to, a means for certifying persons who have completed the training program) shall be developed by OMKM following consultation with scientists and environmental organizations knowledgeable about the Mauna Kea summit area, selected by OMKM, and reviewed and approved by DLNR.

CONTENT OUTLINES

Visitor Orientation

Scope

- Geographic Areas & Rules
- Visitor Services
- Rangers as a resource

Cultural Heritage

- Significance
- Access
- Wahi Pana
- Appropriate Behavior
- Historic Properties (incl. find spots and burials)

Natural Resources

- Geology
- Cinder – do not crush
- Hydrology

- Vegetation
- Arthropods
- Soundscape & Birds

Best Practices

- Health & Safety
- Altitude Sickness
- Travel Recommendations & Requirements
- Cultural Protocol
- Litter & Debris
- Invasive Species Plan & Requirements
- Rules & Regulations
- No off-road driving
- Hiking – stay on trails, pack out all trash
- Driving
- Emergencies

User Orientation

Scope

- Community Management
- Comprehensive Management Plan
- Geographic Areas & Rules
- Astronomy
- Visitor Services
- Rangers as a resource
- Support Services

Cultural Heritage

- Significance
- Access
- Wahi Pana
- Appropriate Behavior
- Historic Properties (incl. find spots and burials)

Natural Resources

- Geology
- Cinder – do not crush
- Hydrology

- Vegetation
- Arthropods
- Soundscape & Birds
- Non-Native Species
- Invasive Species

Best Practices

- Threats
- Litter & Debris
- Invasive Species Plan & Requirements
- Construction Practices
- Burial & Historic Property Protections
- Cultural Protocol
- Safety
- Altitude Sickness
- Travel Recommendations & Requirements
- Driving
- No off-road driving
- Hiking – stay on trails, pack out all trash
- Emergencies
- Reporting

Project-Specific Orientation

Incorporates User Orientation material in a more in-depth context, using the following broad outline:

- Introduction & Purpose
- Cultural Heritage
 - Historical Overview
 - Traditions & Historical Narratives
 - Land Use History
 - Contemporary Practices
- Scope of Management
- Rules
- Other Requirements
- Natural Resources & Management
- Cultural Resources & Management
- Best Practices
- Safety
- TMT Project-Specific Considerations

Native Hawaiian Cultural Specialist Qualifications

The criteria or qualifications for the cultural specialist shall be developed in consultation with Kahu Kū Mauna, in consultation with families with lineal and historic connections to Mauna Kea, kūpuna, cultural practitioners, the Office of Hawaiian Affairs, and other Native Hawaiian groups.

- Work experience as a Native Hawaiian cultural specialist
- Knowledgeable of the types of cultural resources and practices relating to the summit of Maunakea