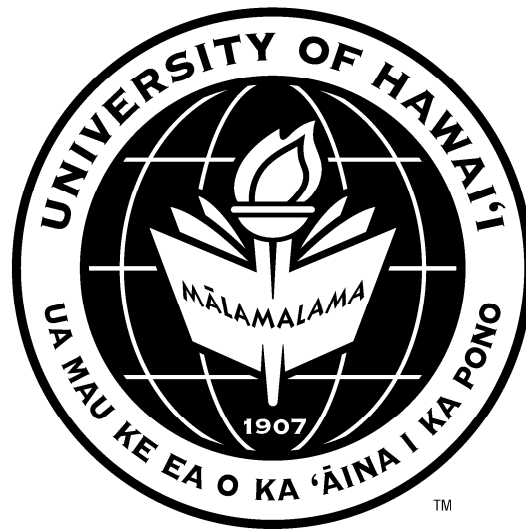


UNIVERSITY OF HAWAI‘I SYSTEM ANNUAL REPORT



REPORT TO THE 2023 LEGISLATURE

Annual Report on the Mauna Kea Lands

HRS 304A-1905

December 2022

Annual Report on the Mauna Kea Lands
Legislative Reports
HRS § 304A-1905

Pursuant to Hawai'i Revised Statutes (HRS) § 304A-1905, "Mauna Kea Lands; reporting requirements," the University of Hawai'i (UH) respectfully submits its report on (1) Maunakea lands activities; (2) current and pending lease agreements and fees; (3) the status of current and pending administrative rules; (4) income and expenditures of the Mauna Kea lands management special fund established in HRS § 304A-2170; and (5) other issues that may impact the activities on the Mauna Kea lands. Consistent with past practice, this report covers the fiscal year 2022 (FY22), which started on July 1, 2021, and ended on June 30, 2022, but this report may also include matters outside FY22 where relevant.

Current and Pending Lease Agreements and Fees

In 1964 the Hawai'i State Legislature passed Senate Concurrent Resolution 16 (SCR 16) stating that the "State of Hawaii and its citizenry are most desirous and willing to co-operate and aid in the promotion of our nation's space program and research to the benefit of the County of Hawaii, the state and the nation." It was resolved that the governor set aside and establish an appropriate area on the summit of Maunakea for the installation and operation of telescope observatory and astronomical activities. In fulfillment of SCR 16, the Mauna Kea Science Reserve (MKSR) was established in 1968, and the Board of Land and Natural Resources (BLNR) and UH entered into an agency-to-agency lease granting UH a lease of the Science Reserve for a term expiring on December 31, 2033 (MKSR General Lease). The lease is gratis, a common practice for leases between government agencies and one that supports the goal of benefiting the County of Hawai'i, the State, and the Nation.

Also in 1964, Governor John A. Burns recognized that Hawai'i has ". . . some obvious natural advantages in this area of scientific research, [and that Hawai'i] must capitalize on these, utilizing all our available resources at the University, in the industrial community and at the levels of State and local government." He also emphasized that Hawai'i is not "constrained by these physical advantages." "We can acquire competence in any field of scientific inquiry," and "[t]he limitations are only those we impose on ourselves." (Honolulu Advertiser, August 7, 1964).

Governor Burns understood the demand for manual labor in agriculture would decrease over time, and that future jobs would require technicians and scientists. The development of a research enterprise would provide jobs of the future. The two areas Governor Burns felt the state should pursue were in the fields of oceanography and astronomy, areas in which the State of Hawai'i unquestionably excels.

In a State effort to establish astronomy as a viable research endeavor and establish Hawai'i as a center for astronomical research, UH entered into subleases with 11 organizations to operate astronomical observatories. BLNR approved all subleases, which are co-terminus with the MKSR General Lease. Each sublessee is obligated to provide a guaranteed percentage of

viewing time to UH. Viewing time provides invaluable advantages for advancing UH, Hawaii's only State-funded institution of higher education, as a center for excellence in research, including astronomy.

At little cost and risk to the State, UH is recognized as one of the Nation's leading astronomical research institutions and globally as the center of excellence for astronomical research. This recognition contributes significantly to the State's efforts to expand its high-technology sector. The annual economic impact of astronomy in the State in 2019 was \$220.95 million (\$261.33 million in 2022 dollars (CPI-U)), with the largest impacts found on Hawai'i Island and Honolulu, \$101.68 million (\$120.26 million in 2022 dollars (CPI-U adjusted)) and \$86.96 million (\$102.85 million in 2022 dollars (CPI-U adjusted)), respectively.¹ Additional benefits accrue to the State and local communities through opportunities in scientific, professional, technical, and administrative employment within the local community.

In preparation for seeking a new land authorization (e.g., a new general lease from the BLNR beyond 2033), UH updated the "Mauna Kea Science Reserve Master Plan," adopted by the UH Board of Regents (BOR) in 2000, and the "Mauna Kea Comprehensive Management Plan," adopted by the BLNR in 2009 (collectively, the Plans). The effort to update the Plans involved significant community and stakeholder input. UH's new master plan, *E O Nā Leo: Listen to the Voices*, was adopted by the Board of Regents in January 2022, and the updated Mauna Kea Comprehensive Management Plan, *Comprehensive Management Plan 2022 Supplement*, was approved by the Board of Land and Natural Resources in July 2022.² UH has also been preparing an environmental impact statement (EIS) for UH's proposed new land authorization to continue astronomy on Maunakea. Among other things, the Plans integrate management actions that strive for a renewed balance across the cultural, natural, educational, and recreational values Maunakea provides the State. The Plans also address decommissioning commitments UH has made and the replacement of the University of Hawai'i Hilo's educational telescope from the summit to the mid-level facilities at Hale Pōhaku.³

Prior to the 2022 Legislative Session, the House of Representatives established the Maunakea Working Group to recommend alternative governance structures for the future management of Maunakea. The purpose was to replace UH as the responsible entity for managing the Mauna Kea Science Reserve, Hale Pōhaku, and the roadway easement connecting Hale Pōhaku and the Mauna Kea Science Reserve. After considering the Working Group's recommendation, HB 2024 was introduced which eventually resulted in Act 255, which was signed into law by Governor Ige in June 2022.

¹ In 2022 UHERO updated its 2014 economic impact analysis for astronomy. Numbers reported are for 2019 which was the last year of pre-pandemic operations.

² BLNR's adoption of the *Comprehensive Management Plan 2022 Supplement* is currently being challenged by opponents in *Teale v. Bd. of Land & Nat. Res.*, SCOT-22-0000502.

³ As discussed below, UH has halted further work on the EIS and new land authorization in accordance with 2022 Hawai'i Session Laws Act 255 (Act 255).

Act 255 establishes the Mauna Kea Stewardship and Oversight Authority (MKSOA) comprised of eleven voting Board members.⁴ Act 255 sets a five-year transition period during which the UH and the MKSOA will jointly manage certain aspects of Maunakea while MKSOA is formally organized and prepares to assume all legal responsibilities held by UH (e.g., UH's two general leases, grant of easement, and all conservation district permits held by UH for third party non-UH astronomy facilities and buildings). Act 255 also grants the MKSOA certain land disposition responsibilities currently under the jurisdiction of the BLNR and appropriates \$14M for MKSOA start-up.

Act 255 prohibits new leases on Maunakea until after the transition period ends and leases are taken over by the MKSOA. Consequently, all UH work on the EIS, new land authorizations from BLNR, and new real property sub-agreements with Maunakea observatories have stopped. As reiterated in Act 255, the two astronomy facility decommissioning projects already underway for the Caltech Submillimeter Observatory (CSO) and UH Hilo's Hōkū Ke'a teaching telescope are progressing to completion.

Thirty Meter Telescope (TMT) Sublease

On September 27, 2017, the BLNR issued its 271-page *Findings of Fact, Conclusions of Law and Decision and Order* containing 1070 findings of fact and 512 conclusions of law, for the Conservation District Use Permit (CDUP) allowing the construction and operation of TMT. On October 30, 2018, the Hawai'i Supreme Court affirmed the CDUP after various parties appealed. The process for obtaining the CDUP approval took approximately seven years from the permit application's initial submission in 2010, including two contested cases, several judicial appeals, and two Hawai'i Supreme Court decisions. Parties continue to challenge the TMT project, for example, in cases before BLNR, the State Land Use Commission, and Hawaii's circuit and appeals courts.

Unlike the other existing observatory subleases, which provide for nominal rent in exchange for viewing time and sublessee contributions to shared operations, maintenance, and stewardship of Maunakea, the TMT International Observatory (TIO) sublease provides for substantial lease rent payments. Pursuant to TIO's sublease, annual lease rent starts at \$300,000. The lease rent schedule is phased, with increases based on construction activity. Full annual lease rent payments of \$1,080,000 a year will be paid when TMT is operational. To date, \$3,435,258 has been paid. These payments are deposited into the Mauna Kea lands management special fund as the legislature directed in Act 132, Session Laws Hawai'i 2009 (codified at HRS § 304A-

⁴ Three ex officio members: chair of BLNR, mayor of the County of Hawai'i, and chair of the UH Board of Regents. Two members are appointed by the governor from two lists of three, one provided by the president of the senate and one provided by the speaker of the house. Six individuals appointed by the governor in six categories: (i) aina (land) resource management expertise and specific experience with Hawaii island-based management, (ii) possessing expertise in the fields of p-12 public education or post-secondary education, (iii) one name from a list of three submitted by Maunakea Observatories, (iv) business and finance experience and previous administrative experience in managing a large private-sector business, (v) lineal descendent of a practitioner of Native Hawaiian traditional and customary practices associated with Mauna Kea, and (vi) recognized practitioner of Native Hawaiian traditional and customary practices. The chancellor of UH at Hilo serves as an ex officio, nonvoting member.

2170).⁵ In addition, as a result of UH's negotiations, TIO committed \$1 million per year in donations to community benefits, primarily by advancing STEM education on Hawai'i Island, and a similar amount to a workforce pipeline initiative as operations become imminent to maximize employment opportunities for residents. TIO has paused these payments while they await National Science Foundation (NSF) funding. NSF initiated a Section 106 consultation process as part of their review of TIO's application for funding. This process involved months of pre-consultation meetings with the community and, more recently, three public meetings held on Hawai'i Island.

New Maunakea Observatory (MKO) Agreements

In FY21 discussions with MKO Directors commenced regarding new agreements post-2033, which is when their current subleases terminate. Those discussions continued into FY22 and covered various terms including rent, stewardship fees, community benefits, shared use and maintenance costs, and property or use rights. The goal of these negotiations was to have an agreed upon set of terms by the end of 2022. The process for developing these new agreements included discussions with the community.

Consistent with Act 255, in addition to stopping UH work on a new general lease from BLNR, all work on new MKO agreements have been stopped. Act 255 states that the MKSOA "shall develop a management plan," and that the "management plan shall," among other things, "[p]repare for and establish the framework, criteria, and procedures for any leases and permits."

Administrative Rules

Hawai'i Administrative Rules Chapter 20-26, "Public and Commercial Activities on Mauna Kea Lands," was adopted by the BOR on November 6, 2019, and approved by Governor David Ige on January 13, 2020 (MK Rules).⁶ UH has no pending administrative rules related to Maunakea at this time.

The focus in FY22 was on continuing the implementation of the MK Rules. This work included staff training, developing administrative systems, improving signage, revamping employee and visitor orientation, improving education at the Visitor Information Station (VIS), opening discussions with commercial tour operators, and updating the Rangers' operating procedures. This work also included key hires and recruitment to replace recent vacancies and fill positions based on the reorganization of Maunakea management approved by the BOR on August 20, 2020.

⁵ "The proceeds of the special fund shall be used for: (1) Managing the Mauna Kea lands, including maintenance, administrative expenses, salaries and benefits of employees, contractor services, supplies, security, equipment, janitorial services, insurance, utilities, and other operational expenses; and (2) Enforcing administrative rules adopted relating to the Mauna Kea lands." HRS § 304A-2170(b).

⁶ BOR's adoption of the administrative rules are being challenged by opponents in *Flores-Case 'Ohana v. University of Haw.*, No. SCRQ-22-0000118.

Act 255 repeals the MK Rules after the transition period, and grants the MKSOA authority to develop its own administrative rules.

Income and Expenditures of the Mauna Kea Lands Management Special Fund (HRS § 304A-2170)

Income and expenditures during the reporting period remained affected by the remnants of the operational and travel restrictions due to the COVID-19 pandemic though not as significantly as the previous year. During FY22, \$174,758 in fees were collected from commercial tour operators, \$700 in fees collected from film permit applicants, \$788,791 in lease fee payments from TMT, \$450,676 carryover from FY21, and \$2,746 in interest for a total of \$1,417,671. A total of \$253,652 was used to help defray the cost to operate the Maunakea Ranger program, Visitor Information Station, and road, facility, and infrastructure maintenance expenses.

Total payments of \$188,122 made to the Office of Hawaiian Affairs (OHA) in 2022 were as follows: \$4,930 (FY21 4th Quarter payment) and \$183,192 (total of 1st thru 3rd Quarter payments). A payment for \$9,658 for 4th Quarter 2022 was paid to OHA following the start of FY23.

The \$450,676 carryover from FY21 includes 4th Quarter FY21 payment to OHA and a mandatory reserve ranging from 5–16% of total expenses. The funds collected were deposited into the Mauna Kea lands management special fund.

HRS § 304A-1905 requires reporting in this annual report of "income and expenditures of the Mauna Kea Lands Management Special Fund established in HRS § 304A-2170". However, it is important to note that the Mauna Kea Lands Management Special Fund comprises a small fraction of the revenue required to fund the overall management and stewardship costs for Mauna Kea. In FY23 it is projected that the Mauna Kea Lands Management Special Fund will account for 13% (\$964,000) of revenues required to cover operating costs while UH's contribution will account for 29% (\$2,108,000). The remaining sources used to fund operating expenses are comprised of a combination of observatory contributions, Hale Pōhaku use fees, and VIS bookstore sales. In addition to operating expenses and as part of its stewardship responsibilities, UH has also funded planning, permitting, and legal expenses needed to ensure compliance with conservation district rules and lease requirements. In recent years, these costs have ranged between \$500,000-\$1.2M annually. Act 255 repeals the Mauna Kea Lands Management Special Fund on July 1, 2028.

Maunakea Lands Activities and Other Activities

Seven commercial tour operator permits are active. With the pandemic, only six have been operating; the seventh is planning to restart in 2022. Each commercial tour operator is charged a \$6.00/tour passenger fee, which is submitted to the Center for Maunakea Stewardship (formerly the Office of Maunakea Management (OMKM)) every month. All fees are used to cover management activities on Maunakea. Twenty percent of the fees collected are set aside for payment to OHA.

The COVID-19 pandemic significantly impacted commercial tour operators, demonstrating the risks of an overreliance on this revenue stream. With the easing of COVID and travel restrictions, commercial tour passenger numbers have increased but not to pre-pandemic levels. UH did begin outreach to individual commercial tour operators to seek their input on fee increases and permitting requirements. While working to bring existing permits into compliance with the new MK Rules, UH is also considering additional options for managing visitor access, including concessions, a shuttle system, and new permit requirements. UH would like to continue work on updating commercial tour permits since it is uncertain how long it will take MKSOA to develop administrative rules. UH plans to discuss this issue with the MKSOA. In the meantime, existing permit conditions apply.

To support our assessment of permit fees and managed access UH contracted with the UH at Mānoa School of Travel Industry Management (TIM) to conduct a visitor and operator survey to better understand the relationship between demand, fee acceptance, and capacity. This work was impacted by COVID-19 as visitor traffic and commercial tour demand remain significantly reduced. In light of Act 255, the scope of this work is being re-evaluated since commercial activities and access management will fall under the purview of the MKSOA after the transition period.

Decommissioning

Pursuant to the CDUP for the TMT project, the BLNR imposed special conditions regarding the decommissioning of telescopes on Maunakea, including the following:

10. The University will decommission three telescopes permanently, as soon as reasonably possible, and no new observatories will be constructed on those sites. This commitment will be legally binding on the University and shall be included in any lease renewal or extension proposed by the University for Mauna Kea.
11. Notwithstanding any lease renewal or extension, consistent with the Decommissioning Plan, at least two additional facilities will be permanently decommissioned by December 31, 2033, including the Very Long Baseline Array antenna and at least one additional observatory.

Related to decommissioning, on November 6, 2019, the BOR adopted Resolution 19-03, “Resolution to Act on Items Relating to Maunakea Management” (BOR Reso. 19-03, revised in part by BOR Reso. 21-02). Accordingly, a schedule to decommission CSO and Hōkū Ke‘a by December 31, 2021, was presented to the BOR. This presentation and schedule is available at <http://go.hawaii.edu/Fp3>. This schedule has been updated due to COVID-19 and permitting delays with the new projected timelines discussed below.

The Resolution established a December 30, 2025, deadline to determine which three additional telescopes will be decommissioned in compliance with existing or future permits or governmental approvals. UH began discussions with sublessees to prepare a framework for

decision-making for public comment and review as part of the Plans update process. However, these discussions between UH and sublessees has stopped with the passage of Act 255, which will transfer the CDUP for TMT to the MKSOA in 2028, after the transition period. UH Plans will also no longer be applicable after the transition period, wherein UH commits to only nine operating astronomy facilities on Maunakea after decommissioning. Important to note here is that subleases are coterminous with the MKSR General Lease, which expires in 2033. The subleases and MKSR General Lease all provide provisions for the removal or transfer of ownership of astronomy facilities on Maunakea on or before 2033.

The CSO and Hōkū Ke‘a are currently undergoing the decommissioning process. Both CSO and Hōkū Ke‘a issued a Notice of Intent to decommission in 2015 and have been coordinating and consulting with UH and DLNR in the preparation of their permitting requirements and environmental assessments under HRS Chapter 343 to address impacts associated with removal and restoration activities.

CSO’s environmental assessment (EA) was accepted, and their CDUP was approved, in FY23 by the BLNR. All internal fixtures and furnishings have been removed and lead paint abatement has been completed. CSO is currently working on additional permits and transport requirements that are needed to ship the telescope itself to Chile. Winter weather is impacting this schedule such that telescope removal and deconstruction of the dome and support facilities will restart in Spring 2023. Deconstruction is expected to be completed by December 2023.

UH Hilo submitted the Hōkū Kea CDUA to DLNR in August 2022. The CDUP is projected to be approved by April 2023 with site deconstruction projected to be completed by December 2023.

In addition to CSO and Hōkū Ke‘a, UH committed to decommissioning the United Kingdom Infrared Telescope (UKIRT) by the time the TMT project becomes operational in finding of fact 171 of the CDUP issued for TMT, and the BLNR identified the Very Long Baseline Array (VLBA) for decommissioning in Special Condition 11 of the CDUP issued for TMT. Act 255 transfers all CDUPs issued to UH for astronomy facilities owned by third parties, like TMT, to the MKSOA. Consequently, the MKSOA will need to pursue these options.

Cesspool Removal

In FY22 and FY23, UH completed the process of closing two cesspools that were not in service and replacing two others with zero discharge waste systems. All four served UH-owned facilities. Notifications have been provided to the appropriate regulating agency.

Center for Maunakea Stewardship: Internal Restructuring Plan

At its August 20, 2020, meeting, the BOR considered and adopted agenda item VI.B, “Approval of Revised Internal Restructuring Plan for Management Operations of Maunakea Lands (*continued from May 21, 2020*).” The proposed plan is a requirement of BOR Reso. 19-03, paragraph 8, which provides that the “purpose of the plan is to improve operations and

management and make it more efficient, effective, and transparent.” Outreach was a key element of BOR Reso. 19-03, paragraph 8.

After consultation and outreach, by which formal and informal discussions were conducted with various stakeholders, findings were reported to the BOR. Outreach included seeking input and comments from the Maunakea Management Board (MKMB), Kahu Kū Mauna, ‘Imiloa Astronomy Center (‘Imiloa), existing Maunakea Observatories (individual and group), Maunakea Observatory Support Services staff, OMKM staff, interested Legislators, Congressional Staff, Governor’s Office and Cabinet, Governor’s Land Authorization Working Group (DLNR, National Science Foundation, UH, Governor’s representative), Thirty Meter Telescope International Observatory Board of Governors, Pūko‘a Council, Kūali‘i Council, and Maunakea kia‘i (through a third-party; kia‘i did not respond to UH’s direct outreach).

Among other things, the restructuring included the creation of the Center for Maunakea Stewardship (CMS), which coordinates all activities on land managed by UH on Maunakea with direct reporting to the UH Hilo chancellor. The restructuring also provides more direct input from cultural, community, and stakeholder advisory groups.

Details of the “Center for Maunakea Stewardship: Internal Restructuring Plan for Management Operations of Maunakea Lands,” are posted online at <http://go.hawaii.edu/3zF>.

In December 2021, the UH BOR directed UH Internal Audit to review the status of the reorganization and establishment of CMS. The objective of this audit project was to evaluate the status of the Restructuring Plan in addition to the status of Corrective Actions to address recommendations included in historical audit reports by Internal Audit (September 2018) and the State Auditor (most recent dated July 2017). Internal Audit released their report in April 2022 stating that “Internal Audit believes that the reorganized and restructured management of Maunakea is more streamlined and provides a better reporting structure when compared to the historical convoluted structure. Based on the work performed, Internal Audit believes CMS has either completed or is in the process of meeting the Restructuring Plan’s objectives. Interviews with leaders of the various advisory groups support Internal Audit’s conclusions. In addition, Internal Audit has determined that all recommendations noted in historical State Auditor and Internal Audit reports have been properly addressed and/or implemented.” The report of Internal Audit is posted online at <https://go.hawaii.edu/9Jk>.

Collaborative Stewardship in Maunakea Governance

At its April 16, 2020, meeting, the BOR considered agenda item V.C, “Status Update on Items Relating to Maunakea Management Pursuant to Board of Regents Resolution 19-03 (Discussion Only).” The BOR was presented with alternative governance models to fulfill the requirements of BOR Reso. 19-03, Paragraph 9, which asks “whether the management of the Maunakea Science Reserve (MKSR) would be better served if transferred to a governmental authority or other third-party entity, or through alternate management mechanisms.”

A number of existing management models used by other state agencies and private organizations that manage large tracts of land with diverse and complex land management issues were reviewed. Land managers were asked about the benefits and challenges of working under various land management structures. Five models were developed: Attached State Agency Model, BLNR Management Model, Third-Party Model, Collaborative Stewardship Model, and Collaborative Stewardship within UH Model. These models are more fully discussed in the presentation to BOR available online at <http://go.hawaii.edu/3zb>.

UH's preference is for Model 4A identified in the review (Collaborative Stewardship within UH). This model can be implemented without legislation, minimizes the complications arising from HRS Chapter 171 provisions governing disposition of public lands, and leaves only the summit area and Hale Pōhaku under direct UH management in full collaboration with stakeholders. If the world-class astronomy envisioned in the 1960s by the State, Hawai'i County, and UH leaders is still one of the key objectives for Maunakea, UH must play an active role not only in astronomy but other educational opportunities that the unique cultural and natural attributes of Maunakea provide.

The BOR took no action on this matter and noted that a change to a completely new model would require action by state entities outside UH.

This analysis was made available to the Maunakea Working Group in their deliberations to develop their recommendation for an alternative governance model and offers were made to provide the working group an overview of the data UH had collected. The working group did not accept UH's offers to discuss the analysis but the information has been made available to the MKSOA.

Cultural and Natural Resource Education

CMS has remodeled the VIS on Maunakea to prepare for new exhibits to be developed by the 'Imiloa Astronomy Center of Hawai'i. Temporary educational exhibits occupy the space while exhibit development continues. CMS has developed and installed new educational signage at the VIS covering Maunakea's cultural history, natural resources, astronomy, and the administrative rules. These exhibits are intended to help educate and foster visitor awareness about Maunakea's cultural heritage, natural environment, and astronomical inquiry while informing the public about safety and permitted activities. In addition, 'Imiloa has been awarded federal funding to develop a plan to expand the educational programs and uses of Hale Pōhaku and the VIS.

During FY21 'Imiloa completed work on a new training and orientation video and materials for employees, contractors, and vendors that replaced the current training required by the CMP. The new training was implemented in 2022. A public version of this will be developed using the new video as the basis.