

# UNIVERSITY OF HAWAI‘I SYSTEM ANNUAL REPORT



REPORT TO THE 2022 LEGISLATURE

Annual Report on the Mauna Kea Lands

HRS 304A-1905

December 2021

**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 2021 (FY21), which starts on July 1, 2020, and ends on June 30, 2021, but this report may also include matters outside FY21 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 (Science Reserve) 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 (Master 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-UH 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

UH's Master Lease. Each sublessee is obligated to provide a guaranteed percentage of viewing time to UH. Viewing time provides invaluable advantages for advancing UH, Hawai'i'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 2012 was \$168 million (\$230 million in 2021 dollars (CPI-U)), with the largest impacts found on Hawai'i Island and Honolulu, \$91 million (\$110 million in 2021 dollars (CPI-U adjusted)) and \$68 million (\$82 million in 2021 dollars (CPI-U adjusted)), respectively. Additional benefits accrue to the State and local communities through opportunities in scientific, professional, technical, and administrative employment within the local community.<sup>1</sup>

In preparation for seeking a new land authorization (e.g., a new master lease from the BLNR beyond 2033), UH is updating 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). UH is also 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 will also address decommissioning commitments UH has made.

During FY21 significant progress was made on developing a new Maunakea Master Plan (*E Ō Nā Leo: Listen to the Voices*). The latest draft of the new master plan was developed with significant community and stakeholder input that included multiple individual and group meetings and an interactive website over the course of the fiscal year. That input resulted in multiple drafts the most current of which is scheduled for review by the BOR in December 2021 and for approval in January 2022. Public input has been documented in a 1400 page appendix that is included with the draft, and the two BOR meetings provide the public with additional opportunities to comment on the draft of the new master plan.

UH also completed the first step in the update to the Comprehensive Management Plan (CMP) during FY21. This involved a comprehensive assessment of UH's progress in implementing the 103 management actions in the CMP since its adoption in 2009. This assessment is documented in the Outcome Analysis Report (OAR) as required by the CMP. Feedback from agency stakeholders and others who have knowledge of the specific requirements of the CMP was sought on the draft OAR before it was finalized. During the preparation of the OAR, UH

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<sup>1</sup> UH is currently updating the economic impact analysis of astronomy in the state. The analysis is targeted for completion in early 2022.

was able to benefit from the Department of Land and Natural Resources' (DLNR) separate and independent evaluation of UH's implementation of the CMP.<sup>2</sup> The OAR was completed in August 2021 and submitted as UH's annual report to the BLNR in November 2021.

The EIS for a new land authorization will analyze impacts from alternative forms of land holdings and parcel configurations. UH's proposed action is to obtain continued authority for the long term use of Maunakea similar to the existing general lease set to expire in 2033. As required by EIS regulations, the EIS will also consider alternatives, which include evaluating a request by Governor David Ige for approximately 10,000 acres of the land currently leased to UH to be returned to BLNR, leaving approximately 525 acres leased to UH for astronomy purposes. An EIS Preparation Notice was published through the Office of Environmental Quality Control's February 23, 2018 edition of "The Environmental Notice." UH held public open houses in March 2018 in Hilo, Waimea, and Honolulu. UH is currently conducting outreach efforts with the community and interested persons to develop a draft EIS that incorporates public input and comments.

### ***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, \$2,236,209 has been paid. These payments are deposited into the Mauna Kea lands management special fund as the legislature directed in 2009 Hawai'i Session Laws Act 132 (codified at HRS § 304A-2170).<sup>3</sup> 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

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<sup>2</sup> Independent Evaluation of the Implementation of the Mauna Kea Comprehensive Management Plan, Kuiuwalu, December 2020.

<sup>3</sup> "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).

amount to a workforce pipeline initiative as operations become imminent to maximize employment opportunities for residents.

### ***New Maunakea Observatory (MKO) Agreements***

In FY21 discussions with MKO Directors commenced regarding new agreements post-2033 which is when their current subleases terminate. Terms currently being discussed include rent, stewardship fees, community benefits, shared use and maintenance costs, and property or use rights. The goal of these negotiations is to have an agreed upon set of terms by the end of 2022. The process for developing these new agreements includes discussions with the community.

### **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). There are no other pending administrative rules at this time.

The focus in FY21 was on implementing the MK Rules. This work has included staff training, developing administrative systems, improving signage, revamping employee and visitor orientation, improving education at the VIS, opening discussions with commercial tour operators, and updating the Rangers' operating procedures. This work has 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.

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

Income and expenditures during the reporting period were significantly affected by the COVID-19 pandemic. During FY 2021, \$33,850 in fees were collected from commercial tour operators, \$652,946 in lease fee payments from TMT, \$186,411 carryover from FY 2020, and \$2,498 in interest for a total of \$875,705. A total of \$414,262 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 \$130,589 made to the Office of Hawaiian Affairs (OHA) in 2021 were as follows: \$2,245 (FY 2020 4<sup>th</sup> Quarter payment) and \$132,430 (total of 1<sup>st</sup> thru 3<sup>rd</sup> Quarter payments). A payment for \$4,930 for 4<sup>th</sup> Quarter 2021 was paid to OHA following the start of FY 2022.

The \$186,411 carryover from FY 2020 includes 4<sup>th</sup> Quarter FY 2020 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.

### **Maunakea Lands Activities and Other Activities**

There were nine commercial tour permits transferred to UH from DLNR. Seven are active as two permittees have since terminated operations. 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 has significantly impacted commercial tour operators, demonstrating the risks of an overreliance on this revenue stream. Of the nine allowed permits, seven are active but all are operating at significantly reduced levels driven by reduced demand and restrictions determined by county and state directives. Consequently, the sum of fees collected from permitted tour operators has decreased and this business impact makes the timing of discussions concerning increasing fees difficult. Despite this, UH has begun outreach to individual commercial tour operators to seek their input on fee increases and permitting requirements.

The existing permits are a carryover from DLNR. With the adoption of the MK Rules, UH is now working to bring existing permits into compliance with the new MK Rules. The MK Rules allow UH to consider additional options for managing visitor access, including concessions, a shuttle system, and permitting. UH is evaluating these options as part of the updates to the Plans but public sensitivity to managed access requires a separate focused engagement plan on this issue.

To support our assessment of permit fees and managed access UH has 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 has also been impacted by COVID-19 as visitor traffic and commercial tour demand remain significantly reduced. The scope of this work is being re-evaluated since it is uncertain when numbers reflecting more typical traffic and demand will return to previous levels.

### ***Decommissioning***

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

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.

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 the Caltech Submillimeter Observatory (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 with the new projected timelines discussed below.

The Resolution also establishes 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 has begun these discussions with sublessees, and UH is preparing a framework for decision-making for public comment and review as part of the Plans update process.

The CSO and UH Hilo's Hōkū Ke'a teaching telescope (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 has submitted their environmental assessment (EA) and Conservation District Use Application to DLNR and is awaiting scheduling of a hearing before the BLNR. It is anticipated this will occur in January 2022. The projected completion of removal for CSO is December 2022.

UH Hilo is completing their cultural impact assessment (an EA requirement) for the Hōkū Ke'a decommissioning which is anticipated to be finalized in late Spring 2022. After that, the project will require EA acceptance and a CDUP from BLNR both of which require their own public outreach. The projected completion of removal for Hōkū Ke'a is December 2023.

In addition to CSO and Hōkū Ke'a, the Very Long Baseline Array and the United Kingdom Infrared Telescope have been identified as candidates for the future decommissioning and planning scenarios are being developed and discussed with stakeholders.

#### ***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>.

### ***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 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.

However, during FY21 the MKMB spent considerable time deliberating ways to improve their representation of the community as advisors to UH. Part of those deliberations included targeted outreach to both critics and supporters of UH as managers of Maunakea. At their December 7, 2021 board meeting the MKMB passed a motion recommending to UH a restructuring of the MKMB along the lines of Model 4A (Collaborative Stewardship Model within UH). While this recommendation was not technically required in order for UH to move forward with MKMB restructuring, it was important to ensure that UH’s primary community



advisory group supports this change. After acceptance by UH, the immediate next steps include recruitment of new members and amending the MKMB By-Laws.

***Cultural and Natural Resource Education***

CMS and 'Imiloa are working on designing and installing new informational exhibits about the resources on Maunakea, including cultural and natural history, at the Visitor Information Station. These exhibits are intended to help educate and foster visitor awareness about Maunakea's cultural heritage, natural environment, and astronomical inquiry. We have requested state and federal funding to further support the education program and exhibit development, and are awaiting a response.

During FY21 'Imiloa commenced work on, and is in the final stages of, developing a new training and orientation video and materials for employees, contractors, and vendors that will replace the current training required by the CMP. The new training is targeted to be implemented in 2022 after training trainers and piloting efforts are completed. Once completed, this material will be repurposed to support an enhanced visitor orientation program.

***Cesspool Removal***

UH is in the process of closing two cesspools that are currently not in service and replacing two others with zero discharge waste systems. All four serve UH-owned facilities. These projects require considerable regulatory, engineering, environmental, and cultural reviews. All internal reviews with our community advisory groups have been completed and concurrence has been obtained from the DLNR Office of Conservation and Coastal Lands to proceed. UH is still working to finalize its Archaeological Monitoring Plan and obtain approval from the State Historic Preservation Division, and to complete Department of Health permitting requirements. The closures/replacements are expected to be completed in 2022.