United States Department of the Interior

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FINDING OF NO SIGNIFICANT IMPACT

U.S. Geological Survey (USGS) Hilo Research Facility

INTRODUCTION: The U.S. Geological Survey (USGS) is proposing to construct a research facility on 6.8 acres of land in Hilo, Hawai'i. The USGS Hilo Research Facility provides a replacement facility for the Hawaiian Volcano Observatory (HVO) whose existing facilities in Hawai'i Volcanoes National Park were irreparably damaged by the 2018 eruption of Kīlauea volcano. The facility will also accommodate the Pacific Islands Ecosystem Research Center (PIERC), currently located in Hawai'i Volcanoes National Park.

In compliance with the National Environmental Policy Act (NEPA) of 1969, the USGS prepared an Environmental Assessment (EA) for the proposed research facility. Because the project involves the use of land owned by the State of Hawai'i, the EA was also prepared in accordance with Hawai'i Revised Statutes (HRS) Chapter 343 and Chapter 11-200.1 Hawai'i Administrative Rules.

Notice of the Draft EA and Anticipated Finding of No Significant Impacts (DEA-AFNSI) was issued in the February 23, 2023 edition of *The Environmental Notice,* published by the Hawai'i Environmental Review Program (ERP), Office of Environmental Planning and Sustainable Development. A 30-day public review period ended on March 28, 2023.

NEED FOR PROPOSED ACTION: The Proposed Action is needed to provide permanent research facilities for the HVO and PIERC that are safe, physically adequate, and ideally, close to the University of Hawai'i at Hilo (UH Hilo). The temporary facilities that HVO has used since the 2018 evacuation do not provide sufficient space for personnel or equipment to allow the agency to meet its mission over the long-term. Existing PIERC facilities are also substandard and have long needed upgrade. The project will allow HVO researchers and administrative staff to move out of their temporary facilities and PIERC staff to relocate from their current facilities at Hawai'i Volcanoes National Park.

The site location near the UH Hilo will enhance collaborative relationships between HVO, PIERC, County government agencies and university researchers. The project site is part of a larger parcel of land that was granted via Executive Order by the State of Hawai'i for use by the University of Hawai'i and its allied purposes. The UH Hilo administration has indicated that the Proposed Action is consistent with the intent of the Executive Order and the university is in full support of the project. A Use and Occupancy Agreement between the USGS and University of Hawai'i will be executed.

The USGS initially evaluated seven (7) alternatives to satisfy the purpose and need for the project, including No Action. The alternatives included consolidation with other federal research agencies,

leasing space vs. new construction, relocation to O‘ahu, and alternative sites within the vicinity. The Proposed Action was determined to be clearly superior in meeting the project objectives and feasibility, with minimal environmental impact.

PROJECT DESCRIPTION: The USGS Hilo Research Facility will include two main structures and parking within a campus-like setting, and support approximately 50 staff and volunteers from HVO and 53 staff and volunteers from PIERC. The main Research Facility will be a three-story building with the first floor to include laboratory bays, private and open offices, conference rooms, work areas, and a main lobby. The ground floor will be occupied by HVO. The second floor includes similar laboratory bays, offices, and work areas, and will be occupied by PIERC. The third floor of the building will contain mechanical space and an open observation deck.

The Warehouse and Field Support building will support HVO and PIERC operations and serve as a bridge between laboratory and field functions. The building will include administrative spaces, a climate-controlled room for archives; field gear storage and maintenance areas, and lockers/restrooms/showers. The building will also include labs and lab support spaces, and an insectary and animal housing area separated from the main building. An outdoor greenhouse will also be included.

AGENCY PERMITS, APPROVALS AND PROJECT COMMITMENTS: The USGS will commit to the following actions and mitigations:

Type of Action	Responsibility	Overseeing/Coordinating Entity
Agency Permits and Approvals		
Disability Communication Access Board (DCAB) review	USGS & architect	Hawai‘i Department of Health, Disability and Communication Access Board
National Pollutant Discharge Elimination System (NPDES) permit (construction)	USGS & civil engineer	Hawai‘i Department of Health Clean Water Branch
County Site Plan approval	USGS & architect	County Planning Department
Solid Waste Management Plan	USGS & civil engineer	County Department of Environmental Management
Grubbing, grading, and stockpiling permits	USGS & Construction manager/General Contractor (CM/GC)	County Department of Public Works
Sewer Study	USGS & civil engineer	County Department of Environmental Management
Final approval of water availability (domestic and fire demand)	USGS & civil engineer	County Department of Water Supply
Final approval of sewer availability	USGS & civil engineers	County Department of Environmental Management
Possible Noncovered source or covered source permit (for emergency generator installation)	USGS & civil engineer	Hawai‘i Department of Health Clean Air Branch
FAA Form 7460-1, Notice of Proposed Construction or Alteration. Prepare glint/glare analysis *(for future photovoltaic installation)*	USGS & GC (photovoltaic contractor	Federal Aviation Administration

Type of Action	Responsibility	Overseeing/Coordinating Entity
Project Commitments		
Provide additional firefighting equipment with future installation of PV Batteries	USGS & architect	USGS
Natural Resource Commitments		
Project related ground disturbance will be limited to areas within the delineated project site	USGS & GC	USGS
No nighttime construction in order to avoid impacts to migratory birds and astronomy observatories	USGS & GC	U.S. Fish & Wildlife Service
Lighting to comply with Hawai'i County Lighting Ordinance and be fully "dark sky compliant" (shielded, pointed directly at ground where possible, placed under building eaves, etc.)	USGS Architect & GC	County Dept. of Public Works
Biologist to conduct Hawaiian hawk nesting survey in coordination with USFWS prior to clearing and grubbing	USGS & GC	U.S. Fish and Wildlife Service
No clearing woody vegetation greater than 15 ft in height between June 1 and September 15 to avoid impact to Hawaiian Hoary Bat	USGS & GC	U.S. Fish and Wildlife Service
No barbed wire will be installed	USGS & GC	USGS
Incorporation of native plants	USGS	USGS
Invasive Species Management Plan provided by contractor for USGS approval prior to any access or construction staging on the property *(compliance with EO 13112, Invasive Species)*	USGS	U.S. Fish and Wildlife Service
Archaeological/Cultural Resource Commitments		
Coordination with State Historic Preservation Division (SHPD) on archaeological matters associated with ground disturbance	USGS & consultants	Hawai'i State Historic Preservation Division

ANALYSIS OF ENVIRONMENTAL IMPACT: The Proposed Action and alternatives were evaluated for their environmental impact. The Proposed Action will have minimal to negligible impacts on biological resources; historic, archaeological, and cultural resources; socio-economic resources; infrastructure and utilities; traffic; noise quality; and air quality and Green House Gas (GHG) Emission.

Biological Resources. There are no protected species of plants or animals present on the site. It is possible that protected seabirds overflying the site at night could be adversely impacted by exterior lighting emanating from the site. To minimize impacts all construction activities are planned for daylight hours and will comply with applicable State of Hawai'i and County regulations. Following build-out, all lighting will comply with Hawai'i County Lighting Ordinance and be fully "dark sky compliant."

It is also probable that the endemic Hawaiian hoary bat overflies the project area on a seasonal basis. The removal of vegetation within the site could temporarily displace individual bats using trees for roosting. During the bat pupping season, females carrying their pups may be less able to vacate a roost

site as the tree is felled. Adverse impacts will be minimized and avoided by not clearing woody vegetation taller than 15 feet between June 1 and September 15, the period in which bats may have pups.

The project site includes several native ʻōhiʻa lehua trees, many of which appear to be infected with Rapid Ohia Death (ROD), an invasive fungal disease afflicting thousands of trees on Hawaiʻi Island. To prevent its spread, and in compliance with Executive Order 13112, Invasive Species, accepted procedures will be followed prior to site work, including testing wood samples and employing accepted procedures for decontamination and tree removal. During site clearing and construction, contractors will utilize best management practices to avoid the introduction and spread of invasive plant or animal species. Best management practices include being familiar with invasive species, reporting invasive plants and animals, and cleaning vehicles and equipment, and clothing after arriving at the worksite and after working in infested areas. The USGS will prepare an Invasive Species Management Plan and all work will be monitored and approved by USGS prior to construction. USGS will have oversight before and during construction.

Informal Section 7 Consultation in accordance with the Endangered Species Act was conducted with the U.S. Fish and Wildlife Service (USFWS). In a letter dated April 10, 2023, the USGS sent the USFWS a request for concurrence with its determination of likely to affect but Not Likely to Adversely Affect (NLAA) for the Proposed Action. In a letter dated May 4, 2023, USFWS concurred that the project may affect, but is not likely to adversely affect listed species, with the implementation of agreed upon mitigation listed above.

Archaeological and Cultural Resources. Archaeological studies were conducted within a 13-acre Area of Potential Effect (APE), which includes the project site. The 13-acre study area includes five previously recorded historic sites. Data recovery for all five sites in the APE was completed in 2006, to the satisfaction of the State Historic Preservation Officer, and no further work was required in 2006.

A small portion of one of the sites (SIHP #50-10-35-24243) will be removed by the proposed USGS Research Facility project. This site is described as a World War II (WWII) military training site, associated with military defense and training in the upland area of Hilo during WWII. It is comprised of 12 features, including several “foxholes” constructed of stacked and piled rocks, kerbstone footpaths, and the concrete foundation of a small building.

Consultation in accordance with Section 106, National Historic Preservation Act and HRS Chapter 6E was initiated with the Hawaiʻi Department of Land and Natural Resources, State Historic Preservation Division (SHPD) during the development of this project. Native Hawaiian Organizations were consulted as part of the Section 106 process. The USGS made a determination of “no historic properties affected” in a letter to the State Historic Preservation Office (SHPO) dated April 6, 2023 and submitted via the SHPD’s on-line portal, Hawaiʻi Cultural Resource Information System (HICRIS) on April 10, 2023 (Submission token 1LB9TYSETXPB). No response was received within the required 30-day response period which ended on May 10, 2023.

A Cultural Impact Assessment, prepared in compliance with HRS Chapter 343, found the project has minimal potential to adversely impact cultural resources and traditional or customary practices in the area.

Infrastructure and Utilities. There will be no adverse impacts on infrastructure and utility systems. Average daily demand for water will be 24,000 gallons per day, and calculations estimate demand at 135 gpm. As design progresses, updated calculations will be submitted to the County Department of Water Supply which will confirm and provide final approval of water availability for domestic and fire demand. New water connections and sub-meters will be installed and a dedicated fire line provided.

The sewer system will comply with the County Wastewater Standards. Prior to construction, USGS will continue to work with the County Department of Environmental Management (DEM). USGS will provide a sewer study for DEM approval. A Solid Waste Management Plan will be prepared for DEM approval.

No adverse drainage impacts are anticipated, and stormwater runoff within the site will be collected via the new onsite drainage system and discharged into shallow drywells. There will be no net increase in storm water runoff offsite, and no adverse impact to adjacent properties. A drainage report for the project has been approved by the County Department of Public Works. Electrical and telecommunication service in the area is adequate to support the project.

The placement of structures on the site was chosen to be compatible with the existing topography and to minimize earthwork. All grading and construction will comply with best management practices and the conditions of the National Pollutant Discharge Elimination system permit for construction activities. No unusual site work or grading activities are anticipated.

When Photovoltaic (PV) systems are installed, a glint and glare analysis for the Federal Aviation Administration will be completed prior to start of construction, due to the site's proximity to Hilo International Airport. The USGS will also provide additional firefighting equipment with the installation of PV batteries.

Transportation and Roadways. The Traffic Impact Analysis Report for the project found that by Future Year 2025, the project will generate 83 new vehicle trips during the AM peak hour and 81 new trips during the PM peak hour. The Proposed Action will only increase traffic along Komohana Street by 1 to 2% from Base Year 2025 conditions, or as much as 5 to 35 vehicles/hour/direction. These will have a minimal impact to the overall study roadway network. The project will minimally increase intersection movements in the vicinity by one second or less and will not worsen the Level of Service for any intersections beyond what they would be without the project.

RELATIONSHIP TO LAND USE PLANS, POLICIES AND CONTROLS: The USGS Hilo Research Facility is consistent with federal laws and executive orders; and State of Hawai‘i and County of Hawai‘i land use plans, policies and controls.

The project site is located within the State of Hawai‘i agricultural land use district. The research facility is a permissible use within the agricultural district as defined in HRS §205-4.5(5), which allows "Public institutions and buildings that are necessary for agricultural practices," which includes greenhouses. Research conducted by HVO and PIERC (e.g., volcanic hazards, soils, local and regional climate, invasive species, ecosystem processes, etc.) directly and indirectly supports agricultural practices throughout the state. In a May 25, 2022 meeting between USGS and the Hawai‘i County Planning Department Administrative Permits Division, the County concurred that the project is consistent with a public use and structure necessary for agricultural practices.

PUBLIC PARTICIPATION AND COMMENTS

The Draft Environmental Assessment-Anticipated Finding of No Significant Impact (DEA-AFNSI) underwent a 30-day public review period from February 23, 2023 to March 28, 2023. During the comment period, nine (9) comments were received. The table below summarizes the comments and responses. Copies of all comment letters are included in the Appendix of the Final EA.

Overview of Draft EA Comments

Agency	Major Comments	Response
Hawai'i Department of Hawaiian Homelands	No impact to DHHL lands or beneficiaries. Encourage consultation with native Hawaiian organizations.	Consultation with Hawaiian Homestead community associations and other Native Hawaiian Organizations conducted as part of the Cultural Impact Assessment (CIA) and the Section 106, National Historic Preservation Act (NHPA) consultation. No stakeholders or interviewees expressed concern regarding the removal of historic properties by proposed development. CIA concluded project has minimal potential to adversely impact cultural resources and traditional and customary practices. See Final EA Section 3.7.
Hawai'i Department of Health, Solid & Hazardous Waste Branch	Standard Comments for Solid and Hazardous waste attached	Project will comply with all applicable laws regulations pertaining to hazardous and solid waste, and underground storage tanks. See Final EA Appendix A, Section A.3.7.
Hawai'i Department of Land and Natural Resources	Engineering Division--no additional comments. Land Division—no objections.	Acknowledged.
Hawai'i Department of Transportation	1. HDOT early consultation comments dated April 19, 2022 are still valid and applicable to the project. 2. If an energy or battery storage facility is planned for a PV system, the energy storage facility shall have sufficient firefighting/fire suppressant ability to prevent hazardous smoke in the protected air space. 3. The Draft EA and the conclusions of the Transportation Impact Assessment Report (TIAR) (October 2022) projected that the project will increase traffic along Komohana Street by 1 to 2% (from Base Year 2025 conditions). Therefore, we find that the proposed use does not appear to generate	***Comment 1.*** Early consultation comment letter dated April 19, 2022 is included in the Final EA. All comments have been addressed in the Traffic Impact Analysis Report (Final EA Appendix E). See Final EA Section 3.9. ***Comment 2.*** Photovoltaic systems are not included in this phase of the project but are planned for a future phase (to be determined) when funding becomes available to implement Executive Order 14057, Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability (2021). At that time, there will be sufficient firefighting/fire suppressant ability to

Agency	Major Comments	Response
	significant traffic impacts onto the State facility. 4. Any future expansion or intensification of land use beyond what is presented may require an updated TIAR to be submitted to the HDOT for review and acceptance. Study should identify potential direct or secondary traffic generated by the project impacts to the state facility and provide mitigations at no cost to the state.	prevent hazardous smoke in the protected air space. See Final EA Section 3.3.2.1. ***Comment 3.*** Comment acknowledged. ***Comment 4.*** USGS will update the TIAR if there is an expansion or intensification of this project on this site beyond what's described in the EA.
University of Hawai'i Institute for Astronomy	1. Any outdoor lighting, including both construction and permanent lighting, must conform to the standards established by the Hawai'i County Outdoor Lighting Ordinance (Hawai'i County Code Chapter 14, Article 9: "Outdoor Lighting"). IfA encourages project planners to include references to the Outdoor Lighting Ordinance in planning documents to confirm to readers that its requirements are being considered and addressed in project planning. 2. The minimum possible amount of outdoor/exterior lighting should be used and should be turned off when not needed. Motion sensor activated lighting is strongly preferred wherever feasible. 3. All exterior lighting should be fully shielded. IfA appreciates the Draft EA's recognition of this recommendation by the state Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW). 4. Conformity to the Outdoor Lighting Ordinance also requires the use of blue-deficient exterior lighting. This means that exterior LED lighting must emit less than 2% of its total energy at wavelengths less than 500 nm. The best choices for this are either filtered LED lights, or amber LED lights. 5. White light should be avoided in general because the blue component of white light significantly impacts astronomy. Any white	***Comment 1.*** USGS has committed to no-night construction to avoid impacts and exterior lighting will conform in every aspect to the Lighting Ordinance (Hawai'i County Code Chapter 14, Article 9: "Outdoor Lighting." See Final EA Section 3.5.2. ***Comment 2.*** The lighting design for exterior lighting uses the minimum amount of light on building exteriors and in parking and driving lanes while satisfying standards and practices. Exterior lighting will be controlled by building time clocks and/or motion sensors when feasible. ***Comment 3.*** All exterior lighting planned for the USGS facilities is fully shielded protecting against light pollution. ***Comment 4.*** All exterior lighting to be used will conform to the less than 2% blue light requirements. ***Comment 5.*** All exterior lights are designed at 2700K, or less in the case of the Amber parking and drive lane lighting. <u>General:</u> Brief discussion about potential light impacts to telescopes and proposed mitigation has been added to Final EA, Section 3.5, Existing and Surrounding Land Uses.

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	light deemed essential should have a Correlated Color Temperature of 2700 K or below.	
County Department of Environmental Management	Solid Waste Division Requested revision on Section 3.1.2, Table 3-2, Page 3-3 [noted]. • Commercial operations, State and Federal agencies, religious entities and non-profit organizations may not use transfer stations for disposal. • Aggregates and any other construction/demolition waste should be responsibly reused to its fullest extent. • Ample and equal room should be provided for rubbish and recycling. • Green waste may be transported to the green waste sites located at the West Hawai'i Organics Facility and East Hawai'i Organics Facility, or other suitable diversion programs. • Construction and demolition waste is prohibited at all County Transfer Stations. Wastewater Division Require connection of proposed structures to the public sewer in accordance with Section 21-5 of the Hawai'i County Code	***Solid Waste Division***. The EA has been revised to note that USGS will comply with the requirement to prepare a Solid Waste Management Plan following guidelines provided (January 29, 2021). See Final EA list of permits and approvals in Project Summary and Section 4.4, Table 4-2. Solid waste generated from construction will be disposed at the West Hawai'i Sanitary Landfill. All recommendations and mitigation measures outlined in the solid waste management plan will be met. ***Wastewater Division***. Connection to public sewer will be done in accordance with Section 21-5 of Hawai'i County Code. See Final EA Section 3.8.2.
Police Department	Staff does not anticipate any significant impact to traffic and/or public safety concerns.	Comments acknowledged.
County Department of Research and Development	County supports the development of a permanent research facility to support HVO and PIERC. Continued efforts by scientists and staff continue to serve as a boon to the island's economy. HVO and its partners have been great protectors of our citizens and visitors	Comments acknowledged.
Hawaiian Telcom	Review pending	N/A, no comments received
Private citizen	Will the facility be able to accommodate tour buses and have a gift shop?	Proposed project will be a research facility, no plans to accommodate public tours, tour buses or gift shop.

FINDING OF NO SIGNIFICANT IMPACT: Based on the environmental assessment analyses, agency input, public comments provided, and information obtained at the March 15, 2023 Public Meeting, the USGS has determined that the project will not have significant environmental impacts on natural, cultural, or historic resources. The development of the USGS Hilo Research Facility is consistent with State and County land use plans and with federal laws and Executive Orders. There will not be significant adverse

effects on natural, cultural, or historic resources; on economic or social welfare; on public health, air, water or noise.

Following review of the attached Environmental Assessment and all comments received, the USGS concludes that the proposed project is not a federal action significantly affecting the quality of the human environment within the meaning of NEPA of 1969. Therefore, an Environmental Impact Statement is not required.

RESPONSIBLE OFFICIAL

AIMEE DEVARIS Digitally signed by AIMEE DEVARIS Date: 2023.05.11 12:20:31 -08'00' _____

Aimee Devaris, Regional Director, Alaska Region, U.S. Geological Survey Date