

STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Forestry and Wildlife
Honolulu, Hawai'i

November 13, 2020

Chairperson and Members
Board of Land and Natural Resources
State of Hawai'i
Honolulu, Hawai'i

Land Board Members:

SUBJECT: AUTHORIZE THE UNITED STATES DEPARTMENT OF AGRICULTURE TO CONDUCT INFRASTRUCTURE IMPROVEMENT ACTIVITIES IN HAWAI'I EXPERIMENTAL TROPICAL FOREST, SITUATED AT PU'U WA'AWA'A FOREST RESERVE;

AUTHORIZE ISSUANCE OF A LEASE AGREEMENT TO THE UNITED STATES DEPARTMENT OF AGRICULTURE FOR NON-EXCLUSIVE USE OF FACILITIES SITUATED AT PU'U WA'AWA'A FOREST RESERVE;

REQUEST DELEGATION OF AUTHORITY TO THE CHAIRPERSON TO APPROVE, EXECUTE, AMEND, AND EXTEND A LEASE AGREEMENT WITH THE UNITED STATES DEPARTMENT OF AGRICULTURE FOR NON-EXCLUSIVE USE OF FACILITIES SITUATED AT PU'U WA'AWA'A FOREST RESERVE; AND

REQUEST DELEGATION OF AUTHORITY TO THE DIVISION OF FORESTRY AND WILDLIFE ADMINISTRATOR TO NEGOTIATE, APPROVE, AND EXECUTE A FACILITIES OPERATING PLAN IN PARTNERSHIP WITH THE UNITED STATES DEPARTMENT OF AGRICULTURE FOR FACILITIES SITUATED AT PU'U WA'AWA'A FOREST RESERVE, NORTH KONA, HAWAI'I, PORTION OF TAX MAP KEY: (3) 7-1-001:006.

SUMMARY:

This Board Submittal requests approval for the United States Department of Agriculture (USDA) to conduct infrastructure improvement activities to existing State-owned structures and appurtenant facilities, at the Hawai'i Experimental Tropical Forest (HETF), situated at the Pu'u Wa'awa'a Forest Reserve (PWWFR), North Kona, Hawai'i, Tax Map Key (TMK) 3-7-1-001: portion of 006 (**Exhibit A**). Additionally, this Board Submittal requests approval to issue a lease

agreement to USDA for non-exclusive use of the subject facilities in exchange for funding and services provided by the USDA to complete the subject improvements.

The Division of Forestry and Wildlife (DOFAW) is requesting that the Board of Land and Natural Resources (Board) delegate authority to the Chairperson to approve, execute, amend and extend the lease agreement, subject to approval by the Department of the Attorney General. Prior to completion of the proposed project, a facilities operating plan will be finalized between DOFAW and the USDA to lay out terms of use and maintenance of the subject facilities; DOFAW is requesting that the Board delegate authority to the DOFAW Administrator to negotiate, approve, and execute the facilities operating plan.

BACKGROUND:

The Hawai'i Experimental Tropical Forest Cooperative Agreement

On December 12, 2006, the Board and the USDA signed a 35-year Cooperative Agreement (**Exhibit B**) (referenced throughout this document as "HETF Cooperative Agreement") for the establishment and administration of the HETF at Pu'u Wa'awa'a. Under this agreement, the PWWFR and Pu'u Wa'awa'a Forest Bird Sanctuary (PWWFBS), along with the Kīholo State Park, serve as a center for long-term research and a focal point for developing and transferring knowledge and expertise for the management of tropical forests.

Permit to Use State Lands

On January 26, 2007, under agenda Item C-2, the Board granted a non-exclusive permit (**Exhibit C**) to the USDA to use State lands in compliance with the HETF Cooperative Agreement, situated at Pu'u Wa'awa'a as a HETF unit. Under item number 2.i. of the subject permit, the USDA is authorized "To construct, maintain, and improve needed infrastructures, including: a new field station facilities at Laupāhoehoe and renovation of existing structures for use as a field station at Pu'u Wa'awa'a consisting of dormitories, work areas, demonstration/education buildings, and storage facilities, gaging stations in streams, weather stations, eddy covariance towers, and similar devices; maintenance of the existing trail system and development of new trails for access; and maintenance and improvement of existing roads." Furthermore, the permit states that "The USDA must obtain the prior written consent of the Board before construction of infrastructure or making any major improvements, as outlined in section IV.I of the Cooperative Agreement."

Pu'u Wa'awa'a Infrastructure Improvement Project

The primary purpose of the Pu'u Wa'awa'a Infrastructure Improvement Project is to enhance facilities that will support HETF research, demonstration, and educational functions. The two structures proposed for improvement, known as the Lake House and Meeting House, are managed by DOFAW and use is currently shared by the USDA and DOFAW, in support of the management of the forest reserve and HETF functions. The proposed project would renovate the two existing structures, improve access by providing parking and sidewalks, and upgrade utilities with new sanitary wastewater, photovoltaic electricity, propane, and water systems.

The USDA is proposing to conduct the following activities, detailed in The Pu'u Wa'awa'a Infrastructure Improvement Scope of Work and Environmental Analysis (**Exhibit D**):

- **Building Renovation:** new flooring, appliances, and plumbing fixtures, as well as painting and refurbishing both houses for user access, user safety, and ease of maintenance.
- **Access:** add paved parking and sidewalks compliant with the Americans with Disabilities Act's access standards.
- **Utility Upgrades:**
 - Sanitary Wastewater – develop a conventional septic system for each house, or a shared system for both if feasible. This would likely use filter material brought to the site, as local soil and bedrock conditions are not conducive to sub-surface wastewater disposal.
 - Electrical Power – the current system of a small generator serving each of the houses would be replaced with a 20-kilowatt photovoltaic array, a central backup generator serving both houses, and new electrical distribution lines.
 - Gas – construct a new shared propane tank and gas lines serving each house.
 - Water – the project would continue to rely upon water service from a private utility and would upgrade water lines on the site. Water for fire protection would continue to be supplied from the reservoir adjacent to the site.

LOCATION:

Portion of Government lands situated at North Kona, Hawai'i, identified by TMK (3) 7-1-001: portion of 006, as shown on the attached map labeled as **Exhibit A**.

ZONING:

State Land Use District: Agriculture
County of Hawai'i: Agriculture

CURRENT USE STATUS:

Tax Map Key (3) 7-1-001: portion of 006 is part of the PWWFR, as established under Executive Order 4203 dated October 19, 2007, and managed by DOFAW. The subject area is also established as part of the HETF through the HETF Cooperative Agreement between the Board and the USDA dated December 12, 2006.

LEGAL REFERENCE:

Section 171-95, Hawaii Revised Statutes, as amended.

APPLICANT:

United States Department of Agriculture

CHARACTER OF USE:

Research, demonstration, and education purposes.

COMMENCEMENT DATE:

To be determined by the Chairperson.

LEASE TERM:

The primary term will be for the life of the 35-year HETF Cooperative Agreement signed on December 12, 2006, with the possibility to extend, not to exceed 65 years.

RENT:

One dollar (\$1.00) for the primary term.

REMARKS:

The Pu'u Wa'awa'a Infrastructure Improvement Scope of Work and Environmental Analysis (**Exhibit D**) describes details of the proposed project, and addresses and incorporates analysis of site-specific impacts of the project on cultural resources, terrestrial wildlife, and botanical species based on the Pu'u Wa'awa'a Infrastructure Improvement Project Biological Assessment and a Cultural Resource Assessment of Pacific Southwest Research Station – Institute of Pacific Islands Forestry – Hawaii Experimental Forest Lake house and Meeting house Improvements Project.

This proposed action replaces an earlier proposal to construct a new bunkhouse and lab building approximately 0.6 mile north of the current project location. Improvements to the existing structures and their utility infrastructure would be a more efficient way to meet the project purpose and need with less environmental impact than would result from the earlier proposal of new construction. The proposed infrastructure improvements would enable these buildings to better meet this need through improving access for visitors with all levels of mobility, providing a steady source of electrical power, improving sanitary waste disposal, and updating the buildings' interiors for user efficiency and comfort.

The Division has been unsuccessfully seeking funds for the subject improvements for over 10 years. Thus, completion of this project would be mutually beneficial to DLNR and the USDA. The proposed improvements would be made to existing DOFAW structures that are currently used by DOFAW and the USDA, pursuant to the HETF Cooperative Agreement.

Pursuant to the HETF Cooperative Agreement as referenced in the Land Use Permit, DOFAW is requesting written approval from the Board for the USDA to conduct the subject infrastructure improvements.

The Division is also requesting authorization to issue a non-exclusive lease agreement to the USDA for use of the subject facilities. The lease will be issued for a rental fee of one dollar (\$1.00) or at gratis for the primary term in exchange for the infrastructure improvements executed and funded by the USDA. This lease is required for the USDA to expend federal funds for the improvement project in accordance with Title 7, United States Code, section 2550a, and are consistent with the terms previously contemplated and recognized by the Board in the HETF Cooperative Agreement. A draft of the subject lease (**Exhibit E**) has been routed to the Department

of the Attorney General for consultation and review. The proposed primary lease term will be for the life of the HETF Cooperative Agreement with the option to extend at the discretion of the Chairperson, for a period not to exceed 65 years. The 35-year HETF Cooperative Agreement was signed in December 12, 2006. The Division is requesting delegation of authority to the Chairperson to approve, execute, amend, and extend the lease agreement to the USDA, subject to review by the Department of the Attorney General.

A Draft Facilities Operating Plan (**Exhibit F**) was developed in partnership with the USDA and DOFAW to detail the terms of use and maintenance of the subject infrastructure following completion of the proposed improvement project. The Division is requesting delegation of authority to the DOFAW Administrator to negotiate, approve, and execute a final plan between DOFAW and the USDA prior to the completion of the improvements.

CHAPTER 343 – ENVIRONMENTAL ASSESSMENT:

Furthermore, in accordance with Hawaii Administrative Rules (HAR) § 11-200.1-16 and the Exemption List for the Department of Land and Natural Resources, reviewed and concurred by the Environmental Council on March 3, 2020, the subject activities are exempt from the preparation of an Environmental Assessment pursuant to:

1. Exemption Class No. 1, Part 1, Item 4, that states, “Operation, repair, and maintenance of existing structures and facilities, including baseyards, offices, cabins, sheds, and fencing;”
2. Exemption Class No. 6, Part 1:
 - a. Item 1, that states, “Construction, placement or installation of signage, pavement markings, buoys, or other similar structures,” and
 - b. Item 5, that states, “Construction or placement of utilities (telecommunications, electrical, solar panels, drainage, waterlines, sewers) and related equipment (such as transformers, poles, cables, wires, pipes) accessory to existing facilities;”
3. Exemption Class No. 1, Part 1, Item 26, that states, “Repair and reconstruction of existing roadways, roadway shoulders, road structures and signage, parking areas, walkways, bikeways, multi-use driveways, and boat launch ramps;”
4. Exemption Class No. 1, Part 1, Item 41, that states, “Leases of state land involving negligible or no expansion or change of use beyond that previously existing;
5. Exemption Class No. 4, Part 1, Item 1, that states, “Improvements to previously existing graded parking and storage yard areas, including paving, infilling, grading and compacting;” and
6. Exemption Class No. 7, Part 1:
 - a. Item 1, that states, “Interior alterations and renovations to offices, buildings or structures that do not increase the floor area or change the maximum occupancy to include: a. installation of office partitions, utility outlets or connections, air conditioning, lighting, and security systems; b. renovations required to bring

existing structures into compliance with current building codes and applicable health, safety, and access regulations; c. renovations that will result in energy or other operational/cost savings; or d. other similar interior alterations;”

- b. Item 2, that states, “Expand utilities as need dictates in existing structures,” and
- c. Item 3, that states, “Construction required to maintain or upgrade existing utilities.”

RECOMMENDATION:

That the Board:

- 1) Authorize the U.S. Department of Agriculture to conduct the subject infrastructure improvements as described pursuant to the terms and conditions of the Hawai‘i Experimental Tropical Forest Cooperative Agreement;
- 2) Authorize issuance of a lease agreement to the U.S. Department of Agriculture for non-exclusive use of the subject facilities;
- 3) Delegate authority to the Chairperson to approve, execute, amend, and extend a lease agreement with the U.S. Department of Agriculture for non-exclusive use of the subject facilities; and
- 4) Delegate authority to the Division of Forestry and Wildlife Administrator to negotiate, approve, and execute a facilities operating plan prior to completion of the proposed infrastructure improvement project.

Respectfully submitted,



DAVID G. SMITH, Administrator
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:



SUZANNE D. CASE, Chairperson
Board of Land and Natural Resources

Attachments:

Exhibit A. Maps of Project Area

Exhibit B. HETF Cooperative Agreement

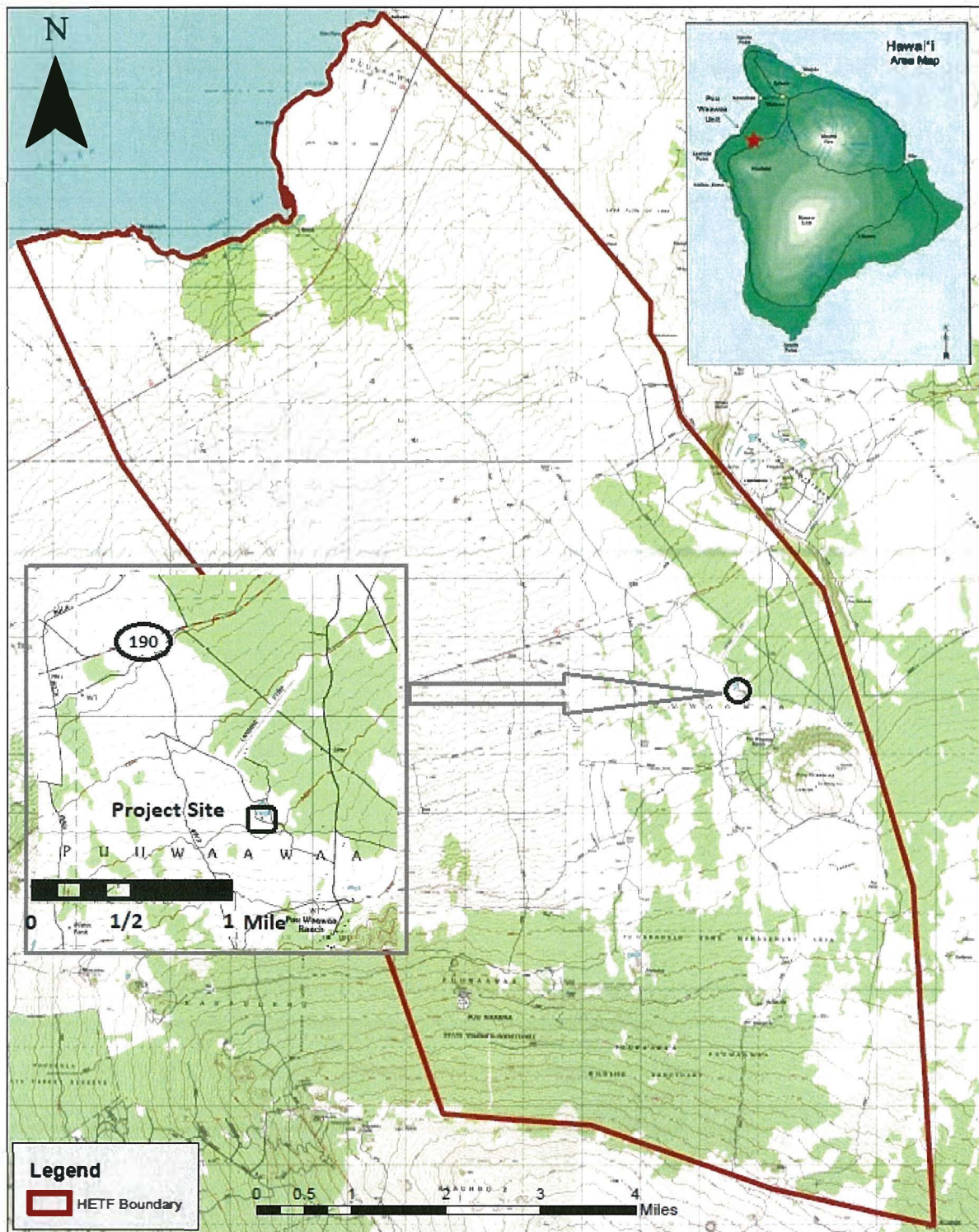
Exhibit C. Land Use Permit

Exhibit D. Pu'u Wa'awa'a Infrastructure Improvement Project Scope of Work and Environmental Analysis

Exhibit E. [DRAFT] Lease Agreement for the USDA

Exhibit F. [DRAFT] Facilities Operating Plan for Use of Infrastructure at PWWFR

Map of Project Area



Aerial View of Project Area



Figures from Scope of Work and Environmental Analysis

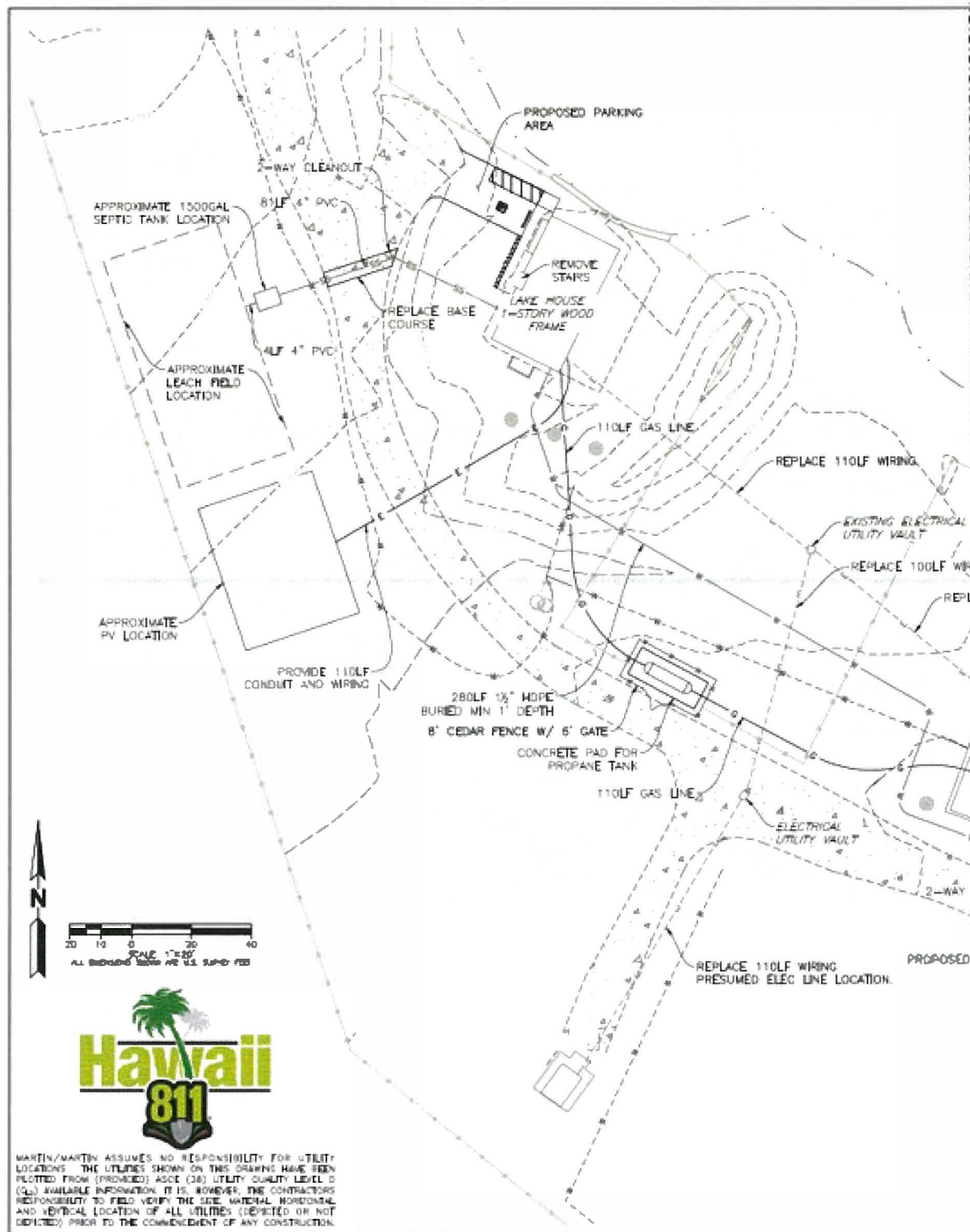


Figure 4. Proposed Action site plan (west half).

Figures from Scope of Work and Environmental Analysis

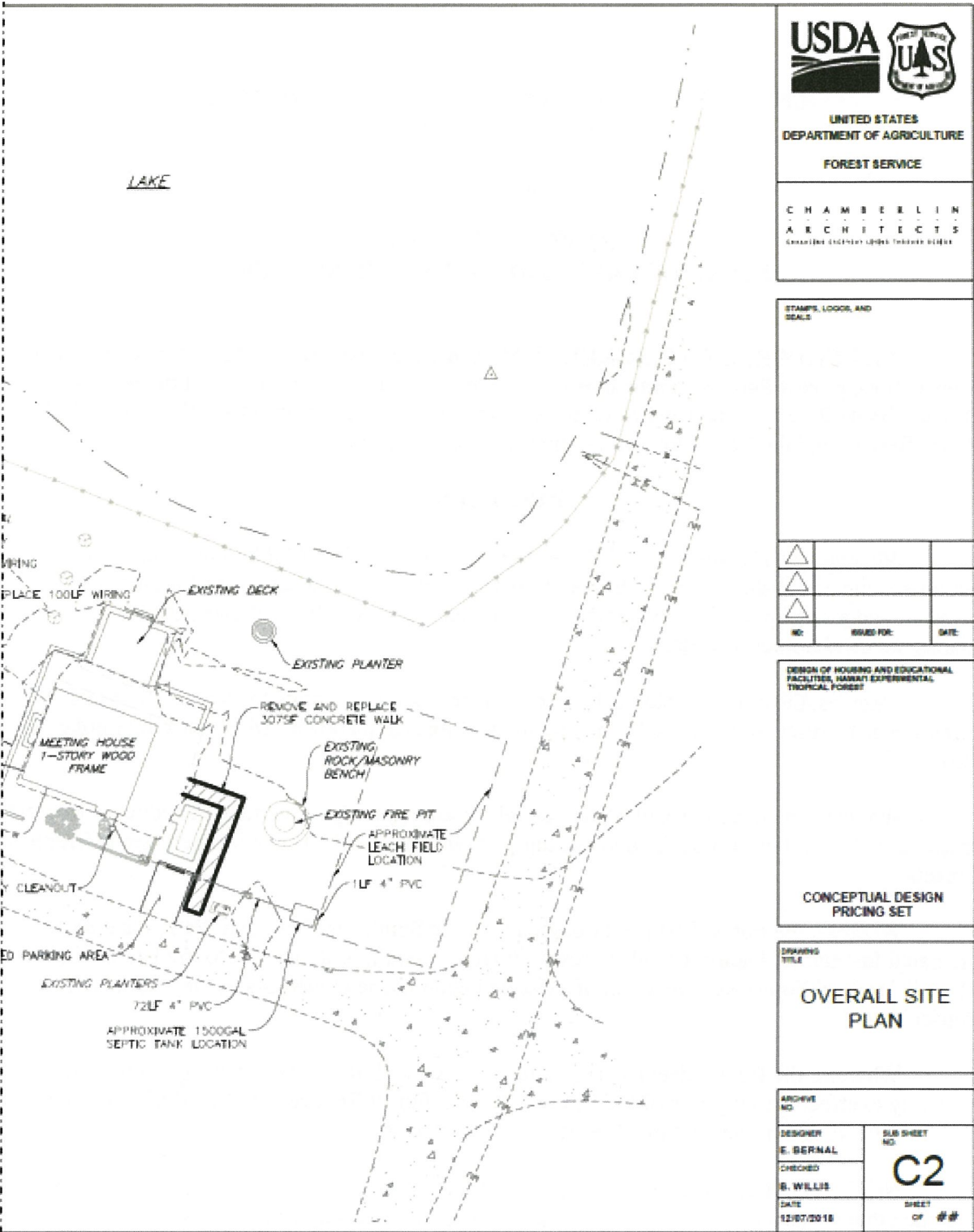


Figure 5. Proposed Action site plan (east half).

COOPERATIVE AGREEMENT

between the

UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE

and the

STATE OF HAWAII BOARD OF LAND AND NATURAL RESOURCES

THIS COOPERATIVE AGREEMENT is between the **United States Department of Agriculture, Forest Service**, hereinafter referred to as the "Forest Service", and the **State of Hawaii**, by its Board of Land and Natural Resources, hereinafter referred to as the "Board". The Forest Service and the Board are jointly referred to as the "Parties".

RECITALS:

Whereas, the Hawaii Tropical Forest Recovery Act of 1992 (Public Law 102-574) authorizes the establishment of the Hawaii Experimental Forest as a center for long-term research and a focal point for developing and transferring knowledge and expertise for the management of tropical forests.

Whereas, the unique biological diversity, resources, and threats to Hawaii's tropical forests pose a critical need to establish experimental forests in Hawaii, where currently none exist.

Whereas, there are areas of State land which are uniquely suited to the conduct of tropical research and, therefore, for designation as the first two units of the Hawaii Experimental Tropical Forests.

Whereas, the Forest Service, through its Pacific Southwest Research Station and its affiliated Institute of Pacific Islands Forestry in Hilo, Hawaii, is authorized to implement the Hawaii Tropical Forest Recovery Act of 1992 on behalf of the United States Department of Agriculture.

Whereas, the Parties deem a cooperative Federal and State research program to be the best way to effect the purposes of the Hawaii Tropical Forest Recovery Act of 1992 and, to that end, to execute and implement this Cooperative Agreement.

NOW, THEREFORE, in consideration of the mutual benefits of cooperative research and the other terms and conditions of this agreement, the Parties agree as follows:

I. AUTHORITIES.

A. *For the Forest Service:* This Cooperative Agreement is authorized by section 606(d)(1)(B) of the International Forestry Cooperation Act of 1990, as amended by the Hawaii Tropical Forest Recovery Act of 1992 (Public Law 102-574).

B. *For the State:* This Cooperative Agreement is authorized by Hawaii Revised Statutes (HRS) §§ 171-6, 183-1.5, 195-4, and 195-7.

II. HAWAII EXPERIMENTAL TROPICAL FORESTS.

A. Within 90 days of execution of this Cooperative Agreement, the Secretary of Agriculture will designate pursuant to the Hawaii Tropical Forest Recovery Act (Public Law 102-574), two units of the Hawaii Experimental Tropical Forests located on the island of Hawaii, generally depicted on the map appended hereto as Map 1, as follows:

1. Laupāhoehoe Experimental Forest comprising approximately 12,343 acres on the Island of Hawaii and generally depicted on the map appended hereto as Map 2.
2. Pu'u Wa'awa'a Experimental Forest comprising approximately 38,885 acres on the Island of Hawaii and generally depicted on the map appended hereto as Map 3.

B. The Laupāhoehoe and Pu'u Wa'awa'a Experimental Forests are collectively referred to herein as the "Hawaii Experimental Tropical Forests".

C. The purposes of the Hawaii Experimental Tropical Forests are:

1. To learn how to better restore, preserve, and sustainably manage native tropical forests, streams and entire watersheds of the Pacific, and to provide information to land managers challenged with management of these important landscapes;
2. To be a center for demonstration, education, training, and outreach on tropical forestry, conservation biology, and natural resources research and management;
3. To provide sites dedicated to long term research on tropical forestry, ecology, hydrology, conservation biology, and natural resource management; and

4. To promote research cooperation and collaboration between State, Federal agencies, educational, and other institutions in tropical forestry research in Hawaii.

D. Additional lands may be incorporated into the Experimental Forests with the written concurrence of the Parties in accordance with section 606 of the International Forestry Cooperation Act of 1990, as amended by the Hawaii Tropical Forest Recovery Act of 1992.

III. LAND USE AUTHORIZATION.

On or about the date hereof, the Board of Land and Natural Resources ("Board") will issue to the Department of Agriculture, Forest Service, a permit to use the Hawaii Experimental Tropical Forests in accordance with this Cooperative Agreement.

A. The permit is a non-exclusive authorization for the Forest Service and its assigns to use the Hawaii Experimental Tropical Forests for the purpose of research, education, demonstration, and related purposes.

B. Entities conducting research activities requiring additional federal, state, or county permits or approvals, including but not limited to environmental assessments or conservation district use permits, will be required to acquire those permits through the procedures in effect for obtaining such permits.

C. In the event that the Forest Service needs to build valuable improvements and support facilities in furtherance of activities contemplated under this Cooperative Agreement, then the State shall issue a lease for such purposes on terms and conditions necessary to meet the requirements of 7 U.S.C. § 2250a and HRS §§ 171-95 and 183-11.

D. All research activities to be conducted on the Hawaii Experimental Tropical Forests shall be administered by the Hawaii Experimental Tropical Forests Research Committee as provided in Part VI of this Cooperative Agreement.

IV. COOPERATIVE RESEARCH AND MANAGEMENT.

In furtherance of a long-term philosophy for cooperation at the Hawaii Experimental Tropical Forest and to implement the purposes of the Hawaii Experimental Tropical Forests and Section 606 of the International Forestry Cooperation Act of 1990, as amended by the Hawaii Tropical Forest Recovery Act, the Parties agree:

A. To conduct long term ecological, forestry, hydrological and other natural resources-related, research;

B. To conduct long term studies at scales from the plot to the watershed on forestry, conservation biology, endangered species, and invasive species;

C. To conduct baseline studies and monitor results and benefits of forest management practices on important issues facing Hawaii including but not limited to: weed control, invasive pest control, ungulate management, forest recreation, recreational hunting, fire control, cultural subsistence gathering, protection and reintroduction of native plants and animals, hydrology, and water quality;

D. To conduct studies on forest silviculture, restoration, and sustainable management;

E. To conduct global climate change research;

F. To attract and conduct multidisciplinary research studies by scientists from federal and state agencies, non-governmental organizations, and universities;

G. To provide for forest education and demonstration for groups ranging from school children to continuing education for land managers, natural resource professionals, and the general public;

H. To form a management/research partnership where information needs and new findings are freely exchanged between the Parties; and

I. To construct, maintain and improve needed infrastructure, including:

1. New field station facilities at Laupāhoehoe and renovation of existing structures for use as a field station at Pu'u Wa'awa'a consisting of dormitories, work areas, demonstration/education buildings, and storage facilities on experimental forest lands or other state lands encumbered under lease, license or permit.
2. Gaging stations in streams, weather stations, eddy covariance towers, and similar research structures. Gaging stations can be placed at the lower reaches of Ka'awali'i Stream, Laupāhoehoe Stream, Kilau Stream, Kiwilahiahi stream, Ha'ako'a Stream, and Pahale Stream within the Laupāhoehoe Natural Area Reserve.
3. Development and maintenance of the existing trail system and the development of a limited network of new trails to achieve access, minimize trampling damage and insure safety of users
4. Maintenance and improvement of existing roads to facilitate access and diminish ecological damage from roads in poor condition.

V. CONSULTATION.

A. *In General.* Owing to the many values and benefits that arise from research, education, and demonstration on the Hawaii Tropical Forests and elsewhere, the Parties further agree they will consult and reach agreements with each other to coordinate research, management, and educational activities and to:

1. Jointly develop research and management plans for the Hawaii Experimental Tropical Forests and to update these plans at least every five years;
2. Consult and reach agreement prior to implementing any written policy or plan that may affect the management of or research within the Hawaii Experimental Tropical Forests;
3. Consult and reach agreement during planning for the development of facilities or any major ground disturbing activities;
4. Consult and reach agreement before any major ground disturbing activities that may affect the conduct of research or the biological integrity of the area such as logging, scarification, chemical applications, fencing, etc.

B. *External Consultation.* The Parties will consult with scientists, managers, general citizens, and local community members concerning ongoing research activities. Existing State sanctioned advisory councils may be utilized for this purpose.

VI. HAWAII EXPERIMENTAL TROPICAL FORESTS RESEARCH COMMITTEE.

A. There is hereby established a Hawaii Experimental Tropical Forests Research Committee ("Committee") which will be chaired by the Forest Service. The Committee will consist of one Federal representative and one State representative who will review and recommend for approval research, education, and demonstration activities on lands designated as the Hawaii Experimental Tropical Forests, and recommend such terms and conditions for the conduct of such research as the Committee deems in the public interest consistent with this Cooperative Agreement.

B. The Committee will establish its own procedures and guidelines consistent with this Cooperative Agreement, including the establishment of subcommittees which may be composed of staff or consultants to deal with specific proposals for the Pu'u Wa'awa'a and Laupāhoehoe Experimental Forest Units.

C. The Committee shall be comprised of persons familiar with the on-going management, research, and education activities on the Experimental Tropical Forests:

1. The Director of the Institute of Pacific Islands Forestry in Hilo, Hawaii, or such alternative Federal official as may be named by the Station Director of the Pacific Southwest Research Station, and
2. The Hawaii Island Branch Manager of the Division of Forestry and Wildlife, or such alternative as may be named by the Board of Land and Natural Resources.

D. Additional members of the Committee may be added by mutual agreement by way of an amendment to this Cooperative Agreement.

E. The Committee will act by unanimous agreement to recommend research activities, including any recommended terms and conditions set forth in writing in an agreement with each research proponent. Research and other activities will follow State guidelines and management plans specific for the land area designation and experimental forest where the research will be conducted.

F. The Committee will provide mechanisms for public information and oversight of research activities, and will provide such information to the Secretary of Agriculture for inclusion in the annual reports to Congress as required by section 607 of the International Forestry Cooperation Act of 1990, as amended by the Hawaii Tropical Forest Recovery Act of 1992. A copy of this annual report will also be sent to the Board of Land and Natural Resources and Natural Area Reserves Commission.

G. Committee members shall serve such renewable terms as determined at the pleasure of the Station Director of the Pacific Southwest Research Station and the Board, as the case may be.

VII. AUTHORIZATION OF RESEARCH ACTIVITIES.

A. The Parties agree that the procedures of the Committee in administering, reviewing, and approving research activities, and the State procedures for issuance of permits for State lands should be streamlined and, to the extent possible, consolidated.

B. For areas of the Hawaii Experimental Tropical Forests outside the Natural Area Reserves System (NARS), within 90 days of this agreement, the Board will delegate to its representative on the Committee the authority to approve and issue permits for the use of state lands for research activities approved by the Committee. It is recognized that this delegation will be subject to terms and conditions as the Board may prescribe, and is subject to modification or revocation at the sole discretion of the Board.

C. For areas of the Hawaii Experimental Tropical Forests inside the Natural Area Reserves System, the Parties agree to encourage the NARS Commission to adopt policies and procedures to meet the objectives of paragraph A. It is recognized that any delegation would be subject to terms and conditions as the Commission may prescribe, and is subject to modification or revocation at the sole discretion of the Commission. It is recognized that, as of the date of this Cooperative Agreement, the NARS Commission lacks legal authority to delegate permit approval authority.

D. Forest Service research activities which the State determines to be within the scope of the permit issued pursuant to Part III of this Cooperative Agreement may not require additional authorizations.

VIII. RESEARCH ON THE LAUPĀHOEHOE NATURAL AREA RESERVE.

A. The Laupāhoehoe Experimental Forest will be a site where long term research at the landscape or ahupua'a scale will be made possible. Within this ahupua'a will be a field station on State-leased agriculture lands, a Natural Area Reserve (NAR), and a Forest Reserve (FR).

B. In addition to the other requirements of this Cooperative Agreement, any research conducted on the Laupāhoehoe Natural Area Reserve shall be performed in a manner which is consistent with NARS management objectives, HRS § 195-1.

C. Prior to issuing a recommendation for approval of any proposed research on the Laupāhoehoe NAR, the Committee will consult with the Hawaii Island NARS Area Manager. The Area Manager will be consulted regularly on ongoing research activities to insure research activities remain consistent with NARS objectives and management actions.

IX. RESEARCH ON THE PU'U WA'AWA'A EXPERIMENTAL FOREST UNIT .

A. The Pu'u Wa'awa'a Experimental Forest Unit will be a site where long term research at the landscape or ahupua'a scale will be made possible.

B. In addition to the other requirements of this Cooperative Agreement, any research conducted on the Pu'u Wa'awa'a Experimental Forest Unit shall be performed in a manner which is consistent with or provides information that would improve the Pu'u Wa'awa'a management plan.

X. RESEARCH RESULTS.

A. Unless the Parties agree otherwise on any given project, the rights to publication, patent, or otherwise to any research results shall accrue to the respective party(s) conducting the research.

B. Each agency shall be acknowledged in publications and audiovisuals as a result of this Cooperative Agreement.

C. Within a reasonable period after completion of research or management activities, the Committee shall require that all information be included in an Experimental Forest data base.

D. Metadata including weather and streamflow data will be made available to the Parties as soon as is practically possible.

XI. MANAGEMENT ACTIVITIES ON HAWAII EXPERIMENTAL TROPICAL FORESTS.

A. *Occupancy and Use.* By this Cooperative Agreement and the permit referenced in Section III.A, persons employed by the Forest Service, are authorized general entry upon the Hawaii Experimental Tropical Forests for research, education, demonstration, and related purposes as set forth herein.

B. *Assignees, contractors and cooperators.* Either Party may authorize entry to the Hawaii Experimental Tropical Forests to assignees and contractors to carry out activities authorized under any permit or authorization, insofar as such entry and activities undertaken do not interfere with any ongoing or planned research or management activities. This Cooperative Agreement does not restrict the Forest Service or the Board from participating in similar research activities with other public or private agencies, organizations, and individuals.

C. *Public Access.*

1. If so authorized, public access will be regulated by the Board to accommodate, in a manner compatible with, ongoing research or management activities. The Board will appropriately manage public access so that threats to public safety are minimized.
2. The Board shall be primarily responsible to utilize its authorities under state law to enforce regulations and permit requirements.

D. *State Management.* The Board will be primarily responsible for normal land management functions including, but not limited to, control of public access, fire suppression, law enforcement, regulation of hunting and grazing activities, invasive species management, and

forest disease, insect, and ungulate control. The Parties will consult with each other and reach an agreement prior to implementing any activity which may impede ongoing management or research activities.

E. *Emergencies.* Nothing in this Cooperative Agreement shall be interpreted to impede the State's prerogatives in dealing with immediate emergencies such as fire or other immediate threats to human safety, which may be undertaken without prior consultation with the Forest Service or the Committee.

F. *Environmental Compliance.* The Committee shall assure that all research activities fully comply with the requirements of all applicable state and federal environmental laws and regulations.

G. *Maintenance of Improvements.* Unless the Parties agree otherwise on a case-by-case basis, the Forest Service will maintain the improvements on the land that are being used by the Forest Service or its assigns for research purposes. The Board will be responsible for maintenance of all other improvements.

XII. FUNDING.

A. *No Obligations of Funds.* This Cooperative Agreement is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds, transfer of property, services or anything of value between the parties will be handled in accordance with applicable regulations, and procedures including those for Governmental procurement or printing. Such endeavors will be outlined in separate agreements that shall be made in writing by representatives of the parties and shall be independently authorized by appropriate statutory authority. Any contract or agreement for training or other services must fully comply with all applicable procurement procedures.

B. *Anti-deficiency.* All activities and operations of the Forest Service and the Board are subject to the availability of appropriated funds. Nothing in this Cooperative Agreement shall be interpreted as obligating unappropriated funds by either entity.

XIII. LIABILITIES.

The Parties agree that liability for any loss, damage, claim, demand, or action, caused by, arising out of or connected with the operations authorized by this Cooperative Agreement shall be governed by applicable state and federal law. For the Forest Service, tort claims will be governed by the provisions of the Federal Tort Claims Act (28 U.S.C. §§ 2671, *et seq.*).

XIV. TERM, EVALUATION AND MODIFICATION.

A. *Term.* This instrument is executed as of the last date shown below which shall be the commencement date. This instrument will remain in effect for Thirty Five (35) years after which it is renewable at the option of the Parties.

B. *Evaluation.* This Cooperative Agreement may be reviewed, evaluated, and updated at any time, but no later than ten (10) years from the commencement date.

C. *Modification.* This Cooperative Agreement may be modified at any time by mutual agreement of the Parties. Modifications shall be in writing executed by the authorized officer representing the Forest Service and the Board respectively. For purposes of this modification provision, such authorized officers are the Station Director of the Pacific Southwest Research Station, and the Board of Land and Natural Resources for all substantive changes and the Chairperson of the Board for nonsubstantive changes to facilitate processing such changes.

XV. DISPUTES.

A. *Laupāhoehoe Natural Area Reserve.* Disputes that cannot be resolved within the Committee concerning research permission on the NAR will be taken to the Natural Area Reserves System Commission for their recommendation to the Board of Land and Natural Resources.

B. *Other Disputes.* Any other dispute among the parties in implementation of the Permit or this Cooperative Agreement shall be elevated to the Station Director, Pacific Southwest Research Station, and the Board of Land and Natural Resources, State of Hawaii.

XVI. TERMINATION.

Either party, in writing, may terminate the instrument in whole, or in part, at any time before the date of expiration. Unless otherwise by mutual agreement, two years advance notice shall be provided prior to termination.

XVII. PRINCIPAL CONTACTS.

The principal contacts for administering this Cooperative Agreement are:

- A. *U.S. Department of Agriculture:*
Director, Institute of Pacific Islands Forestry
Pacific Southwest Research Station
Department of Agriculture, Forest Service

B. *State of Hawaii:*
Administrator, Division of Forestry and Wildlife
Department of Land and Natural Resources


XVIII. MISCELLANEOUS PROVISIONS.

A. *Disclaimers.* Nothing in this Cooperative Agreement shall be construed as affecting in any way the delegated authority or responsibilities of the Board of Land and Natural Resources or the Forest Service. This Cooperative agreement shall not supercede any agreements currently in effect between State and the Forest Service.

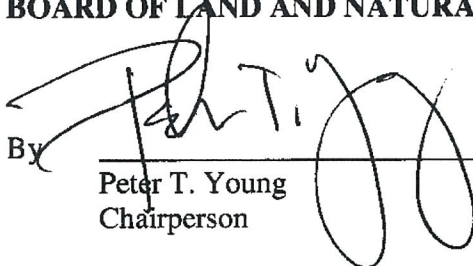
B. *Additional Parties.* By modification of this Cooperative Agreement by the Parties, additional governmental, non-profit organizations, and other entities may be made party thereto on such terms and conditions as the Board and the Forest Service may agree.

IN WITNESS WHEREOF, the parties hereto have executed this Cooperative Agreement as of the last date written below.

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE

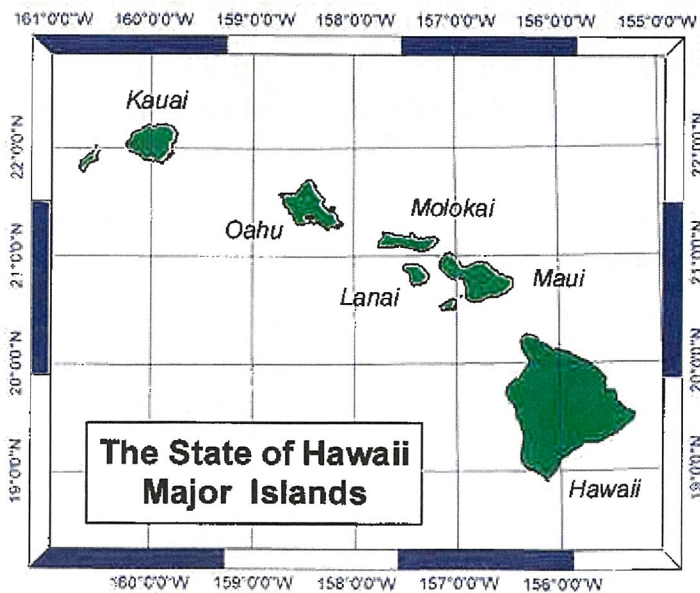
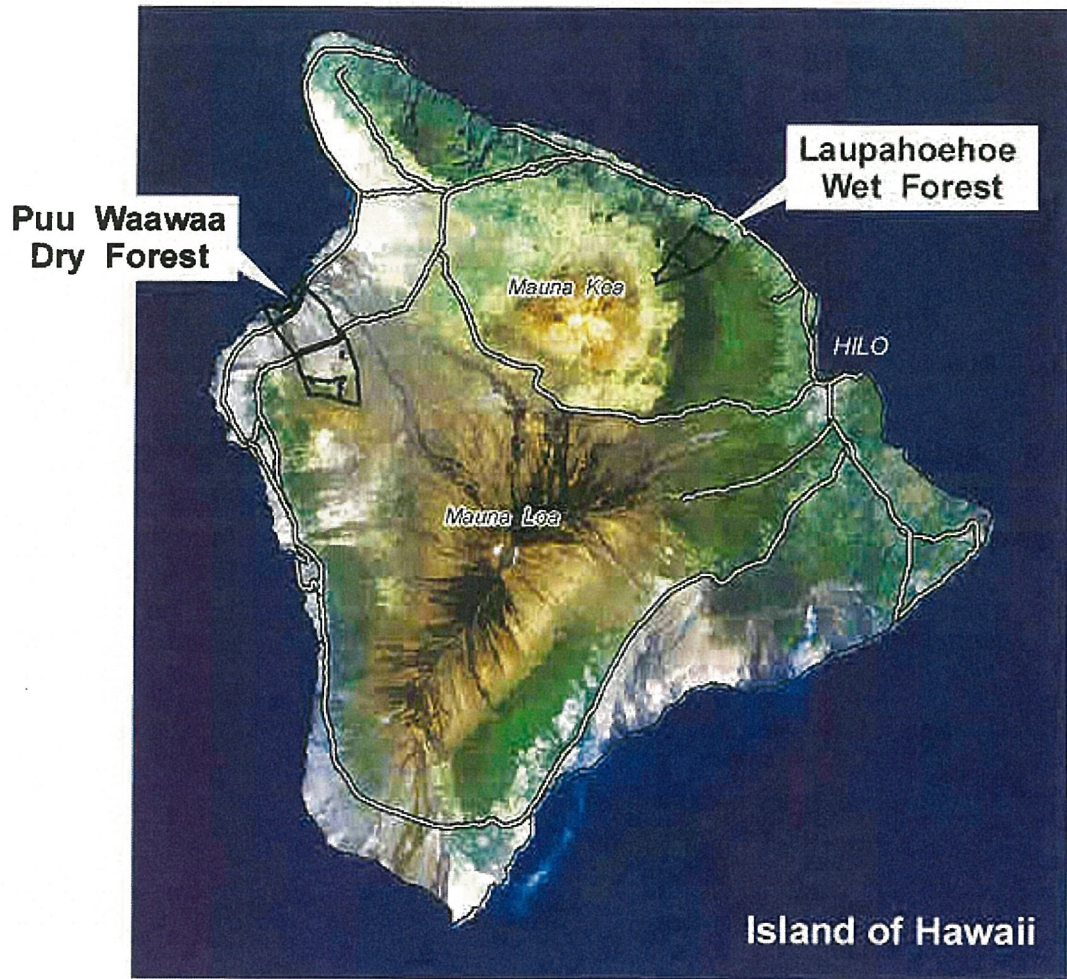
By  _____ 12/12/06
for Dale Bosworth _____
Chief Date

STATE OF HAWAII BOARD OF LAND AND NATURAL RESOURCES

By  _____
Peter T. Young _____
Chairperson Date

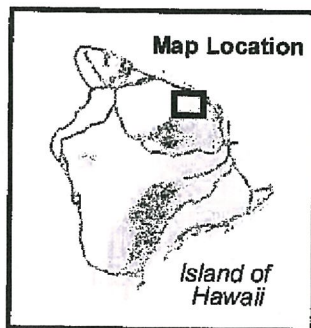
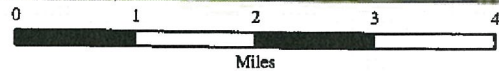
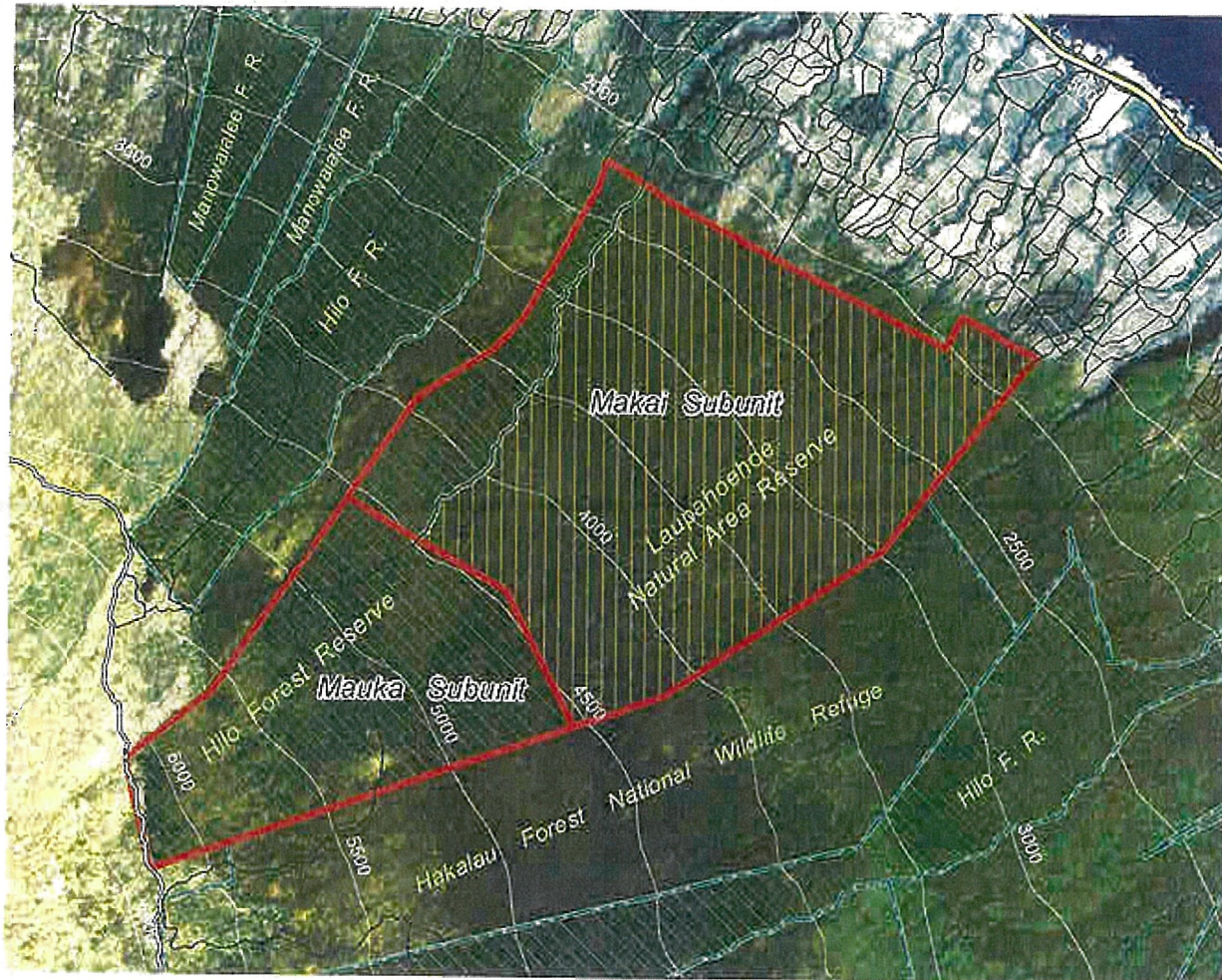
Approved by the Board of Land and Natural Resources
at its meeting held on DEC 08 2006

MAP 1. Location











State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
Map No. FW - 0669 (08/2006)
Contact: Ronald Cannarella
Telephone: (808) 383-3077
Email: Ronald.J.Cannarella@hawaii.gov

MAP 2. Laupahoehoe Wet Forest : Subunits and Geography



Legend

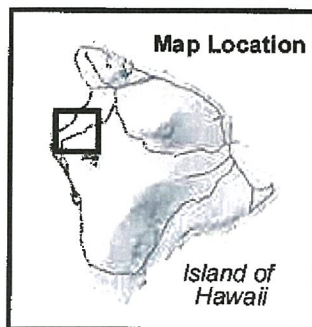
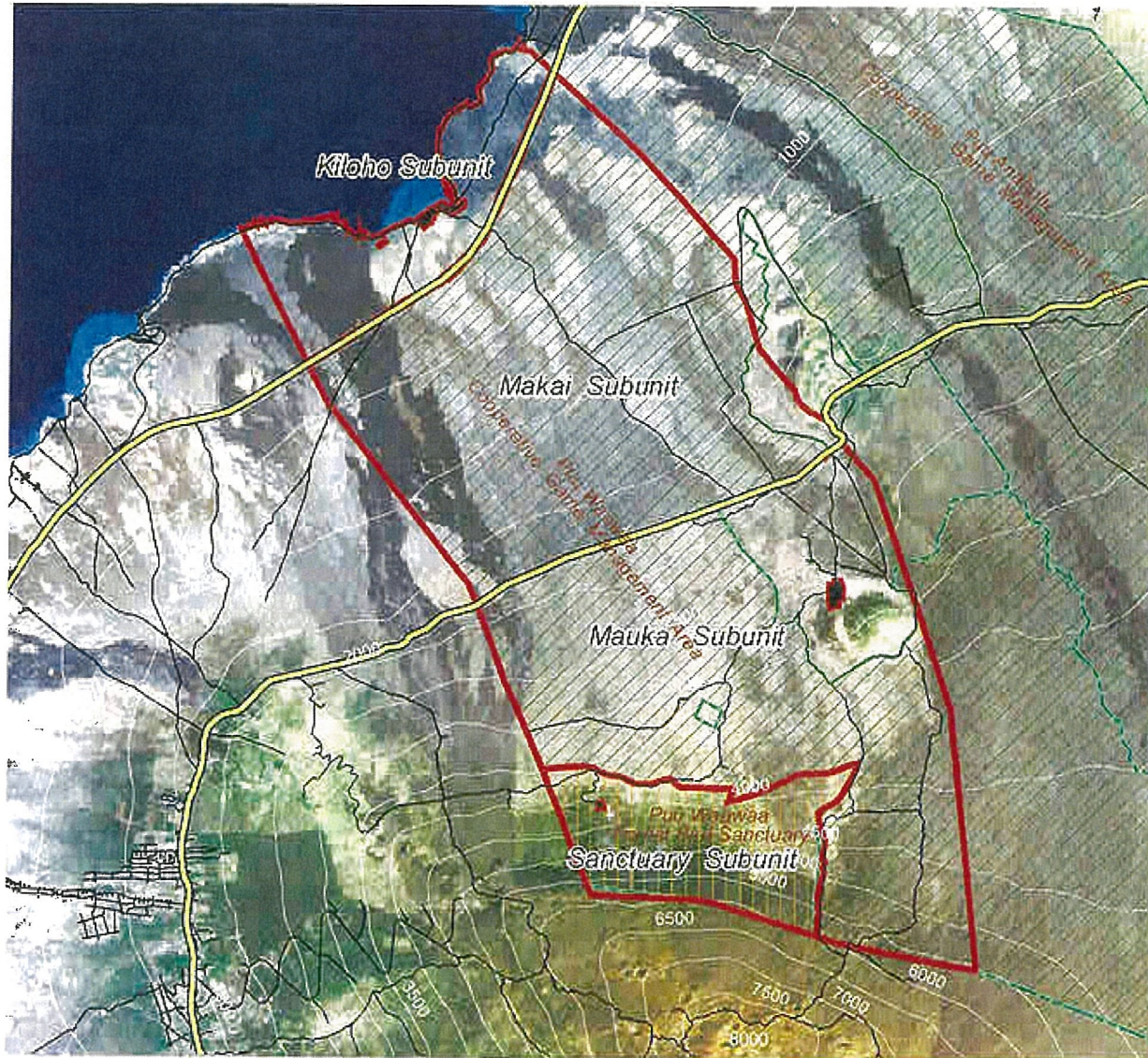
-  HETF Boundary
-  Forest Reserve
-  Natural Area Reserve
-  Major Road
-  Secondary Road
-  Minor Road and Trail
-  Stream
-  500-Foot Contour



State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
Map No. FW - 0670 (08/2006)
Contact: Ronald Cannarella
Telephone: (808) 383-3077
Email: Ronald.J.Cannarella@hawaii.gov

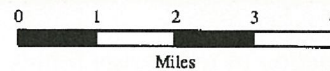
Data Source : Landsat; State of Hawaii GIS.

MAP 3. Puu Waawaa Dry Forest : Subunits and Geography



Legend

- HETF Boundary
- Game Management Area
- Bird Sanctuary
- Major Road
- Minor Road and Trail
- Stream
- 500-Foot Contour



State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
Map No. FW - 0673 (08/2006)
Contact: Ronald Cannarella
Telephone: (808) 383-3077
Email: Ronald.J.Cannarella@hawaii.gov

Data Source : Landsat; State of Hawaii GIS.

**Delegation of Selected Permitting Approval Authority for Research Activities
Undertaken on the Hawaii Experimental Tropical Forest**

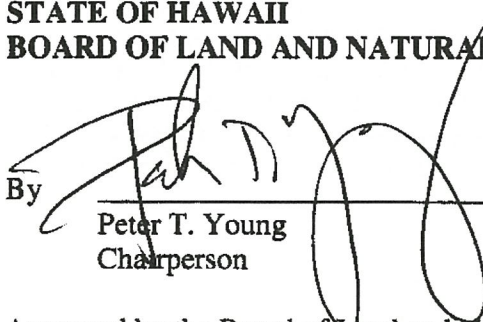
The authority to approve permits and permit terms and conditions for the following research activities conducted on the Hawaii Experimental Tropical Forest is hereby delegated to the Hawaii Island Branch Manager of the Division of Forestry and Wildlife when performing duties as authorized by the Cooperative Agreement for research between the State of Hawaii and the U.S. Forest Service. For purposes of this Exhibit A, "non-destructive" means an activity that does not destroy or harm the object of analysis.

1. Non-destructive inventory, measurements, censuses, and monitoring of trees, ferns, understory plants, birds, mammals, insects, and aquatic organisms where there is no harm to the organisms (includes both ground-based and remotely sensed measures).
2. Non-destructive inventory, measurements, and monitoring of the forest floor, dead and downed wood, and soils.
3. Non-destructive inventory, measurements, and monitoring of streams, ponds, and other aquatic ecosystems.
4. Nondestructive hydrological and geomorphic studies which do not involve the erection of structures or long term placement of equipment.
5. Research involving cutting and/or removal of exotic/nonnative vegetation that does not directly disrupt native forest species, forest composition, or forest structure (limited to test plots ≤ 10 acres in area).
6. Research on the use of pesticides/herbicides/prescribed fire/grazing animals to control invasive species (does not directly disrupt native forest species, composition, or structure, and limited to test plots ≤ 10 acres in area).
7. Erection of small protective fences and barriers ≤ 10 acre in area (and the removal of exotic species within such plots).
8. Construction of temporary blinds and field observation structures.
9. Soil and plant nutrient cycling research.
10. Biocontrol research to control invasive plants and animals - manipulate densities of state and federally permitted biocontrol agents through redistribution and experimental methods, including caging plants or parts of plants.

11. Sampling air and gasses (plant and soil respiration) within the experimental forest.
12. Placement of temporary electronic devices for environmental monitoring or sampling (for periods ≤ 36 months).
13. Introduction and use of Carbon, Oxygen, Nitrogen and other isotopes for research.
14. Non-destructive collection of plant material (excluding all listed T&E plants), soils, and water samples for laboratory analysis.
15. Collection of plant and insect samples that are from common, exotic, and abundant taxa for laboratory, greenhouse, or herbarium sampling (excluding all listed T&E species).
16. Maintenance of a trail system for access.

**STATE OF HAWAII
BOARD OF LAND AND NATURAL RESOURCES**

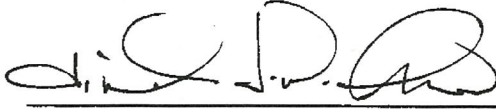
By


Peter T. Young
Chairperson

Date

Approved by the Board of Land and Natural Resources
at its meeting held on DEC 8 2006.

APPROVED AS TO FORM



Deputy Attorney General

Date: 12/8/06

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCES MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR

DEAN NAKANO
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCES MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

PERMIT TO USE STATE LANDS

Pursuant to the authority granted by the Board of Land and Natural Resources at its meeting of January 25, 2007, (Item C-2), the U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, ("USDA Forest Service" or "Permittee"), is hereby granted a non-exclusive permit to use State lands situated at Laupāhoehoe and Pu'u Wa'awa'a, Hawai'i, identified by tax map key parcel numbers: (3) 3-7-001:002; (3) 3-7-001:012; (3) 7-1-001:001; (3) 7-1-001:004; (3) 7-1-001:004; (3) 7-1-001:006; (3) 7-1-001:007; (3) 7-1-002:001; (3) 7-1-002:013; (3) 7-1-002:002; (3) 7-1-002:008, and as shown on the attached maps, for use as the Hawai'i Experimental Tropical Forest (Laupāhoehoe and Pu'u Wa'awa'a units), in compliance with the herein referenced Cooperative Agreement. The USDA Forest Service is acting through the Institute of Pacific Islands Forestry located in Hilo, Hawaii.

Definitions:

"Assigns" means the employees, contractors, agents, and consultants.

"Cooperative Agreement" means the Cooperative Agreement between the State of Hawaii, Board of Land and Natural Resources and the U.S. Department of Agriculture, Forest Service, dated December 12, 2006.

"Hazardous Material" means any pollutant, toxic substance, hazardous waste, hazardous substance, or oil as defined in pursuant to applicable federal law, including, but not limited to, the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9601, et seq., the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901, et seq., the Clean Water Act, 33 U.S.C. §§ 1251, et seq., Clean Air Act, 42 U.S.C. §§ 7401, et seq., the Safe Drinking Water Act, 42 U.S.C. §§ 300f, et seq., the Oil Pollution Act, 33 U.S.C. §§ 2701, et seq., the Toxic Substances Control Act, 15 U.S.C. §§ 2602, et seq., and the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§ 136, et seq., or any state law or regulation promulgated pursuant to such federal law.

This Permit is subject to the following conditions:

1. This permit to use State lands shall be effective from the last date shown below and extend for thirty-five years from December 12, 2006, the date the parties entered the Cooperative Agreement.
2. This permit to use State lands is a non-exclusive authorization for the USDA Forest Service and its assigns to occupy and use the Hawaii Experimental Tropical Forests for

the purpose of research, education, demonstration, and related purposes. This permit shall be effective for the following general purposes:

- a. To conduct long-term ecological, forestry, hydrological, and other natural resources-related research;
- b. To conduct long-term studies at scales from the plot to the watershed on forestry, conservation biology, endangered species, and invasive species;
- c. To conduct baseline studies and monitor results and benefits of forest management practices on important issues facing Hawaii including but not limited to: weed control, invasive pest control, forest restoration, aquatic ecology, hydrology, ungulate management, forest recreation, recreational hunting, fire control, cultural subsistence gathering, and protection and reintroduction of native plants and animals;
- d. To conduct studies on forest silviculture and sustainable management and to develop new commercial forest products;
- e. To conduct global climate change research;
- f. To attract and conduct multidisciplinary research studies by scientists from federal and state agencies, non-governmental organizations, and universities;
- g. To provide for environmental education and demonstration for groups ranging from school children to continuing education for land managers, natural resource professionals, and the general public;
- h. To form a management/research partnership where information needs and new findings are freely exchanged between the USDA Forest Service and the State; and
- i. To construct, maintain, and improve needed infrastructures, including: a new field station facilities at Laupahoehoe and renovation of existing structures for use as a field station at Pu'u Wa'awa'a consisting of dormitories, work areas, demonstration/education buildings, and storage facilities, gaging stations in streams, weather stations, eddy covariance towers, and similar devices, maintenance of the existing trail system and development of new trails for access, and maintenance and improvement of existing roads.
- j. To engage in the specific activities listed on Exhibit A to this permit.

Research or activities requiring additional Federal, State, or county permits or approvals, including but not limited to environmental assessments or conservation district use permits, will be subject to the procedures in effect for obtaining such permits or authorizations.

The USDA Forest Service must obtain the prior written consent of the Board before construction of infrastructure or making any major improvements, as outlined in section IV.I of the Cooperative Agreement. Any major improvements, including but not limited to buildings and fences, erected on or moved onto the Premises by the USDA Forest Service shall remain the property of the USDA Forest Service and the USDA Forest Service shall have the right, prior to the termination or revocation of this Permit, or within an additional period the Board in its discretion may allow, to remove the improvements from the Premises.

3. This permit to use State lands constitutes an authorization for the USDA Forest Service and its assigns to conduct activities described herein as authorized under the Cooperative Agreement. For activities conducted by entities other than the USDA Forest Service and its assigns permits to conduct those activities shall be secured as outlined in Sections III and VI through IX of the Cooperative Agreement. The permit or any rights hereunder shall not be sold, conveyed, leased, mortgaged, or otherwise transferred or disposed of. Persons acting under this permit shall carry a copy of the permit or a signed authorization from the USDA Forest Service indicating their name, purpose, and dates of authorization with them at all times while in the permit area and

shall, upon request, show the permit or signed authorization to any law enforcement officer, or the authorized representative of the Board of Land and Natural Resources.

4. USDA Forest Service shall insure that in the exercise of this permit to use State lands, it shall comply with all laws, statutes, ordinances, rules and regulations of the Federal, State, and county governments affecting the permit area. In addition, prior to activities in Laupāhoehoe Natural Area Reserve, USDA Forest Service shall ensure that proposed activities are to be performed in a manner which is consistent with NARS management objectives, HRS § 195-1 and in consultation with the Hawaii Island Natural Area Reserves System Area Manager to ensure that proposed activities remain consistent with NARS objectives and management actions. Prior to activities in Pu'u Wa'awa'a, USDA Forest Service shall ensure that proposed activities are to be performed in a manner consistent with the Pu'u Wa'awa'a Management Plan and in consultation with the Pu'u Wa'awa'a Coordinator.
5. In the event any unanticipated sites or remains such as bone or charcoal deposits, human burials, rock or coral alignments, pavings or walls are encountered USDA Forest Service, its contractors, and consultants shall immediately stop work and contact the State Historic Preservation Division in Kapolei at (808) 692-8015.
6. USDA Forest Service agrees to consult regularly with the State, including the appropriate DLNR land manager, on proposed and ongoing activities within the permit area, to ensure open and full communication and to minimize conflicts and maximize benefits between planned and ongoing research projects and between research projects and land management.
7. USDA Forest Service, through the Hawaii Experimental Tropical Forest Research Committee established under the Cooperative Agreement, agrees to consult regularly with the State, including:
 - a. Providing a copy of the annual report submitted to Congress as required by section 607 of the International Forestry Cooperative Act of 1990, as amended by the Hawaii Tropical Forest Recovery Act;
 - b. Providing an annual report on the status of approved new and ongoing research (including the primary investigator, the research topic, the location for the research, dates of field research, date of anticipated results, and contact information for the primary investigator);
 - c. Providing an annual report on the number of educational tours and total number of participants; and
 - d. Annually reporting on the challenges faced in the administration of the Experimental Forest.
8. The USDA Forest Service will maintain the improvements on the land that are being used by the Forest Service or its assigns. The USDA Forest Service will keep the permit area and improvements in a clean, sanitary, and orderly condition. Disturbance of native vegetation and native wildlife shall be avoided as much as possible. The USDA Forest Service will not make, permit, or suffer, any waste, strip, spoil, nuisance or unlawful, improper, or offensive use of the permit area. Precautions shall be taken to prevent introductions of plants and animals not naturally present in the permit area, including inspection and cleaning of clothing, equipment, and vehicles. At all times with respect to the permit area, USDA Forest Service will use due care for public safety and will use appropriate precautions and measures to minimize inconveniences to surrounding residents, landowners, lessees, and the public in general.

9. The State will remain primarily responsible for normal land management functions, including but not limited to control of public access, fire suppression, law enforcement, regulation of hunting and grazing activities, invasive species management, and forest disease, insect, and ungulate control. The Board will be responsible for maintenance of all improvements not used, built or placed on the land by the USDA Forest Service. The Board reserves the right for its employees, agents or representatives to enter or cross any portion of the permit area at any time.
10. Liability for any loss, damage, claim, demand, or action, caused by, arising out of or connected with the operations authorized by the Cooperative Agreement shall be governed by applicable State and Federal law. To the extent that the USDA Forest Service requires third parties, including but not limited to its contractors or consultants, to procure liability insurance or to indemnify the Forest Service, the USDA Forest Service shall also require such third parties to insure and indemnify the State.
11. This permit may be modified at any time by mutual agreement of the Director, Institute of Pacific Islands Forestry, USDA Forest Service, and the Board of Land and Natural Resources.
12. Permittee and its assigns shall not cause or permit the escape, disposal or release of any hazardous materials except as permitted by applicable federal and state law. Proposed use of hazardous materials in research activities will be disclosed to the State through the research review and approval procedures of the Hawaii Experimental Tropical Forest Research Committee and the processes for activities authorizations prescribed by the Cooperative Agreement. Permittee and its assigns shall store and use hazardous materials only as prescribed by federal law. Liability for release of a hazardous material shall be in accord with applicable Federal and state law.

To the extent that the Permittee requires its contractors or consultants to indemnify, defend, and hold the Permittee harmless from any damages and claims resulting from the release of hazardous materials on the permit area occurring while Permittee or its contractors are in possession of the permit area, or elsewhere if caused by Permittee's contractors acting for or on Permittee's behalf, Permittee shall also require such contractors or consultants to indemnify the State. These covenants shall survive the expiration or earlier termination of this permit.
13. In the event of an alleged violation of this permit, the State will contact the Director of the Institute of Pacific Islands Forestry (or other designated official of the USDA Forest Service) with notice of such violation and a reasonable time permitted to cure the violation.
14. Disputes shall be resolved by the Station Director, Pacific Southwest Research Station, USDA Forest Service, and the Board of Land and Natural Resources. Disputes involving Laupāhoehoe Natural Area Reserve shall be taken to the Natural Area Reserve System Commission first for their recommendation to the Board of Land and Natural Resources.

IN WITNESS WHEREOF, the STATE OF HAWAII, by its Board of Land and Natural Resources, has caused the seal of the Department of Land and Natural Resources to be hereunto affixed and the parties hereto have caused these presents to be executed the day, month and year first above written.

STATE OF HAWAII

By


Chairperson of the Board of Land and
Natural Resources

Approved by the Board of
Land and Natural Resources
at its meeting held on JAN 26 2007

USDA FOREST SERVICE


James Sedell, Station Director
Pacific Southwest Research Station

APPROVED AS TO FORM:



Deputy Attorney General
State of Hawaii

Dated: 1/26/07

Exhibit A to Permit

The following activities, when undertaken by the Forest Service or its assigns pursuant to actions authorized in accordance with the provisions of the Cooperative Agreement for research between the State of Hawaii and the Forest Service, are authorized by this Permit. For purposes of this Exhibit A, "nondestructive" means an activity that does not destroy or harm the object of analysis.

1. Operations and maintenance of buildings, dormitories, work areas, demonstration/education buildings, storage facilities, and management structures on experimental forest lands or other state lands encumbered under lease, license or permit.
2. Minor modification of existing buildings, work areas, demonstration/education facilities, and storage facilities to improve their usefulness as per the cooperative agreement, or to provide for public and worker safety.
3. Maintenance or modification of landscaping and other minor land and vegetation improvements around buildings, work areas, storage facilities on experimental forest lands to improve site use or public safety, including cutting and/or removal of vegetation, and use of pesticides and herbicides to maintain landscaping.
4. Cutting and/or removal of exotic/nonnative vegetation and animals or use of pesticides and herbicides to control or prevent the establishment or spread of invasive species.
5. Maintenance and operation of all facilities and improvements that are used by the U.S. Forest Service or its assigns, or those installed under research permits as per agreement of the Forest Service.
6. Maintenance of existing roads to facilitate access and diminish ecological damage from roads in poor condition, including the cutting or removal of roadside vegetation, and use of herbicides and pesticides in road right-of-way.
7. Maintenance of the existing trail system facilitate access, minimize trampling damage and insure safety of users, including the cutting or removal of roadside vegetation, and use of herbicides and pesticides in the trail corridor.
8. To participate in or conduct hikes, nature study, or other passive recreational activities.
9. Non-destructive inventory and monitoring of basic resources of experimental forest lands.
10. To lead site tours or provide access to school children, land managers, natural resource professionals, and the general public for forest education purposes and demonstration projects.

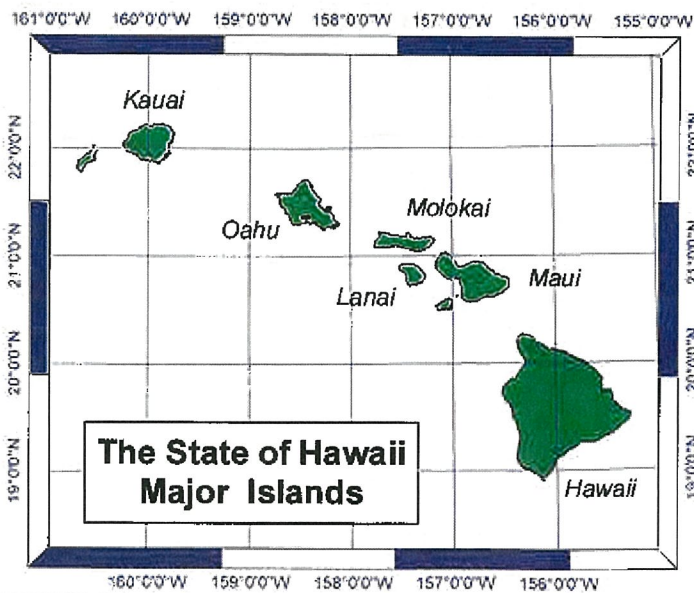
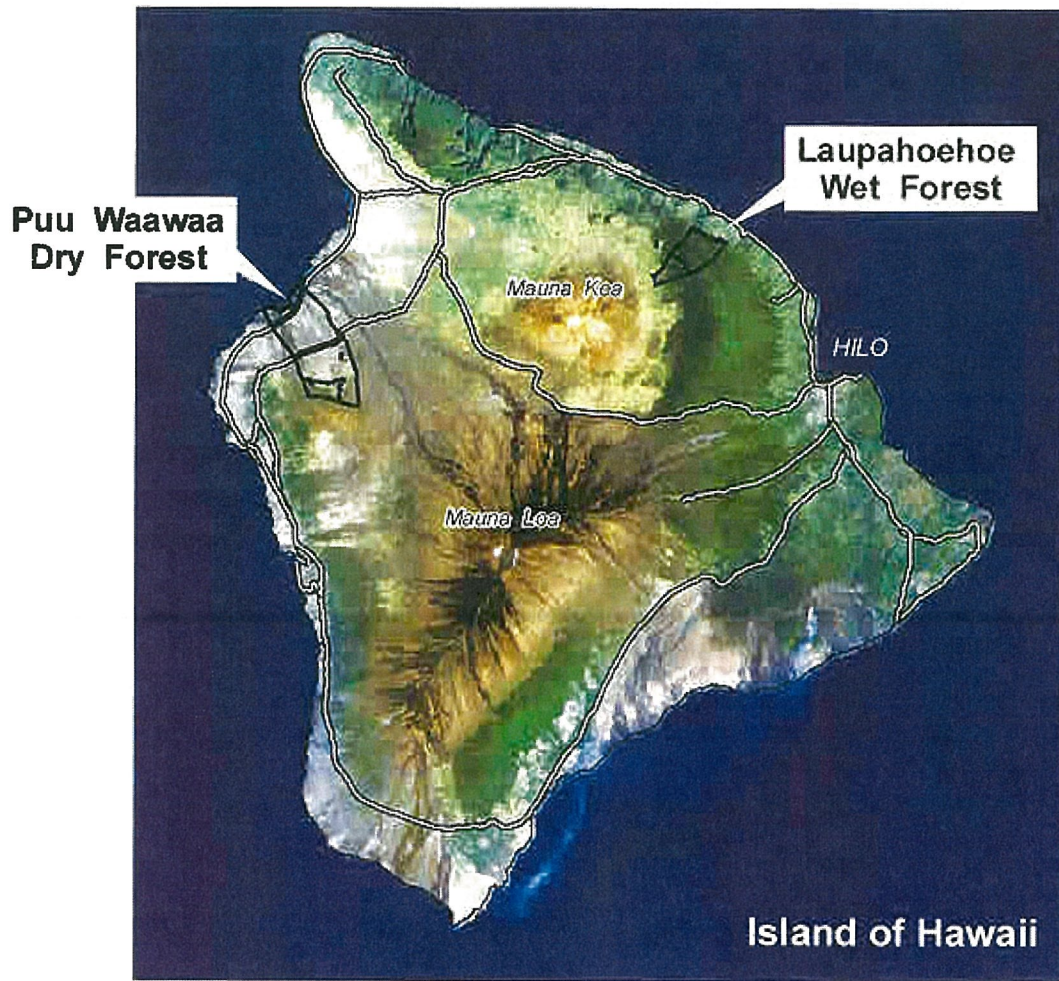
11. Installation and maintenance of directional and informational signs for worker, visitor, and public use and safety.
12. Monitoring of public use and environmental conditions in and around public use facilities, including placement of temporary electronic devices for environmental monitoring or sampling (for periods ≤ 36 months), and the sampling of air and gasses (plant and soil respiration) within the experimental forest.
13. Use of motorized or unmotorized vehicles and equipment off established roads and trails or other designated vehicle-areas for approved management and research plan activities or to respond to emergency situations.

The following eleven activities are also authorized by this permit when undertaken by the Forest Service or its assigns pursuant to research actions authorized by the Hawaii Experimental Tropical Forests Research Committee in accordance with the provisions of the Cooperative Agreement for research between the State of Hawaii and the Forest Service.

14. Non-destructive inventory, measurements, censuses, and monitoring of trees, ferns, understory plants, birds, mammals, insects, and aquatic organisms where there is no harm to the organisms (includes both ground-based and remotely sensed measures).
15. Non-destructive inventory, measurements, and monitoring of the forest floor, dead and downed wood, and soils.
16. Non-destructive inventory, measurements, and monitoring of streams, ponds, and other aquatic ecosystems.
17. Nondestructive hydrological and geomorphic studies which do not involve the erection of structures or long term placement of equipment.
18. Erection of small protective fences and barriers ≤ 10 acre in area (and the removal of exotic species within such plots).
19. Construction of temporary blinds and field observation structures.
20. Soil and plant nutrient cycling research.
21. Biocontrol research to control invasive plants and animals - manipulate densities of state and federally permitted biocontrol agents through redistribution and experimental methods, including caging plants or parts of plants.
22. Introduction and use of carbon, oxygen, nitrogen and other isotopes for research.

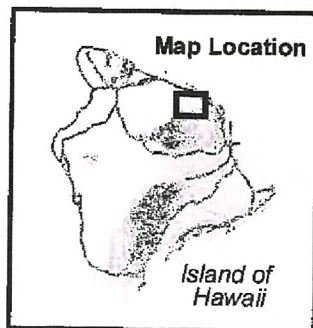
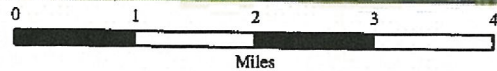
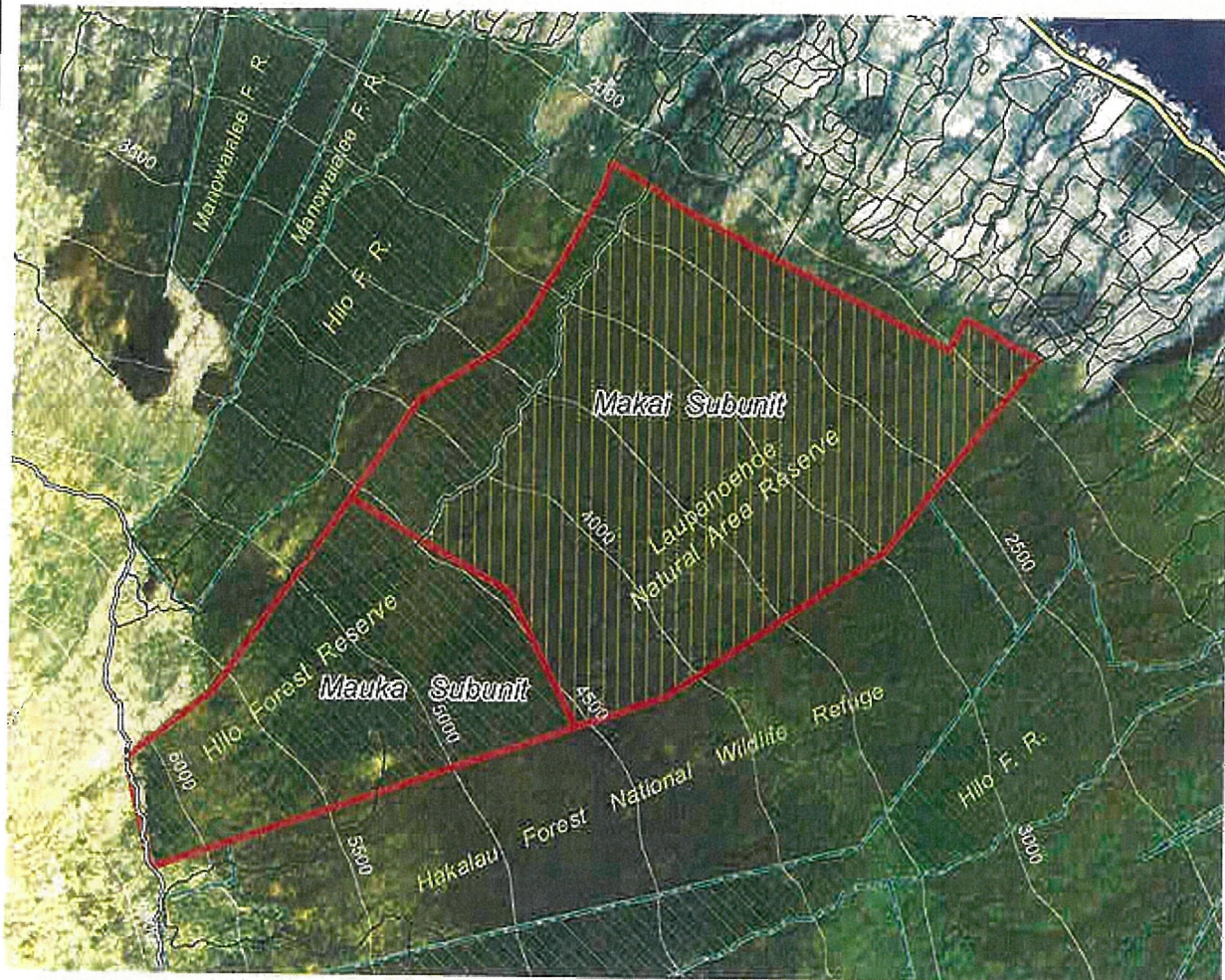
23. Non-destructive collection of plant material (excluding all listed T&E plants), soils, and water samples for laboratory analysis.
24. Collection of plant and insect samples that are from common, exotic, and abundant taxa for laboratory, greenhouse, or herbarium sampling (excluding all listed T&E species).

MAP 1. Location



State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
Map No. FW - 0669 (08/2006)
Contact: Ronald Cannarella
Telephone: (808) 383-3077
Email: Ronald.J.Cannarella@hawaii.gov

MAP 2. Laupahoehoe Wet Forest : Subunits and Geography



Legend

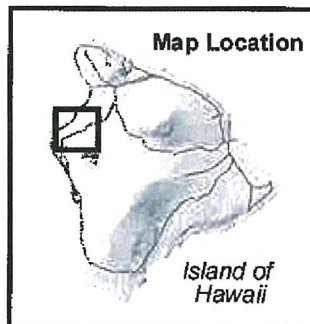
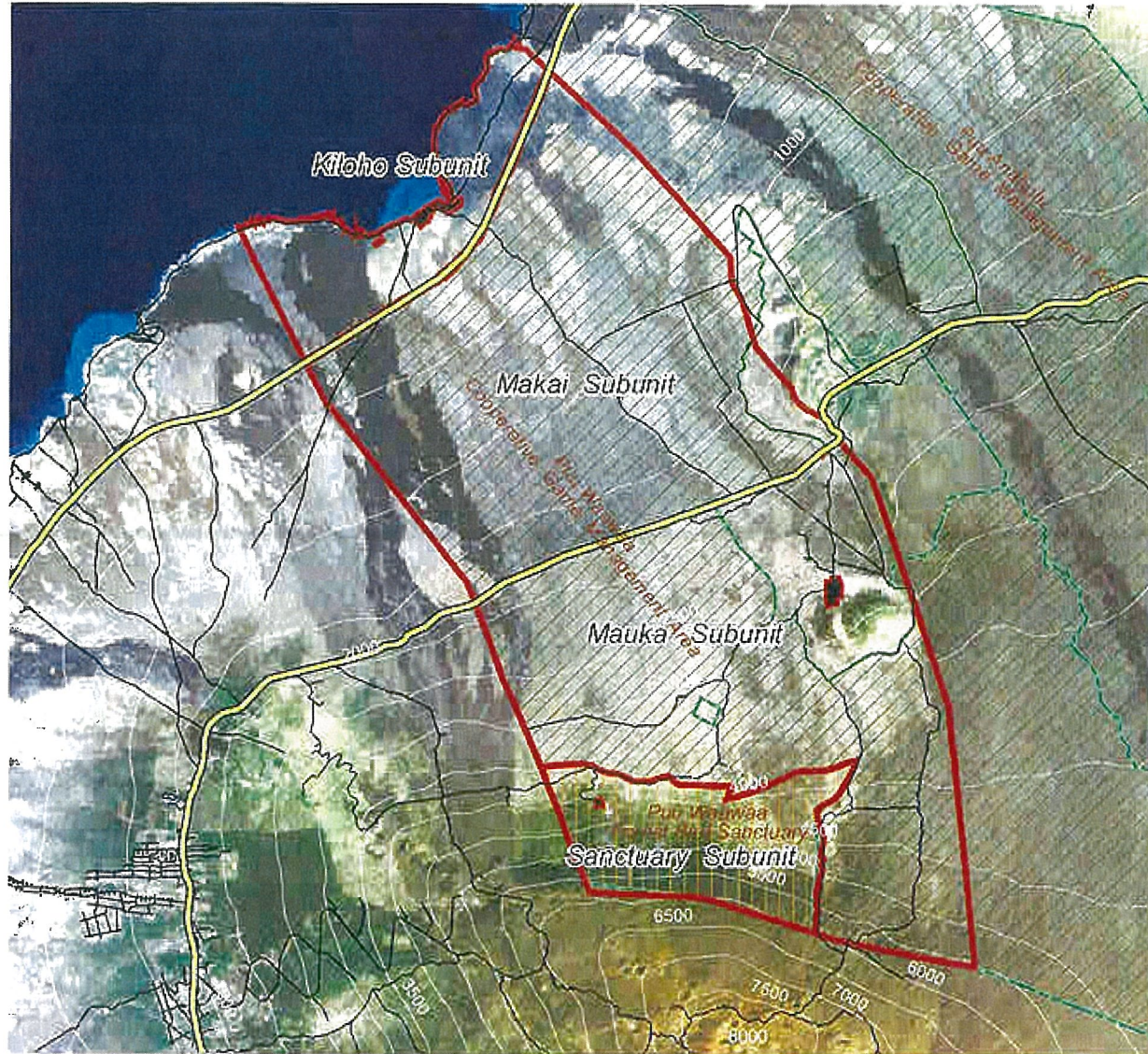
- HETF Boundary
- Forest Reserve
- Natural Area Reserve
- Major Road
- Secondary Road
- Minor Road and Trail
- Stream
- 500-Foot Contour



State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
Map No. FW - 0670 (08/2006)
Contact: Ronald Cannarella
Telephone: (808) 383-3077
Email: Ronald.J.Cannarella@hawaii.gov

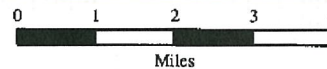
Data Source : Landsat; State of Hawaii GIS.

MAP 3. Puu Waawaa Dry Forest : Subunits and Geography



Legend

- HETF Boundary
- Game Management Area
- Bird Sanctuary
- Major Road
- Minor Road and Trail
- Stream
- 500-Foot Contour



State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
Map No. FW - 0673 (08/2006)
Contact: Ronald Cannarella
Telephone: (808) 383-3077
Email: Ronald.J.Cannarella@hawaii.gov

Data Source : Landsat; State of Hawaii GIS.

Pu'u Wa'awa'a Infrastructure Improvement Project

Scope of Work and Environmental Analysis

March 24, 2020

Introduction

The USDA Forest Service proposes to construct improvements for two existing structures to better serve the research and education mission of the Institute of Pacific Islands Forestry, Pacific Southwest Research Station. These buildings are owned by the State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife at Pu'u Wa'awa'a. The existing structures were constructed as part of the Pu'u Wa'awa'a Ranch and are known as the Lake House and the Meeting House. Proposed improvements would enhance both houses' suitability to support the vision and objectives of the Pu'u Wa'awa'a Unit of the Hawaii Experimental Tropical Forest (HETF).

The project would renovate the two existing structures, improve access by providing parking and sidewalks, and upgrade utilities with new sanitary wastewater, photovoltaic electricity, propane, and water systems. The proposed action was chosen as a lower cost, reduced environmental footprint alternative to new construction at the Pu'u Wa'awa'a Unit of the HETF.

This document incorporates by reference the following reports analyzing the site-specific impacts of the project on cultural resources, terrestrial wildlife, and botanical species:

1. *A Cultural Resource Assessment of Pacific Southwest Research Station - Institute of Pacific Islands Forestry - Hawai'i Experimental Tropical Forest Lakehouse and Meetinghouse Improvement Project* by Breton Friel, May 28, 2019. (Electronic file: 20190528_HETF_CR_Assessment).
2. *Pu'u Wa'awa'a Infrastructure Improvement Project Biological Assessment* by Katherine Malengo, January 8, 2020. (Electronic file: 20200108PuuWaawaaFinalBASigned).

Exemption and Exclusion from Documentation in an EA or EIS

Hawaii Revised Statutes

The proposed project is anticipated to be exempt from analysis subject to Chapter 343 of the Hawaii Revised Statutes consistent with the following classes of activities:

- Exemption Class 1: *Operations, repairs or maintenance of existing structures, facilities, equipment, or topographical features, involving negligible or no expansion or change of use beyond that previously existing; Subheading 7: Operation, repair and maintenance, of existing Department structures and facilities, including base yards, offices, cabins, sheds, and fencing.*
- Exemption Class 6: *Construction or placement of minor structures accessory to existing facilities.*

- Exemption Class 7: *Interior alterations involving things such as partitions, plumbing, and electrical conveyances.*

Forest Service NEPA Regulations

The proposed action is also anticipated to be categorically excluded from documentation in an environmental assessment or an environmental impact statement under the Forest Service's NEPA regulations at 36 CFR § 220.6(d)(3): *Repair and maintenance of administrative sites*. A proposed action that is consistent with this category of actions may be categorically excluded from further analysis and documentation in an EIS or EA only if there are no extraordinary circumstances related to the proposed action. The regulations require consideration of seven resource conditions in order to determine whether extraordinary circumstances exist (36 CFR § 220.6(b)(1)). The Forest Service considered two of those resource conditions because only they are relevant to this action:

- 1) *Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species* (36 CFR 220.6(b)(1)(i)); and
 - 2) *Archaeological sites, or historic properties or areas* (36 CFR 220.6(b)(1)(vii))
- *The mere presence of one or more of these resource conditions does not preclude use of a categorical exclusion. It is the existence of a cause-effect relationship between a proposed action and the potential effect on these resource conditions, and if such a relationship exists, the degree of the potential effect of a proposed action on these resource conditions that determines whether extraordinary circumstances exist.* (36 CFR § 220.6(b)(2)).

The Forest Service conducted public scoping for this project in July of 2019 (36 CFR 220.4(e)). Public scoping did not introduce any other relevant resource concerns for us to consider.

Project Location

The project area is in Hawaii County, off Highway 190 approximately 10 miles south-southwest of the community of Waikoloa Village and approximately 20 miles south-southwest of the Town of Waimea. The project site would be leased from the Hawaii Department of Land and Natural Resources and includes two existing structures known as the Meeting House and Lake House.

The site is located at about 2,200 feet above mean sea level elevation, and 6.5 miles from the coast. The land to be leased from the Hawaii Department of Land and Natural Resources is a portion of Hawaii Tax Map Key (TMK) number (3) 7-1-001:006. See figure 1 for a site vicinity map, and figure 2 for site topography.

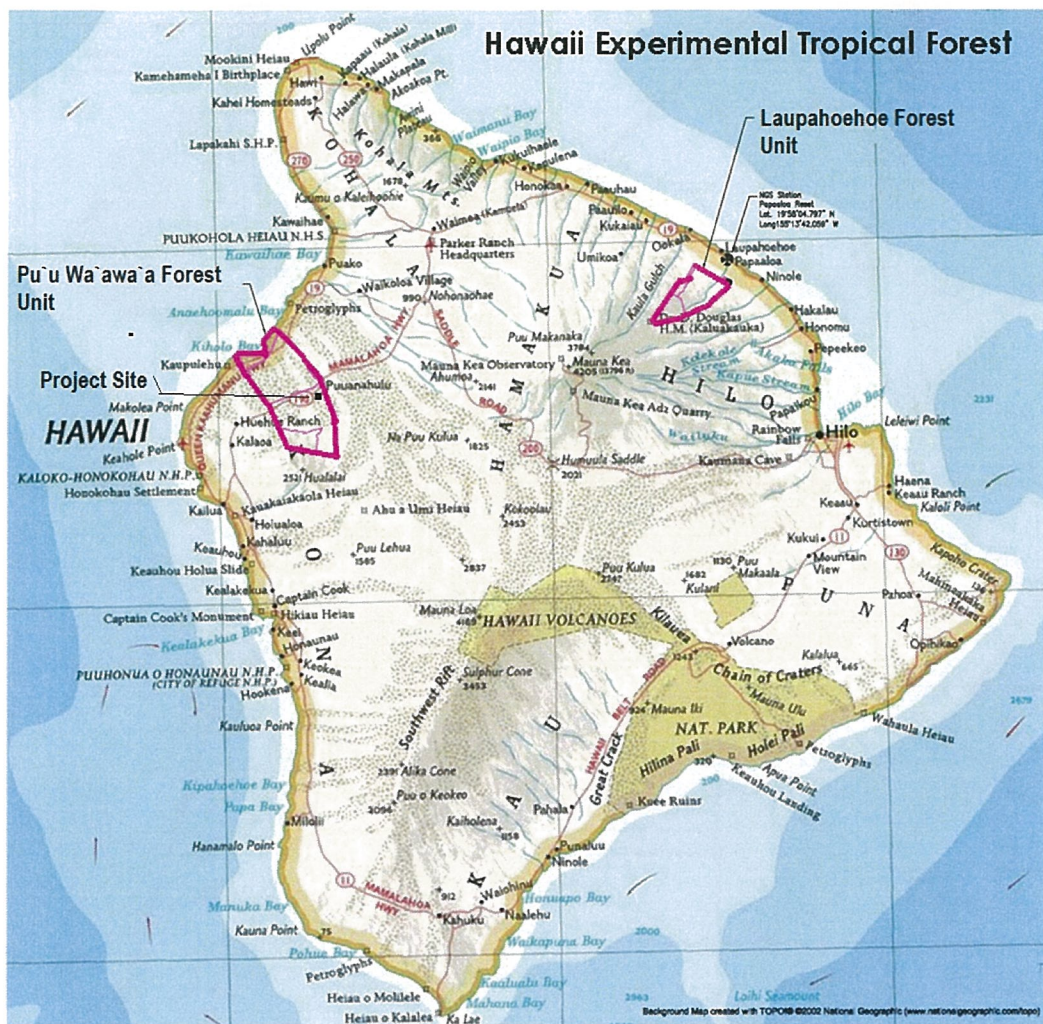


Figure 1. Project area location on the west side of the Island of Hawai'i.



Figure 2. Geographic features in the vicinity of the Pu'u Wa'awa'a Infrastructure Improvement Project.

Need for the Proposal

The HETF was established in 2007 through a cooperative agreement between the U.S. Forest Service and the State of Hawaii Department of Land and Natural Resources. To meet its full potential as a site for research, education and demonstration, securing adequate research and education field station facilities is the next step. The primary purpose of the Pu'u Wa'awa'a Infrastructure Improvement Project is to enhance facilities that will support HETF research, demonstration, and educational functions.

The two structures proposed for improvement are shared by the HETF and the State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife, in support of those functions. The proposed infrastructure improvements would enable these buildings to better address these needs through improving access for visitors with all levels of mobility, providing a consistent source of electrical power, improving sanitary waste disposal, and updating the buildings' interiors for improved layout, efficiency, and comfort. See figure 3 for a recent aerial photo of the project site.



Figure 3. Aerial view of project site.

Exhibit D.

These structures are used by a variety of people such as community groups, volunteers, researchers, youth conservation corps, interns, hikers and hunters. Large events at Pu'u Wa'awa'a are infrequent. A few events are hosted once or twice a year. For example, once per year, school groups are brought to Pu'u Wa'awa'a for a Bioblitz. There is also an annual running race based at Pu'u Wa'awa'a. Although infrequent, hundreds of people can be present for these events. Use of the facility is somewhat seasonal but it is used almost daily in June and July.

Currently, research scientists must travel to the site on a frequent basis from Hilo or other places of residence to conduct research. The educational program's scope does not address program objectives due to the absence of teaching rooms and support facilities at Pu'u Wa'awa'a.

The facility periodically hosts events of 20 to 30 people. Event organizers bring in porta-potties and a generator, in addition to renting a public address system as needed. Utility use is difficult and requires following very detailed instructions that are not always adhered to.

Electrical power is provided to both buildings via a generator located somewhat between the two buildings within a CMU out-building. Users tend to avoid using the generator because it requires them to haul fuel to the site and it is loud and expensive to operate.

Use of gas at each building is by propane tanks that must be brought by each user group. This is typically a small tank connected to each building externally.

The sanitary waste from the buildings goes to an unknown location, assumed to be an existing cesspool. This is not allowed under current regulations and is one of the conditions proposed to be addressed by this project.

This proposed action replaces an earlier proposal to construct a new bunkhouse and lab building approximately 0.6 mile north of the current project location. Improvements to the existing structures and their utility infrastructure would be a more efficient way to meet the project purpose and need with less environmental impact than would result the earlier proposal of new construction.

Proposed Action

The Institute of Pacific Islands Forestry is proposing to conduct the following activities:

Building Renovation

The proposed project would provide new flooring, appliances, and plumbing fixtures, as well as painting and refurbishing both houses for user access, user safety, and ease of maintenance.

Access

The proposed project would add paved parking and sidewalks compliant with the Americans with Disabilities Act's access standards.

Utilities

Utility upgrades would be a major component of the proposed project.

Exhibit D.

- Sanitary Wastewater – the proposed project would develop a conventional septic system for each house, or a shared system for both if feasible. This would likely use filter material brought to the site, as local soil and bedrock conditions are not conducive to sub-surface wastewater disposal.
- Electrical Power – the current system of a small generator serving each of the houses would be replaced with a 20-kilowatt photovoltaic array, a central backup generator serving both houses, and new electrical distribution lines.
- Gas – the project would construct a new shared propane tank and gas lines serving each house.
- Water – the project would continue to rely upon water service from a private utility and would upgrade water lines on the site. Water for fire protection would continue to be supplied from the reservoir adjacent to the site.

See the project site plan in figure 4 and figure 5.

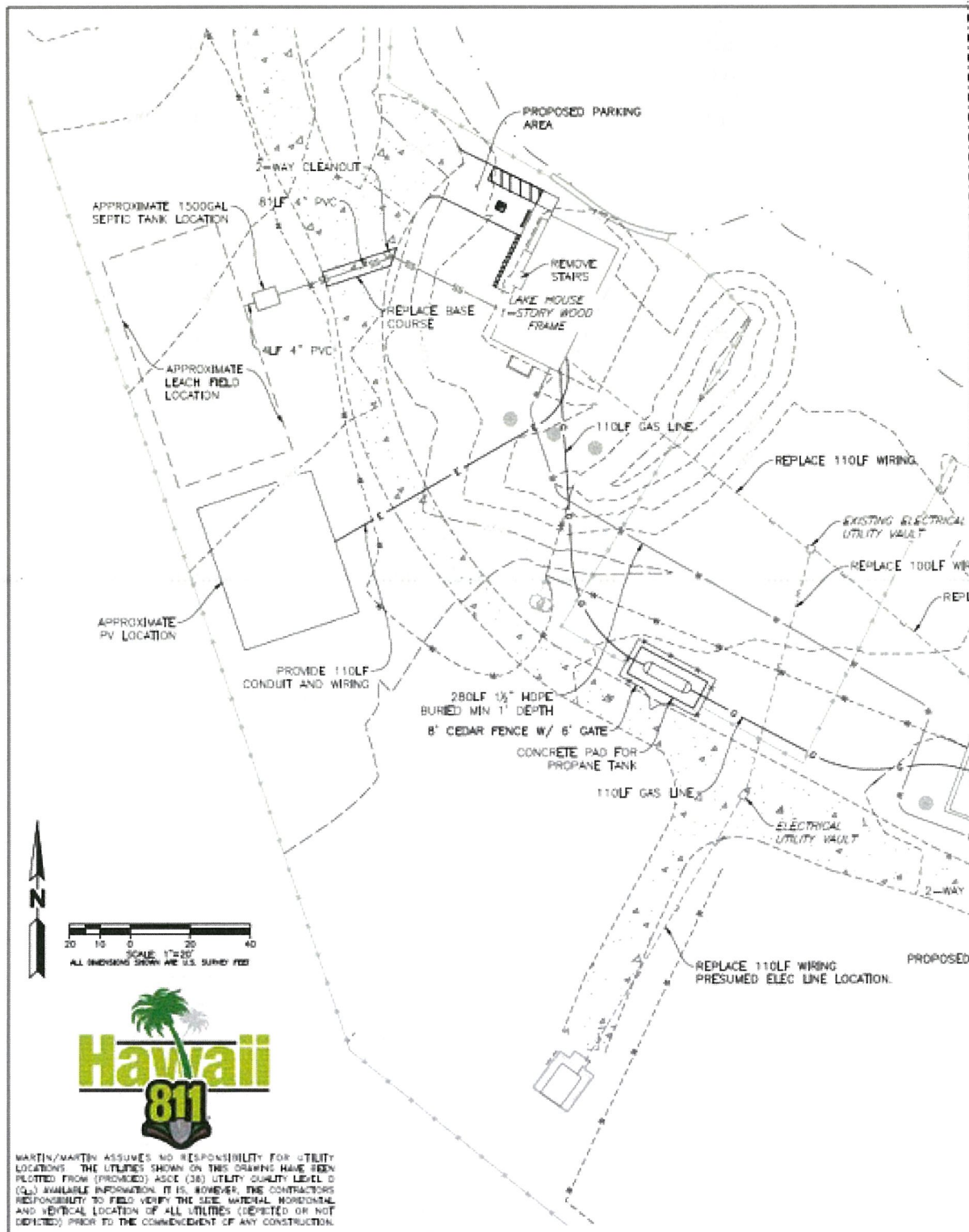


Figure 4. Proposed Action site plan (west half).

Exhibit D.

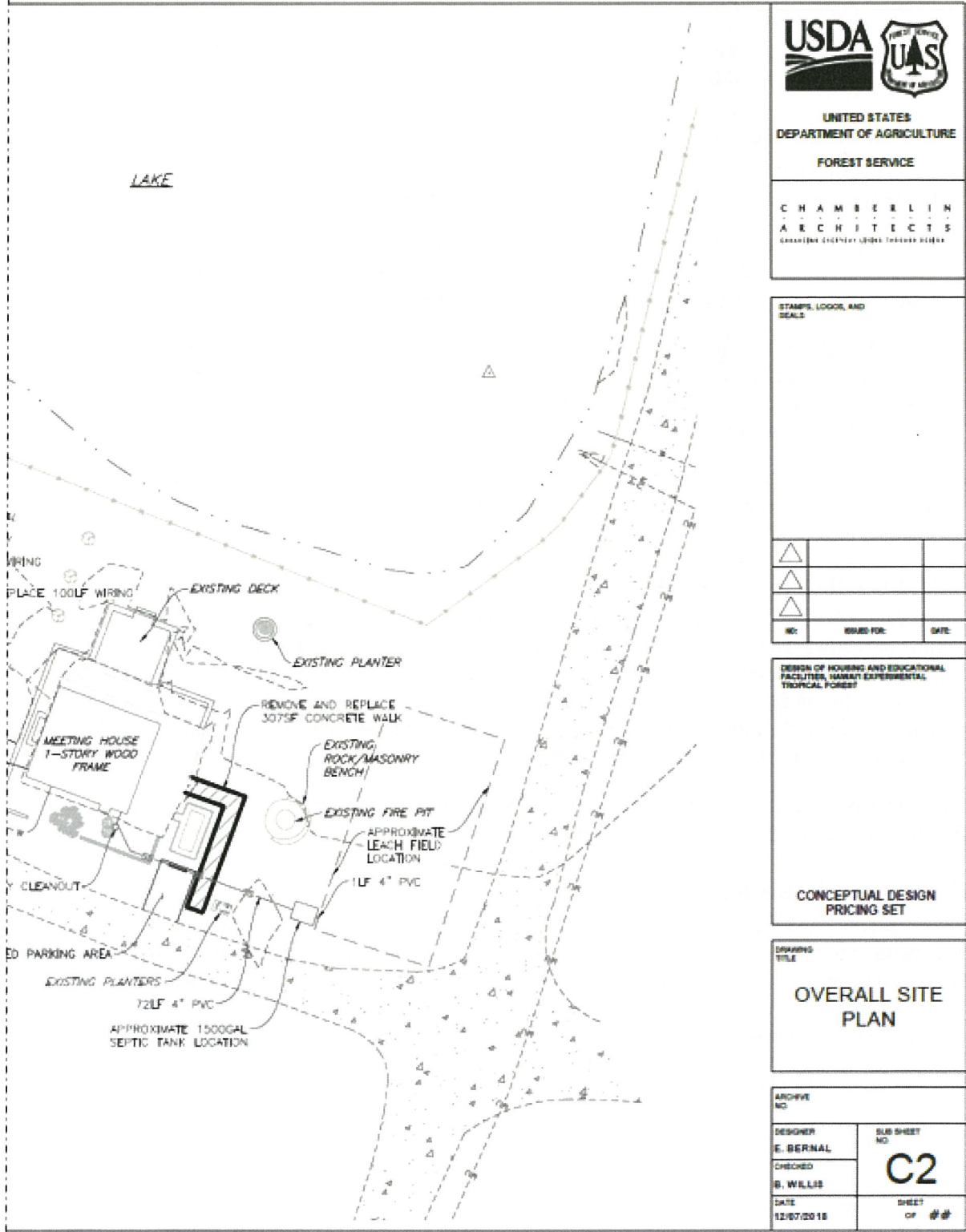


Figure 5. Proposed Action site plan (east half).

Design Criteria

The proposed action includes specific design criteria to avoid or minimize adverse effects to affected resources. These are described as follows:

Cultural Resources

Based on the findings of the cultural resource assessment, the following design criteria are recommended for this project, and are hereby incorporated into the description of the proposed action:

- Should cultural sites within the proposed activity areas be encountered, members of the Hawaiian community at Pu‘u Wa‘awa‘a would be contacted, and consultation regarding site treatment would be undertaken along with representatives of the DLNR-SHPD.
- If any burial remains are discovered, they will be treated on a case-by-case basis in accordance with Chapter 6E-43 (as amended by Act 306). Final disposition of remains will be determined in consultation with DLNR-SHPD, and Native Hawaiian descendants of the families associated with Pu‘u Wa‘awa‘a and adjoining lands.
- Should evidence of any archaeological or culturally significant sites be encountered during construction, vegetation clearing and fence construction, work in the immediate vicinity of the findings will be terminated, and the Hawai‘i Island Representative of DLNR-SHPD will be notified.

Analysis and Determinations

Given the application of the above design criteria, no direct, indirect, or cumulative impacts to historic or cultural properties would occur from the proposed action for this project because no historical or cultural properties were identified. Incorporation of the design criteria would also reduce potential impacts from project activities in the case inadvertent discoveries were made during project activities. Therefore, it is recommended that the proposed Pu‘u Wa‘awa‘a Research Facilities Construction Project would have a S.106 finding of No Historic Properties Affected.

No concerns with the proposed activities, the methodology and analysis of effects, or the above finding were identified during consultation with the Hawaii State Historic Preservation Division.

Biological Resources

The Forest Service received a letter dated April 21, 2019 from the U.S. Fish and Wildlife Service documenting the “Species List for Infrastructure Renovations and Improvements at Pu‘u Wa‘awa‘a, Island and County of Hawaii” (attached as Appendix A). This letter includes measures to avoid and minimize impacts to listed species. These measures are incorporated by reference into the proposed action and will be implemented with the proposed action.

The species evaluated in this analysis are:

- Federally endangered species:
 - ♦ Hawaiian hoary bat (*Lasiurus cinereus semotus*)
 - ♦ Hawaiian hawk (*Buteo solitarius*)
 - ♦ Blackburn’s sphinx moth (*Manduca blackburni*)
 - ♦ Hawaiian goose (*Branta (=Nesochen) sandvicensis*)

Exhibit D.

- ◆ Hawaiian stilt (*Himantopus mexicanus knudseni*)

- ◆ Hawaiian coot (*Fulica alai*)

Additionally, the endangered Hawaiian petrel (*Pterodroma sandwichensis*), band-rumped storm-petrel (*Oceanodroma castro*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*) may transit over the project area flying to upland breeding colonies.

Designated critical habitat is also located within the project site for Blackburn's sphinx moth and six federally listed plants:

- *Hibiscadelphus hualalaiensis*
- *Pleomele hawaiiensis*
- *Colubrina oppositifolia*
- *Neraudia ovata*
- *Zanthoxylum dipetalum* spp. *tomentosum*
- *Delissea undulata*

We would comply with the project design measures contained in the Service's letter.

Analysis and Determinations

We prepared a Biological Assessment (BA) for these species based upon the avoidance and minimization measures recommended by the U.S. Fish and Wildlife Service. That BA is incorporated by reference and included in the project record. Given the application of the design criteria and the protocols in Appendix A (attached), the BA reached the following determinations:

Species	Determination
Hawaiian hoary bat (<i>Lasiurus cinereus semotus</i>)	May affect but not likely to adversely affect
Hawaiian goose (<i>Branta</i> (=Nesochen) <i>sandvicensis</i>)	May affect but not likely to adversely affect
Hawaiian hawk (<i>Buteo solitarius</i>)	May affect but not likely to adversely affect
Blackburn's sphinx moth (<i>Manduca blackburni</i>) and critical habitat	May affect but not likely to adversely affect
Hawaiian stilt (<i>Himantopus mexicanus knudseni</i>)	May affect but not likely to adversely affect
Hawaiian coot (<i>Fulica alai</i>)	May affect but not likely to adversely affect
Newell's shearwater (<i>Puffinus auricularis newelli</i>)	May affect but not likely to adversely affect
Hawaiian petrel (<i>Pterodroma sandwichensis</i>), band-rumped storm-petrel (<i>Oceanodroma castro</i>), and Newell's shearwater (<i>Puffinus auricularis newelli</i>)	May affect but not likely to adversely affect
<i>Hibiscadelphus hualalaiensis</i> , <i>Pleomele hawaiiensis</i> , <i>Colubrina oppositifolia</i> , <i>Neraudia ovata</i> , <i>Zanthoxylum dipetalum</i> spp. <i>tomentosum</i> , <i>Delissea undulata</i> and their critical habitats	May affect but not likely to adversely affect

The U.S. Fish and Wildlife Service concurred with these determinations in their letter of concurrence referring to projects 01EPIF00-2019-SL-0269 and 01EPIF00-2020-I-0133, dated January 27, 2020.

Appendix A -- Wildlife and Botany Mitigations and Biosecurity Protocols



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

In Reply Refer To:
01EPIF00-2019-SL-0269

April 21, 2019

Mr. John Slown
Lolo National Forest Supervisor's Office
24 Fort Missoula Road
Missoula, Montana 59804

Subject: Species List for Infrastructure Renovations and Improvements at Puu Waawaa,
Island and County of Hawaii

Dear Mr. Slown:

The U.S. Fish and Wildlife Service (Service) received your correspondence on April 16, 2019, requesting a species list for infrastructure renovations and improvements project at Puu Waawaa. The Service offers the following comments to assist you in your planning process so that impacts to trust resources can be avoided through site preparation, construction, and operation. Our comments are provided under the authorities of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 *et seq.*).

The current project proposal is an alternative to the Puu Waawaa Construction Project (reference 2016-I-0313). The project is located approximately 0.6 miles south from the proposed Puu Waawaa Construction site and will include no new construction. The project would include the renovation of two homes owned by the Division of Forestry and Wildlife: Lake House and Meeting House, an establishment of a septic system for the homes, the installation of a 20-watt photovoltaic array, and minor utility work as well as parking and sidewalk improvements.

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Project, there are six listed animal species in the immediate vicinity of the project area: the federally endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Hawaiian goose (*Branta* (= *Nesochen*) *sandvicensis*), Hawaiian hawk (*Buteo solitarius*), Blackburn's sphinx moth (*Manduca blackburni*), Hawaiian stilt (*Himantopus mexicanus knudseni*) and Hawaiian coot (*Fulica alai*). Additionally, the endangered Hawaiian petrel (*Pterodroma sandwichensis*), band-rumped storm-petrel (*Oceanodroma castro*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*) may transit over the project area flying to upland breeding colonies. Designated critical habitat is also located within the project site for Blackburn's sphinx moth and six federally listed plants:

Hibiscadelphus hualalaiensis, *Pleomele hawaiiensis*, *Colubrina oppositifolia*, *Neraudia ovata*, *Zanthoxylum dipetalum* spp. *tomentosum*, and *Delissea undulata*.

The Service recommends the following measures to avoid and minimize project impacts to the following listed species:

Hawaiian hoary bat

The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away. Additionally, Hawaiian hoary bats forage for insects from as low as 3 feet to higher than 500 feet above the ground and can become entangled in barbed wire used for fencing.

To avoid and minimize impacts to the endangered Hawaiian hoary bat we recommend you incorporate the following applicable measures into your project description:

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15).
- Do not use barbed wire for fencing.

Hawaiian petrel, Newell's shearwater, and band-rumped storm petrel

Hawaiian seabirds may traverse the project area at night during the breeding, nesting and fledging seasons (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

To avoid and minimize potential project impacts to seabirds we recommend you incorporate the following applicable measures into your project description:

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

Hawaiian goose

Nene are found on the islands of Hawaii, Maui, Molokai, and Kauai predominately, with a small population on Oahu. They are observed in a variety of habitats, but prefer open areas, such as pastures, golf courses, wetlands, natural grasslands and shrublands, and lava flows. Threats to the species include introduced mammalian and avian predators, wind facilities, and vehicle strikes.

To avoid and minimize potential project impacts to nene we recommend you incorporate the following applicable measures into your project description:

- Do not approach, feed, or disturb nene.
- If nene are observed loafing or foraging within the project area during the breeding season (September through April), have a biologist familiar with the nesting behavior of nene survey for nests in and around the project area prior to the resumption of any work. Repeat surveys after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest).
 - Cease all work immediately and contact the Service for further guidance if a nest is discovered within a radius of 150 feet of proposed work, or a previously undiscovered nest is found within said radius after work begins.
- In areas where nene are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.

Hawaiian stilt and Hawaiian coot

Listed Hawaiian waterbirds are found in fresh and brackish-water marshes and natural or man-made ponds. Hawaiian stilts may also be found wherever ephemeral or persistent standing water may occur. Threats to these species include non-native predators, habitat loss, and habitat degradation. Hawaiian ducks are also subject to threats from hybridization with introduced mallards.

To avoid and minimize potential project impacts to Hawaiian waterbirds we recommend you incorporate the following applicable measures into your project description:

- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.
- If water resources are located within or adjacent to the project site, incorporate applicable best management practices regarding work in aquatic environments into the project design (see enclosure).
- Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest). If a nest or active brood is found:
 - Contact the Service within 48 hours for further guidance.
 - Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
 - Have a biological monitor that is familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

Hawaiian hawk

The Hawaiian hawk is known to occur across a broad range of forest habitats throughout the Island of Hawaii. Loud, irregular and unpredictable activities, such as using heavy equipment or building a structure, near an endangered Hawaiian hawk nest may cause nest failure. Harassment of Hawaiian hawk nesting sites can alter feeding and breeding patterns or result in nest or chick abandonment. Nest disturbance can also increase exposure of chicks and juveniles to inclement weather or predators.

To avoid and minimize impacts to Hawaiian hawks we recommend you incorporate the following applicable measures into your project description:

- If work must be conducted during the March 1 through September 30 Hawaiian hawk breeding season, have a biologist familiar with the species conduct a nest search of the project footprint and surrounding areas immediately prior to the start of construction activities.
 - Pre-disturbance surveys for Hawaiian hawks are only valid for 14 days. If disturbance for the specific location does not occur within 14 days of the survey, conduct another survey.
- No clearing of vegetation or construction activities should occur within 1,600 feet of any active Hawaiian hawk nest during the breeding season until the young have fledged.
- Regardless of the time of year, no trimming or cutting trees containing a hawk nest, as nests may be re-used during consecutive breeding seasons.

Blackburn's sphinx moth

The Blackburn's sphinx moth may be in the vicinity of the proposed project area. Adult moths feed on nectar from native plants, including beach morning glory (*Ipomoea pes-caprae*), iliee (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*); larvae feed upon non-native tree tobacco (*Nicotiana glauca*) and native aiea (*Nothocestrum* sp.). To pupate, the larvae burrow into the soil and can remain in a state of torpor for up to a year (or more) before emerging from the soil. Soil disturbance can result in death of the pupae.

We offer the following survey recommendations to assess whether the Blackburn's sphinx moth is within the project area:

- A biologist familiar with the species should survey areas of proposed activities for Blackburn's sphinx moth and its larval host plants prior to work initiation.
 - Surveys should be conducted during the wettest portion of the year (usually November-April or several weeks after a significant rain) and within 4-6 weeks prior to construction.
 - Surveys should include searches for eggs, larvae, and signs of larval feeding (chewed stems, frass, or leaf damage).
 - If moths or the native aiea or tree tobacco over 3 feet tall are found during the survey, please contact the Service for additional guidance to avoid take.

If no Blackburn's sphinx moth, aiea, or tree tobacco are found during surveys, it is imperative that measures be taken to avoid attraction of Blackburn's sphinx moth to the project location and prohibit tree tobacco from entering the site. Tree tobacco can grow greater than 3 feet tall in

approximately 6 weeks. If it grows over 3 feet, the plants may become a host plant for Blackburn's sphinx moth. We therefore recommend that you:

- Remove any tree tobacco less than 3 feet tall.
- Monitor the site every 4-6 weeks for new tree tobacco growth before, during and after the proposed ground-disturbing activity.
 - Monitoring for tree tobacco can be completed by any staff, such as groundskeeper or regular maintenance crew, provided with picture placards of tree tobacco at different life stages.

Listed plants

Project activities may affect listed plant species by causing physical damage to plant parts (roots, stems, flowers, fruits, seeds, etc.) as well as impacts to other life requisite features of their habitat which may result in reduction of germination, growth and/or reproduction. Cutting and removal of vegetation surrounding listed plants has the potential to alter microsite conditions (e.g., light, moisture, temperature), increase the risk of invasion by nonnative plants which can result in higher incidence or intensity of fire. Activities such as grazing, use of construction equipment, vehicles, and increased human traffic (i.e. trails, visitation, monitoring), can cause ground disturbance, erosion, and/or soil compaction which decrease absorption of water and nutrients and damage plant root systems and may result in reduced growth and/or mortality of listed plants. Soil disturbance or removal has the potential to negatively impact the soil seed bank of listed plant species if such species are present or historically occurred in the project area.

In order to avoid impacts to listed plant species or designated critical habitat:

Minimize potential adverse effects to listed plants that may occur on the proposed project site by minimizing disturbance outside of existing developed or otherwise modified areas. When disturbance outside existing developed or modified sites is proposed, conduct a botanical survey for listed plant species within the project action area, defined as the area where direct and indirect effects are likely to occur. Surveys should be conducted by a knowledgeable botanist with documented experience in identifying native Hawaiian and Pacific Islands plants, including listed plant species. Botanical surveys should optimally be conducted during the wettest part of the year (typically October to April) when plants and identifying features are more likely to be visible, especially in drier areas. If surveys are conducted outside of the wet season, the Service may assume plant presence.

The boundary of the area occupied by listed plants should be marked with flagging by the surveyor. To avoid or minimize potential adverse effects to listed plants, we recommend adherence to buffer distances for the activities in the **Table below**. Where disturbed areas do not need to be maintained as an open area, restore disturbed areas using native plants as appropriate for the location. Whenever possible we recommend using native plants for landscaping purposes.

If listed plants occur in a project area, the avoidance buffers are recommended to reduce direct and indirect impacts to listed plants from project activities. However, where project activities will occur within the recommended buffer distances, additional consultation is required. The impacts to the plants of concern within the buffer area may be reduced by placing temporary fencing or other barriers at the boundary of the disturbance, as far from the affected plants as practicable.

Exhibit D.

The above guidelines apply to areas outside of designated critical habitat. If project activities occur within designated critical habitat unit boundaries, and a federal agency is conducting, permitting, or funding this project, it is that agency's responsibility to address the potential effects to the critical habitat unit in addition to the listed species.

All activities, including site surveys, risk introduction of nonnative species into project areas. Specific attention needs to be made to ensure that all equipment, personnel and supplies are properly checked and are free of contamination (weed seeds, organic matter, or other contaminants) before entering project areas. Quarantines and or management activities occurring on specific priority invasive species proximal to project areas need to be considered or adequately addressed. This information can be acquired by contacting local experts such as those on local invasive species committees (Kauai: <http://www.kauaiisc.org/>; Oahu: <http://www.oahuisc.org/>; Maui Nui: <http://mauiinvasive.org/>; and Hawaii: <http://www.biisc.org/>).

Table 1. Recommended buffer distances for to minimize and avoid potential adverse impacts to listed plants from activities listed below.

Action		Buffer Distance (feet (meters)) - Keep Project Activity This Far Away from Listed Plant	
		Herb/Shrub	Tree
Cutting and Removing Vegetation By Hand or Hand Tools (e.g., weeding)		3 ft (1 m)	3 ft (1 m)
Mechanical Removal of Individual Plants or Woody Vegetation (e.g., chainsaw, weed eater)		3 ft up to height of removed vegetation (whichever greater)	3 ft up to height of removed vegetation (whichever greater)
Removal of Vegetation with Heavy Equipment (e.g., bulldozer, tractor, "bush hog")		2x width equipment + height of vegetation	820 ft (250 m)
Use of Approved Herbicides (following label)	Hand Application (spot treatment)	10 ft (3 m)	Crown diameter
	Ground-based Spray Application (e.g. backpack, tank sprayer)	50 ft (15 m)	250 ft (76 m)
	Aerial Spray (ball applicator)	250 ft (76 m)	250 ft (76 m)
	Aerial Application (paintball)(individual plant treatment)	100 ft (30 m)	100 ft (30 m)
	Aerial Spray (boom)	Further consultation required	Further consultation required
Ground/Soil Disturbance/Outplanting/Fencing (Hand tools, e.g. shovel, 'ō'ō; Small mechanized tools, e.g., auger)		20 ft (3 m)	2x crown diameter
Ground/Soil Disturbance (Heavy Equipment)		328 ft (100 m)	820 ft (250 m)

Surface Hardening/Soil compaction	Trails (e.g., human, ungulates)	20 ft	2x crown diameter
	Roads/Utility Corridors, Buildings/Structures	328 ft (100 m)	820 ft (250 m)
Prescribed Burn/Fires		Further consultation required	Further consultation required
Farming/Ranching/Silviculture		820 ft (250 m)	820 ft (250 m)

Definitions (Wagner *et al.* 1999)

Crown: The leafy top of a tree.

Herb: A plant, either annual, biennial, or perennial, with the non-woody stems dying back to the ground at the end of the growing season.

Shrub: A perennial woody plant with usually several to numerous primary stems arising from or relatively near the ground.

Tree: A woody perennial that usually has a single trunk

Minimize Spread of Rapid Ohia Death

Rapid Ohia Death (ROD), a newly identified disease, has killed large numbers of mature ohia trees (*Metrosideros polymorpha*) in forests and residential areas of Hawaii Island. The disease is caused by a vascular wilt fungus (*Ceratocystis fimbriata*). Crowns of an affected tree turn yellowish or brown within days to weeks and dead leaves typically remain on branches for some time. All ages of ohia trees can be affected and can have symptoms of browning of branches or leaves. As of early 2017 the disease has been confirmed in all districts except North and South Kohala. Additional information on ROD can be found at:

<http://www2.ctahr.hawaii.edu/forestry/downloads/ROD-trifold-03.2016.pdf> and
http://www2.ctahr.hawaii.edu/forestry/disease/ohia_wilt.html.

The following avoidance and minimization measures should be followed for projects working in ohia forests or at sites with ohia trees on Hawaii Island:

- 1) A survey of the proposed project site should be conducted within two weeks prior to any tree cutting to determine if there are any infected ohia trees. If infected ohia are suspected at the site, the following agencies should be contacted for further guidance.
 - a. Service – please contact the name at the bottom of this letter.
 - b. Dr. J.B. Friday, University of Hawaii Cooperative Extension Service, 808-969-8254 or jbfriday@hawaii.edu
 - c. Dr. Flint Hughes, USDA Forest Service, 808-854-2617, fhughes@fs.fed.us
 - d. Dr. Lisa Keith, USDA Agriculture Research Service, 808-959-4357, Lisa.Keith@ars.usda.gov

- 2) Both prior to cutting ohia and after the project is complete:
 - a. Tools used for cutting infected ohia trees should be cleaned with a 70 percent rubbing alcohol solution. A freshly prepared 10 percent solution of chlorine bleach and water can be used as long as tools are oiled afterwards, as chlorine bleach will corrode metal tools. Chainsaw blades should be brushed clean, sprayed with cleaning solution, and run briefly to lubricate the chain.
 - b. Vehicles used off-road in infected forest areas should be thoroughly cleaned. The tires and undercarriage of the vehicle should be cleaned with detergent if they have travelled from an area with ROD or travelled off-road. Use a pressure washer with soap to clean all soil off of the tires and vehicle undercarriage.
 - c. Shoes and clothing used in infected forests should also be cleaned. Shoes should be decontaminated by dipping the soles in 70 percent rubbing alcohol to kill the ROD fungus. Other gear can be sprayed with the same cleaning solutions. Clothing can be washed in hot water and detergent.
 - d. Wood of affected ohia trees should not be transported to other areas of Hawaii Island or interisland. All cut wood should be left on-site to avoid spreading the disease. The pathogen may remain viable for over a year in dead wood. The Hawaii Department of Agriculture has passed a quarantine rule that prohibits interisland movement, except by permit, of all ohia plant or plant parts.

Thank you for participating with us in the protection of our endangered species. If you have any further questions or concerns regarding this consultation, please contact Eldridge Naboa, Fish and Wildlife Biologist, 808-933-6964, e-mail: eldridge_naboa@fws.gov. When referring to this project, please include this reference number: *01EPIF00-2019-SL-0269*.

Sincerely,

MICHELLE BOGARDUS

Digitally signed by
MICHELLE BOGARDUS
Date: 2019.04.20
15:20:49 -10'00'

Michelle Bogardus
Island Team Manager
Maui Nui and Hawaii Island

BIOSECURITY PROTOCOL – HAWAII ISLAND (JULY 2018)

The following biosecurity protocol (based on National Park Service, State of Hawaii, U.S. Fish and Wildlife, U.S. Geological Survey, and the DOI Office of Native Hawaiian Relations guidance) should be followed when operating on Hawaii Island to prevent the introduction of harmful invasive species including frogs, ants, weeds, and fungi into local natural areas (e.g., Hawaii Volcanoes National Park, Hakalau Forest National Wildlife Refuge, State of Hawaii “Natural Areas”) and areas with native habitat (habitat that is primarily composed of native vegetation), other islands in Hawaiian archipelago, or the U.S. mainland. The protocol also includes suggestions for keeping field staff safe from certain invasive species.

1. All work vehicles, machinery, and equipment should be cleaned, inspected by its user, and found free of mud, dirt, debris and invasive species prior to entry into the natural areas or native habitat.

a. Vehicles, machinery, and equipment must be thoroughly pressure washed in a designated cleaning area and visibly free of mud, dirt, plant debris, insects, frogs (including frog eggs) and other vertebrate species such as rats, mice and non-vegetative debris. A hot water wash is preferred. Areas of particular concern include bumpers, grills, hood compartments, areas under the battery, wheel wells, undercarriage, cabs, and truck beds (truck beds with accumulated material (intentionally placed or fallen from trees) are prime sites for hitchhikers).

b. The interior and exterior of vehicles, machinery, and equipment must be free of rubbish and food. The interiors of vehicles and the cabs of machinery must be vacuumed clean. Floor mats shall be sanitized with a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

c. Any machinery, vehicles, equipment, or other supplies found to be infested with ants (or other invasive species) must not enter natural areas or native habitat. Treatment is the responsibility of the equipment or vehicle owner and operator.

2. Little Fire Ants – All work vehicles, machinery, and equipment should be inspected for invasive ants prior to entering the natural areas or native habitat.

a. A visual inspection for little fire ants should be conducted prior to entry into natural areas or native habitat.

b. Hygiene is paramount but even the cleanest vehicle can pick up a little fire ant. Place MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; <http://littlefireants.com/Maxforce%20Complete.pdf>) into refillable tamper resistant bait stations. An example of a commercially available refillable tamper resistant bait station is the Ant Café Pro (<https://www.antcafe.com/>). Place a bait station (or stations) in vehicle. Note larger vehicles, such as trucks, may require multiple stations. Monitor bait stations frequently (every week at a minimum) and replace bait as needed. If the station does not have a sticker to identify the contents, apply a sticker listing contents to the station.

c. Any machinery, vehicles, equipment, or other supplies found to be infested with ants (or other invasive species) must not enter natural areas or native habitat until it is sanitized and re-tested following a resting period. Infested vehicles must be sanitized following recommendations by

the Hawaii Ant Lab (<http://www.littlefireants.com/>) or other ant control expert and in accordance with all State and Federal laws. Treatment is the responsibility of the equipment or vehicle owner.

d. Gravel, building materials, or other equipment such as portable buildings should be baited using MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; <http://littlefireants.com/Maxforce%20Complete.pdf>) or AmdroPro (0.73% Hydramethylnon; <http://littlefireants.com/Amdro%20Pro.pdf>) following label guidance.

e. Storage areas that hold field tools, especially tents, tarps, and clothing should be baited using MaxForce Complete Brand Granular Insect Bait (1.0% Hydramethylnon; <http://littlefireants.com/Maxforce%20Complete.pdf>) or AmdroPro (0.73% Hydramethylnon; <http://littlefireants.com/Amdro%20Pro.pdf>) following label guidance.

3. Base yards and staging areas inside and outside areas must be kept free of invasive species.

a. Base yards and staging areas should be inspected at least weekly for invasive species and any found invasive removed immediately. Pay particular attention to where vehicles are parked overnight, keeping areas within 10-meters of vehicles free of debris. Parking on pavement and not under trees, while not always practical is best.

b. Project vehicles or equipment stored outside of a base yard or staging area, such as a private residence, should be kept in a pest free area.

4. All cutting tools must be sanitized to prevent the Rapid Ohia Death (ROD) fungus.

a. Avoid wounding ohia trees and roots with mowers, chainsaws, weed eaters, and other tools. Cut only the minimum amount of trees and branches as approved for the project.

b. All cutting tools, including machetes, chainsaws, and loppers must be sanitized to remove visible dirt and other contaminants prior to entry into natural areas or areas with native habitat, and when moving to a new project area within the native habitat area. Tools may be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution. One minute after sanitizing, you may apply an oil based lubricant to chainsaw chains or other metallic parts to prevent corrosion.

c. Only dedicated tools and chainsaws should be used to sample known or suspected ROD infected trees.

d. Vehicles, machinery, and equipment must be cleaned as described in (1) above.

5. Imported firewood, logs, and ohia parts:

a. Ohia firewood, ohia logs, and ohia parts should not be transported.

6. For individuals working in the field:

a. **Before going into the field**, visually inspect and clean your clothes, boots, pack, radio harness, tools and other personal gear and equipment, for seeds, soil, plant parts, insects, and other debris. A small brush is handy for cleaning boots, equipment and gear. Soles of shoes

should be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

b. **Immediately before leaving the field**, visually inspect and clean your clothes, boots, pack, radio harness, tools, and other personnel gear and equipment, for seeds, soil, plant parts, insects, and other debris. Soles of shoes should be sanitized using a solution of >70% isopropyl alcohol or a freshly mixed 10% bleach solution.

c. **Little fire ants nest in trees.** If you are under a tree and that tree is bumped or somehow stressed, the threat response of the ants is to fall from the leaves and sting the person under the tree. If you are subject to an ant attack, do not panic. The ants are extremely small but their stings are painful so make sure you remove all ants from your body and clothing. The stings cause inch long welts that are itchy and painful, and can last for weeks. Treat stings as you would other insect stings. In some persons stings can produce life threatening reactions. Stocking antihistamine in the first aid kit is a reasonable precaution.

d. **Rat Lungworm disease** is caused by a parasite that can infect humans who consume raw or undercooked infected snails or slugs or consume raw produce that contains a small infected snail or slug. Infection is rare but can be serious. Symptoms can include severe headache, neck stiffness, low grade fever, nausea, and vomiting anywhere from 1-6 weeks after exposure. The disease is not spread person to person. Anyone who handles snails or slugs should wear gloves and/or wash hands. Eating unwashed produce is discouraged.

References Cited

- USFWS. 2010. Endangered and threatened wildlife and plants; determination of endangered status for 48 species on Kauai and designation of critical habitat. Federal Register 75: 18960–19165.
- . 2012. Endangered and threatened wildlife and plants; endangered status for 23 species on Oahu and designation of critical habitat for 124 species; final rule. Federal Register 77: 57648–57862.
- . 2013a Endangered and threatened wildlife and plants; determination of endangered status for 38 species from Molokai, Lanai, and Maui. Federal Register 78: 32014–32065.
- . 2013b. Endangered and threatened wildlife and plants; determination of endangered species status for 15 species on Hawaii Island. Federal Register 78: 64638–64690.
- . 2016. Endangered and threatened wildlife and plants; determination of endangered status for 49 species from the Hawaiian Islands. Federal Register 81: 67786–67860.
- . 2016. USFWS Rare plant database. Unpublished.
- Wagner, W.L., Sohmer, S., and D.R. Herbst. 1999. Manual of the flowering plants of Hawaii, revised edition. Honolulu, Hawaii. University of Hawaii and Bishop Museum Press. 1,919 pp.

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DRAFT: 10/13/20

LONG TERM LEASE

By and Between the

**STATE OF HAWAII
BOARD OF LAND AND NATURAL RESOURCES**

and the

UNITED STATES DEPARTMENT OF AGRICULTURE

This Long Term Lease ("Lease") is made and entered into the date and year last written below by the authorized signatories acting on and behalf of the **State of Hawaii**, Department of Land and Natural Resources, by its Board of Land and Natural Resources, and its successors or assigns, as Lessor, hereinafter referred to as the "State" or "BLNR", and the **United States Department of Agriculture**, acting by and through the Station Director, Pacific Southwest Research Station, Forest Service Department of Agriculture, and its successors or assigns, as Lessee, hereinafter referred to as the "USDA". BLNR and USDA are collectively referred to as the "Parties".

AUTHORITIES: The authorities of USDA to enter into this lease are 16 U.S.C. § 1643(a); 7 U.S.C. §§ 2250a. The authority of BLNR to enter into this lease is Hawaii Revised Statutes (HRS) §171-13(1).

RECITALS:

WHEREAS, the Pu'u Wa'awa'a Experimental Forest (hereafter "PWW") was designated by the Secretary of Agriculture on February 18, 2007, pursuant to section 606(b) of the International Forestry Cooperation Act of 1990, for the primary purpose of tropical forest research;

WHEREAS, the Forest Service is permitted by the BLNR to conduct research and related activities on PWW;

WHEREAS, the Department of Land and Natural Resources currently owns two buildings on PWW known as the Lake House and Meeting House, said buildings being used for official purposes by the Forest Service and the State Division of Forestry and Wildlife;

WHEREAS, in order to enhance research capabilities at PWW in cooperation with the Department of Land and Natural Resources, the Forest Service seeks to make various Federally

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funded improvements to the Lake House, Meeting House, and appurtenant facilities;

WHEREAS, the Forest Service and the Department of Land and Natural Resources completed an analysis entitled "*Pu'u Wa'awa'a Infrastructure Improvement Project: Scope of Work and Environmental Analysis*" on proposed improvements to be constructed at PWW, and it was determined that further environmental analyses were not necessary;

WHEREAS, Title 7, United States Code, section 2250a, allows for the expenditure of Federal funds for the construction of structures on state owned land provided that, "... there is obtained the right to use the land for the estimated life of or need for the structure, including the right to remove any such structure within a reasonable time after the termination of the right to use the land, [and] provided further, that appropriations and funds available to the Department of Agriculture shall be available for expenses in connection with acquiring the right to use land for such purposes under long-term lease or other agreement."

WHEREAS, this lease is hereby granted to the USDA in order to allow for the expenditure of Federal funds for various improvements at PWW in conjunction with the Forest Service's Institute for Pacific Islands Forestry ("IPIF").

NOW THEREFORE, in consideration One dollar (\$1.00), receipt of which is hereby acknowledged, and other good and valuable considerations herein mentioned, the BLNR grants this Long-Term Lease to USDA on the following terms and conditions:

1. **Plans and Analyses:** The activities contemplated under this lease are those disclosed in the document *Pu'u Wa'awa'a Infrastructure Improvement Project: Scope of Work and Environmental Analysis* which is incorporated by reference in this lease and hereafter referred to as the "Environmental Analysis".
2. **Leased Premises:** The Leased Premises are those lands and improvements identified and depicted at pages 5, 8 & 9, of the Environmental Analysis, which are generally located off Highway 190 on the Island of Hawaii, approximately 10 miles south-southwest of the community of Waikoloa Village (*See*: Figures 2 through 5 of the Environmental Analysis).
3. **Authorized Uses:** The Leased Premises shall be used by USDA, its agents and assigns, for the primary purposes of forest research consistent with the purposes for which PWW was designated as an experimental forest, and for such other scientific, research and forest management activities of USDA authorized by law.
4. **Improvements:**
 - a. On the Leased Premises, USDA, its agents, contractors, and assigns, are authorized to construct and maintain improvements to existing facilities and appurtenances including utility systems, parking facilities, and such other work proposed

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in the Environmental Analysis. In its design and planning for facilities, the USDA agrees that it will consult with the BLNR.

b. USDA may use all stone, sand, gravel and other materials on and adjacent to the Leased Premises for use on site, and may divert, use and store waters for such purposes. USDA shall not be liable for any cut timber or vegetation, and may use the same on site for purposes of the improvements.

c. After completion of the improvements identified in the Environmental Analysis, USDA may thereafter from time to time remodel, expand or contract, and otherwise improve or modify the Leased Premises, including signing, landscaping, parking facilities, utilities and other appurtenances. Such subsequent modifications and improvement shall be made with the prior written approval of BLNR, which approval shall not be unreasonably withheld.

d. All improvements, unless otherwise disposed of, shall be and remain the property of the USDA.

5. Upkeep and Maintenance:

a. The Division of Forestry and Wildlife shall, at its expense, maintain the grounds and the interior and exterior of all buildings, improvements, and facilities in good condition and repair, in a manner appropriate to the intended use thereof.

b. At any time hereafter, USDA and the State, through the Division of Forestry and Wildlife or other governmental entity, may enter into a written agreement to reallocate or otherwise address upkeep and maintenance responsibilities.

6. Rights of Entry:

a. USDA shall have the right to use and occupy the Leased Premises, and the right to allow other invitees unto the property for purposes of USDA's authorized activities.

b. The BLNR, and officials of the State and County and their agents or representatives, shall have the right to enter and cross any portion of the Leased Premises for the purpose of performing any public or official duties. The State will coordinate such activities with USDA so as best to avoid interfering with ongoing activities.

7. Operating Plan: The State and USDA may set forth the terms of occupancy and use in an operating plan to be annually reviewed and which plan may from time to time be amended, as needed.

8. Term and Rent:

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a. The USDA has paid the BLNR a rental fee of one dollar (\$1.00) for the primary term. It is agreed by the Parties that no further rental fees are chargeable or payable during the remainder of the term.

b. Subject to termination and renewal rights hereinafter set forth, the term of this Lease will be for a primary term beginning as of the last date of the signatories below and terminating on the date that coincides with the termination of the Hawai'i Experimental Tropical Forest Cooperative Agreement.

c. At the end of the leasehold or after any termination, this Lease may be renewed on such terms and conditions as the Parties may agree upon subject to laws and regulations then in effect.

9. Termination:

a. The USDA may terminate this Lease at any time, without cause, by giving written notice to the BLNR at least nine (9) months in advance of desired termination date. Disposal of USDA improvements, in the event of termination, to be in accordance with Paragraph 6 hereof.

b. BLNR and USDA, by mutual written agreement, may provide for alternative advance notification procedures, as appropriate, for purposes of termination.

c. At the end of the leasehold, improvements and facilities of commercial value may be conveyed to BLNR upon payment to USDA of a mutually agreed upon figure commensurate with the value of the Federal contribution to improvements and facilities. (It is recognized that the value may be zero after amortization of the Federal investment.) Should the BLNR elect not to acquire the improvements and facilities, the USDA may sell, auction, exchange, barter or exercise other similar options authorized under Federal law to recover the value of the improvements and facilities, provided that after two (2) years after termination or expiration of this Lease, any remaining improvements and facilities shall become the property of the State.

10. Termination for Cause. The BLNR shall have the right to terminate this Lease if:

a. The USDA fails to observe or comply with any of the terms or conditions herein after sixty (60) days has elapsed, with the sixty days beginning after USDA's receipt in writing of DLNR's notice of breach or default. DLNR shall deliver such notice to USDA by personal service or by registered or certified mail to the USDA at the address provided herein. Within such period of 60 days, USDA may reinstate the Lease by causing all defaults to be cured, or by performing or undertaking in writing to perform all the covenants of the Lease capable of performance by the USDA. It is understood and

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agreed by the Parties that actions by USDA which require the expenditure of appropriated funds may not be completed within 60 days, and that the leasehold shall not be terminated for a failure to timely cure so long as USDA is undertaking efforts to secure appropriated funds.

b. USDA shall at any time for a five (5) year period fail or cease to use or abandon the leased premises.

11. Loss or Damage:

a. If, at any time during the term of this Lease, the structures and facilities erected upon the Leased Premises are substantially damaged or destroyed by fire or other casualty, then the USDA shall have the option of (1) commencing and thereafter proceeding with reasonable diligence (subject to a reasonable time allowance for appropriation of any additional funds required and for any other unavoidable delay), at its sole cost and expense, to restore or rebuild the same as nearly as possible to its condition immediately prior to such damage or destruction, or (2) terminating this Lease. The USDA agrees to notify the BLNR within six (6) months of the date of casualty or of the date of discovery by the USDA of the casualty, of its intention to restore the improvements to its prior condition. Notification of intent, however, in no way binds the USDA to performance of restoration or rebuilding.

b. In the event construction or evidence of intent to construct has not begun within one (1) year of the destruction of the facilities, this Lease shall terminate. However, the one-year period shall be reasonably extended if USDA is in the process of seeking appropriated funds for repair or replacement of structures and facilities. The extension shall include the present Federal fiscal year plus one additional full fiscal year.

c. It is further understood that in the event the facilities are destroyed or damaged, the USDA will at its sole cost and expense immediately remove all debris, etc. and take all reasonable steps to protect public safety.

12. Rights appurtenant to Leasehold. Rights appurtenant to this leasehold provided to USDA by the BLNR include the following:

a. A right of ingress and egress to the Leased Premises over and across land, common entrances and rights-of-way.

b. A right to connect to any present or future utilities and/or services to the Leased Premises including, but not limited to, gas, electricity, water, telephone, computer connections.

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c. A right for USDA to install, operate, maintain, repair, and replace, at its own expense, power and telephone lines, and computer connections.

13. Liability. The Parties agree that liability of the USDA for any loss, damage, claim, demand, or action, caused by, arising out of or connected with the operations authorized by this Lease, shall be governed by the provisions of the Federal Tort Claims Act (62 Stat. 869, 982; 28 U.S.C. §§ 2671, *et seq.*).

14. Compliance with Laws.

a. The USDA, insofar as it may legally do so, shall comply with applicable Federal, State, and local laws in its use of the Leased Premises. The USDA shall not cause or permit the Leased Premises or any portion thereof to be in violation of any applicable laws or regulations relating to any environmental conditions, industrial hygiene or hazardous materials on, at, or from the Leased Premises.

b. USDA shall not cause or permit the Leased Premises or any portion thereof to be used in violation of any applicable Federal laws or regulations relating to any environmental conditions, industrial hygiene or hazardous materials on, at, or from the Leased Premises, including, but not limited to, those arising under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section §§ 9601, *et seq.*; the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901, *et seq.*; the Clean Air Act, 42 U.S.C. §§ 7401, *et seq.*; the Clean Water Act, 33 U.S.C. §§ 1251, *et seq.*; the Safe Drinking Water Act, 42 U.S.C. §§ 300f, *et seq.*; the Oil Pollution Act, 33 U.S.C. §§ 2701, *et seq.*; the Atomic Energy Act, 42 U.S.C. §§ 2011, *et seq.*; the Toxic Substances Control Act, 15 U.S.C. §§ 2601, *et seq.*; the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§ 136, *et seq.*; and the Occupational Safety and Health Act, 29 U.S.C. §§ 650, *et seq.* USDA shall also comply with state and/or local laws and regulations relating to environmental conditions, industrial hygiene and hazardous materials where Congress has waived Federal sovereign immunity and made Federal agencies subject to such state and/or local law or regulation.

c. Concerning handicapped access, USDA shall comply with the mandates of the Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151 *et seq.* and the regulations promulgated thereunder, in the construction and operation of its facilities.

d. Concerning preservation of archaeological sites in the construction and maintenance of the leased premises, USDA shall comply with the National Historic Preservation Act (16 U.S.C. §§ 440, *et seq.*), and all other Federal laws pertaining to the protection of archaeological, historical, and cultural resources and, where Congress has waived Federal sovereign immunity, with state laws including Chapter 6E, Hawaii Revised Statutes.

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- e. Concerning applicable law, the Parties recognize the potential applicability of Federal, state and local laws to this lease and the activities to be carried out under its provisions. The USDA shall at all times be bound by Federal law. Additionally, USDA shall comply with state and/or local laws and regulations where Congress has waived sovereign immunity and so required such compliance by Federal agencies.
15. **Forbearance on activities:** BLNR agrees that it shall not conduct surface and/or sub-surface drilling and/or excavation of the Leased Premises without consent of the USDA.
16. **Personal Property Risk of Loss:** All personal property of the USDA shall be kept on the Leased Premises at the sole risk of the USDA, except to the extent that damage to such or removal of such arises from actions, negligent acts or omission of the BLNR, its employees or agents.
17. **Co-tenancy and Subleasing:**
- a. USDA may make the Leased Premises available to other State and Federal agencies, universities, and non-profit organizations for research and related purposes.
- b. No portion of the Leased Premises shall be sublet to any non-Federal entity for any purpose, commercial, governmental or noncommercial, without the authorization of the BLNR.
18. **Nondiscrimination:** The use and enjoyment of the Leased Premises shall not be in support of any policy which discriminates against anyone based upon race, gender, sexual orientation, creed, color, national origin, religion, disability, or age. This requirement shall be based on Federal law unless Congress has waived sovereign immunity and requires compliance with applicable state and local laws and regulations.
19. **Severability:** Should any provision or portion of such provision of this Lease be held invalid, the remainder of this Lease or the remainder of such provision shall not be affected thereby.
20. **Successors and assigns:** The terms and provisions of this Lease and the conditions herein shall bind the Parties and their successors, and assigns.
21. **Members of Congress Not to Benefit:** No Member of or Delegate to Congress shall be admitted to any share or part of this Lease, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this Lease if made with a corporation for its general benefit.
22. **Responsible Local Official:** The local officials in Hawaii authorized and designated to implement and administer this lease area as follows:

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- a. **For USDA** – the Director, Institute for Pacific Islands Forestry. The IPIF Director is hereby delegated authority to take any action on behalf of USDA or the Forest Service which is authorized by this Lease, except that modification of this Lease is reserved to the Director, Pacific Southwest Research Station.
- b. For BLNR – the _____
- 23. Notices:** All notices or official communications which may be required by law or required under this Lease, given by either party to the other, shall be in writing and addressed to such party's address, unless otherwise provided herein. Any party may from time to time by written notice to the other, designate a different address to which notices shall be sent. Notice shall be sent as follows:
- a. Notice to BLNR:
State of Hawaii
Department of Land and Natural Resources
Division of Land Management
P.O. Box 621
Honolulu, Hawaii 96813
- b. Notice to USDA:
U.S. Department of Agriculture
Forest Service
Institute for Pacific Islands Forestry
60 Nowelo Street
Hilo, Hawaii 96720
- 24. Entirety of Agreement:** The making, execution, and delivery of this Lease have been induced by no representations, statements, or warranties other than those herein expressed. This Lease embodies the entire understanding of the parties and there are no further or other agreements or understandings, written or oral, in effect between the parties relating to the subject matter hereof. This Lease may be amended or modified only by an instrument of equal dignity and formality signed by all the respective parties hereto.
- 25. Modifications to this Lease.** By mutual agreement at any time hereafter among the lessor and lessee, this lease may be modified.

IN WITNESS WHEREOF, this Lease is executed as of the date of the last signature below by the authorized official of the Lessor and Lessee:

EXHIBIT E.

FOR THE LESSOR:

STATE OF HAWAII, BOARD OF LAND AND NATURAL RESOURCES

By: _____

Its: _____

Date _____

FOR THE LESSEE:

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE

By: _____
Director, Pacific Southwest Research Station

Date: _____

EXHIBIT F.

FACILITIES OPERATING PLAN

THIS FACILITIES OPERATING PLAN (hereafter “Plan”) is made pursuant to the Long Term Lease between the STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES, hereinafter referred to a “DLNR”, as Lessor, and the UNITED STATES DEPARTMENT OF AGRICULTURE through the Forest Service, as Lessee, hereinafter referred to as the “USDA” or “Forest Service.” DLNR and USDA are collectively referred to as the “Parties”.

FOR AND IN CONSIDERATION OF the Long Term Lease between the Parties on or about the date hereof, the Parties agree on the following:

I. PURPOSE:

This Plan is to further the purposes for which the Pu`uwa`awa`a State Forest Reserve was designated in 2007 as the Pu`uwa`awa`a Unit (“PWW”) of the Hawaii Experimental Tropical Forest (HETF), and also the purposes of the Cooperative Agreement between the Forest Service and the State Board of Land and Natural Resources dated December, 2006, and the Permit to Use State Lands from said Board to the Forest Service dated January, 2007.

This Plan establishes guidelines for the use and maintenance of two facilities at PWW called the Lake House and Meeting House (hereafter called “facilities”). USDA is agreeing to fund the renovation of the facilities to serve as lodging and meeting space for uses consistent with the purposes of research, education, management, and demonstration projects at PWW.

II. ASSIGNMENT OF RESPONSIBILITIES.

Pursuant to the Long Term Lease and the above referenced Cooperative Agreement and the Permit to Use State Lands, the State of Hawaii Department of Land and Natural Resources (DLNR), Division of Forestry & Wildlife and the USDA Forest Service (USDA) hereby agree as follows to share use of the facilities.

III. GENERAL PROVISIONS:

A. Department of Land and Natural Resources shall:

1. Annually review this Plan, and revise it as necessary in consultation with the Forest Service. The Plan shall outline the responsibilities of both DLNR and USDA in regards to facilities use and maintenance and steps that will be taken to protect public health and safety and the environment.

EXHIBIT F.

2. Maintain the area to standards of repair, orderliness, neatness, sanitation, and safety acceptable to both DLNR and USDA.
3. Develop and implement guidelines on facility use that will be approved by the HETF Planning Group.
4. Facilitate and schedule visiting staff, researchers, and education/community groups to use the facilities whose purposes are consistent with the mission and purpose of the HETF, and maintain a calendar of facilities use and scheduled activities/events.
5. Ensure that users agree to follow facility use guidelines and that they fill out appropriate liability waivers for use of the facilities as directed by the laws, rules, and guidelines of the State of Hawaii, DLNR and USDA.
6. Provide site maintenance that includes landscaping, facility upkeep including the off-grid power system, and minor repairs.
7. Agree to work with the Forest Service through the HETF Planning Group and Research Technical Committee to ensure that facilities usage supports the 2003 Management Plan for the Ahupua'a of Pu'uwa'awa'a and the Makai lands of Pu'uanahulu, and the mission and purposes of the Hawaii Experimental Tropical Forest.

B. USDA Forest Service Shall:

1. Annually review this Plan, and revise it as necessary in consultation with the DLNR.
2. Schedule all planned facility use through the Pu'uwa'awa'a Coordinator (808-333-0084) who will work with the West Hawaii Wildlife Office to maintain a facility use calendar. Reservations should be made during normal DOFAW business hours (7:00 am – 3:30 pm, M-F excluding holidays);
3. Agree that, with reasonable prior notice (except in emergencies), DLNR use of the facilities may supersede planned usage by USDA or USDA-sponsored groups if use of the buildings is necessary for DLNR's mission to protect the safety of the public and natural and cultural resources in the area;
4. Immediately inform DLNR of any and all damage to the property, reservoir, fences, structures, sheds, or equipment, seen, or witnessed by USDA staff while in the area or using the facilities, as well as any water leaks in the reservoir, pipes, or water infrastructure, or if any hooved mammals (e.g. sheep, pigs, goats) or their sign is seen inside the 50-acre fenced unit that encloses the facilities;
5. Agree to waive the liability for use the facilities by USDA and USDA-sponsored groups and agree to have waivers signed for any non-state and non-federal partners and community groups using the facilities;

EXHIBIT F.

6. Agree to work with DLNR through the HETF Planning Group and Research Technical Committee to ensure that facilities usage supports the 2003 Management Plan for the Ahupua`a of Pu`uwa`awa`a and the Makai lands of Pu`uanahulu, and the mission and purposes of the Hawaii Experimental Tropical Forest.

IV. UPKEEP AND MAINTENANCE OF FACILITIES.

A. Electrical.

1. Electric power will be provided by solar panels, batteries, and current inverters (when USDA renovations are complete), and the facilities are currently powered by a diesel powered generator which supplies electricity to both the Lake and Meeting houses.
2. The DLNR shall be responsible for general maintenance of the electrical system, including bi-monthly checks on the generator.
3. Consumables such as diesel fuel, light bulbs, and cleaning/bathroom supplies will be supplied by DLNR for state use and USDA for federal use. For non-state and non-federal cabin users consumables will be supplied by said users. The diesel generator should not be allowed to run dry as this can lead to air in the gas lines making it difficult to start the generator. Therefore a minimum of a ¼ tank should be maintained at all times. If the tank level falls below the quarter full mark during a period of Forest Service use, the Forest Service shall fill the tank and bill DLNR for the amount.
4. Cabin users whether state, federal, or other will agree to prevent waste of fuel and electricity through wise use and to shut off power and lights when not in use.

B. Water.

1. The water is currently supplied by Nāpu`u Water Inc. (NWI), a private local non-profit that supplies fresh, safe, and potable drinking water to the residents and organizations/businesses of Pu`uwa`awa`a and Pu`uanahulu. DLNR agrees to pay the monthly water bill for the facilities which goes to the Hilo DOFAW office provided the monthly water usage is minimal and there isn't excessive waste.
2. In the case that planned water use by the USDA will be excessive (over a monthly average), or a leak is detectable due to the negligence of USDA, USDA agrees to cover the additional cost of the monthly water bill. If monthly water bills become excessive (over the monthly average), USDA agrees to work with DLNR on ways to reduce water use and cost.
3. DLNR is responsible for providing at its cost all consumable such as water filters, and paying for repairs to the water system as needed in between the NWI water meter for the facilities and the water output at the buildings (faucets, hose bibs, etc.).

C. Wastewater and sewage.

1. The DLNR will maintain the wastewater system.
2. DLNR will provide for the pumping of wastewater when necessary.

D. Propane.

EXHIBIT F.

1. DLNR will cover the cost of propane once propane tanks are installed as part of the facility improvement project. If USDA plans to use an above-average quantity of propane for an HETF related function (or an excessive amount is used through USDA use), then USDA agrees to pay for the amount in excess necessary to re-fill the propane tank.

E. Phone and Internet.

1. There is no land-line phone service or internet service at the facilities. Users will provide their own phone service through the use of cell phones and internet through the use of hotspots.
2. If a better internet connection is required (such as a service provided through the use of a satellite dish), DLNR and USDA can work together to find an appropriate vendor to supply the service and determine who will pay for it based on who has the need.

F. Security.

1. The Forest Service shall designate an employee who shall have keys to gates and facilities.
2. Keys for building use by third parties can be checked out for access to the buildings and gates from either the Waimea Division of Forestry and Wildlife office (from office staff) at (808) 887-6063, or from the Pu`uwa`awa`a Coordinator Elliott Parsons (808) 333-0084. Keys must be checked out during normal business hours (7 AM to 3:30 PM, M-F excluding holidays), and key-pickup must be arranged in advance. A \$60 key deposit is required to check out keys and will be returned when users check out of the facilities. In the case that keys are lost or buildings are not left in a clean and sanitary manner, the key deposit may not be returned and a fee may be charged for clean-up.
3. The buildings will remain locked when not in use and all locks should be checked when checking out of the facilities.
4. There are four gates that lead into the Hauaina fence which is a 50-acre fenced area that encloses the land with the facilities. These gates must be closed and locked at all times and should be closed tightly to prevent the ingress of non-native sheep, goats, and pigs or other livestock. Users that fail to close gates or allow animal ingress may be prohibited from using the buildings.

G. Health & Safety.

1. Facility users will be made aware of the extreme wildfire risk that exists at Pu`uwa`awa`a Forest Reserve. No open fires are allowed at any time either outside or inside of the buildings. Users shall be aware of the locations of all fire extinguishers, how to use them, and where escape routes are from the facilities to the highway (there are four gates that lead out of the Hauaina fenced area).
2. DLNR shall maintain the annual fire extinguisher certifications to ensure they are filled, charged, and ready to use and one large extinguisher will be made available at each building.

EXHIBIT F.

3. Users will be required to have a currently certified fire extinguisher in their vehicle and know how to use it.
4. All wildfires should be immediately reported to 911 and the witness should provide as much information about the fire as possible including size, location, wind and heat, and if any people or structures are at risk.
5. No persons shall be allowed to enter the reservoir area enclosed by the fence. If someone falls into the reservoir and can't climb out there are three rubber ladders installed on the liner in three locations around the reservoir.

H. Grounds and Landscaping.

1. DLNR will be responsible for maintaining the grounds including mowing and removal of debris from drains, walkways, etc.

I. Repairs

1. DLNR agrees to perform routine repairs to the facilities using qualified staff or contractors.
2. USDA agrees to inform DLNR of any damage to the property during USDA use of the facilities and to pay for repairs if it is found the damage was due to the negligence of USDA.

V. RESERVATIONS.

- A. The DLNR will reserve use of the facilities during emergencies that may include wildfire suppression activities, search and rescue operations, post-hurricane clean-up or other emergencies that require DLNR to provide its services to the state and public to protect public safety and property or to protect cultural and natural resources. If an emergency occurs during a pre-planned use, DLNR will do its best to relocate building users to another facility if that is possible. DLNR retains the right to cancel any building use in order to fulfill its mission to protect public safety and the natural and cultural resources under its jurisdiction in the North Kona and South Kohala Districts.
- B. DLNR and the Forest Service may each reserve use of a room, closed, storage shed, or outside shed for equipment, supplies, chairs, or other equipment. For those areas used, the respective agency will be solely responsible for upkeep and maintenance as well as locks and security, provided that the Pu'uwa'awa'a Coordinator or other responsible person on site shall have keys and access to all such spaces.

AGREED UPON as of the day and year last written below:

STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES

EXHIBIT F.

By: _____

Its: _____

Dates: _____

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE

BY: _____

Director, Institute of Pacific Islands Forestry

