STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Forestry and Wildlife
Honolulu, Hawaii 96813

December 8, 2006

Chairperson and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Land Board Members:

SUBJECT: Approval of a Cooperative Agreement between U.S. Forest Service and Department of Land and Natural Resources for the Establishment and Administration of the Hawaii Experimental Tropical Forest at Laupahoehoe, Hamakua, Hawaii and Puu Waawaa, Kona, Hawaii; and Partial Delegation of Authority for Issuance of Research Permits.

Background: In 1992, President George H.W. Bush signed into law the Hawaii Tropical Forest Recovery Act (Public Law 102-574, 1992), to promote the recovery of Hawaii tropical forests. The Act brought recognition of the value that Hawaii tropical forests provide to the nation and authorized the establishment of the Hawaii Experimental Tropical Forest to 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.

On February 24, 2006, the Board approved the Report of Findings for the Establishment of the Hawaii Experimental Tropical Forest and recommended to the Governor the establishment of the Hawaii Experimental Tropical Forest on approximately 12,343 acres of state lands of Laupahoehoe Natural Area Reserve and Laupahoehoe Forest Reserve in Hamakua, Hawaii and 38,885 acres in the ahupuaa of Puu Waawaa, Kona. The Board also authorized the Department to develop a Memorandum of Agreement with the U.S. Forest Service to establish and administer the proposed sites as the Hawaii Experimental Tropical Forest.

Governor Linda Lingle concurred with the recommendations of the Board and on March 6, 2006, transmitted the Report of Findings and state recommendations to the Secretary of Agriculture and requested he take the necessary actions to establish the first experimental forest in Hawaii at Laupahoehoe and Puu Waawaa. The Hawaii Tropical Forest Recovery Act provided that the Secretary shall, at the request of the Governor, establish and administer the Hawaii Experimental Tropical Forest in Hawaii.

The Department and the U.S. Forest Service have met and consulted with affected communities, Puu Waawaa Advisory Council, the Natural Area Reserves Commission and respective staffs to

develop the Cooperative Agreement. The language and form were jointly developed with the assistance of a federal solicitor and Deputy Attorney General.

The U.S. Forest Service has received initial funding to begin planning and completion of the Establishment Record and preparation of environmental documentation.

Analysis: The Cooperative Agreement (attachment 1) outlines the close partner relationship between the U.S. Forest Service and the State that is desired for this experimental forest. The cooperative agreement is for 35 years and provides that the State will issue a permit to the U.S. Forest Service and its assignees to use the Hawaii Experimental Tropical Forest for the purpose of research, education, demonstration, and related purposes.

The major provisions of the cooperative agreement are:

1. The cooperative agreement authorizes Forest Service use of the 12,343 acres Laupāhoehoe Unit of the Experimental Forest and 38,885 acres of the Pu'u Wa'awa'a Unit of the Experimental Forest. Additional lands may be incorporated into the agreement with concurrence of the Parties.

2. The term of the agreement is for 35 years with an option for renewal and subject to review, evaluation and updating at any time and at a minimum of every 10-years.

3. Provides for lease of lands to develop support facilities. This will be a separate Board action that would involve the lease of Agriculture zoned lands adjacent to the Laupāhoehoe Unit. The Department is in discussions with the current leaseholder of the adjacent lands regarding options.

4. A description of potential cooperative research and management activities and types of improvements and facilities that may be developed including a new field station, stream gaging stations, weather stations, and the development of new trails for access.

5. A commitment to consult and reach agreements with each other to coordinate research, management, and educational activities.

6. A commitment to 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. This will include the Pu'u Wa'awa'a Advisory Council and community members from Laupāhoehoe.

7. To established a Hawaii Experimental Tropical Forests Research Committee chaired by the Forest Service that will administer and coordinate research efforts and will review and recommend for approval research, education, and demonstration activities on the Hawaii Experimental Tropical Forests, and recommend terms and conditions for the conduct of such research. The Committee will initially consist of the Director of the Institute of Pacific Islands Forestry in Hilo, and the Hawaii Island Branch Manager of the Division of Forestry and Wildlife or alternates as named by the Forest Service or Board.

Recommendations for approval of research proposals will require unanimous agreement of the Committee members.

8. Additional members may be added to the Research Committee. The plan is to look into adding the University of Hawaii as a member. That action would involve an amendment to this agreement.

9. The Committee will prepare an annual report to the Secretary of Agriculture and Board.

10. In an effort to streamline and consolidate State procedures for review and approval of permits for research on the Hawaii Experimental Tropical Forests, within 90-days the Board will delegate to its representative on the Committee the authority to approve and issue permits for research activities approved by the Committee on the Experimental Tropical Forest, outside the Natural Area Reserve, subject to terms and conditions as the Board may prescribe. The delegation is subject to modification or revocation at the sole discretion of the Board. The Staff recommendation for that delegation of authority is provided as Attachment 2. The approval authority would not include activities requiring additional federal, state, or county permits or approvals, such as environmental assessments, conservation district use permits, or Endangered Species permits. Those permits will need to be acquired through the usual permitting procedures and approval processes.

11. The Parties agree to encourage the NARS Commission to adopt a similar delegation policy for portion of the Experimental Tropical Forest within the NARS. It is recognized that at this date the NARS Commission does not have legal authority to delegate permit approval authority and that the delegation would be subject to terms and conditions established by the Commission.

12. Research on the Laupāhoehoe and Pu'u Wa'awa'a Units will be conducted in a manner consistent with the appropriate management objectives management plans.

13. Public access will be regulated by the Board to accommodate ongoing research and management activities. Public hunting, hiking, and traditional and customary practices will be allowed as per existing laws.

14. The Board will be primarily responsible for normal land management functions such as control of public access, fire suppression, law enforcement, regulation of hunting and grazing activities, invasive species management, and forest disease, insect, and ungulate control.

15. The State retains the prerogative to deal with emergencies such as fire or other immediate threats to human safety.

16. The Forest Service will maintain the improvements on the land that are being used by the Forest Service or its assigns. The Board will be responsible for maintenance of all other

improvements.

17. The Research Committee shall assure that all research activities fully comply with the requirements of all applicable state and federal environmental laws and regulations.

18. Disputes will be elevated to the Station Director, Pacific Southwest Research Station, U.S. Forest Service, the NARS Commission for NARS areas, and the Board of Land and Natural Resources.

The Staff is requesting a delegation of permitting authority to the State representative on the Research Committee for certain research type activities. This will centralize and streamline research approval processes with the on-the-ground people that will be managing the sites and facilitate closer coordination with the appropriate staff and local advisory bodies. For oversight, the agreement provides for the preparation of a 5-year management and research plan, and annual reports on progress.

The Cooperative Agreement commits to the development of a permit to use of the Experimental Tropical Forest lands by the Forest Service, a lease of state lands for the Forest Service to build a new Research Station, and the option to add the University of Hawaii as a third party to the Research Committee. The Department and Forest Service are working with the appropriate parties to develop these documents and agreements and will bring them to the Board, and the NARS Commission for the permit to use the NARS area, once the details have been worked out. This Cooperative Agreement provides the approval in concept by the Parties to pursue those provisions.

The Department believes that establishment of an experimental forest on the Island of Hawaii at Laupahoehoe and Puu Waawaa will help achieve the stated objectives of the Hawaii Tropical Forest Recovery Act to provide an area to conduct research, demonstration, and education on management of tropical forests in the Pacific and provide tools to restore and sustainably manage our forest resources. Benefits from the proposed project would include research on pressing Hawaii natural resource management issues, research on long-term questions such as impacts of global warming, providing a learning opportunity for school children of all ages to get into the forest, and demonstration and educational opportunities for present and future generations of landowners, land managers, and local scientists. Establishment of the experimental forest will also provide economic and employment opportunities in these areas. The proposed Cooperative Agreement and provisions it provides establish a good workable relationship between the Department and U.S. Forest Service for establishing and administering the Hawaii Experimental Forest.

RECOMMENDATION

That the Board:

1. Approve the Cooperative Agreement between the U.S. Forest Service and Board of Land and Natural Resources for the establishment and administration of the Hawaii Experimental Tropical Forest subject to review and approval by the Attorney General

and Federal Solicitor.

2. Delegate authority to approve research permits within the Hawaii Experimental Tropical Forest as detailed in Attachment 2 to the Hawaii Island Branch Manager of the Division of Forestry and Wildlife.

Respectfully submitted,

PAUL J. CONRY
Administrator

Attachment 1 and 2

APPROVED FOR SUBMITTAL:

PETER T. YOUNG, Chairperson
Board of Land and Natural Resource

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 Cooperative 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 Cooperative 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 Cooperative 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 Cooperative 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 _____ _____
Dale Bosworth Date
Chief

STATE OF HAWAII
BOARD OF LAND AND NATURAL RESOURCES

By _____ _____
Peter T. Young Date
Chairperson

Approved by the Board of Land and Natural Resources
at its meeting held on _____.

APPROVED AS TO FORM

_____ Date: _____

Deputy Attorney General

Attachment 2

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, native forest composition, or native 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 roads, fences and a trail system for access.

STATE OF HAWAII
BOARD OF LAND AND NATURAL RESOURCES

By _____ _____
Peter T. Young Date
Chairperson

Approved by the Board of Land and Natural Resources
at its meeting held on _____.

APPROVED AS TO FORM

_____ Date: _____
Deputy Attorney General