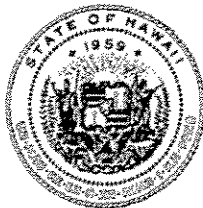


LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

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

March 13, 2009

Ms. Laurie Tippin
Director, State and Private Forestry
USDA Forest Service Regional Office, R5
1323 Club Drive
Vallejo, CA 94592

Dear Laurie:

On behalf of my staff, I would like to thank you and Region 5 for keeping Hawaii in mind when you were allocating FY 08 carry over funding. We will put these funds to good use. Enclosed please find Hawaii's FY 09 State-Wide Assessment and Resource Strategy (SWARS) grant proposal totaling \$75,000.

Due to the short period of time we have to complete these documents, we are interested in expediting the execution of this grant. I am requesting that these funds please be made available in advance of grant work being completed. We would like to work with your staff to facilitate State match documentation and Federal reimbursement as soon as possible to enable my staff to engage in a number of contracts related to SWARS development.

As always, we appreciate your support and consideration for our request.

Sincerely,

A handwritten signature in black ink that reads "Paul J. Conry".

PAUL J. CONRY,
Administrator

cc: Bertha Mastez, Ronald J. Cannarella, Sheri S. Mann

State of Hawaii
Cooperative Forestry Assistance State and Private Forestry
FY 2009 Grant Proposal

GRANT PROGRAM: State-Wide Assessment & Resource Strategy (SWARS)

PROJECT TITLE: State-wide Assessment of Forest Resources & State-wide Forest Resource Strategy development for the State of Hawaii

PROJECT COORDINATOR: Ronald J. Cannarella
Planning & Information Services Forester
DLNR-DOFAW
1151 Punchbowl St., Rm. 323
Honolulu, HI 96813
Tel: (808) 383-3077 Fax: (808) 587-0160

PROJECT CO-COORDINATOR: Sheri S. Mann
Cooperative Resource Management Forester
DLNR-DOFAW
1151 Punchbowl St., Rm. 325
Honolulu, HI 96813
Tel: (808) 587-4172 Fax: (808) 587-0160

TIMELINE: April 10, 2009 – April 9, 2011

STATEMENT OF NEED/BACKGROUND: State assessments and resource strategies are integral to the State and Private Forestry (S&PF) Redesign and required as an amendment to the Cooperative Forestry Assistance Act (CFAA), as enacted in the 2008 Farm Bill.

Two of the three assessment and planning components required by the State and Private Forestry (S&PF) Redesign to approach and identify priority forest landscape areas and highlight work needed to address national, regional, and state forest management priorities will be addressed through the use of this grant request:

- **State-wide Assessment of Forest Resources** - provides an analysis of forest conditions and trends in the state and delineates priority rural and urban forest landscape areas.
- **State-wide Forest Resource Strategy** - provides long-term strategies for investing state, federal, and other resources to manage priority landscapes identified in the assessment, focusing where federal investment can most effectively stimulate or leverage desired action and engage multiple partners.

State-wide Assessment of Forest Resources

Ensure that federal and state resources are being focused on important landscape areas with the greatest opportunity to address shared management priorities and achieve measurable outcomes. The State will work collaboratively with key partners and stakeholders to develop a statewide forest

resource assessment. This resource assessment will provide a comprehensive analysis of the forest-related conditions, trends, threats, and opportunities in and among the 8 main Hawaiian islands.

State-wide Forest Resource Strategy

Hawaii's forest resource strategy will provide a long-term, comprehensive, coordinated strategy for investing state, federal, and leveraged partner resources that address the management and landscape priorities identified in its assessment. The resource strategy will incorporate existing statewide forest and resource management plans and provide the basis for future program, agency, and partner coordination.

GOALS: The goals of the Hawaii **State forest resource assessment** are:

- Provide an analysis of present and future forest conditions, trends, and threats on all ownerships in the state using publicly available information. This information will identify forest related threats, benefits, and services consistent with the S&PF Redesign national themes.
- Delineate priority rural and urban forest landscape areas to be addressed by the state resource strategy. Additionally, linkages between terrestrial and aquatic habitat will be identified and incorporated where sufficient data is available.
- Work with neighboring Pacific and Caribbean Tropical Islands and States to identify any common resource issues and or regional priorities.
- Incorporate existing statewide plans including Wildlife Action Plans, Community Wildfire Protection Plans, and address existing S&PF program planning requirements.
- A combination of qualitative, quantitative, and geospatial data will be used in the State-wide Assessment to provide relevant information to key Hawaiian, Pacific Region, Western State, and national themes.

The Hawaii **State Resource Strategy** will:

- Outline long-term strategy for addressing priority landscapes identified in the state forest resource assessment and the following national themes and associated management objectives.
 - **Conserve Working Forest Lands:** conserving and managing working forest landscapes for multiple values and uses; identify and conserve high priority forest ecosystems and landscapes; and actively and sustainably manage forests.
 - **Protect Forests From Harm:** protect forests from threats, including catastrophic storms, flooding, insect or disease outbreak, and invasive species; restore fire-adapted lands and reduce risk of wildfire impacts; and identify, manage and reduce threats to forest and ecosystem health.
 - **Enhance Public Benefits from Trees and Forests:** including air and water quality, soil conservation, biological diversity, carbon storage, and forest products, forestry-related jobs, production of renewable energy, and wildlife.
- Protect and enhance water quality and quantity; improve air quality and conserve energy through the management and restoration of forests to mitigate and reduce global climate change.
- Assist communities in planning for and reducing wildfire risks.
- Maintain and enhance the economic benefits and values of trees and forests.
- Protect, conserve, and enhance wildlife and fish habitat.
- Connect people to trees and forests, and engage them in environmental stewardship activities.
- Identify partner and stakeholder involvement.

- Identify strategies for monitoring outcomes within priority forest landscape areas and how actions will be revised when needed.
- Describe how Hawaii's proposed activities will accomplish national State and Private Forestry program objectives and respond to specified performance measures and indicators.
- Describe how State and Private Forestry programs will be used to address priority landscape and management objectives.
- Incorporate existing statewide plans including Wildlife Action Plans, community wildfire protection plans, and address existing S&PF program planning requirements.

COMPLETED OR ONGOING ACTIVITIES: Hawaii began working on the SWARS in June 2008 when preliminary Farm Bill advice became public. As a result a number of activities have already begun including the following:

- Establishment of www.hawaiistateassessment.info, which is an interactive website hosted and maintained by the State that allows the sharing of national, regional and local documents related to the SWARS; the interactive capacity of anyone interested to post messages, blogs, and/or provide comments pertaining to SWARS materials and eventually drafts, and of course a countdown clock ending June 18, 2010.
- Identified and are participating in the development of new data sources which will augment or replace some of the weaker data used in the Spatial Analysis Project (SAP). New or updated data layers that have been obtained since SAP was completed in June 2008 include fuel mapping, community fire response plans, LANDFIRE, high-resolution landcover from NOAA/CCAP program, impervious surfaces layer and landcover from the NLCD. It should be noted that the development of new data layers has been initiated by other entities (i.e., LANDFIRE, Carnegie Institute). By partnering with the primary data producers (i.e., reviewing data, providing ancillary data), SWARS staff is insuring that the products will be compatible with our needs for the Hawaii SWARS.
- Ron Cannarella has made presentations on the Hawaii SAP and its relation to SWARS to the Hawaii Geographic Information Coordinating Council (HIGICC), the professional association for GIS technicians. Supporting SWARS has been included in the strategic plan for the HIGICC. In addition, Ron has made presentations on SAP"/SWARS to the Hawaii ESRI User Group, the Hawaii Association of Watershed Partnerships, the State Technical Committee, The Forest Legacy Committee and the Forest Stewardship Committee.
- Ron Cannarella, who conducted the data analysis for the SAP has become certified by ESRI (the makers of ArcGIS) as a python programmer. It is expected that using python programming language will greatly improve our efficiency and consistency
- All of the major Federal and Non-Profit partners in Hawaii have been engaged and made aware of the SWARS and the fact that the State is very interested in their help, data, imagery, etc.
- Established working groups within the NRCS State Technical Advisory Committee (STAC), and Kaulunani Urban Forestry Council.
- Significant interaction with the University of Hawaii in Manoa and Hawaii Community College has begun and resulted in collaborations on large grant proposals, involvement with at least one UH class that has result in technical writing support via students, an offer by a professor who

specializes in technical writing and sustainability to do pro bono writing for SWARS in the Summer of 2008, and focused scientific research related to the economic relationships between watershed protection and water quality and quantity necessary for much of the city and county of Honolulu.

- As of January 1, 2009, DOFAW hired (\$9,000) a UH graduate student, Kelly Hartman, for specific SWARS related GIS data analysis. Her current project is to produce the definitive map of NIPF for Hawaii, with an associated list of Tax Map Key (TMK) parcels and a mailing list of. We expect to release this data shortly.
- Established a SWARS track at the July 2009 Hawaii Conservation Conference (HCC - <http://hawaiiconservation.org/Default.asp>) in Honolulu. This track will have speakers from various fields (fire, hydrology, economics, wildlife/biodiversity, forestry, etc) and an interactive forum to discuss the newly drafted HI State-wide Assessment of Forest Resources. Additionally, discussions will take place pertaining to planning and implementation of the State-wide Resource Strategy.
- Planned a training session at the University of Hawaii on April 17, 2009 for 15 teams of GIS analysts and policy makers to utilize NOAA/C-CAP (Coastal-Change Application Program) data and the Habitat Priority Planner GIS tool that has been developed by NOAA (<http://www.csc.noaa.gov/digitalcoast/tools/hpp.html>).

EXPECTED ACTIVITIES:

- Three DOFAW staff will attend the Pacific Island Committee meeting in Palau. Provide funds to many of the above for new remote sensing and/or satellite imagery. Also, request that some future imagery be focused on priority areas as the SWARS develops. (May 2009)
- Continue to work closely with the University of Hawaii faculty, students and organizations, civic groups, Neighborhood Boards and other stakeholders to identify issues, focus the analysis and review products.
- Hire Information and Technology consultants specializing in the use of Social Media networking to expand the functionality of our website www.hawaiistateassessment.info to facilitate public participation, collaboration, ensure transparency, and solicit feedback in a timely, efficient, and low cost manner. (April 2009).
- Work closely with the Kaulunani Urban and Community Forest Program and Friends of Hawaii's Urban Forests to coordinate their Urban Forestry Summit (tentatively scheduled for June/July 2009), and to closely integrate their U&CS SWARS products into the overall Hawaii SWARS.
- Provide paid opportunities for internships through the UH system, which will focus on technical writing for various SWARS chapters and GIS data analysis and mapping. (May 2009)
- Hire GIS consultants to analyze and standardize existing data to ensure that the data format and spatial resolution are all consistent and compatible with Hawaii SWARS (30 meter resolution based on Landsat). This process will allow us to take full advantage of existing hi-resolution imagery and landcover products for the U&CS SWARS, incorporate GIS data produced by the

Coral Reef Task Force but not previously used in SAP, and the traditional terrestrial datasets that were used in Hawaii SAP. (May 2009)

- Hire technical writers for various SWARS chapters. (December 2009)
- Incorporate outcomes from the HCC into the Assessment and use discussions to engage into the Resource Strategy. (August 2009)
- Convene meeting of partners/stakeholders to review State Assessment. (July 2009)
- Review and incorporate existing Natural Resource Plans (September 2009)
- Submit a draft of the State Assessment and Resource Strategy to US Forest Service at the PIC meeting. (February 2010)
- Submit a draft of both documents to the Board of Land and Natural Resources. (March 2010)
- Convene final stakeholder workshop and incorporate input/make final changes. (April 2010)
- Submit final documents to USDA Secretary of Agriculture by June 18, 2010.

EVALUATION AND MONITORING: The above described actions have evaluation steps uniquely described throughout the next year and two months. DOFAW intends to utilize all sources of evaluation for these documents including: Federal, State, Non-profit, and community review and input; regional partner review (Pacific Island Committee and US Caribbean partners); the US Forest Service; and the Hawaii Board of Land and Natural Resources. The use of www.hawaiistateassessment.info ensures an open and transparent process in which the State intends to follow throughout this process.

BUDGET:

	Federal Grant Share (\$ Requested)	Applicant (Cash/In-Kind)	3rd Party Contributors (In-kind)	Source/Need
Personnel	0	35,000	20,000	R. Cannarella, M. Jones, UH staff & Interns
Travel	10,000	0	0	R. Cannarella, M. Jones
Equipment	2,500	0	0	In House GIS needs
Supplies	0	2,000	0	Paper (brochures, SWARS drafts), printer ink, binders, etc.
Contractual	50,000	3,000	10,000	GIS analysis, remote imagery, interactive SWARS website
Other	7,500	5,000	0	Overhead
TOTAL	75,000	45,000	30,000	\$150,000

BUDGET NARRATIVE: The majority of Federal funds will be used for contractual services for GIS analysis, imagery acquisition, and in support of various University of Hawaii Internships. Travel funds will be used in support of Ronald Cannarella and Michelle Jones' attendance at the May 4-8, 2009 Pacific Island Committee Annual meeting in the Republic of Palau; as well as support intra-state island travel for staff and collaborators. The State and 'others' will be providing a total of \$75,000 in match, both from cash and in-kind sources. A significant portion of the State match will come from State funded staff i.e., Ronald Cannarella and Michelle G. Jones. Non-State key match parterres will be the

University of Hawaii at Manoa and Hawaii Community College through various Professor time involved in scientific analyses, economic modeling predictions and the use of students/interns. Match will also be provided by the State Forest Stewardship Advisory Committee, non-Federal members of the State Technical Advisory Committee, costs associated with public meetings introducing and advising the public about SWARS, local non-profits, and others.

KEY PERSONNEL: Ronald Cannarella and Sheri Mann will be the primary staff devoted to this grant and the development of the Hawaii SWARS. Other key staff that will be involved are Robert Hauff, Wayne Ching, Michelle G. Jones and Michael Constantinides.

Timeline and Milestones for Hawaii State-Wide Assessment of Forest Resources and State-wide Resource Strategy (Hawaii SWARS)

SWARS TASK TIMELINE	DATE DUE	DATE COMPLETED	PROGRESS REPORTS are due 30 days following the timeline DUE DATE	COMMENTS
Perform resource condition and trends analysis	July 2009		8/31/09	
Conduct partner consultation of assessment and analysis	August 2009		9/30/09	
Finalize assessment document to share with partners	October 2009		11/30/09	
Develop resource strategy/host partner workshop to create action plan	November 2009		12/31/09	
Create draft assessment and resource strategy(SWARS)	January 2010		2/28/2010	
Review draft SWARS and present at 2010 PIC	February 2010		3/31/2010	
Create FINAL SWARS present to S&PF	May 2010		Final SWARS must be submitted as report NLT	

SWARS TASK TIMELINE	DATE DUE	DATE COMPLETED	PROGRESS REPORTS are due 30 days following the timeline DUE DATE	COMMENTS
			5/31/2010	
SUBMIT FINAL SWARS to secretary of Agriculture	June 18,2010			
	Timeline must be kept as falling behind could cause failure meet the 6/18/2010 due date			

APPENDIX A

Data Availability for Hawaii SWARS

Maps/Data per SWARS final guidance see attached	Available? GIS or hardcopy?	Unavailable
Forest land & forest patches	Available, GIS	
Ecological Zones (vegetation, etc.)	Available, GIS	
Land ownership <i>US Federal government</i> <i>Government (state & federal)</i> <i>Private industrial forestland (Hawaii only)</i> <i>Private (other)</i>	Available, GIS	
Forest Health: Maps of insect, disease, and invasive plant and animal species occurrence	Available, GIS but a consolidated layer must be derived from existing data	
Watersheds (watershed boundaries) / aquifers	Available, GIS	
Public water supplies <i>Water wells, aquifers supplying public water supply (intake points)</i>	Available, GIS	
Streams, coastlines (can derive buffer zones from this) (information if available on condition of riparian and coastal strand vegetation)–	Available, GIS	
Wetlands / forested freshwater wetlands, mangroves, taro pits (hydric soils)	Available, GIS	

(Terrestrial) Threatened and endangered species / include both listed species and species of concern, rare habitats, ecosystems, and "areas of biological significance"	Available, GIS	
Protected areas <i>Parks & buffer zones around them, including land adjacent to marine parks</i>	Available, GIS	
Slope / Soils maps / geology	Available, GIS	
Threat of development <i>Current & projected population densities</i>	Available, GIS but must be derived from existing data	
Fire risk / Data on occurrence/risk of wildfires & structural fires	GIS (in progress via LANDFIRE and independent mapping project. Deliverables for both projects due by July 15, 2009)	
5YR UCF Plans	Available (does not include maps or GIS)	
Stewardship plans	Available, GIS	
Fire plans	Available, GIS	
AON Legacy	Available, GIS	
Other plans-specify	DOFAW Management Guidelines (in progress)	

Data Source: Ronald Cannarella, DLNR/DOFAW March 19, 2009