

Pacific Fire Science Consortium

A proposal to the US Joint Fire Sciences Program
In response to BLM/JFSP RFA No. FA-RFA-11-S Task 3
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1. Statement of Need

Wildfire is a large and growing threat to native ecosystems of Hawaii and the seasonally dry U.S. Affiliated Pacific Islands, and the highly endangered flora and fauna they support. This threat originates with invasion of native ecosystems by fire-prone exotic grass and shrub species that have brought novel fire regimes to the region – with serious impacts to cultural and natural resources, and the health and safety of the region’s citizens. Wildfires have greatly reduced the extent of tropical dryland forests (< 2% their original cover), impacted large areas of dry to mesic habitat, and increased the threat of extinction for hundreds of Hawaii’s T&E species – most of which are island endemics. Further, rapid development and urbanization has created a wildland urban interface that exposes residents and millions of visitors to wildfire hazards. Finally, climate in Hawaii has warmed over the past 30 years at a rate faster than the global average, with future warming anticipated to greatly exacerbate wildfire hazards. Despite an urgent and growing need for enhanced capacity in fire science and management, the highly diverse and dispersed Islands of Hawaii and the U.S. Affiliated Pacific lack region-specific fire related information that is organized, comprehensive, understandable and accessible by managers. To deal with this need, the region will benefit greatly from a fire science consortium that will: 1) focus on the region’s diverse and unique landscapes and wildfire issues; 2) link managers to Pacific-relevant information, training, and resources; 3) coordinate, communicate and expand the scope of regional fire science and management; and 4) enhance collaboration across the Pacific’s scientific and resource management communities.

In January 2011, the JFSP awarded a planning grant to the Pacific region. The collaborators on this planning grant used the award to establish the Pacific Fire Science Consortium (PFSC), which has supported diverse planning activities leading to this full proposal. Following meetings and the release of the PFSC’s 1st newsletter in April 2011 (www.hawaiiwildfire.org/Pacific-Fire-Science-Consortium.html), the PFSC created and released across the region through existing agency networks a comprehensive needs assessment in the form of a web-based survey. Our assessment team included USFS research scientists, Hawaii Wildfire Management Organization (HWMO) social scientists and fire managers, and program managers with the Pacific Disaster Center and the DOD. The survey targeted potential end-users of the PFSC to better understand how the PFSC could address specific “major challenges” previously identified through live interviews with fire managers and scientists across the region: 1) easier access to information; 2) better and more comprehensive information; 3) improved technical assistance; and 4) a more collaborative information transfer environment. The 48 survey respondents identified a diversity of specific needs under each of these categories. To gain a better understanding of survey results, the PFSC then held follow-up meetings (Focus group sessions on Oahu and Hawaii Island), presented at conferences (Pacific Island Watershed Institute, Hawaii Association of Watershed Partnerships, Hawaii Conservation Conference), and attended/hosted regular agency/organization meetings and workshops (HWMO Board, Hawaii Post-Fire Restoration Coordinating Group, Big Island Wildfire Coordinating Group, Watershed Partnerships, Community Firewise Program). Collectively, these activities have provided the PFSC with geographically, culturally, politically, and scientifically diverse expertise and jurisdictional coverage needed to address the PFSC’s four major challenges, described below.

Easier Access to Information Sources – The Pacific region has no centralized, fire-focused information source, and nearly all respondents identified that Pacific-relevant information to assist with decision-making and fire management plan development is challenging to access. Region managers are left to use Internet search engines to locate information of sometimes uncertain reliability. Some peer-reviewed sources, such as journal articles, are often accessible only through academic institutions or for purchase, and so are not readily available to managers. Even when broadly relevant publications are accessible, applicability to specific management situations is often hindered by differences in geography or practices, writing styles that are difficult to interpret by managers, and lack of content describing

“management implications”. As a result, managers most often learn through on-the-job training and trial-and-error experience. Upper level resource managers and agency leaders also identified the need for formal interagency agreements for data and information sharing and a data management structure to promote knowledge and technology transfer. In follow-up meetings, nearly all managers responded that they would use a centralized, web-based, and Pacific-focused clearinghouse for readily accessible, relevant, and understandable summaries addressing specific management needs. Other suggestions included new Memoranda of Understanding for information sharing among partners, and access to a web-site hosting fire-science-related publications.

Better and More Comprehensive Information – The survey asked what types of information are most often used in making management decisions, and what types of new information would be most useful in managing fire in the region. In focus-group meetings, we asked participants to describe unmet information needs, especially with regards to scientific research and real-time data. High resolution fuels maps, associated fire danger and behavior information, and state-and-transition modeling capacity were all identified as critical needs because “this information is inadequate or lacking across the region”. Most of the data used to support local fire danger rating systems are derived from continental studies, and have been shown repeatedly to be inadequate for local applications. Many stakeholders also asked for greater capacity for real-time data collection and trend analysis – especially for weather (e.g. Honolulu and Guam National Weather Service Forecast Office products), fuel loading, fuel moisture content, hazard thresholds, potential fire sites, site-specific and species-specific model outputs, and drought maps/warnings. Further suggestions included the PFSC promoting creation of new information while also serving as a clearinghouse for existing information; expanded collaboration on research proposals with explicit input from managers; and a central website connecting users to data, maps and trend analyses.

Improved Technical Assistance – Information and technology transfer were identified in the survey as the most important challenge area (by a large margin) for the PFSC, and it was discussed in depth by participants during follow-up meetings. In the past century, fire threats have expanded dramatically across the region, but local capacity to deal with these threats, especially resources and training, have not kept pace. Managers specifically identified pre-fire and post-fire land management training and wildfire suppression and mitigation as severely constrained by inadequate funds. Further, they noted that new training opportunities including decision support tools would help managers prioritize management actions and better understand outcomes. Respondents suggested that requested information should be delivered as “translated” science summaries and “hands-on” training opportunities. These synopses should synthesize science into a set of recommendations for managers to help build a broader understanding of new ways to deal with wildfire threats across the region. Other suggestions included: a data-base of Pacific-specific or otherwise relevant technical research; coordinated sharing and access to equipment (e.g., cameras, weather stations); expanded training opportunities (e.g., webinars, workshops); web-based ‘Ask an expert’ service; and pre- and post-fire Best Management Practices.

More collaborative information transfer environment – Survey results and follow-up meetings identified the lack of sharing mechanisms among partners and islands as the biggest hindrance to effective information sharing. Managers requested improved communication mechanisms and a feedback process between scientists and managers to share new information, and to help scientists conduct research that better addresses management needs. All survey and focus group participants responded strongly that the preferred mechanisms for information transfer include web-based tools and regular meetings, symposia and workshops. Managers emphasized that managers want the PFSC to: 1) facilitate and provide science and information that directly addresses their needs; 2) organize information by responsibility area (suppression, land management, science, etc.); and 3) when necessary and possible, facilitate one-on-one practitioner-researcher exchanges to better address issue or site-specific needs. Other suggestions included: targeted list-serves for fire science topic areas; web-based and facilitated discussion boards; targeted symposia at workshops and conferences; list of PFSC partners, areas of expertise, and resources; and interactive maps showing study sites, describing key research findings, available extension and outreach products, and points of contact.

2. Geographic Region

Hawaii and the U.S. Affiliated Pacific contain a remarkable diversity of ecosystems, geographies, and cultures, spanning an equally large range of climates – from tropical lowland forest to alpine deserts. While species, ecosystems and associated restoration and fire mitigation strategies may vary across the region, the lack of a coordinated and effective knowledge transfer system is common to the entire region. To this end, the PFSC will support fire managers in Hawaii, Guam, American Samoa, Commonwealth of Northern Mariana Islands,



Figure 1. PFSC Region- Hawaii and US Affiliated Pacific by addressing wildfire issues through the multi-agency partnerships that support natural resource management programs across the region. The PFSC will coordinate clearly defined outreach between scientists and land/resource managers. While Hawaii will remain the hub for the PFSC because fire science capacity is most developed in Hawaii, the PFSC will extend programs into the U.S. Affiliated Pacific. The part-time Western Pacific Outreach position based in Yap (see PFSC Structure and Governance section) will assist the PFSC in helping to deliver products to and assist fire managers across the U.S. Affiliated Pacific. All four PFSC positions will support bi-directional information and technology transfer across the region.

3. Consortium partners and investigators roles

As with other natural resources issues in the region, regional resources to support fire science, extension and outreach are very limited. Currently, there are no permanent research or extension positions in the PFSC region whose primary focus is fire, despite significant expenditures by land managers on fire related management. The region currently has just one post-doctoral fellow (Andrew Pierce, UH Manoa / USDA Forest Service) and one Ph.D. student focused on fire science. The region's few scientists who conduct fire-related research do so because the need is enormous, but they also direct much larger non-fire research programs in other natural resources fields. This lack of focused fire science capacity is troubling because ecosystem and watershed function, health of near shore environments, T&E species conservation, and the region's WUIs are all highly impacted by fire. Therefore, the PFSC needs to follow a model that differs from continental consortia, which typically utilize a larger number of already existing fire-dedicated positions – each receiving a fraction of their salary as part of the JFSP Consortium program. We propose the PFSC to be staffed by three full-time positions, each co-funded by JFSP and hosting entities. An additional, USDA Forest Service funded part-time Outreach position in Yap will provide links to Western Pacific fire managers. Partners and participants agreed that to be effective, the PFSC will need to hire personnel who can concentrate fully on building the PFSC while also growing fire science and management capacity at universities and with agencies in the region. The four positions are carefully designed to address the spectrum of end-users identified through the needs assessment.

The PFSC will be led by Christian Giardina and Susan Cordell, Research Ecologists with the Institute of Pacific Islands Forestry, Pacific Southwest Research Station, and the Leadership Committee described in Table 1. The Leadership Committee will work with the PFSC Coordinator (USDA FS/University of Hawaii), the Hawaii Outreach Liaison (HWMO), the Western Pacific Outreach Liaison (USDA Forest Service), and the Fire Extension Specialist (University of Hawaii) to implement the actions described below. Staff and the Leadership Committee will be guided by an Advisory Panel (Table 1). Collectively, this larger team will receive feedback from and dialogue with all members of the broader fire science and management community including land management agencies, Universities, NGOs, and private land owners. Overall, the PFSC will be composed of PFSC staff and partners that include practitioners, managers, scientists and extension personnel – all with experience in fire science or management. Most Advisory Panel members have provided leadership to fire science, suppression, mitigation, or other management efforts in the region.

Table 1. The PFSC organizational structure and roles of individual contributing partners. PFSC Personnel will be hired by hosting institutions and co-funded by JFSP and the hosting institution. The Leadership Committee will be made up of committed fire science and management leadership in the region; these individuals will not receive compensation for serving on the Leadership Committee. Finally, the Advisory Panel is made of up leaders in fire science and management, with broad expertise at local, country, state and regional scales with federal, state and private sector ownerships.

PFSC Personnel	Role	Responsibility
PFSC Coordinator (TBD)	PFSC Coordinator	Coordinates activities of the PFSC
University of Hawaii Cooperative Extension (TBD), University of Hawaii	PFSC Extension Specialist	Leads extension activities for the region through the University of Hawaii
Elizabeth Pickett, Hawaii Wildfire Management Organization	PFSC Hawaii Outreach Liaison	Hawaii based outreach to local, county & state fire suppression and restoration programs, communities
Margie Falanruw, Institute of Pacific Islands Forestry, USDA Forest Service	PFSC Western Pacific Outreach Liaison	Western Pacific based outreach to local and state fire programs, schools and communities
Leadership Committee	Role	Responsibility
Christian Giardina, Institute of Pacific Islands Forestry, USDA Forest Service	Consortium Leader	Lead, overall coordination of PFSC across region
Miles Nakahara, Hawaii Wildfire Management Organization	Member of Leadership Committee	Lead, coordination of PFSC outreach efforts across region
Creighton Litton, Assistant Professor, University of Hawaii at Manoa	Member of Leadership Committee	Lead, coordination of PFSC research & extension across region
Susan Cordell, Institute of Pacific Islands Forestry, USDA Forest Service	Member of Leadership Committee	Co-lead, overall coordination of PFSC across region
Andy Beavers, Center for Environmental Management of Military Lands	Member of Leadership Committee	Co-lead, overall coordination of PFSC across region
Wayne Ching, Hawaii Division of Forestry and Wildlife	Member of Leadership Committee	Co-lead, coordination of PFSC outreach efforts across Hawaii
Eric Moller, Department of Defense (Army)	Member of Leadership Committee	Co-lead, coordination of PFSC outreach efforts across region
Carolyn Stewart, Hawaii Wildfire Management Organization	Member of Leadership Committee	Co-lead, coordination of PFSC research & extension across region
Advisory Panel	Role	Area of Expertise
Michelle Mansker, Department of Defense (Army)	Advisory Panel	Fire Science & Management,
Stan Goosby, Pacific Disaster Center	Advisory Panel	Disaster Management
Trudie Mahoney, US Forest Service	Advisory Panel	Fire Programs & Management
Francis Fujioka, US Forest Service	Advisory Panel	Fire Meteorology and Modeling
Tony Ingersol, US NRCS	Advisory Panel	Natural Resources Management
John Henshaw, The Nature Conservancy	Advisory Panel	Land Conservation & Management
J.B. Friday University of Hawaii-Manoa	Advisory Panel	Forestry Extension
Dawn Greenlee US Fish and Wildlife	Advisory Panel	Fire Management
James Jacobi US Geological Service	Advisory Panel	Fire Science & Conservation

The Consortium Coordinator (1.0 FTE JFSP) will coordinate the PFSC and the production of all outputs and solutions resulting from PFSC activities. This person will facilitate communication and coordination among PFSC staff, partners and end-users, and assist both the Extension and Outreach positions in achieving PFSC objectives. The Consortium Coordinator will serve the following specific roles: 1) Serve as PFSC’s link to upper level management and decision-makers via regular attendance at Hawaii

Conservation Alliance, Pacific Island Climate Change Cooperative, and individual Watershed Partnership/Alliance meetings; 2) Represent the PFSC at national JFSP meetings, as well as other national fire-focused meetings; 3) Identify opportunities and secure support from regional to national funding sources for PFSC enhancement or development; 4) Develop, maintain and expand the PFSC website; 5) Coordinate PFSC Staff to ensure information is shared and addresses practitioner needs; 6) Periodically assess the effectiveness of the PFSC in meeting the needs of End-users, while identifying new needs; 7) Organize symposia at state and national meetings on PFSC topics; 8) Manage PFSC grants, budgets, staff work schedules, agendas, and grant reporting.

The UH Cooperative Extension Position (0.50 FTE JFSP, 0.50 FTE University of Hawaii) will facilitate communication between and link research and management via extension (75%) and research (25%) activities. This position will focus on developing research-based extension information and synthesizing recommendations for practitioners. Specific roles include: 1) Collect existing and new research according to practitioner needs, and develop and disseminate research-based extension information and products for practitioner use; 2) Help research understand management information needs and develop long-term research agendas; 3) Work with researchers to analyze models, forecast and communicate upcoming droughts, fire season starts, and other hazards, and communicate findings to practitioners directly or other PFSC positions; 4) Work with researchers to develop webinars for practitioners; 5) Lead or assist with grant writing for management-driven fire research projects and implement funded research proposals; and 6) Develop or coordinate the creation of decision support and other tools for pre-fire planning and post-fire restoration.

The Hawaii Outreach Liaison (0.50 FTE JFSP, 0.50 FTE HWMO) will lead outreach with on-the-ground fire managers and practitioners, communities, and private land-owners. This person will work to connect various sources of information from both the Extension Specialist and the Coordinator to a wide diversity of Hawaii-based, on-the-ground end-users, and will represent the PFSC at local to county fire suppression and fire management meetings. Specific roles include: 1) In collaboration with the Extension Specialist, identify local training needs and opportunities and provide training and information to fire suppression / fire prevention practitioners; 2) Attend local to state meetings of these practitioners to provide PFSC products and expertise; 3) Identify fire suppression/fire prevention information needs and communicate those back to Extension and Coordinator positions; 4) Create education and outreach materials for suppression/prevention (website links, webinars, pamphlets, etc.); 5) Secure funding and resources and develop materials for practitioner and community outreach; and 6) Develop decision support tools for suppression/prevention practitioners.

The Western Pacific Outreach Liaison (0.00 FTE JFSP, 0.25 FTE USDA FS) will coordinate the distribution of PFSC information to and ensure regular communication among Western Pacific end users. Specific roles include: 1) Represent PFSC at Western Pacific meetings (e.g., the annual Pacific Island Committee – a meeting of all State Foresters in the Pacific); 2) Facilitate PFSC communications between/among scientists and managers in the Western Pacific; 3) Identify local training needs and opportunities and secure appropriate resources; 4) Coordinate and provision of Pacific Island trainings and meetings via workshops and webinars; and 5) Coordinate PFSC Road shows in the Western Pacific.

Two or more PFSC positions will contribute to achieving the following activities: 1) Coordinate and lead a regional vision for information transfer and webinar development, transmission and online access; 2) Coordinate with PFSC partners and staff to develop and submit grant applications; 3) Provide information and technical assistance to private landowners and land managers; and 4) Identify, develop and coordinate existing or new training opportunities at local to national levels.

4. Consortium Structure and Governance

The PFSC will be structured with PFSC Staff directed by the PFSC Leadership Committee, which will be guided by the Advisory Panel. The Leadership Committee will be made up of the PI (Giardina), and Co-PIs Ching, Cordell, Litton, Moller, Nakahara, and Stewart, with Roberts Rules of Order and majority votes used to conduct PFSC business and make decisions. The Advisory Panel will be made up of 7 to 11 land management, fire science or conservation leaders in the region. This inter-agency Advisory Panel

will meet semi-annually to guide and provide feedback to the Leadership Committee and Staff regarding outputs, progress, failures and successes. The Leadership Committee, Advisory Panel and PFSC Staff will meet twice per year with one of the meetings in Honolulu during the annual Hawaii Conservation Conference, which attracts >1000 participants, mostly conservation professionals, from across Hawaii and the Pacific. The Leadership Committee initially will meet monthly and then quarterly. PFSC Staff will meet weekly to monthly as need dictates. See letters of support provided in Attachment 2.

5. End-User Communities

The needs assessment process identified and acquired key insights from private/local to federal land and fire management practitioners and suppression agents in Hawaii and the U.S. Affiliated Pacific. This included local, county, state, federal, private, and Western Pacific agencies and organizations. Large landowners dealing with fire (including private ranchers, Molokai Land Trust, The Nature Conservancy), NRCS, National Park Service, and decision-makers contributed to this effort. While the majority of respondents were from Hawaii, all US Affiliated Islands were represented during the assessment. The Western Pacific Outreach position will increase on-the-ground access to PFSC products for practitioners in the Western Pacific, and provide the PFSC with their needs – safeguarding the PFSC’s ability to transfer information and technology the diversity of end users in the region.

End user needs and preferences directed the design of the operations and governance structure to ensure stakeholder needs are being met and that the PFSC will be conducive to bi-directional information transfer in an accessible format. Feedback on the proposed outputs and governance were provided by practitioners at a special meetings held on Oahu in June at the University of Hawaii campus and in August during the 2011 Hawaii Conservation Conference, resulting in refined outputs that will effectively meet the needs of end users and efficiently use funds.

6. Planned Activities

The PFSC planned activities will be implemented by a combination of: 1) four staff (described above) who will communicate and work with the spectrum of end users; 2) informational products to include a comprehensive website, science translations, webinars, etc.; and 3) improved communications and outreach among fire managers, other practitioners, scientists, and regional Universities. All of these components are necessary for the PFSC to be effective, particularly the four staff to cover the diversity of end users. The PFSC has already schedule three events for November of 2011: a fire-focused PFSC session in Honolulu at the annual meeting of the Pacific Island Committee (state forestry leadership across the Pacific); the first meeting of the PFSC during the SAF conference also in Honolulu; and an all-day PFSC / DOD Strategic Environmental Research and Development Program supported state-of-fire-science workshop in Hilo at the Institute of Pacific Islands Forestry, where new research-derived technology to support fire management in Hawaii will be presented.

While the PFSC is based in Hawaii for logistical reasons and for ease in collaboration, the objective is to increasingly connect with Pacific-wide partners through our Western Pacific Outreach staff position, as well as continued collaboration through our partner networks (NRCS and USDA Forest Service staffing and funding networks across the Pacific). We anticipate that for the two years of the proposed project period, we will focus on: Hawaii, where there is infrastructure and capacity for fire science and management; Guam where there are large fire needs and because of a strong DOD presence resources to address these needs; Palau, where the USDA Forest Service (International Programs, Pacific Southwest Research Station, R5 Cooperative Fire) have invested substantial resources and a full time natural resources specialist to address land and fire management issues; and Yap, where the Western Pacific Outreach Position is located. A summary of the connections between end users (by user type and geography) and the PFSC’s planned informational products and communication and outreach activities are outlined in Table 2.

Activities Timeline – The various activities in the proposal will be implemented over the 24 month period of the grant. The existing HWMO – hosted PFSC website will be redesigned in months 1-4, or as soon as there is clear direction from JFS regarding centralized versus independent websites. Components will be added throughout the first year and updated regularly throughout the project period. The Listserv will be initiated at first launch of the website and maintained on an ongoing basis. Material products, webinars, workshops, symposia, training development will be initiated within in months 1-6 months, and new products developed and offered throughout the project period. Our long-term vision is to build programmatic and institutional support for fire science so that PFSC positions will eventually be supported with non-JFSP funds.

Table 2. PFSC End Users Reached by Planned Activities

End Users Reached/ PFSC Activities	End User Focus		End User Geography	
	Fire & Resource Management	Science & Fire Research	Hawaii- Based	Western Pacific Based
Staff Positions				
Coordinator	*	*	*	*
UH Cooperative Extension	*	*	*	*
Hawaii Outreach Liaison	*		*	*
Western Pacific Outreach Liaison	*			*
Website/ Informational Products				
Database of research relevant to the Pacific	*	*	*	*
Science synopses with management implications	*		*	*
Decision support tools	*		*	
Best management practice guides	*		*	*
Trend analysis data links	*	*	*	*
Training announcements	*		*	*
Ask an expert service	*	*	*	*
Interactive map with current and past research	*	*	*	
Communications and Outreach				
MOUs to formalize inter-agency data sharing	*	*	*	*
List-serves for specific topics	*	*	*	*
Printed and electronic material products compiled or created by PFSC (best management practices, newsletters, etc.)	*	*	*	*
Fire management, mitigation, and science webinars/ trainings	*		*	*
PFSC attendance at meetings to facilitate communication and feedback of products and research needs/ results	*	*	*	*

Leveraging Resources

This proposal leverages several programs that will lend support to the PFSC. These include: University of Hawaii at Manoa Cooperative Extension; Hawaii Wildfire Management Organization; The USDA Forest Service Climate Change Resource Center, USDA Forest Service / DOD investments into Decision Tool Development for the Pacific; Hawaii Conservation Alliance, Pacific Island Climate Change Cooperative, the Hawaii Association of Watershed Partnerships. Further, this proposal will take advantage of the active

fire-science research programs of the PI and Co-PIs, as well as the National Weather Service for short to long-term weather forecasting relevant to planning for changing fire and fuel conditions through their web-based newsletters, products and trainings. Finally, USDA presence in the Pacific via NRCS and Forest Service (Fire & Aviation Management, State & Private Forestry, International Programs, and Research and Development), along with State Forestry agencies will collaborate on training and capacity-building for the staff fire focused agencies. Because of travel costs and because most USDA staff are located in either Hawaii or California, training is typically delivered in intensive “short courses.” Examples relevant to fire and fuels management over the last several years have included: Plantation Establishment; Weed Control and Herbicide Use; Adaptive Management; Participatory Rural Appraisal & Strategic Planning; Pacific Climate and Forest Disturbance; Fire Prevention & Fuels Management; Restoration of Degraded Lands; and Community Wildfire Protection Planning. In the proposed PFSC, and where there are common regional needs, we envision delivering these type of short courses as a “road show,” with a team of resource people (PFSC Staff and Partners) visiting several islands (Guam, Palau, Yap) to deliver adaptations of the same short course, with follow-up in the subsequent year of this proposal. This maximizes relevance to island managers and involves a critical mass of people from that island. It also minimizes the time that island professionals spend traveling to attend training elsewhere. A second method of delivery will target and sustain training and technical assistance to an island where island managers are actively engaged in a promising project (e.g., Guam). Funding for travel can typically be secured from S&PF or FI&A grants, cooperative agreements or technical assistance budgets as well as International Programs funding – what we lack are professionals and staff time to lead these trainings. Travel by PFSC staff instead of trainees exposes staff to the full diversity of the region while building relationships with island professionals. Further, the Forest Service in collaboration PFSC Partners engage with island community colleges to increase island professionals’ basic education and capacity through the Pacific Professional Internship Program. In 2009-2010, ten young Micronesian and American Samoan “professional interns” attended the University of Hawaii for one semester and then implemented “focus projects” under the guidance of Forest Service and other mentors. Nominees have been identified for a second group of internships for 2012-2013, with some “focus projects” to include fire themes.

7. Program Effectiveness

The PFSC aims to address end users’ fire information and technology transfer needs, and will encourage feedback through three primary means: 1) ‘customer satisfaction’ questionnaires to website and training users; 2) formal interviews and re-interviews with end-users; and 3) yearly assessment/review of participants at annual PFSC meetings and symposia and PFSC Advisory Panel meetings. In the quarter following each regular assessment through each of these three channels, the Leadership Committee and PFSC Staff will evaluate feedback, develop a strategy for addressing concerns or new ideas, and develop a plan of work with staff to implement changes and new ideas. Results of these engagements will be posted on the web in the form of a detailed summary for end-users.

8. Budget and Funding Request (All Years)

	Requested	Contributed	Total
LABOR	\$293,000	\$185,000	\$478,000
TRAVEL	\$30,000	\$50,000	\$80,000
VEHICLES	\$12,000	\$12,000	\$24,000
Materials & Supplies	\$15,000	\$5,000	\$20,000
Other: Subcontracts	\$5,000	\$0	\$5,000
Total Direct Costs	\$355,000	\$252,000	\$607,000
Indirect Costs:	\$20,933	\$0	\$20,933
Total Requested Funding	\$375,933	\$252,000	\$627,933