

# PNW CESU

## Recent Staff Changes

Cooperative  
Ecosystem  
Studies Units



### NPS Research Coordinator for PNW CESU:

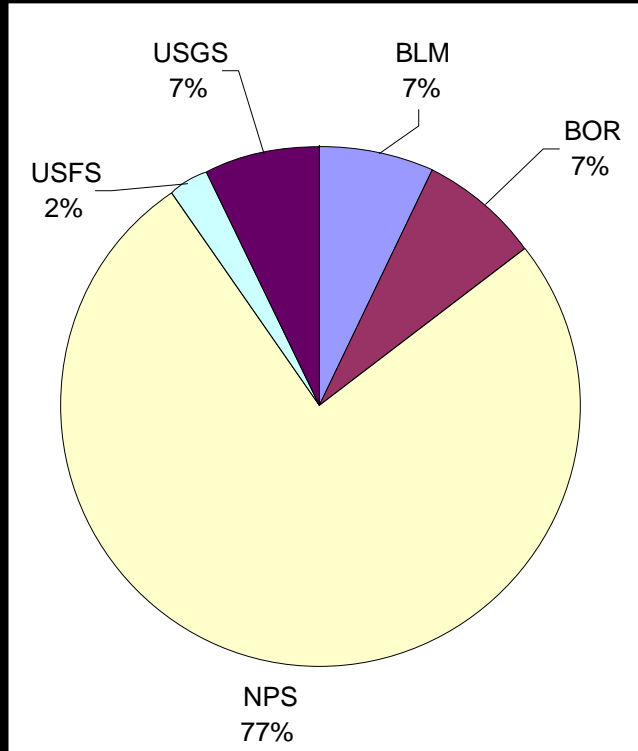
- Darryll Johnson retired in June 2008
- Angie Evenden (GB CESU) served as acting RC for the next 7 months
- Chris Lauver started in January 2009

### Program Coordinator / Admin Assistant for PNW CESU:

- Joel Siderius left in Jan 2009
- Debbie Confer took over position in Feb 2009

# PNW CESU FY09 Activity

## New Projects by Agency

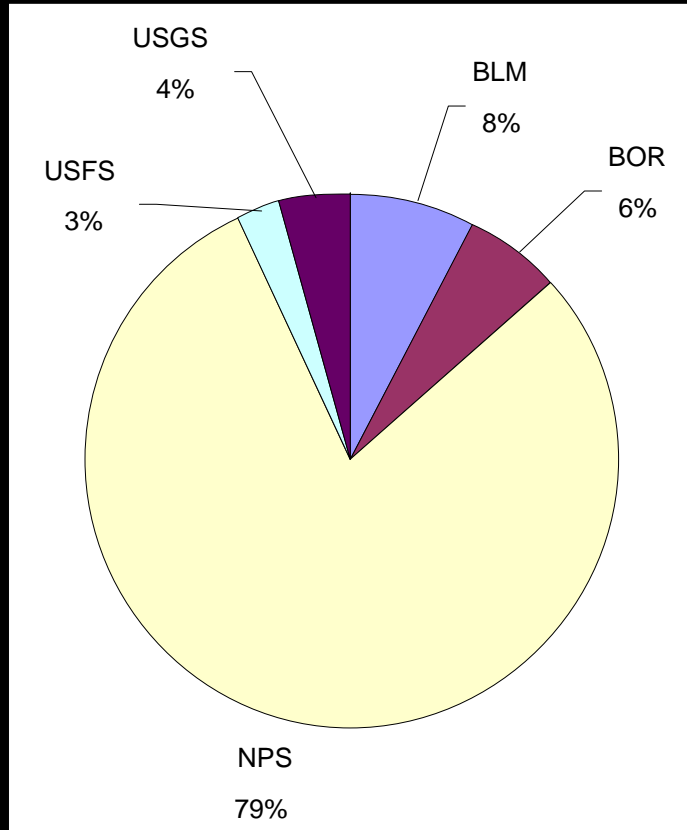


Agency	New Projects
BLM	3
BOR	3
NPS	31
NRCS	No data – yet
USFS	1
USFWS	No data - yet
USGS	3
<b>TOTAL</b>	<b>41</b>

FY08: NPS had 30 projects

# PNW CESU FY09 Activity

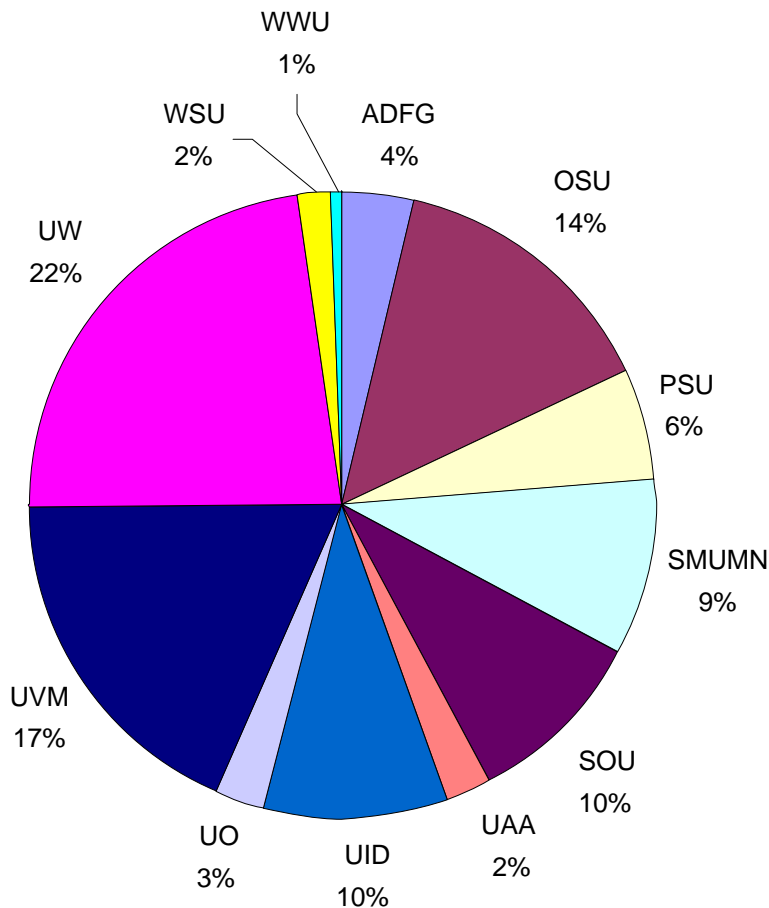
## New Project Funding by Agency



Agency	Funding
BLM	\$157,851
BOR	\$121,684
NPS	\$1,621,959
NRCS	No data - yet
USFS	\$52,585
USFWS	No data - yet
USGS	\$87,000
<b>Total</b>	<b>\$2,041,079</b>

# PNW CESU FY09

## New Project Funding by Univ. / State Partner



University/ State Partner	Funding
ADFG (1)	\$80,567
EWU	0
Heritage	0
OIT	0
OSU (9)	\$287,505
PSU (3)	\$120,000
SMUMN (4)	\$178,367
SOU (2)	\$195,025
Tuskegee	0
UAA (1)	\$45,000
UAS	0
UBC	0
UID (5)	\$193,970
UO (1)	\$52,000
UVM (4)	\$373,616
UW (7)	\$467,993
WSU (3)	\$33,124
WWU (1)	\$13,912
<b>TOTAL</b>	<b>\$2,041,079</b>

# PNW CESU FY09 Activity

Task Agreement XXXXXXXXXXXXXXXX[HW]0799016

Pacific Northwest Cooperative Ecosystem Studies Unit  
Task Agreement  
National Park Service

TASK AGREEMENT NO.: XXXXXXXXXXXXXXXX[HW]0799016  
08/20/2014

COOPERATIVE AGREEMENT NO.: HBW0706001

EFFECTIVE DATES: 08/20/2009 to 08/20/2014

COOPERATOR: Portland State University

PROJECT TITLE: Grand Canyon-Parashant National Monument Ethnographic Overview and Assessment

FY FUNDING: 2009 ACCOUNT # 8230-0901-UZE NOT TO EXCEED: \$80,000

TOTAL: \$80,000

PROJECT ABSTRACT:  
The National Park Service (NPS) and Portland State University (PSU) will collaborate in the development of an ethnographic overview and assessment for all federal lands in Grand Canyon-Parashant National Monument (PARA). This document will identify all American Indian tribes that are historically associated with these lands, as well as documented past use of lands and their resources within the Monument (PARA) by American Indian communities. The document will also document historical interactions between these American Indian communities and the Mormon ranchers and other European-American communities that occupied and used lands now within the Monument (PARA) in the 19<sup>th</sup> and 20<sup>th</sup> centuries. The final report will provide National Park Service staff with guidance on which tribes and other descendent groups should be consulted through future compliance efforts, and will identify lands and resources that may be of particular concern to the modern descendants of past Monument (PARA) users.

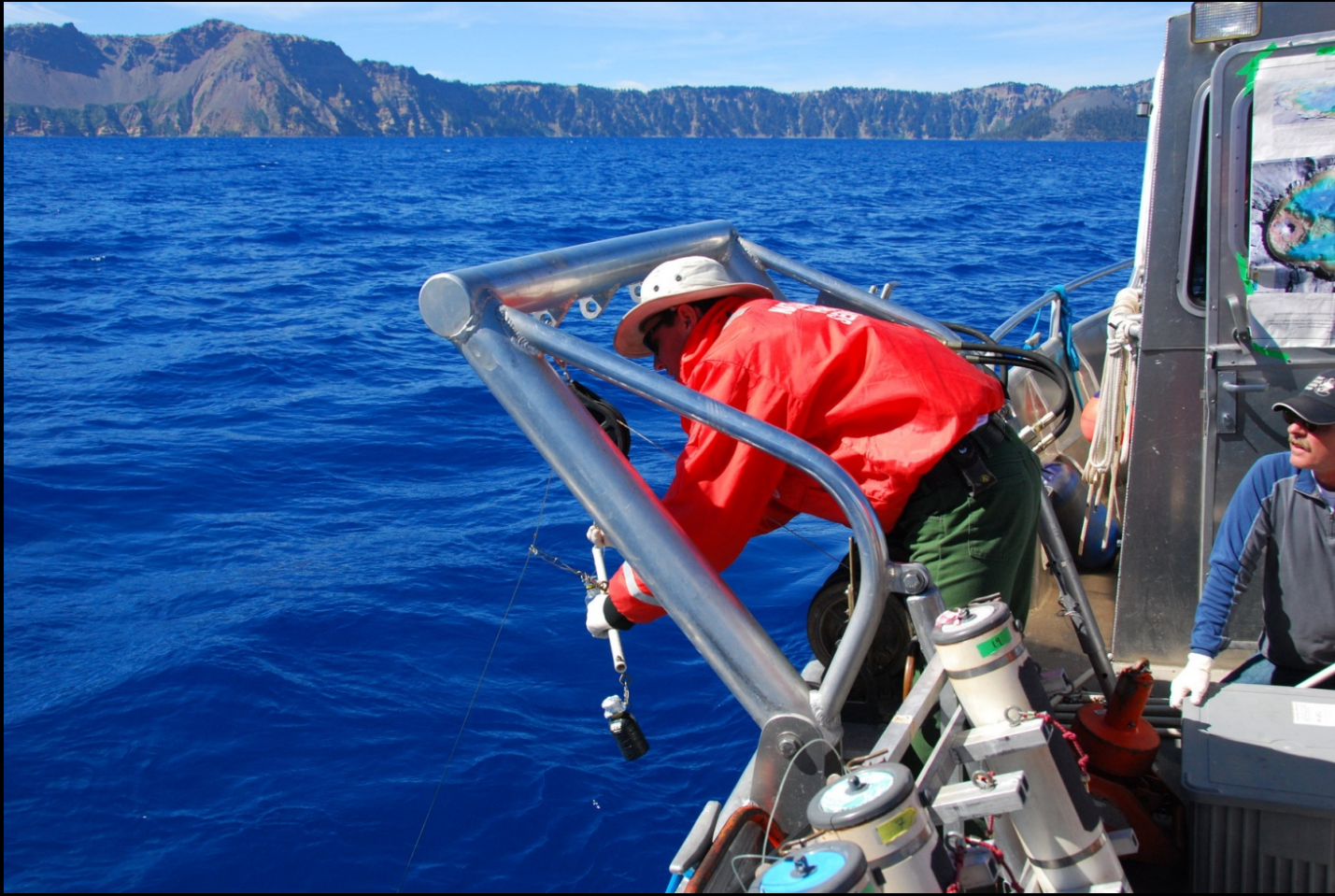
Cost modifications (or amendments) to existing agreements:

35 (22 NPS) = \$ 1,315,652

New projects + Mods = \$ 3,381,731

( + 22 NPS no cost modifications)

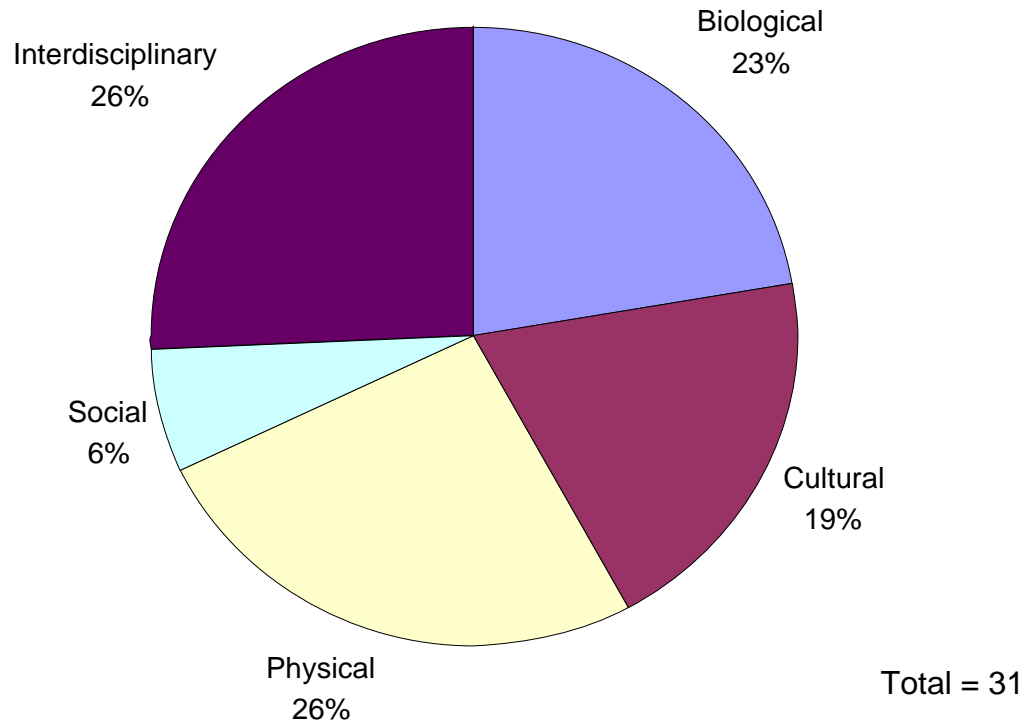
# Water quality sampling at Crater Lake NP



# NPS FY09 projects – partial list

J8W07090004	\$5,000	NPS	UID	Endophytes to Reduce Blister Rust Severity in Whitebark Pine at
J8W07090005	\$86,126	NPS	UVM	Pecos National Historical Park Ranch House Restoration Program
J8W07090006	\$59,385	NPS	UID	Development of a Monitoring Protocol for the American Pika
J8W07090007	\$3,948	NPS	OSU	Development of GIS Maps of Whitebark Pine Communities at
J8W07090008	\$9,984	NPS	WSU	Modeling Air Quality Impact Potential of a Nearby Concentrated Animal Feeding Operation for Minidoka National Historic Site
J8W07090009	\$32,000	NPS	OSU	Development of a Vegetation Map for Lewis and National Historical Park
J8W07090010	\$8,140	NPS	WSU	Atmospheric Modeling to Refine Lichen-based Critical Loads for the North American Marine West Coast Forests Ecological Region
J8W07090011	\$25,000	NPS	PSU	Assess Possible Cruise Ship Impacts on Huna Tlingit Ethnographic Resources in Glacier Bay NP
J8W07090014	\$5,000	NPS	UVM	Research to Support Visitor Management at Gold Rush National Historical Park
J8W07090015	\$157,505	NPS	UVM	Visitor Use Monitoring and Modeling of Existing and Forecasted Visitor Experience Conditions at Muir Woods NM and Alcatraz
J8W07090016	\$80,000	NPS	PSU	Grand Ethnographic Overview and Assessment
J8W07090019	\$45,000	NPS	UAA	Archiving Historic Bird Checklists from 's National Parks
J8W07090020	\$7,000	NPS	UW	Spatial Analysis of Recreational Impacts in Mt. Rainier
J8W07090021	\$100,404	NPS	SMUMN	Natural Resource Condition Assessment for Denali NP and Preserve
J8W07090024	\$178,208	NPS	UW	Development of a Hybrid-Receptor Model for Characterizing Air Quality Impacts from Wildland Fire Particulate Matter Emissions
J8W07090025	\$20,000	NPS	OSU	Developing and Refining Remote Sensing Tools for Monitoring Land Cover Change for the

# NPS FY09 projects by discipline





# Example - Social

## Pacific Northwest Cooperative Ecosystem Studies Unit Task Agreement National Park Service

**TASK AGREEMENT NO.:**  
J8W07090015

**COOPERATIVE AGREEMENT NO.:**  
H8W07060001

**EFFECTIVE DATES:**  
07/01/2009 – 07/30/2010

**COOPERATOR:** University of Vermont

**PROJECT TITLE:** Visitor Use Monitoring and Modeling of Existing and Forecasted Visitor Experience Conditions at Muir Woods National Monument and Alcatraz

**FISCAL YEAR FUNDING:** 2009

**ACCOUNT #**8180-FTA2-454

**NOT TO EXCEED:** \$157,504.80

### **PROJECT ABSTRACT:**

Muir Woods National Monument and Alcatraz parklands are managed by the Golden Gate National Recreation Area (GGNRA). Each of these areas receives intensive public use, with more than one million people visiting each of them annually. The GGNRA is currently embarking on a project to revise the General Management Plan (GMP) and develop Implementation Plans for these areas of the park. This visitor use and experience assessment is critical to that effort and includes the following: complete seasonal monitoring at a minimum of (4) site locations to include Persons At One Time (PAOT) counts at visitor site attractions, and encounter rate counts on the Hillside trail; visitor use route mapping of at least (400) representative visitors over (20) days in the summer season; documentation of duration of time spent walking to, and at, key attractions; identification of thresholds for potential standards; and, complete visitor use modeling of existing and forecasted visitor experience conditions (using indicator proxies) for existing and GMP alternatives on the quality of the visitor experience at Muir Woods National Monument. This effort will also include data collection and seasonal monitoring of visitor density at key sites on Alcatraz thru both counts and photo documentation, as well as identification of potential thresholds for visitor density standards on the island so as to gather all the inputs for a potential follow-up computer modeling effort for Alcatraz.

# Example - Physical

## Pacific Northwest Cooperative Ecosystem Studies Unit Task Agreement National Park Service

**TASK AGREEMENT NO.:**

J8W07090024

**COOPERATIVE AGREEMENT NO.:**

H8W07060001

**EFFECTIVE DATES:**

08/13/2009 – 09/30/2012

**COOPERATOR:** University of Washington**PROJECT TITLE:** Development of a Hybrid Receptor Model for Characterizing Air Quality Impacts from Wildland Fire Particulate Matter Emissions**FISCAL YEAR FUNDING:** 2009**ACCOUNT #** 2350-5555-454**NOT TO EXCEED:** \$178,208

**PROJECT ABSTRACT:** Smoke from fire emissions can be a significant contributor to fine particulate matter (PM<sub>2.5</sub>) and haze. In order to meet air quality regulations, state and federal regulators are beginning to explore reducing the impacts from smoke. To develop meaningful control strategies, federal land managers and policymakers need retrospective tools to apportion daily measurements of PM<sub>2.5</sub> to smoke from natural (e.g., wildfire) and anthropogenic (or prescribed) fires, as well as mobile and industrial sources. Traditionally, source attribution is conducted using chemical transport models (CTM) or receptor models. However, a new hybrid-receptor model has been developed that incorporates CTM results into the receptor modeling framework, and it has been shown to reduce errors from CTM or receptor models alone. In this project we propose to further develop and refine the hybrid-receptor apportionment model. This will involve incorporating additional *a priori* information, providing estimates of the uncertainties of the final source apportionment results, and optimizing the model to apportion the smoke to fire types and states. The model will explicitly incorporate source profile for biomass burning secondary organic aerosols (SOA), and *a priori* source attribution results will be developed using a new simplified CTM capable of estimating the contributions from various source types. The model will also be generalized to estimate contributions from specific source regions. In addition, synthetic datasets will be developed to test, evaluate and validate the hybrid model. The evaluated hybrid-receptor model will be transferred to the National Park Service for use in air quality assessments.

# Example - Cultural

## Pacific Northwest Cooperative Ecosystem Studies Unit Task Agreement National Park Service

**TASK AGREEMENT NO.:**  
J8W07090011

**COOPERATIVE AGREEMENT NO.:**  
H8W07060001

**EFFECTIVE DATES:**  
07/08/2009 – 03/30/2012

**COOPERATOR:** Portland State University

**PROJECT TITLE:** Assess Possible Cruise Ship Impacts on Huna Tlingit Ethnographic Resources in Glacier Bay

**FISCAL YEAR FUNDING:** 2009

**ACCOUNT #**9815-0082-703

**NOT TO EXCEED:** \$25,000

**PROJECT ABSTRACT:** Situated within Glacier Bay National Park (GLBA), Glacier Bay proper (GBP) represents an important component of the Hoonah Tlingit traditional territory. Glacier Bay is also a significant tourist attraction, most commonly visited by cruise ship passengers as part of larger Alaska cruise itineraries. The National Park Service has completed an environmental impact statement, the Vessel Quotas and Operating Requirements Environmental Impact Statement (VQOR), to assess the potential outcomes of different cruise ship number scenarios. As a result of the VQOR, the Superintendent of GLBA, based on the best available data, can increase or decrease the numbers of cruise ships entering GBP. The Glacier Bay Science Advisory Board (GBSAB) has directed the Superintendent to develop a research and monitoring plan to identify and address the effects of cruise ship numbers on Huna Tlingit cultural values within GBP. To date, many of those values have been identified but no attempt has been made to assess how federal actions, such as increasing cruise ship numbers, might affect them. The objective of this study is to compile data that will be accessible to the Superintendent for use in an adaptive management approach in making decisions about annual cruise ship entry permit numbers. This research endeavor has two phases: Phase 1 will design the study plan, while a planned Phase 2 will implement the study and produce a report.

# Example - Biological

Task Agreement J8W07090006

## Pacific Northwest Cooperative Ecosystem Studies Unit Task Agreement National Park Service

**TASK AGREEMENT NO.:**  
J8W07090006

**COOPERATIVE AGREEMENT NO.:**  
H8W07060001

**EFFECTIVE DATES:**  
05/01/2009 – 09/01/2011

**COOPERATOR:** University of Idaho

**PROJECT TITLE:** Development of a Monitoring Protocol for the American Pika in Four Park Units

**FISCAL YEAR FUNDING:** 2009

**ACCOUNT #** 2126-0901-NII  
2126-0917-NNS

**NOT TO EXCEED:** \$29,385  
\$30,000  
**TOTAL:** \$59,385

**PROJECT ABSTRACT:** This Task Agreement details the steps by which Crater Lake National Park (CRLA), Craters of the Moon National Monument and Preserve (CRMO), Lava Beds National Monument (LAVE), Lassen Volcanic National Park (LAVO), and the Upper Columbia Basin Network (UCBN) Inventory and Monitoring Program will produce a comprehensive, peer-reviewed monitoring protocol for the American pika (*Ochotona princeps*) in each of the four parks. The pika is facing increasing risk of extinction as a result of accelerated climate change. UCBN and the partnering parks seek to establish baseline distribution estimates and to initiate long-term monitoring of pika occurrence patterns. Of particular interest is the current distribution of the species within each park with respect to elevation, information on the rate of local extinction and recolonization of recently extirpated areas, and identification of critical habitats that can be managed to support long-term persistence of pikas on NPS lands. A critical component of this effort is the development of a peer-reviewed protocol that will ensure inventory and monitoring data are high quality and are consistent among all parks, and that methods are sustainable over time. Implementation of this protocol will ensure that scientifically-credible estimates of pika status and trends can be obtained in each park. Deliverables from the project will include a monitoring protocol for each of the four parks, inventory reports for CRLA and LAVO, pika distribution maps for each of the four parks, and a Microsoft Access database for long-term management of pika survey data.

# Example - Interdisciplinary

Task Agreement J8W07090021

## Pacific Northwest Cooperative Ecosystem Studies Unit Task Agreement National Park Service

**TASK AGREEMENT NO.:**  
J8W07090021

**COOPERATIVE AGREEMENT NO.:**  
H8W07060001

**EFFECTIVE DATES:**  
08/17/ 2009 – 06/29/2011

**COOPERATOR:** St. Mary's University of Minnesota

**PROJECT TITLE:** Natural Resource Condition Assessment for Denali National Park and Preserve

**FISCAL YEAR FUNDING:** 2009  
2009

**ACCOUNTS** #2141-0903-NWZ (411C)  
#2141-0905-NWZ (411C)

**NOT TO EXCEED:** \$100,000  
\$ 404  
**TOTAL:** \$100,404

**PROJECT ABSTRACT:** The project provides an assessment of natural resource conditions for Denali National Park and Preserve. Through compilation and synthesis of existing scientific and information from multiple sources, and expert judgment from an interdisciplinary team of specialists, this project will: a) characterize park biological and physical resource conditions at appropriate scale(s); b) define threat and stress factors and their relationship to identified resources; c) create multi-layered spatial representations of condition and factors affecting condition; and d) supplement the existing park Resource Stewardship Strategy. Resource conditions, threats, and stressors are evaluated and depicted spatially (where possible) to facilitate use of project findings in a wide variety of park decision and planning processes, and for use in park reporting to the Department of Interior's Strategic Plan land health goals.

# FY09: Projects from other agencies

09FC101412/0	\$69,684	BOR	OSU	Distributed Temperature Sensing (DTS) System
09FC101416/0	\$15,000	BOR	PSU	Identify the Integrated Response of the Surface and Ground Water Hydrologic Systems to Climate Change
09FC101428/0	\$37,000	BOR	UID	Evaluating Water Management Responses to Global Climate Change Using Coupled Hydrologic and Economic Models
09-JV-11052007-214/0	\$52,585	USFS	UID	Protocols for Assessing Community Quality of Life for Land Management Planning
G09AC00264/0	\$15,000	USGS	WSU	Monitoring the Composition and Abundance of Zooplankton Communities in the above Bonneville Dam
G09AC00279/0	\$57,000	USGS	UW	Climate Impacts on Burn Severity in Three Forest Ecoregions of the United States
G09AC00417/0	\$15,000	USGS	OSU	An Assessment of Temporal and Spatial Trends in Historical Climate Data for San Francisco Bay Area Network Parks
L09AC16022/0	\$94,978	BLM	OSU	Water Quality Monitoring of Northern Vernal Pools
L09AC16023/0	\$52,000	BLM	UO	Paisley Caves Cultural Data Removal and Research
L09AC16030/0	\$10,873	BLM	OSU	Sea Grant: Early Detection and Rapid Response to Invasive Species

# PNW CESU

## FY09 issues and FY10



### Issues:

- NPS regional contracting office and task agreement with Univ. of British Columbia

### FY 2010:

- Master Coop & JV Agreement expires in Oct. 2010
- 5 year renewal process (self-assessment, manager's review)
- Strategic Plan
- Newsletter
- Web site improvements (other agency how-to documents)