

FINAL REPORT

National Park Service Protocol Reviews, Pacific Northwest Region

Task Agreement J9W88040027

Cooperative Agreement CA9088A00008

Conducted through the Pacific Northwest Cooperative Ecosystems
Studies Unit (PNW CESU)

July 2004-July 2012

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August 20, 2012

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In 2004, a Task Agreement was developed to provide peer review, and hopefully approval, of 10 scientific protocols meant to monitor status and trends of “Vital Signs” in the Pacific West Region of the National Park Service. The National Park Service Inventory and Monitoring Program is intended to provide scientifically credible measurements of resource conditions in units of the National Park System. This Task Agreement was amended a number of times to increase the number of protocols being reviewed and provide additional help to various I&M programs in the Pacific West Region.

Knowing the condition of natural resources in national parks is fundamental to the National Park Service’s ability to manage park resources. National Park managers across the country are confronted with increasingly complex and challenging issues that require a broad-based understanding of the status and trends of park resources as a basis for making decisions, working with other agencies, and communicating with the public to protect park natural systems and native species. Vital signs monitoring is a key component in the Service’s strategy to provide scientific data and information needed for management decision-making and education. Vital signs also contribute information needed to understand and to measure performance regarding the condition of watersheds, landscapes, and marine resources, and biological communities.

Park vital signs are selected physical, chemical, and biological elements and processes of park ecosystems that represent the overall health or condition of the park, known or hypothesized effects of stressors, or elements that have important human values. Monitoring data help to define the normal limits of natural variation in park resources and provide a basis for understanding observed changes and possible management connections. Understanding the dynamic nature of park ecosystems and the consequences of human activities is essential for management decision-making aimed to maintain, enhance, or restore the ecological integrity of park ecosystems and to avoid, minimize, or mitigate ecological threats to these systems.

From: “Overview of Vital Signs Monitoring”
published by National Park Service

Each region of the National Park System has groups of parks organized into “networks”, for which a Vital Signs Monitoring Plan was developed independent of the Task Agreement being summarized here. There are 8 biogeographical networks within the NPS Pacific West Region: NCCN = North Coast and Cascades Network; UCBN = Upper Columbia Basin Network; KLMN = Klamath Network; SFAN = San Francisco Bay Area Network; SIEN= Sierra Nevada Network; MEDN = Mediterranean Coast Network; MOJN = Mojave Desert Network; and PACN = Pacific Island Network. Within each network’s Vital Signs Monitoring Plan, resource inventories and monitoring protocols were described within the framework identified within the NPS Ecological Monitoring Framework. For each Vital Sign identified (or groups of Vital Signs), a monitoring protocol was or will be developed according to guidelines described by Oakley et al. (2003). As part of the adoption of each protocol, an external review of the protocol is required. The purpose of the protocol is development of high quality procedures “...required for the program to meet its goal of detecting changes in the status and trends of ecosystems under the protection and management of the NPS” (Oakley et al. 2003). The Task Agreement that this Final Report describes was the vehicle by which the initial Pacific West Region monitoring protocols were reviewed.

Over the life of this Task Agreement, the number of protocols continued to increase above the original 10, although several proposed protocols were cancelled. A total of 67 draft protocols were reviewed (Tables 1 and 2), and another eight were not submitted for review by the review cutoff date of November 30, 2011 (Table 3). Of the 67 reviewed protocols, 55 successfully navigated the review process and were approved (see **Appendix 1**, sample approval letter, and **Appendix 2**, Protocol Review Approval Form).

The Task Agreement also supported three other activities: part-time assistance for the Mojave Network natural resources staff (over a two-year period by Joel Siderius), administrative reviews of protocols (first by Joel Siderius and later by Jason Bennett), and full-time editorial assistance for participating networks in the Pacific West region (over a two year period by Kris Freeman). As noted in the Budget section of this report, those activities totaled almost half of the total budget.

Budget

By the time of the last no-cost extension, the total budget had grown to \$502,682. A total of \$253,532, or about half of the budget, was intended for assistance to Mojave Network natural resources reports and editorial assistance for participating networks. Editorial expenditures within the Task Agreement were dependent on receiving draft reports from the networks, and those reports were not always forthcoming. Our editor, Kris Freeman, eventually took another job at the University of Washington and we were left with a surplus of her salary (~\$6500) in the budget, which was not spent.

A total of \$249,150 was budgeted for protocol reviews. These costs included the salary of the Protocol Review Coordinator (Agee), peer reviewer stipends, administrative costs of mailing, contracts for peer reviewers, etc. (Tracy Woodman, Joel Siderius, and Debbie Confer), and since

2010, administrative reviews of draft protocols (Jason Bennett). Due to some protocols being in the budget but never submitted, we had a surplus of about \$12,800 on the protocol review side of the budget. The average cost for a protocol review as roughly \$3500.

A. Reviewer costs. Each protocol was subject to at least two independent, blind peer reviews, in addition to an administrative review, and reviews by the PRC (me) and the NPS Pacific West Region I&M coordinator (Dr. Penny Latham). We asked for a two-month turnaround on reviews, and usually offered a \$400 “honorarium” upon receipt of the review. Outside reviewer costs varied considerably, for two reasons. Sometimes, we arranged for a reviewer to do the review without costs. At other times, the complexity of the protocol, or the inability to secure reviewers in a timely fashion (especially where a reviewer simply defaulted on the review), has led to review costs in excess of the average (in order to received a “rush order” review). The total cost for peer reviews was \$43,700, allocated as shown in Table 4.

Table 1. Protocols Completed Over Life of the Task Agreement (bold if completed January 2012 – July 2012)

Network	Protocol
KLMN	Intertidal Invasive Plants Landbirds Plant Communities WQ-Aquatic Communities-Lakes WQ/Aquatic Communities – Streams
MEDN	Reptiles and Amphibians Aquatic Amphibians
MOJN	Streams and Lakes
NCCN	Climate Forest Vegetation Landbirds Lowland Lakes Landscape Dynamics 1 Intertidal Fish Mount Rainier Glaciers LEWI Elk MORA/OLYM Elk Mountain Lakes Water Quality Prairies Subalpine and Alpine Vegetation Landscape Dynamics 2

PACN Benthic Marine

Table 1 (continued). Protocols Completed Over Life of the Task Agreement (bold if completed January 2012 – July 2012)

Network	Protocol
PACN	Focal Plant Communities
	Freshwater Animal Communities - Streams
	Landbirds 1 (but revised and resubmitted as Landbirds 2)
	Water Quality
	Marine Fish
	Status/Trends of Established Invasives
	Climate
	Landbirds 2
	Groundwater Dynamics
SFAN	Early Detection of Invasive Plants
	Landbirds
	Northern Spotted Owl
	Pinnacles Prairie Falcons
	Rocky Intertidal
	Streamflow
	Pinnipeds
	Salmonids
	Pinnacles Riparian and Wetlands
	GOGA Snowy Plover
SIEN	Landbirds
	Lake Water Quality
	Weather and Climate
UCBN	Camas
	Sagebrush-steppe
	Aspen
	Pika
	Water quality
	Stream Channel Characteristics
	Riparian Condition
UCBN/ KLMN/ SIEN	Three-network White Pine

Table 2. Protocols that were in Review Progress at end of Task Agreement

Network	Protocol	State of Review
KLMN	Integrated Cave Monitoring	Returned to network 3/22/12
MEDN	Stream Water Quality	Returned to network 6/28/10 and withdrawn
	Native Plant Communities	Returned to network 2/6/12
	Invasive Plants	Returned to network 1/24/12
MOJN	Selected Large Springs	Returned to network 3/31/11
	Integrated Upland Communities	Conditionally approved 7/7/12
PACN	Seabirds – Hawaiian Petrels	Conditionally approved 5/23/12
	Invasive Plants – Early Detection	Returned to network 6/14/12
	Anchialine Pools	Returned to network 3/6/12
SFAN	PORE Snowy Plover	Returned to network 9/29/11
SIEN	Wetland Ecological Integrity	Returned to network 1/6/2010
UCBN	Osprey	Approved but approval later withdrawn due to survey constraints

Table 3. Protocols Not Submitted for Review under this Task Agreement

Network	Protocol and Due Date
KLMN	Landuse and Landcover
MEDN	Marine Water Quality – cancelled
MOJN	Invasive Exotic Plants
	Air Quality and Climate
	Riparian Vegetation
PACN	Fisheries Harvest
	Landscape Dynamics - cancelled
SFAN	Amphibians/Reptiles (PINN) - cancelled
	Vegetation Communities – not funded under this Task Agreement
SIEN	Streams and Rivers – not funded under this Task Agreement

Table 4. Costs of Protocol Reviews by year of review and protocol.

Year	Protocol name	Cost
2005	SFAN Pinnacles Prairie Falcons	\$ 500
	SFAN Streamflow	\$1000
2006	MEDN Reptiles/Amphibians	\$ 300
	PACN Benthic Marine	\$ 600
	NCCN Lowland Lakes	\$ 800
2007	NCCN Landbirds	\$ 0
	MEDN Aquatic Amphibian	\$ 400
	SFAN Landbird	\$1100
	PACN Landbird	\$ 600
	UCBN Camas	\$ 800
	KLMN Intertidal	\$1100
	NCCN MORA Glaciers	\$ 500
2008:	PACN Water Quality	\$ 400
	KLMN Landbird	\$ 900
	KLMN Invasive Plants	\$ 900
	NCCN Climate	\$ 400
	NCCN Intertidal	\$1000
	NCCN Landsat 1	\$ 0
	PACN Climate	\$ 800
	SFAN Early Detection Invasives	\$ 900
	SFAN Pinnipeds	\$1000
	SFAN Spotted Owl	\$ 500
	SFAN Pinnacles Prairie Falcons	\$ 500
	SIEN Landbird	\$ 500
	UCBN Water Quality	\$ 400
	UCBN Sagebrush-steppe	\$ 400
	UCBN Aspen	\$ 800
2009:	SFAN Salmonids	\$ 400
	SFAN Pinnipeds	\$ 800
	PACN Marine Fish	\$ 800
	KLMN Plant Communities	\$ 400
	KLMN Invasive Plants	\$ 400
	SIEN Lake Water Quality	\$ 400
	MEDN Stream Water Quality	\$ 400
	UCBN Osprey	\$ 800
2010:	SFAN Pinnacles Wetlands	\$ 400
	KLMN Aquatic Lakes	\$ 800
	PACN Focal Plant Communities	\$ 800

Table 4 (continued). Costs of Protocol Reviews by year of review and protocol.

Year	Protocol name	Cost
2010	PACN Hawaiian Petrel	\$ 800
	PACN Landbirds 2	\$ 400
	SFAN PORE Snowy Plover	\$ 800
	SIEN Wetland Integrity	\$ 800
	UCBN Pika	\$ 800
	UCBN Riparian Condition	\$ 800
	KLMN Caves	\$ 800
	PACN Established Invasive Plants	\$ 800
	KLMN Aquatic Streams	\$ 900
	MOJN Stream/Lake Water Quality	\$1200
	SFAN Rocky Intertidal	\$ 800
	NCCN Fish	\$ 0
	2010	NCCN Mountain Lakes
NCCN Forest Vegetation		\$ 0
SFAN GOGA Snowy Plover		\$ 800
UCBN Stream Channel		\$ 400
NCCN Water Quality		\$ 900
NCCN LEWI Elk		\$ 800
NCCN Prairies		\$ 800
2011	KLMN/UCBN/SIEN White Pine	\$ 400
	PACN Groundwater	\$ 0
	PACN Freshwater Animal Comm.	\$ 0
	MOJN Selected Large Springs	\$1200
	PACN Early Detection	\$ 400
	NCCN Alpine/Subalpine	\$ 800
	NCCN MORA/OLYM Elk	\$ 0
	SIEN Climate	\$ 800
2012	MEDN Invasive Plants	\$ 800
	MEDN Plant Communities	\$ 800
	MOJN Upland Vegetation	\$ 400
	NCCN Landscape Dynamics	\$ 800
	PACN Anchialine Pools	\$ 0

The cost of the average individual honorarium was \$312 (below the budgeted \$400 per review), or \$624 per protocol (below the \$800 budgeted), due to occasional cost-free reviews by Federal or some State employees, requested when non-Federal reviewers were scarce or the Federal employee was clearly the expert, volunteer reviews, or where peer review was completed through the USGS.

B. PRC costs. The PRC (Agee) was paid a total of 39.6 weeks of salary support (1585 hours) through the lifespan of the project (2004-2012). Water quality protocols required some extra costs due to UW taking over the primary review responsibility. The single largest expenditure (20% of total hours) has been for administrative work not associated with any single project (examples included startup time at the project initiation, periodic meetings with PNW-CESU and Dr. Latham, tasks such as allocating undivided invoices to networks, preparation of progress reports, budgeting, professional consultation, and the preparation of this report). Supervision and hiring expenses for Kris Freeman, our writer-editor, ended with her resignation to take a new job in September 2011. The administrative review process handled first by Joel Siderius and later by Jason Bennett through this project under hourly payroll status also raised my administrative costs.

C. Editor costs. In 2009, we hired an Editor, Kris Freeman, to assist the networks in formatting final protocols and other natural resources reports. Kris left in late 2011. Her salary was not associated with any of the protocol review costs.

D. Administrative costs. These costs were limited to PNW CESU efforts to receive protocols, get them to the PRC, arrange for FedEx of packages, pay invoices for the peer reviewers, etc. Debbie Confer has filled this role for the last several years.

Concluding Remarks

I judged the success of the Task Agreement not on the basis of number of protocols approved, but on a more difficult to judge basis of quality of review. I believe on that basis the Task Agreement was a resounding success. We also had a high proportion of protocols approved (over 80%), although most had to be revised (slightly to significantly) before final approval was granted. This Task Agreement made a significant contribution to the Inventory and Monitoring program of the Pacific West Region, National Park Service. A similar Task Agreement has been negotiated between the University of Washington and the National Park Service to carry this effort forward with a new set of protocols.

A CD with all the written correspondence related to peer reviews is enclosed with this report. It also contains an electronic copy of this final report (included in the folder "Progress Reports").

Literature Cited

Oakley, K.L., L.P. Thomas, and S.G. Fancy. 2003. Guidelines for long-term monitoring protocols. *Wildlife Society Bulletin* 31(4): 1000-1003.

Appendix 1
Sample Approval Letter



School of Forest and Environmental Sciences Box 352100
University of Washington, Seattle, Washington 98195

James K. Agee, Emeritus Professor of Forest Ecology
112 Winkenwerder Hall

Phone: none Fax: 206-543-3254
email: jagee@u.washington.edu

January 9, 2012

The review of the revised **Prairie Vegetation Monitoring Protocol for the North Coast and Cascades Network** has been completed. The protocol decision is

APPROVED

There were a couple of typos in the revised sections we received. On page 3 of the response, in the revision to SOP 6, line 6 states “The crew will then continues to walk”; “continue” should be singular. In the section titled “Prairie Protocol Sections with Significant Changes”, the bottom paragraph of the first page is smaller font than the other paragraphs, and line 3 reads “Multiple variations of FQA indices have been use throughout...” should read “in use” or “used”.

Congratulations on completion of the protocol and best of luck in implementing it.

Sincerely,

A handwritten signature in blue ink that reads 'James K. Agee'.

James K. Agee
PWR Protocol Review Coordinator

Appendix 2
Sample Protocol Review Approval Form
(for internal National Park Service use)

PROTOCOL REVIEW APPROVAL FORM

NAME OF NETWORK OR PARK(S): NCCN

TITLE and DATE OF REVIEW DOCUMENT: **Prairie Vegetation Monitoring Protocol**

NAME/AFFILIATION OF PERSON REQUESTING REVIEW*: Regina Rochefort, North Cascades National Park Service Complex

*Note that this would ordinarily be the Network Coordinator, but may be a park contact or principal investigator.

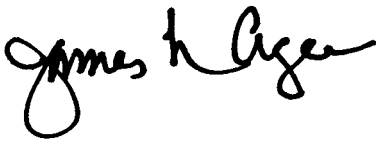
DATE OF SUBMITTAL: Revision submitted December 24, 2011

APPROVED [**XX**] NOT APPROVED []

Peer review of the above named document has been completed. Assurance is hereby given that the document and its review have met the National Park Service Inventory and Monitoring Program Peer Review Guidelines if the document is approved. A record of the review comments and revision strategy is on file.

NAME and TITLE of PROTOCOL REVIEW COORDINATOR*: James K. Agee, Emeritus Professor, College of Forest Resources, University of Washington, Seattle

*Note that this would ordinarily be the Regional I&M Coordinator, but may be an alternate if so specified under the Peer Review Guidelines.



January 9, 2012

Protocol Review Coordinator
Pacific West Region

Date

January 9, 2012

Penelope Latham
Pacific West Regional I&M Coordinator

Date