PROJECT SUMMARY REPORT

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1. Klamath Network Inventory and Monitoring Program
2. Southern Oregon University

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FISCAL / ADMINSTRATIVE RECORD

TASK AGREEMENT NO.:	MODIFICATIONS:	COOPERATIVE AGREEMENT NO.:	EFFECTIVE DATES:
J8W07070023	4	H8W07060001	08/15/2007 to 08/31/2012

COOPERATOR: Southern Oregon University

PRINCIPAL INVESTIGATOR: Dr. Greg Jones

AGREEMENT TECHNICAL REPRESENTATIVE: Dr. Daniel Sarr

PROJECT MANAGER: Dr. Dennis Odion

PROJECT TITLE: Implementation Planning for Vegetation Mapping at Lava Beds, Crater Lake, and Oregon Caves National Park units

PURPOSE OF MODIFICATION: To add additional financial assistance in the amount of $96,200 to provide Year 5 funding available from the NPS Vegetation Mapping Program. Also, this modification updates invoicing language and address in Article V.

FISCAL YEAR FUNDING:	ACCOUNT #:		NOT TO EXCEED:	
2007	2131-0703-NII (411C)			$86,800.00
2008	2131-0800-NII (411C)			$60,000.00
2009	2131-0902-NII (411C)			$84,852.85
2009	2131-0900-NII (411C)			$50,000.00
2010	2131-1002-NII (411C)			$124,950.00
2010	2131-1000-NII (411C)			$10,784.83
2011 (new)	2131-1103-NII (411C)			$96,200.00
			TOTAL:	**$513,587.68**

PROJECT OVERVIEW

This project was a collaborative effort between scientists with the Klamath Network Inventory and Monitoring and Southern Oregon University, working with the NPS/USGS National Vegetation Mapping Program. Dr. Dennis Odion was the project leader, designing and implementing the project with assistance from Dr. Greg Jones and Dr. Daniel Sarr. Dr. Sarr was also involved with fiscal planning and reporting to the national vegetation mapping program. The Klamath Network provided material assistance for some field work, and provided partial funding from its base vital signs budget.

The project is now completed, and all deliverables have been received, including:
1. A Project Technical Report: Odion, D., D. DiPaolo, L. Groshong, and D. Sarr. 2013. Vegetation Inventory Project: Oregon Caves National Monument and proposed expansion area. Natural Resource Technical Report NPS/ORCA/NRTR—2013/782. National Park Service, Fort Collins, Colorado.
2. A resource brief summarizing the report for managers and interesting publics.
3. Tabular Data (on file at the Klamath Network I&M Office) and from the NPS National Vegetation Mapping Program.
4. Spatial Data (on file at the Klamath Network I&M Office).

PROJECT EXECUTIVE SUMMARY/ABSTRACT:

The National Park Service Vegetation Inventory Program funded an effort, beginning in 2009, to classify and map the vegetation at Oregon Caves National Monument and its proposed expansion area (inclusive of the headwaters of Cave and Lake Creeks). Southern Oregon University staff performed the inventory work. The Klamath Network, Inventory and Monitoring Program coordinated the effort.

To classify the vegetation, we sampled 142 representative classification plots throughout the 1,820.8 hectare (4,499.3 acre) project area using traditional phytosociological methods (i.e., relevé sampling). The relevé plots were located and sampled primarily in 2009 and 2010. We identified 397 different vascular plant species in the classification plots, including many that were not previously recorded on the monument's species list. We classified the plot data into 34 plant associations using accepted statistical analyses. A key to the plant associations and description of each association are provided in Appendices B and C of the project report. Mapping of the vegetation polygons was completed via manual digitizing using the most recent National Agriculture Imagery Program (NAIP) imagery. A number of plant associations could not be separated based on unique photo-signatures in the imagery or because they were spatially intermixed forming physiognomic vegetation classes (equivalent to complexes and mosaics). Based on this analysis we therefore defined 19 physiognomic vegetation mapping classes. The map also captures management activities in the year in which they occurred. These activities included major forest vegetation manipulations such as clear-cutting and plantation establishment. The percent cover attribute for the primary and secondary (if present) vegetation in each polygon was added and coded. The final map product is a geographic information system (GIS) database with far greater descriptive power than the predefined areal units of a standard chloropleth map, and it can also be generalized into a standard map. We conducted the accuracy assessment (AA) in 2011 by placing 444 stratified random accuracy assessment plots throughout the project area. The field data were compared to the vegetation map resulting in an overall thematic accuracy (area weighted) of 80.4%.

To complete this vegetation inventory project we produced the standard deliverables as described and presented herein and stored on the digital video disk (DVD) or flash drive distributed with this report. The primary deliverables include:

1. This final report that includes plant association descriptions, the key to plant associations, description of the physiognomic map classes and their photo-signatures, accuracy assessment information, and project methods and results.
2. A resource brief summarizing the report for managers and interesting publics.
3. A GIS database containing the attributed vegetation polygons, classification plots, and accuracy AA points.
4. Digital photographs characterizing the classification plots and landscape features/objects of interest within the monument and proposed expansion area.
5. Federal Geographic Data Committee (FGDC)-compliant metadata for all of the spatial data.