

Great Plains Cooperative Ecosystem Studies Unit



A PERIODIC REPORT OF ACTIVITIES

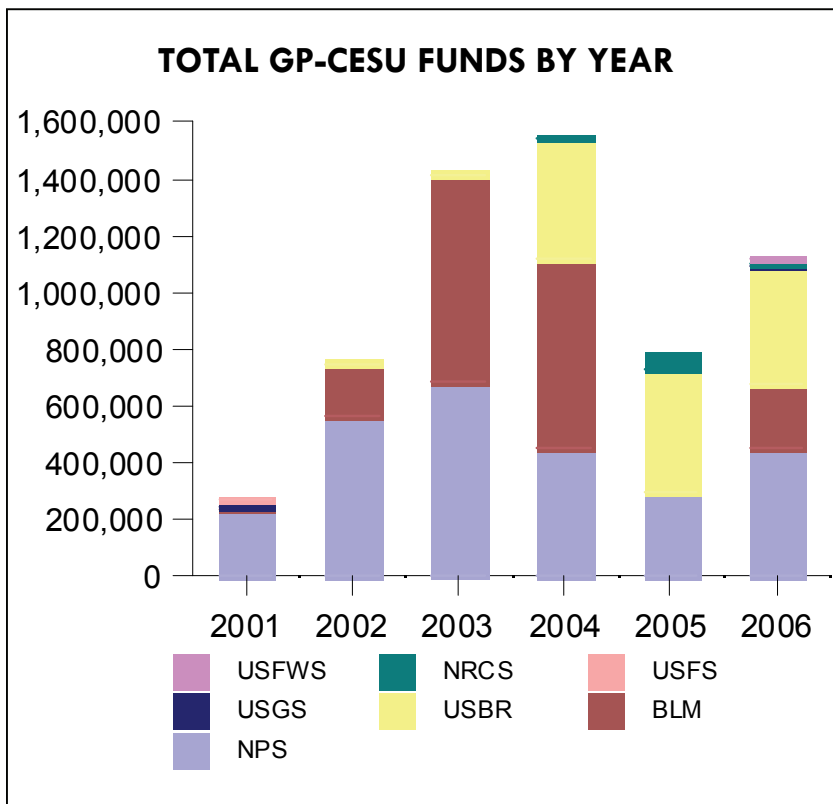
C. Lockert, editor
March 2007



GP-CESU Activity Report, FY2006

The GP-CESU saw an upward trend in agency participation in fiscal year 2006. After a decline in 2005, total funds increased 43.6% with \$1,131,008 obligated through the GP-CESU in 2006. Forty-one new, or continuing projects, were supported by these funds. Including the joining fee for US Fish & Wildlife Service, six of seven federal agency partners obligated funding for research, technical assistance, and education through the GP-CESU. Ten of the 13 partner institutions received funding in 2006.

- USGS funded its first project since 2001, a GAP Analysis project with Kansas State University.
- The Bureau of Land Management supported projects through the GP-CESU for a total of \$223,555.
- The National Park Service had a 53.5% increase in total funding over 2005, with \$451,756 supporting 21 new or continuing projects.
- The Bureau of Reclamation remained relatively consistent (near \$400,000/yr) in their funding support; however, the number of new or continuing projects this money supports, continued to increase (11 projects in 2006, up from three in 2005).
- Since 2001: \$5,954,795 has moved through the GP-CESU in support of 180 projects.



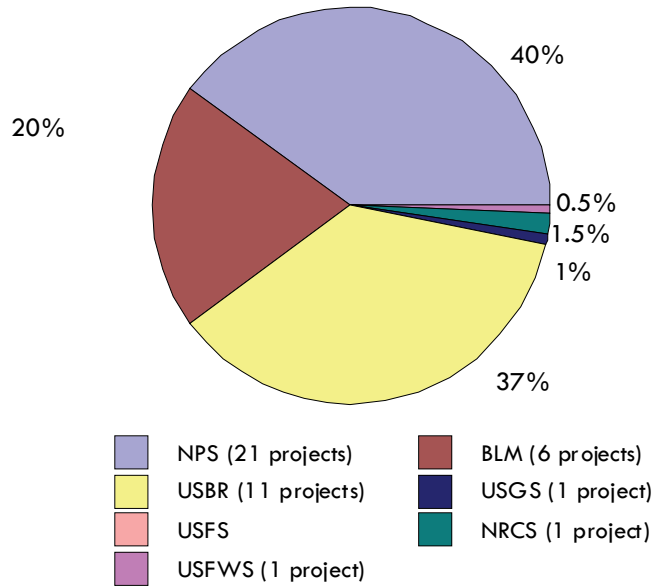
GP-CESU

FUNDING FACTS

- The smallest project is \$2,100; National Park Service
- The largest project is \$309,135; Bureau of Reclamation
- The largest project total over multiple years is \$750,000; Bureau of Reclamation
- The average project amount is \$31,904
- The median is \$17,250

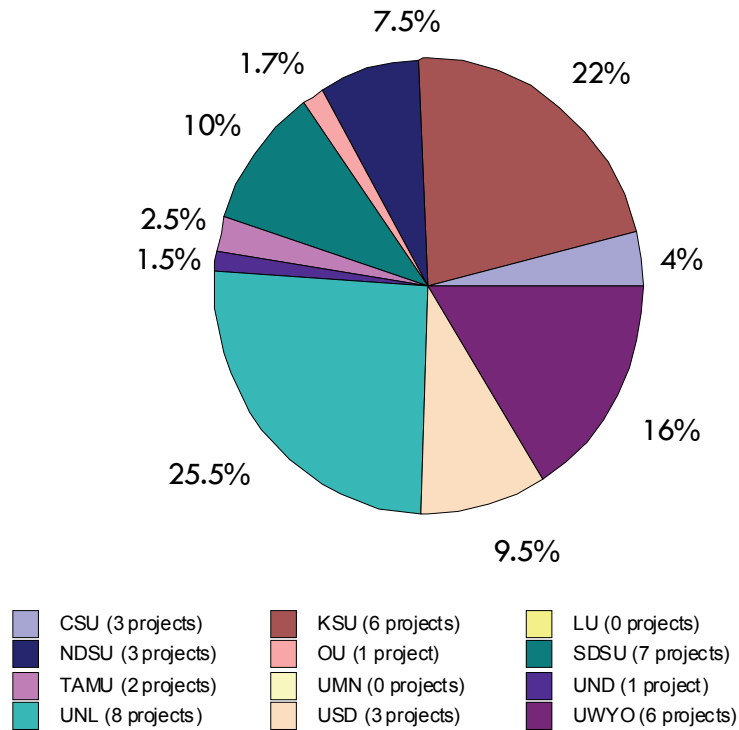
Great Plains CESU

PROJECT FUNDS BY AGENCY FY06, \$1.13 MILLION



A complete list of projects can be viewed on the web site at http://snr.unl.edu/Project_library.htm

PROJECT FUNDS BY UNIVERSITY FY06, \$1.13 MILLION



Great Plains CESU Projects: FY 2006

Group studies Great Plains fire history

reprinted from the 12/14/06 issue of the *Scarlet*, a University of Nebraska publication

Federal researchers affiliated with the School of Natural Resources are helping land managers on the Plains piece together a history of fire in the region.

Fire brings many ecological benefits. In forests, it stops build-up of deadwood, preventing more devastating fires. On the prairie, it prevents colonizing woody vegetations and helps reinvigorate growth of grasses. But in most protected areas, fire so rarely occurs that it has to be re-introduced by management decision.

Having some record of how fire once operated means it can be re-introduced in similar ways. In forested areas, tree ring analysis offers evidence of fire's frequency and extent. Fire burns the tree and leaves a scar on the annual growth ring. But in grasslands, where trees are rare, little evidence exists. "The idea behind the project is that the Great Plains has been principally overlooked in examining fire history due to a lack of trees. But on the perimeter of the plains, there are trees," said Gary Willson, research coordinator with the SNR-based Great Plains Cooperative Ecosystem Studies Unit.

Willson is coordinating the compilation of a record of fire on the prairie from before European settlement.

In addition to the perimeter, researchers also are interested in fire's history in two other areas: the Niobrara River, crossing Nebraska west to east, and parts of the Missouri

River in northeast Nebraska.

"Those two areas might give us some history right in the middle of the Great Plains," Willson said.

The collaborative effort includes the University of Missouri-Columbia's Tree Ring Laboratory, the U.S. Geological Survey's Missouri Cooperative Fish and Wildlife Research Unit and the National Park Service. Researchers will examine tree ring evidence from ponderosa pine and oak trees and feed this data into a fire model that will help fill gaps in fire history where trees are lacking.

During the project's first full field season this past summer, Willson, a fire ecologist, and Richard Guyette, director of the tree ring lab, both worked in the Missouri River valley and Guyette in the Niobrara river valley.

"Many resource managers of the national parks in the Great Plains use fire to manage vegetation. And by and large, they don't have information about the occurrence of fire before European settlement. So they may be guessing about when to use it. This information is very valuable as they recreate a fire regime," Willson said.

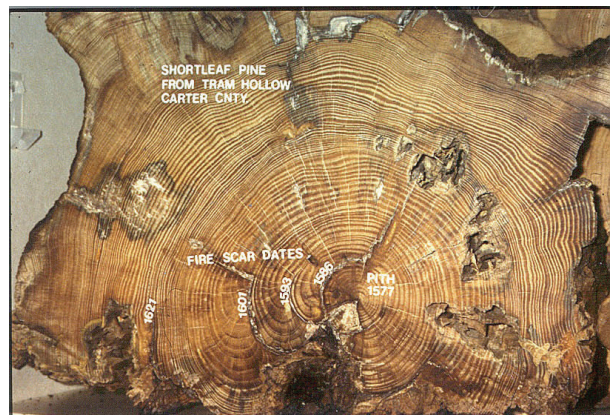
Parks that can sustain or use fire must have a Fire Management Plan. Such plans help managers assess the state of local and regional ecosystems, make management decisions, create restoration plans and assess national fire plans. The fire histories also can be used by nongovernmental organiza-

tions managing grasslands, such as the Nature Conservancy, the Audubon Society and others.

The Great Plains Cooperative Ecosystems Studies Unit includes a dozen university partners and seven federal agencies. This project is funded by a \$250,000 grant from the U.S. Geological Survey.

Nationwide, the ecosystem studies program secures research, technical assistance and education by universities to support science-based management of federal lands.

"THE IDEA BEHIND THE PROJECT IS THAT THE GREAT PLAINS HAS BEEN PRINCIPALLY OVERLOOKED IN EXAMINING FIRE HISTORY DUE TO A LACK OF TREES, BUT ON THE PERIMETER OF THE PLAINS, THERE ARE TREES."



Cross section of a short leaf pine with fire scars. Richard Guyette, University of Missouri-Columbia Tree Ring Laboratory.

This research was highlighted on NPR! [Listen here \(Nov. 2006\)](http://www.npr.org/templates/story/story.php?storyId=6421573)
[<http://www.npr.org/templates/story/story.php?storyId=6421573>]

Great Plains CESU

Cooperative
Ecosystem
Studies Units
Network



A PERIODIC REPORT OF ACTIVITIES

Contact Us:
GP-CESU
University of Nebraska
School of Natural Resources
514 Hardin Hall
Lincoln, NE 68583-0985
Phone: 402-472-5853
Fax: 402-472-2946
E-mail: khoagland@unl.edu
clockert2@unl.edu

The mission of the Great Plains Cooperative Ecosystem Studies Unit is to determine the ecological state of public lands of the Great Plains and examine its future within the context of private lands. Our focus is on improving the scientific basis for managing ecosystems in the region, through more active and interactive technical assistance, research, and education among the partner institutions and agencies.

GP-CESU Members: University of Nebraska-Lincoln - host (2000), Black Hills State University (2003), Colorado State University (2000), Kansas State University (2005), Langston University (2000), North Dakota State University (2003), South Dakota State University (2002), Texas A&M University (2000), University of Minnesota (2000), University of North Dakota (2000), University of Oklahoma (2000), University of South Dakota (2002), and University of Wyoming (2002). Bureau of Land Management (2000), Bureau of Reclamation (2002), National Park Service (2000), Natural Resource Conservation Service (2004), US Fish & Wildlife Service (2006), US Forest Service (2000), and US Geological Survey (2000).

UNIVERSITY OF
Nebraska
Lincoln



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<http://snr.unl.edu/gpcesu>

Federal Agency Representatives

Bureau of Land Management

Ken Henke
Wyoming State Office
PO Box 1828
Cheyenne, WY 82003
307-775-6104
Ken_Henke@blm.gov

Bureau of Reclamation

Jeff Lucero
GP-4500, Water Resources Group
PO Box 36900
Billings, MT 59107
406-247-7751
jlucero@gp.usbr.gov

National Park Service

Gary Willson
515 Hardin Hall
School of Natural Resources
University of Nebraska-Lincoln
Lincoln, NE 68583-0985
402-472-5047
Gary_Willson@nps.gov

Natural Resources Conservation Service

Sheryl Kunickis
USDA-NRCS
14th & Independence Ave., SW
6126 South Bldg
Washington, D.C. 20250
202-720-8723
Sheryl.kunickis@wdc.usda.gov

US Fish & Wildlife Service

Greg Watson
Energy/Research Coordinator
P.O. Box 25486, DFC

Denver, CO 80225-0486
303-236-4514
Greg_Watson@fws.gov

USDA Forest Service

Jack Butler
Rocky Mountain Research Station
Center for Great Plains Ecosystem
Research
1730 Samco Road
Rapid City, SD 57702
605-394-1960
jackbutler@fs.fed.us

US Geological Survey

Frank D'Erchia
Regional Science Coordinator
USGS Central Region
Building 810, MS-150
Denver, CO 80225
303-202-4743
frank_derchia@usgs.gov