

# Cooperative Ecosystem Studies Units



**Thomas E. Fish, National Coordinator**

[cesu.org](http://cesu.org)

- 
- What is the Cooperative Ecosystem Studies Units Network?
  - History
  - Program Description
  - Example projects
  - Future of the CESU Network



# What is the CESU Network?

A nationwide consortium of federal agencies, universities, conservation organizations, and other partners working together to support agency missions and informed public trust resource stewardship



# What is the CESU Network?

- Anthropology to Zoology
- coordinated, collaborative, applied
- natural and cultural resource issues
- multiple scales
- ecosystem context



# What is the CESU Network?

13 federal agencies

227 universities (47 minority serving)

62 state, tribal, and non-governmental

302 total partners

Since 1999, >7,000 projects involving over \$500M  
(est.)



**Bureau of Land Management**



**U.S. Fish and Wildlife Service**



**U.S. Geological Survey**



**National Park Service**



**Bureau of Reclamation**



**Bureau of Ocean Energy Management, Regulation and Enforcement**



**Natural Resources Conservation Service**



**U.S. Forest Service**



**Agricultural Research Service**



**National Oceanic and Atmospheric Administration**



**National Aeronautics and Space Administration**



**U.S. Army Corps of Engineers**



**Department of Defense (Installations & Environment)**





# CESU Network Objectives

- to provide timely scientific research, technical assistance, and education services to develop usable knowledge supporting public trust resource stewardship aligned with agency and partner missions;
- to create and maintain effective collaborative partnerships among federal and state agencies, universities, and other nonfederal partners to share resources and expertise;
- to promote/maintain high standards for scientific research, technical assistance, and educational activities and associated project outputs;
- to encourage professional development of federal scientists, technical staff, and managers through substantial involvement in projects;
- to help prepare future conservation professionals through direct involvement with real-life conservation issues and problem solving.

**WEAVING PARTNERSHIPS | BUILDING KNOWLEDGE | SUSTAINING HERITAGE**



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**1999**

- Rocky Mountains – University of Montana
- Colorado Plateau – Northern Arizona University
- North Atlantic Coast – University of Rhode Island
- Southern Appalachian Mountains – University of Tennessee



  
*1999*

  
*2000*

- Desert Southwest – University of Arizona
- Pacific Northwest – University of Washington
- South Florida-Caribbean – University of Miami
- Great Plains – University of Nebraska, Lincoln



▲  
*1999*

▲  
*2000*

▲  
*2001*

- Chesapeake Watershed – University of Maryland
- Great Basin – University of Nevada, Reno



*1999*

*2000*

*2001*

*2002*

- Great Lakes - Northern Forest CESU – University of Minnesota
- Gulf Coast CESU – Texas A&M University



▲  
*1999*

▲  
*2000*

▲  
*2001*

▲  
*2002*

▲  
*2003*

- North & West Alaska – University of Alaska
- Piedmont - South Atlantic Coast – University of Georgia
- Upper and Middle Mississippi Valley (now Great Rivers) – University of Missouri
- Californian – University of California, Berkeley
- Hawaii - Pacific Islands – University of Hawaii



# CESU Cooperative Ecosystem Studies Units Network





# Program Description

- established renewable Cooperative/Joint Venture Agreements with 5 year duration
- agreements renewed based on mutual consent, self-assessment, federal agency assessment, and independent external review
- many operational model variations



# Program Description

- host university with administrative support staff
- multiple federal agencies
- partner institutions (at least one minority institution)
- federal managers committee
- role and mission statement
- strategic plan and annual work plans
- website
- annual partners meeting



**CESU Council (13 federal agencies)**

(program oversight)

**federal agency  
regional / state offices**

(supervision)

**federal managers  
committee**

(strategic plan)  
(advice and guidance)  
(leads 5-yr renewal process)

(annual work plan)

**CESU**

**tribes**

**agencies**

**agency science  
coordinators  
(optional)**

**host university**

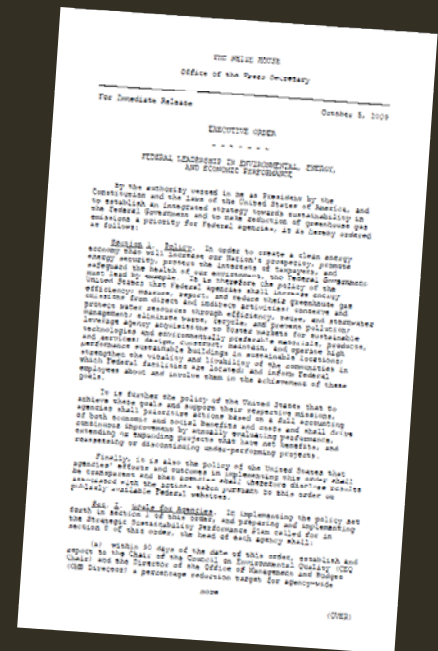
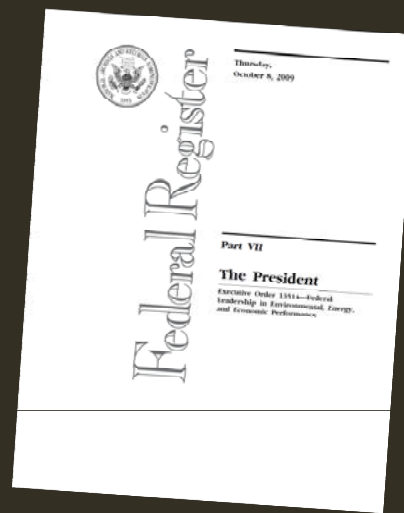
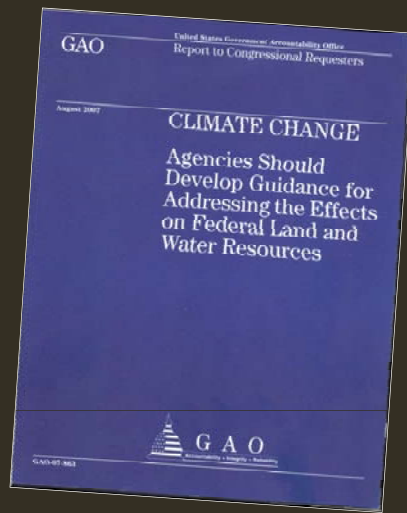
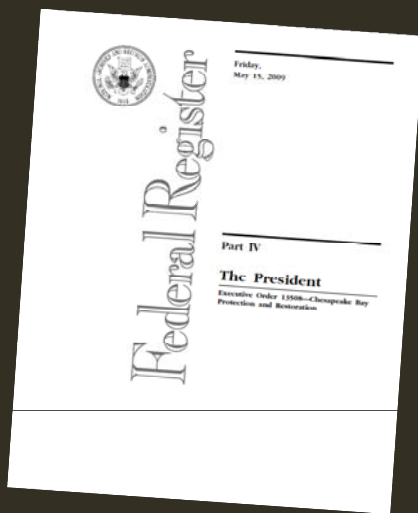
**NGOs**

**academia**

**land management  
units in  
geographic area**



- GAO Report on Climate Change (GAO-07-863)
- Executive Order on Federal Sustainability
- Executive Order on Chesapeake Bay Protection and Restoration
- DOI Secretarial Order on Climate Change





## Example Projects

# Climate Change Workshop Series



*NPS photo*



# Example Projects

**Regional Department of Defense  
Chesapeake Bay Program Initiatives**

*NPS photo*



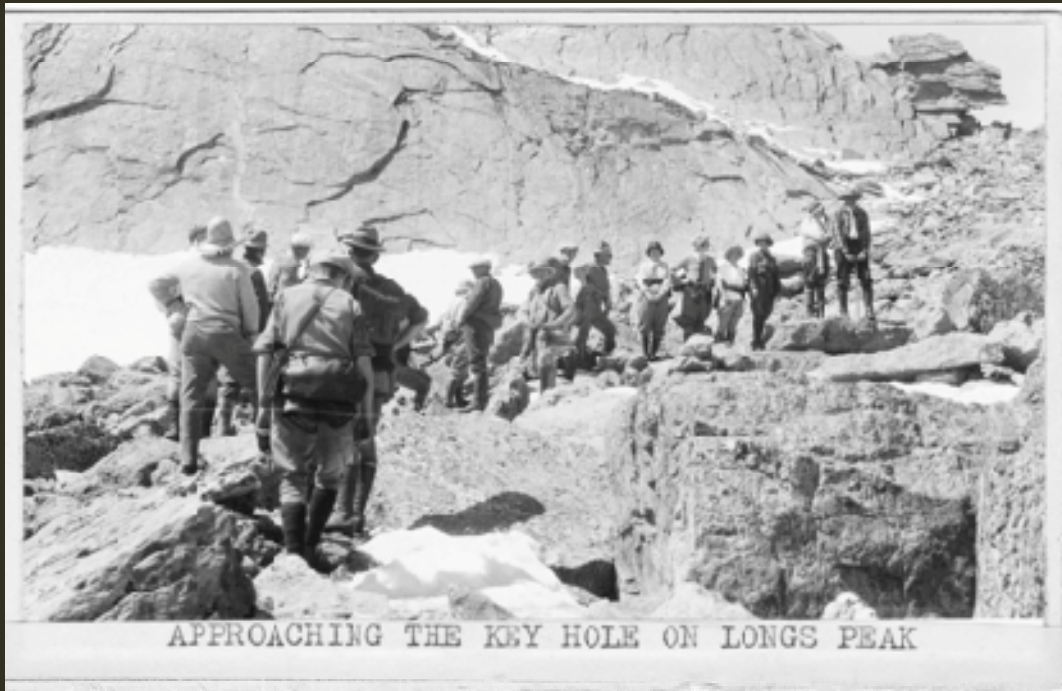
## Example Projects

**Contaminants Assessment  
in Southeast Alaska**

*NPS photo*



# Example Projects



**People and  
Nature on the  
Mountaintop**

## **A Resource and Impact Study of Longs Peak in Rocky Mountain National Park**

Cooperative Ecosystem Studies Units Network

*NPS photo*

Fisheries & Aquatic Resources - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.nbii.gov/portal/community/Communities/Plants,\_Animals\_&\_Other\_Organisms/Fisheries\_&\_Aquatic\_Resources/

great lakes aquatic

Text-Only Portal

Google Custom Search search

NBII Home About NBII Plants, Animals & Other Organisms Fisheries & Aquatic Resources

# Example Projects

**BACK TO: Plants, Animals & Other Organisms**

- Fisheries & Aquatic Resources
- About the Node
- Aquatic Organisms
- Live Maps and Data
- News
- Recreation

**Conferences of Interest**

[Ecological Society of America 94th Annual Meeting](#)  
8/2/2009 - 8/7/2009  
Albuquerque, New Mexico  
United States

[139th American Fisheries Society Meeting](#)  
8/30/2009 - 9/3/2009  
Nashville, Tennessee  
United States


[2009 Association of Fish and Wildlife Agencies Annual Meeting](#)  
9/13/2009 - 9/16/2009  
Austin, Texas  
United States

## Fisheries & Aquatic Resources


*Bringing together people and information to promote fisheries conservation.*

The Fisheries and Aquatic Resources Node (FAR) is a comprehensive, integrated, web-based resource providing access to databases, online mapping applications, and general fishery and aquatic resource information.

 [Aquatic Organisms](#)  
View information about the wide variety of organisms that use the aquatic environment, ranging from endangered species to aquaculture.


 [Aquatic Habitats](#) (Accessible soon)  
Explore the diverse environments in which aquatic organisms live: estuaries, lakes & reservoirs, oceans, rivers, and wetlands.

 [Live Maps & Data](#)  
Choose from global, regional, or local scale applications to find maps and data on a variety of fisheries and aquatic resource topics.

 [News](#)  
Timely articles covering biological issues relevant to aquatic organisms and aquatic habitats.

 [Research](#) (Accessible soon)  
Learn more about research that pertains to fisheries and aquatic resources, including invasive species, water quality, migration, and restoration.

**Welcome!**



Pufferfish (Tetraodontidae)  
[Image: Wikipedia]

Thank you for taking the time to visit and explore our site. If you have any questions or comments, please visit our [About the Node](#) page for contact information.

One of the more characteristic fish of the sea, the pufferfish, defends itself by sucking in water and expanding its size. The predators of the pufferfish are tricked into thinking that the pufferfish is much larger than it really is. For more information about this curious fish, visit [National Geographic](#).

**Development of online infrastructure for North American fisheries/aquatic resources**

Multiple datasets can be added to a 'data cart' to be downloaded simultaneously. Data in your data cart can also be clipped to a specific geographic area and re-projected on-the-fly prior to download.

managers? We are interested in working with new partners to share data of all types, formats, and

Done



# Example Projects

## Costal Watershed Condition Assessments

*NPS photo*





# Example Projects

## SageSTEP: Sagebrush Steppe Treatment Evaluation Project

- Oregon State University
- Utah State University
- Brigham Young University
- University of Idaho
- University of Nevada, Reno
- The Nature Conservancy
- Bureau of Land Management
- Bureau of Reclamation
- U.S. Forest Service
- Agricultural Research Service
- U.S. Geological Survey
- U.S. Fish and Wildlife Service

Pinyon-Juniper Encroachment



Shoshone Mountains, NV Photos by R. Tausch



# Example Projects



works to prevent encroachment around military lands, encourage compatible resource-use decisions, and improve coordination among regions, states, communities, and military services.





# Key Initiatives

- 10-year Program Evaluation and Project Inventory
- CESU Network Administrative History
- Strategic Plan Revision
- Administrative Handbook
- Collaborative Science Program Summit
- 2012 CESU Network National Meeting (June)

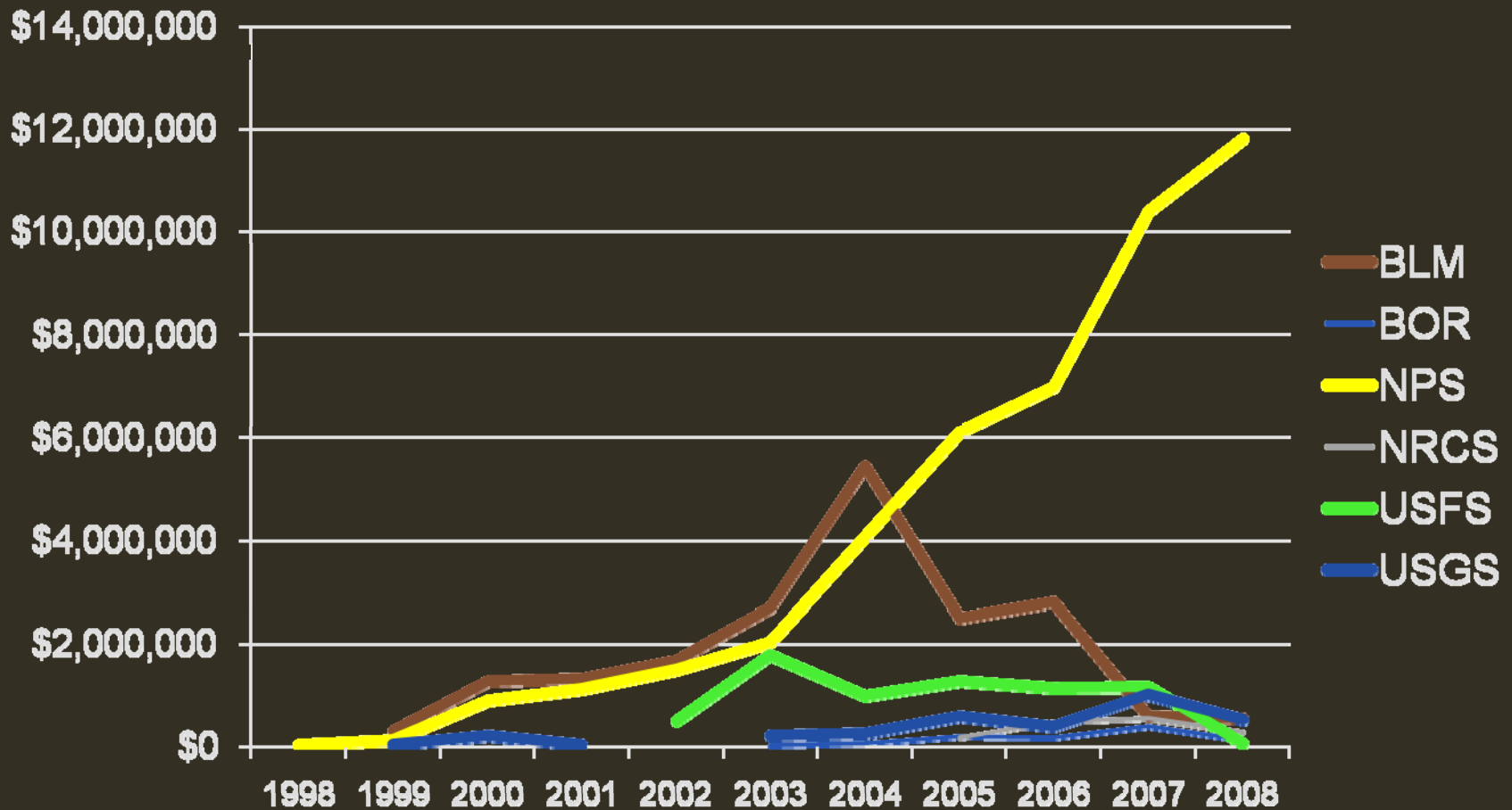


# Top 15 CESU Partners

University	Total
University of Nevada, Las Vegas	33,430,312
CSU	31,197,493
UMT	30,970,526
PICHTR	18,091,067
MSU	14,225,156
UA	11,863,205
University of Hawaii	11,436,575
OSU	9,330,550
UW	8,287,632
University of Hawaii	8,011,103
University of Nevada, Reno	7,038,541
WYU	5,528,928
Utah	4,734,986
University of Illinois	4,538,269
URI	4,507,716



# RM-CESU, Projects by Agency

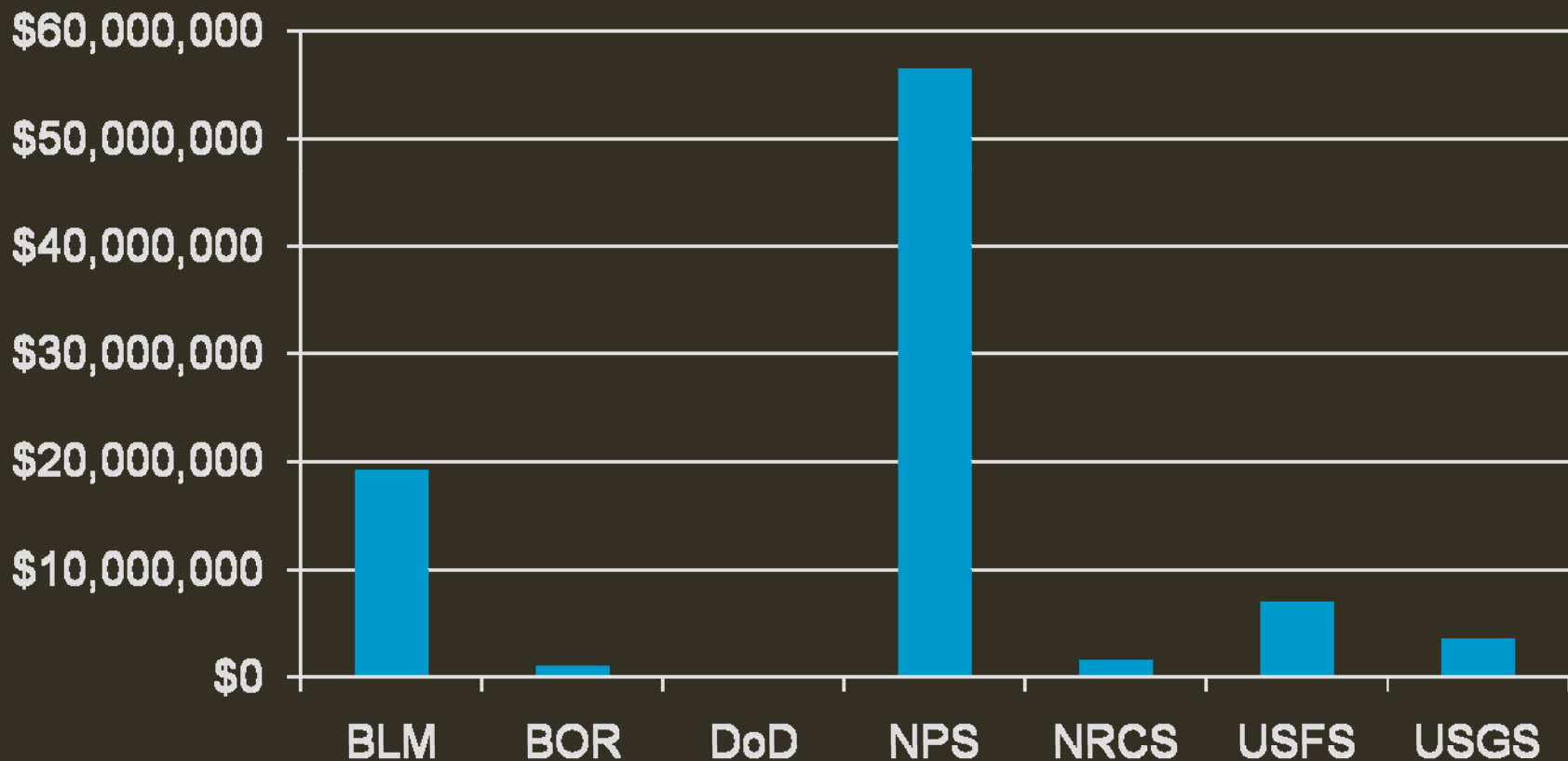


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# RM-CESU, 1999-2009

**Total dollar amount by agency**



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# 2010 National Meeting



Cooperative Ecosystem Studies Units Network



# Future of the CESU Network

- adding new federal and nonfederal partners
- expanding participation and scope of the CESU Network with existing network partners
  - sustainability science
  - green engineering and technology
  - renewable/sustainable energy
  - green workforce development
  - international collaboration
- elevating opportunities for capacity building for tomorrow's environmental professionals
  - national office fellowship program
  - system-wide internship program



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