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Great Basin CESU

Cooperative Ecosystem Studies Unit

Research. Outreach. Education



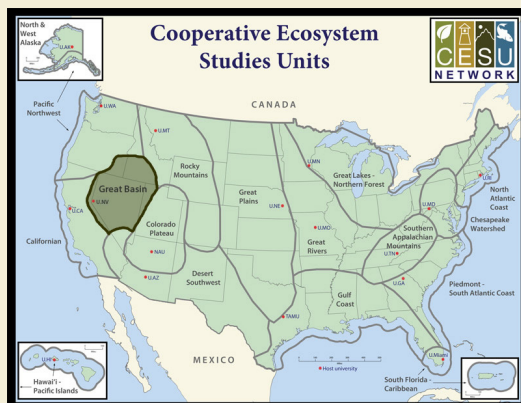
Mission and Objectives

The mission of the Great Basin CESU is to create a partnership for research, technical assistance and education that enhances understanding and management of natural and cultural resources within the Great Basin. As stated in the August 2011-2016 GB-CESU Cooperative and Joint Venture Agreement, the objectives of the GB-CESU are to:

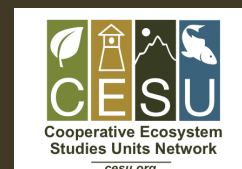
- Provide research, technical assistance and education to federal land management agencies, environmental and research organizations and their potential partners;
- Develop a program of research, technical assistance and education that involves the biological, physical, social, and cultural sciences needed to address resource issues and interdisciplinary problem-solving at multiple scales and in an ecosystem context at the local, regional, and national level; and
- Place special emphasis on developing the working collaborations between federal agency partners and university and non-governmental institutions.

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Partners

Federal Agencies

Bureau of Land Management
 Bureau of Reclamation
 Department of Defense
 National Park Service
 Natural Resources Conservation Service
 USDA Agricultural Research Service
 USDA Forest Service
 U.S. Fish and Wildlife Service
 U.S. Geological Survey

University Institutions

Ball State University
 Boise State University
 Brigham Young University
 California State University, Fresno
 Desert Research Institute
 Great Basin College
 Idaho State University
 Oregon State University
 Texas A&M University, Kingsville
 University of Idaho
 University of Nevada, Las Vegas
 University of Nevada, Reno (Host)
 University of Utah
 Utah State University

Non-governmental Organizations

Hawkwatch International



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Critical Needs in the Great Basin

Protection of wildlife and habitats, restoration of range and forest ecosystems, management of water resources, economic health and stability of rural economies and their industries, and enhancing our understanding, appreciation and preservation of historic cultural resources pose major challenges to land management agencies in the Great Basin. There are three overarching, transcendent themes that form the root causes of virtually all contemporary concerns and issues. They are:

- The rapid transformation of ecosystems and loss of associated plant and animal species across the region.
- The inability of users, managers, and the general public to agree on what causal factors are driving these ecosystem changes and a lack of agreement on prudent courses of action or solutions to the resulting problems.
- The contrast between the scales of time and space at which Great Basin ecosystems actually operate, versus the much more limited scales of time and space at which most people view them, use them, and attempt to manage them.

Strategic Goals

GB-CESU partners collaborate to address the critical needs identified for the Great Basin. The following strategic goals currently guide the actions of the GB-CESU. These goals complement the GB-CESU objectives and provide a vision and framework for a proactive CESU in the Great Basin.

- Cooperate and foster efficient collaborative pathways to aid in the development and implementation of high quality research, education and technical assistance projects.
- Increase engagement of university researchers in federal agency projects and improve the relevancy of research in addressing management needs by ensuring that: 1) federal agency research, technical assistance and education needs are clearly articulated and communicated to university partners in a timely fashion; and 2) federal managers remain aware of available university expertise and resources to apply to federal projects.
- Seek opportunities for all GB-CESU university and agency partners to be active participants in CESU projects.
- Provide encouragement for the development and implementation of effective multi-institution and multi-agency collaborations among GB-CESU partners
- Facilitate application of scientific results to land management by ensuring that results and outcomes of GB-CESU projects are made available to CESU partners and others through high visibility outreach programs.
- Maximize effectiveness of the GB-CESU partnership by integrating CESU projects and activities with other scientific programs and collaborations in the Great Basin as part of the Great Basin Consortium.
- Facilitate opportunities for student research, internships and education that are pertinent to the needs of management and research agencies.
- Develop funding to enhance GB-CESU administrative support for the above activities.

Priority Research Areas for the Great Basin CESU

- Promote research on fire ecology and post-fire rehabilitation
- Assess the impact of invasive plant species on native plant populations and ecosystem processes
- Increase our understanding of the basic causes for the decline in populations of threatened species and the potential for restoration
- Promote effective use of water, soil and related resources
- Inventory ecosystem conditions, collect baseline data, and establish monitoring systems
- Protect and preserve human and cultural resources

Great Basin CESU Projects

The following are examples of current Great Basin CESU projects:

- **A Regional Experiment to Evaluate Effects of Fire and Fire Surrogate Treatments**, USU / USDA-RMRS
- **Baker Strong Point Archeological Mitigation**, DRI / DoD
- **Decisional Support for Ecological Restoration of Walker Basin, Nevada by Integration of Existing Information into a Functional Database that may be Accessed by Multiple Entities**, UNR / DOI-FWS
- **Learning Together: Great Basin Science Delivery Phase 2**, UNR / DOI-BLM
- **Refuge Lands Geographic Information System Update: Support and Training**, USU / DOI-FWS
- **Sagebrush Responses to Climate**, ISU / DOI-USGS
- **Southern Nevada Agency Partnership, Cultural Site Stewardship Program -- Steward Retention and Program Transfer**, UNLV / DOI-NPS