

# Southern Rockies Landscape Conservation Cooperative 2011 Annual Report



Bull elk, Great Sand Dunes National Park & Preserve  
Photo credit: Patrick Myers/NPS



Tyuonyi Village, Bandelier National Park  
Photo credit: Sally King/NPS



Green River, Ouray National Wildlife Refuge  
Photo credit: Ryan Mollnow/USFWS

## **Southern Rockies Landscape Conservation Cooperative**

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## Introduction

Starting in early 2010, the U.S. Bureau of Reclamation (Reclamation) and the U.S. Fish and Wildlife Service (Service) partnered to co-lead the establishment of, and ultimately co-host the operations of the Southern Rockies Landscape Conservation Cooperative (SR LCC). Following extensive outreach and collaboration with a broad range of stakeholders, a steering committee was formed in April 2011, marking the official foundation of this partnership.

The SR LCC is a self-directed partnership linking science with conservation actions to address climate change and other stressors within and across the landscape. The partnership is a vehicle for States, Tribes, Federal agencies, nongovernmental organizations, universities and other conservation partners to agree on common goals for natural and cultural resources; jointly developing the scientific information and tools needed to prioritize and guide more effective conservation actions toward those goals. The SR LCC is one of a network of 21 LCCs complementing and building upon existing science and conservation efforts, applying an adaptive management framework that focuses on learning from conservation actions and applying those lessons to future conservation planning. LCCs are true cooperatives formed and directed by land, water, wildlife, and cultural resources managers, and directed by a steering committee.

The Southern Rockies LCC encompasses large portions of 4 states: Utah, Colorado, Arizona and New Mexico, as well as smaller parts of Wyoming, Idaho, and Nevada (Fig. 1).

The area is geographically diverse, including wide elevation and topographic variation; from 14,000 foot peaks to the Grand Canyon and cold desert basins. This topographically diverse region includes the headwaters of the Colorado River and Rio Grande, the Wasatch and Uinta Mountains to the west, and the Southern Rocky Mountains to the east, separated by the rugged tableland of the Colorado Plateau.

Major ecosystems in the Southern Rockies LCC include alpine tundra, subalpine and montane forests, piñon-juniper woodlands, sage-steppe, desert shrub lands and grasslands.

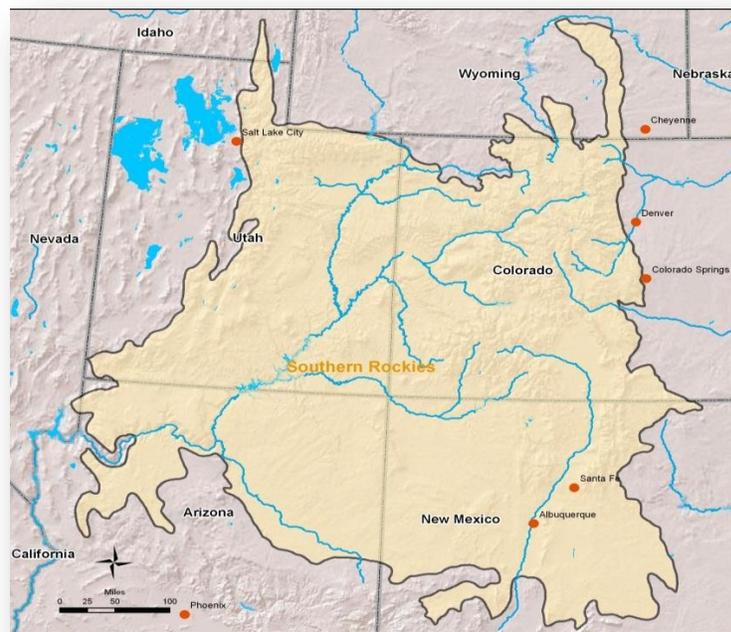


Figure 1 Geographical area of Southern Rockies Landscape Conservation Cooperative

## **Standing up the SR LCC in 2011**

Continuing from 2010 into 2011, the formative stages of the SR LCC were led by interim co-coordinators Avra Morgan (Reclamation) and Kevin Johnson (Service). Avra and Kevin led and supported an Interim Steering Committee to full fruition of the partnership-directing Steering Committee in early 2011. Also continuing from 2010 was Reclamation's contract with the Morris K. Udall Institute for Environmental Conflict Resolution to provide a third-party neutral facilitator. The Keystone Center for Science and Public Policy proved invaluable as a facilitator during the formative and subsequent operational stages of the SR LCC in 2011.

### *Staff*

The U.S. Geological Survey (USGS) came forward in 2011 with support capacity for the SR LCC. John Bradford was brought on as a Research Ecologist to provide capacity for science support. John is stationed at the USGS's Southwest Biological Science Center, Flagstaff, AZ. Throughout 2011, John played an integral part in assisting the LCC in efforts to identify priority resources and associated science needs.

In October of 2011, the Service hired a full time Coordinator for the SR LCC. The Service reached out to the partnership for assistance in the selection process and individuals from the USGS, Colorado Department of Natural Resources, and Reclamation participated. Kevin Johnson was hired and came on board full-time as the LCC's Coordinator in October. Kevin is stationed at the Service's Mountain-Prairie Regional Office, Denver.

Reclamation made significant advancement in 2011 towards hiring a Science Coordinator for the LCC. Reclamation, here too demonstrated a collaborative process whereby individuals from the Steering Committee (University of Colorado – Natural Heritage Program, USGS, Service, Colorado Department of Natural Resources, and New Mexico Office of State Engineer) assisted in the selection process. Reclamation plans to announce the Science Coordinator selection in early 2012.

### *Interim Steering Committee*

The Interim Steering Committee (ISC) was formed as a result of a July, 2010 scoping meeting held in Denver, and was instrumental in assisting Avra and Kevin in formulating and standing up the SR LCC in 2011 (The ISC was ultimately disbanded after the Steering Committee came together in April). The ISC was made up of representatives from The Nature Conservancy, Colorado Division of Wildlife, University of Colorado - Natural Heritage Program, Reclamation, National Park Service, University of Colorado – Western Water Assessment, Service, Wyoming Game and Fish Department, Arizona Game and Fish Department, USGS, Bureau of Land Management, and US Forest Service. This group was tasked with defining a mission for the SR LCC, developing goals and objectives, identifying and engaging with potential partners, and gathering and synthesizing science needs and resource priorities

Much of the above tasks were accomplished and articulated through development of a Draft Governance Document, and a Draft Operations Plan. These two draft documents were

ultimately approved by the Steering Committee in September of 2011. The final versions can be found on the SR LCC website: <http://www.usbr.gov/WaterSMART/lcc/south.html>.

In late January, 2011 the ISC convened via teleconference to approve a list of final invitees (App. A) for the first SR LCC Steering Committee meeting, and approve the date and location for this meeting. The ISC determined the first meeting of the SR LCC Steering Committee would take place April 5-6, 2011 in Salt Lake City, UT. The State of Utah graciously offered to host the meeting at their Capital building.

### *Steering Committee*

Thirty-eight executives and staff from multiple natural and cultural resource managing entities met in Salt Lake City, Utah, on April 5-6, 2011 to establish the Steering Committee for the Southern Rockies LCC. Upon discussions regarding LCC purpose, structure, etc. some of these individuals chose not to participate while others felt their services were best utilized on the SR LCC Science Work Group. In the end, 20 executives identified themselves for Steering Committee membership. Initial Steering Committee representation is as follows:

Arizona Game and Fish	Bureau of Reclamation
Bureau of Indian Affairs	Bureau of Land Management
Colorado Department of Natural Resources	Fish and Wildlife Service
Intermountain West Joint Venture	National Park Service
Natural Resources Conservation Service	New Mexico Office of State Engineer
New Mexico Game and Fish Department	Pueblo of Jemez
Shivwits Band of Paiutes	The Nature Conservancy
Trust for Public Lands	US Geological Survey
US Forest Service	
University of Colorado – Natural Heritage Program	
Utah Governor’s Public Lands Policy Coordination Office	
Wyoming Game and Fish Department	

The SR LCC was now operational. The current list (as of December, 2011) of Steering Committee members is in Appendix B.

## 2011 Operations

### *Steering Committee Meetings*

The SR LCC Steering Committee held two face-to-face meetings and one conference call in 2011. The first Steering Committee was held on April 5-6, in Salt Lake City, UT. Objectives of the meeting were:

- Formalize the SR LCC Steering Committee
- Discuss and define the purpose, benefits, and opportunities associated with the SR LCC
- Discuss and formalize how stakeholders may participate in the SR LCC (i.e. on Steering Committee, Science Committee, other Subcommittees, and/or as an SR LCC Partner)
- Discuss preliminary science needs
- Identify priority science needs for 2011 funding
- Discuss and approve next steps for the SR LCC operation through 2011

Outcomes and agreements from the April Steering Committee meeting were:

- Participants agreed to an initial Steering Committee structure and composition for the Southern Rockies LCC.
- An initial list of participants on the Science Committee was identified.
- Participants identified objectives for 2011 and priority tasks for the LCC Coordinator and Science Coordinator upon their hiring's. Kevin and Avra were tasked with these objectives in the interim.
- Participants brainstormed priority science needs and criteria for evaluating project proposals in 2011.

A Conference Call was held in June, 2011. Objectives of the call were:

- To identify how to fund two-year proposals – fund them for the full two years, or one year at a time
- Agree on the proposals recommended to be funded by the Service in 2011
- Receive updates on: Reclamation's Funding Opportunity Announcement for projects in 2011
- Identify a small working group to develop draft actions to implement SR LCC Governance Document and Operations Plan this year (e.g. staff needed, decisions by Steering Committee needed, etc.)

Outcomes and agreements from the conference call were:

- The SR LCC Steering Committee agreed to funding each selected proposals' entire two-year budget from this year's FWS allocation and require a progress report after the first year.
- Selection of four projects recommended for 2011 Service funding (Table 1).

The last Steering Committee meeting of the year was held September 7-8, Denver, and was hosted by the Colorado Department of Natural Resources. Meeting objectives were:

- To update participants on existing work
- To finalize and adopt the Governance Document – address outstanding items
- To finalize and adopt the Operations Plan – address outstanding items
- To review and approve steps to identify science needs and data management proposal
- To identify landscape goals
- To identify priority issues and/or research questions on which the LCC will work together
- To develop a strategy/action plan to address the priority issues/questions – timeframe, needs, approaches/tools to accomplish, and how to utilize the partnerships to leverage resources
- To provide recommendation on the website proposal

Outcomes and agreements were:

- Move forward with the Science Working Group’s proposed strategic synthesis plan.
- The SR LCC should proceed with the USGS data portal proposal.
- The Steering Committee preliminarily identified five key resources for the SR LCC: Forests, Riparian Obligates, Water, Endangered Species, and Riverine Systems.
- Approval of Governance Document pending the following revisions (see detailed overview below for more information):
  - Edit language regarding rotation of Chair and Vice Chair to include a description of Chair and Vice Chair roles and the desire for sector diversity.
  - Addition of an ad hoc tribal advisory seat to provide advice to chair, vice-chair and SR LCC staff on tribal outreach and planning.
  - Revise member list to include BIA Navajo Region and strike “Colorado” from BLM.
- Steve Guertin (USFWS) was selected as Chair and Becky Mitchell (Colorado DNR) as Vice Chair for the coming year.
- Kyle McFee (Shivwits Band of Paiutes) was selected for the Tribal Advisory Position.
- Revise the reporting and tracking sections of the Operations Plan to state that projects must submit a final report, with specific deliverables regarding making the information accessible to the LCC specified by the funding opportunity announcement.
- Work with Chawne Kae & Associates to create the website SR LCC.org.

### *Science Development and Projects*

2011 Projects Subsequent to the April Steering Committee meeting, a Science Committee (later renamed Science Work Group) was formed (list of members, App. C). Their first task was to assist the Service and Reclamation in development of a Request for Proposals and a Funding Opportunity Announcement (respectively) for science projects to be funded through the LCC in 2011. Based on direction from the Steering Committee, Reclamation’s Funding Opportunity Announcement (FOA) focused on three priority task areas: 1) projecting future water availability and quality; 2) projecting the resiliency and vulnerability of natural or cultural

resources; and 3) assessing and evaluating natural or cultural resources management practices and opportunities to adapt. The Service's Request for Proposals (RFP) focused on five priority conservation goals: 1) identifies current data gaps - assesses what exists within the LCC and what is needed; 2) large in geographic scope (e.g., watersheds) - should inform the larger LCC; 3) demonstrates how the project complements but does not duplicate other work; 4) results should be displayed in a digital and/or GIS format; and 5) translates to applied science/how it will benefit resource management within the SR LCC. The RFP was announced the first of May and the FOA was announced mid-June.

The Science Work Group (SWG) held a conference call on May 6 to finalize scoring and ranking criteria for proposals submitted under the Service's RFP and establish a recommended process and timeline for awarding funds. Subsequently, through the review and criteria scoring process, the SWG identified the top 10 proposals that should be forwarded to the Steering Committee for final agreement.

On June 6, the Steering Committee recommended that any selected proposals be funded from this year's available SR LCC science budget for the proposal's whole two-year budget request, and require annual progress reports. The Steering Committee then discussed the merits of the top ten proposals forwarded from the SWG and ultimately selected four projects (Table 1). With Service funds, the SR LCC was able to wholly fund three of the four proposals for two years. Remaining funds were awarded to a fourth project to fund that project's first year, with a recommendation this project's second year be funded with available 2012 SR LCC science funds.

Reclamation assembled an Application Review Committee in August. This Review Committee consisted of Reclamation staff and staff from Steering Committee agencies. Collectively they vetted and prioritized the proposals submitted under Reclamation's FOA for WaterSMART Applied Science Grants, ultimately selecting two proposals to fund in 2011 (Table 1).

The USGS Southwest Biological Science Center partnered with the USGS Coop unit at Colorado State University, and the University of Wyoming to support two projects across the LCC (Table 1). These projects focused on current spatial patterns and occurrence of native and non-native fishes relative to thermal regimes in select stream reaches, and a predictive assessment of how temperature, precipitation and weather variability will alter temporal patterns of soil water content and utilization by vegetation.

In addition to the projects mentioned above, the Service identified three landscape-level projects already underway by partners of the SR LCC and leveraged science funds to support those projects (Table 1). The science support went to existing efforts of the Western Governors Association, Wildlife Council's Critical Habitat Assessment Tools; and a Bear River watershed working landscapes project.

In 2011, the LCC funded and supported 11 science projects that addressed priorities of the Steering Committee, and leveraged a total of \$898,755 for science across the SR LCC. Collectively, these science support projects were a collaboration of multiple partners that included The Nature Conservancy; Colorado State University; University of California Davis;

Navajo Nation; AZ , CO, NM, and UT state game and fish agencies; Conservation Biology Institute; National Wildlife Refuge Association; USGS; and University of Wyoming.

Long-term Priority Needs Assessment The SWG began a strategic synthesis of common priority resources and science needs for the SR LCC partnership. The strategic synthesis will be accomplished through:

1. Query of the Steering Committee to identify shared resource management issues and related science needs.
2. Outreach to partners and partnerships within the LCC to compile their resource management priorities and related science needs. This process will validate, compliment and support priorities identified by the Steering Committee.
3. Assessing status and availability of landscape level data sets, including metadata.
4. Presentation of strategic synthesis results to Steering Committee for final approval and selection of focal priority resources for the SR LCC.

The strategic synthesis is scheduled to be completed in 2012.

### *Partnership Community*

Tribal outreach Kevin, along with the interim coordinator for the neighboring Desert LCC attended the National Congress of American Indians, 67<sup>th</sup> Annual Convention, Albuquerque, NM. Kevin gave a presentation on LCCs and discussed tribal involvement opportunities for the SR LCC. Specifically, Kevin spoke in front of the Land & Natural Resources Committee's sub-committees for Trust Lands, Natural Resources & Agriculture; and Environmental Protection & Land Use.

Kyle McFee, newly elected SR LCC Tribal Advisor has taken initial steps to engage some of the 31 tribes within the geographically defined area of the SR LCC. Kyle has reached out to natural resources contacts for the Kiabab Paiute Indian Tribe and received positive feedback. Additional contacts with the Institute for Tribal Environmental Professionals at Northern Arizona University also proved positive in the Institutes willingness to assist in disseminating SR LCC information to tribes.

With the help of staff from the Bureau of Indian Affairs, Kevin has contacted natural resources management staff for the Navajo Nation, and the Hopi Tribe. Meetings with these tribes to specifically discuss how the SR LCC can assist their management efforts and invite their active participation in the partnership have been scheduled to occur in early 2012.

Table 1. 2011 SR LCC Projects

Funded through a Fish & Wildlife Service RFP

Project Title	Principle Investigator	Partners	Project Description
Vulnerability and connectivity of natural landscapes and riparian habitat in the SRLCC	Colorado State University	Wildlife Conservation Society, Colorado Division of Wildlife, Forest Service, Utah Department of Natural Resources, Great Northern LCC, NASA, MT St Univ.	The project will conduct a vulnerability assessment of water-limited habitat, focusing on riparian and wetland systems. Two sources of change will be examined: climate and land use.
A Regional Model for Building Resilience to Climate Change: Development and Demonstration in Colorado's Gunnison Basin	The Nature Conservancy	Gunnison County, Forest Service, Fish and Wildlife Service, Bureau of Land Management, Natural Resources Conservation Service, Colorado Division of Wildlife, National Park Service	This project will enable the Gunnison Climate Working Group, a chartered partnership of 14 public and private organizations to: 1) complete a science-based vulnerability assessment of species and habitats in the Upper Gunnison Basin and identify data gaps; 2) develop a watershed-wide adaptation strategy for priority species and systems; 3) design and implement a local adaptation demonstration project for priority species and habitats; and 4) document tools, methods, and lessons learned to share with others across the SRLCC through a climate adaptation learning network.
Collaborative multi-species monitoring in the Southern Rockies LCC: impacts of forest restoration treatments on ponderosa pine ecosystems in Colorado	USGS	Forest Service, Fish and Wildlife Service, Natural Resources Conservation Service, The Wilderness Society, Colorado Forest Restoration Institute, Colorado State University; Colorado State Forest Service	The project will expand the scope of forest restoration treatment monitoring for Collaborative Forest Landscape Restoration projects in 3 key ways: 1) augment wildlife monitoring efforts to include a more diverse range of species and/or guilds, including several species of conservation concern within the SRLCC; 2) expand the monitoring of understory plant response to provide a holistic evaluation of treatment impacts on understory plant communities; 3) add monitoring plots both on non-USFS lands managed by partner agencies, and on adjacent untreated lands to serve as a comparison and to allow for the evaluation of landscape-scale effects.
Assessment of connectivity and enhancement of adaptive management capacity on Navajo Nation lands	University California, Davis	Northern Arizona Univ.; The H. John Heinz III Center for Science, Economics, and the Environment; Navajo Nation Department of Fish and Wildlife; Univ. of Nevada, Reno	The project will provide estimates of habitat connectivity for focal species on the Navajo Nation and adjacent lands for purposes of planning and implementation of adaptive management. Work will support assessment of objective, quantitative, and realistic scenarios of natural and anthropogenic environmental change against which the tribe can conserve wildlife while promoting development of natural resources. The project will support the Western Governors Association's Wildlife Corridors Initiative and complement the WGA Wildlife Council's pilot decision support system.

## Funded through a Fish and Wildlife Service Grant or Cooperative Agreement

Project Title	Principle Investigator	Project Description
Decision Support System (DSS) Development for Wildlife Resources in Arizona and Utah.	Arizona Game & Fish Department	These two projects will develop useful and consistent sources of mapped biological information across the respective states, followed by a display tool – a Decision Support System (DSS) - within each state. Developing the DSS involves: 1) Compiling types and layers of information valuable in identifying crucial habitat; 2) Analysis of information to rank areas as crucial habitat and wildlife corridors; and 3) Develop the tool to help deliver crucial habitat and corridor information to appropriate users (the actual DSS) - a web-based, spatially-explicit decision support system presenting information at a scale supported by the available data, to be used to identify crucial wildlife habitats and important wildlife corridors and inform management decisions that have the potential to impact those habitats and species.
Crucial Wildlife Habitats and Corridors Decision Support System for the Colorado-New Mexico Border Region.	New Mexico Department of Game & Fish	

Bear River Watershed Beyond the Borders Project	National Wildlife Refuge Association	This project will support collaborative work to further the goals and accomplish objective of the Bear River Watershed Conservation Area (BRWCA). The BRWCA project works with private landowners to conserve natural resources and working landscape of the area. The project will provide GIS and conservation area planning support; develop public outreach strategies, outreach materials, and develop communications strategies; and advance the BRWCA as a national model of collaborative landscape conservation, in the tradition of the Crown of the Continent, in an effort to institutionalize the “Beyond the Boundaries” or collaborative conservation approach to implementing strategic habitat conservation.
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## Funded through a Bureau of Reclamation FOA and WaterSMART Applied Science Grants

Modeling low stream flows and assessing the ecological impacts of potential stream drying under climate change in the Upper Colorado River Basin	Colorado State University	The project will address how small stream low-flow hydrology will be impacted by predicted, drier summers in the UCRB under climate change and how the resulting impacts will affect riparian plant communities. The assessment will produce GIS data layers and maps for streams in the UCRB indicating how stream flows may change under future climate change scenarios and will be available on an interactive website. Additionally, the project will produce statistical models that relate flow parameters to riparian vegetation compositions.
Soil Vulnerability to Future Climate Change in the Southern Rockies LCC, with implications for vegetation change and water cycle	Conservation Biology Institute	The project will take existing soil map data and increase the resolution within the LCC, if data is missing use statistical methods to “fill in the blanks”. This will give a LCC-wide soils dataset. This may be used to project future climatic changes and its potential effect on the vegetation found on a given soil type.

## Funded through USGS Southwest Biological Science Center

Project Title	Principle Investigator	Project Description
Distribution and abundance of roundtail chub, and bluehead and flannelmouth suckers in relation to water temperatures in selected reaches of the White River in Colorado.	USGS Coop Unit at Colorado State University USGS SBSC	Objectives of this project are to examine historic and current spatial patterns and occurrence of native and non-native fishes relative to thermal regimes in the White River from about Meeker, CO to the confluence with the Green River in UT; to model thermal resources in the White River and its tributaries to gain understanding of preferred thermal requirements for fish species; to determine zones of overlap for native and nonnative fishes; and to provide land managers with information that will help protect fish communities in the White River.
The Influence of Changing Climate on terrestrial water availability in the Southern Rockies Region.	University of Wyoming USGS SBSC	This project is structured around the central goal of applying a soil water model to assess how alteration temperature, precipitation and weather variability will alter temporal patterns of soil water content and utilization by vegetation. This includes addressing how increasing temperature might influence rates of evaporative water loss throughout the region, potentially decreasing water availability for plants; how changes in the seasonality of precipitation would influence soil water availability through the soil profile; and what the consequences of increasing variability in weather events and increasing frequency of extreme weather are for seasonal and soil depth patterns of soil water availability?

**Appendix A. List of invited agencies, tribes, and organizations to the Southern Rockies Landscape Conservation Cooperative's first Steering Committee Meeting, April, 2011.**

Arizona Department of Water Resources	Hopi Tribe
Arizona Game and Fish Department	Hualapai Tribe
Army Corps of Engineers	Jicarilla Apache Nation
Bureau of Indian Affairs	Kaibab Band of Paiute Indians
Bureau of Land Management	Laguna Pueblo
Bureau of Reclamation	Mescalero Apache Tribe
Colorado Division of Wildlife	Navajo Tribe
Colorado Water Conservation Board	Ohkay Owingeh
Earth Justice	Paiute Indian Tribe of Utah
Emory County Utah	Pueblo of Acoma
Environmental Protection Agency	Pueblo of Cochiti
Fish and Wildlife Service	Pueblo of Isleta
Intermountain West Joint Venture	Pueblo of Jemez
National Park Service	Pueblo of Nambe
Natural Heritage Program, Colorado State	Pueblo of Picuris
Natural Resources Conservation Service	Pueblo of Pojoaque
New Mexico Department of Game and Fish	Pueblo of San Felipe
New Mexico Office of the State Engineer	Pueblo of San Ildefonso
The Nature Conservancy	Pueblo of Sandia
Trust for Public Lands	Pueblo of Santa Ana
Utah Governor's Public Lands Policy	Pueblo of Santa Clara
Coordination Office	Pueblo of Santo Domingo
US Forest Service	Pueblo of Taos
US Geological Survey	Pueblo of Tesuque
Western Association of Agricultural	Pueblo of Zia
Experiment Stations	Pueblo of Zuni
Western Native Trout Initiative	Sandia Pueblo
Western Water Assessment	Shivwits Band of Paiute Tribe of Utah
Wyoming Game and Fish Department	Southern Ute Tribe
Wyoming State Engineer	Ute Mountain Ute Tribe

**Appendix B. Southern Rockies Landscape Conservation Cooperative Steering Committee Members, December 2011.**

Dave Anderson, Director, Natural Heritage Program - Colorado State University

Astor Boozer, Acting Regional Conservationist, NRCS

Bob Broscheid, Deputy Director, Arizona Game & Fish Department

Warren Day, Associate Regional Executive for Science, USGS

Suzanne Gifford, Natural Resources Business Manager, Pueblo of Jemez

Randall Gray, Sage Initiative Field Capacity Coordinator, Intermountain West Joint Venture

Stephen Guertin, Regional Director, FWS

Helen Hankins, State Director, BLM

Mitchel Hannon, GIS Program Manager, Trust for Public Land

John Harja, Director, Utah Governor's Public Lands Policy Coordination Office

Amy Heuslein, Environmental Protection Officer, BIA

James Lane, Director, New Mexico Department of G&F

Frank McCormick, Program Manager, USFS - Rocky Mountain Research Station

Kyle McFee, Shivwits Band of Paiutes

David Mehlman, Director, Migratory Bird Program, The Nature Conservancy

Rebecca Mitchell, Water Policy and Issues Coordinator, Colorado Dept. of Natural Resources

Glenn Pauley, Planning Coordinator, Wyoming Game & Fish Department.

Sharon Pinto, Regional Director, BIA

Rick Truex, Regional Wildlife Ecologist, USFS - Rocky Mountain Region

William Walker, Regional Director, BIA

Larry Walkoviak, Regional Director, BOR

Tammy Whittington, Associate Regional Director, NPS

## **Appendix C. Southern Rockies Landscape Conservation Cooperative Science Work Group Members, December 2011**

Tim Bardsley, Utah Liaison, Western Water Assessment

Pam Benjamin, Acting IMR Climate Change and LCC Coordinator, NPS - Intermountain Region

John Bradford, Research Ecologist, USGS

Breton Bruce, Scientist, USGS - Denver

Casey Burns, State Biologist, NRCS

David Busch, Interim Director, SW Climate Science Center, USGS

Bill Dunkelberger, Associate Center Director, BLM - CO

Katrina Grantz, hydrologist, BOR

David Hanni, Science Director, Rocky Mountain Bird Observatory

Michael Harrington, Executive Director, Western Association of Agricultural Extension

Mike Johnson, Hydrology Bureau Chief, New Mexico - Office of State Engineer

Wayne King, Regional Biologist and I&M Coordinator, FWS

Robin Knox, Coordinator, Western Native Trout Initiative

Jeffery J Lukas, Western Water Assessment - University of Colorado

Mary Catherine Manuelito, Navajo Region Climate Change Coordinator, BIA

Frank McCormick, Program Manager, USFS - Rocky Mountain Research Station

Craig McLaughlin, Terrestrial Section Manager, Colorado - Division of Wildlife

David Mehlman, Director, Migratory Bird Program, The Nature Conservancy

Kevin Miller, Science Program Administrator, BLM - UT

Rebecca Mitchell, Water Policy and Issues Coordinator, Colorado – Dept. of Natural Resources

Wayne Padgett, Ecologist, BLM - UT

Claudia Regan, Ecologist, USFS - Representing Regions 2, 3, 4

William Walker, Regional Director, BIA

Kevin Werner, Service Coordination Hydrologist, NOAA