



SOUTHERN ROCKIES

Landscape Conservation Cooperative

2016 Annual Report

SOUTHERN ROCKIES Landscape Conservation Cooperative

The Southern Rockies LCC is a self-directed partnership formed by federal, state, tribal, and non-governmental organizations that collectively works to address pressing conservation issues at the landscape scale. Encompassing more than 127 million acres, our geography covers portions of Arizona, Colorado, New Mexico, Utah, and Wyoming. We are part of a network of 22 LCCs focused on meeting the shared needs of partner organizations.

We enhance collaborative management actions through an adaptive management framework that answers vital questions about our conservation work: where, what, when, and how much. By addressing shared objectives and leveraging resources to provide scientific information and decision support tools, we inform actions that lead to desired on-the-ground conservation outcomes.



VISION

A landscape that supports and sustains desired conditions for five focal resources: cultural, mule deer and elk, native fish, streamflows, and the sagebrush-steppe ecosystem.



LEADERSHIP HIGHLIGHTS

In 2016, the Southern Rockies Landscape Conservation Cooperative (SRLCC) Steering Committee (SC) focused much of its effort in two areas: increasing tribal engagement and bringing the activities of the SRLCC into a cohesive strategy under the existing Strategic Conservation Framework.

◆ Increasing Tribal Engagement

During the spring meeting in Pinedale, WY, the SC approved a Tribal Engagement Strategy. The strategy consists of the following three parts.

1. Increase tribal participation

The SRLCC will host Tribal Forums every year to interact with tribal resource managers. Tribes have expressed that they would best be able to engage with the SRLCC if there could be a “tribes only” forum tied to a larger conference that they were already planning to attend. This would minimize impacts to schedules and travel cost, as well as provide a venue for tribal groups to discuss their respective climate change adaptation and other landscape conservation issues in a more open way.

The first Tribal Forum was held in August 2016 in conjunction with the Native American Fish and Wildlife Society (NAFWS) Southwest Regional Conference. As a result of conversations at the forum, the SRLCC is supporting VISTA students to conduct vulnerability assessments (see below) and wrote a letter of support for a Southwest Climate Science Center proposal that will help tribes plan for changes to vegetation species important for cultural purposes (e.g., food, medicinal). Additionally, several SC members (Pam Benjamin, Joe Jojola, Tammy Belone, Kyle McFee, Gloria Tom, and Caiti Steele) worked with the NAFWS Southwest Region to secure a BIA grant for travel support to Tribal Forums starting in 2017.

2. Enhance tribal communications

SRLCC staff is working with tribal members to develop a tribal web page for the SRLCC website. The page will include information of tribal interests, provide access to on-going and completed tribal projects in the SRLCC, highlight information from the Tribal Forums, and link to resources for developing adaptation strategies.

3. Provide consistent funding opportunities to address tribal needs

Feedback received by the SC from the Tribal Forum is being directly incorporated into SRLCC funding opportunities. Tribal members on the SC are working to acquire VISTA students to conduct vulnerability assessments for important cultural resources.



Golden eagle. Photo by Tom Koerner, USFWS

The SRLCC is supporting these VISTA students by providing technical capacity for the development of vulnerability assessments and adaptation strategies. SRLCC staff is also pursuing ways to financially support the students.

◆ Refining Our Strategic Direction

Early on, the SC adopted a Strategic Conservation Framework based on an adaptive management approach to guide SRLCC activities. The first step in this framework was to identify a set of shared conservation targets. Subsequently, the SC articulated their vision for the Southern Rockies geography: a landscape that supports and sustains desired conditions for five focal resources (shared conservation targets) within the SRLCC. The current focal resources include: cultural, mule deer and elk, native fish, streamflows, and the sagebrush-steppe ecosystem.

This year, the SC focused on bringing our ongoing activities and initiatives—Tribal Forums, Landscape Conservation Design and Adaptation Forums, Focal Resource Planning Matrices, and support to National Fish Habitat Partnerships—into an updated strategy that describes how their vision for the landscape will be achieved.

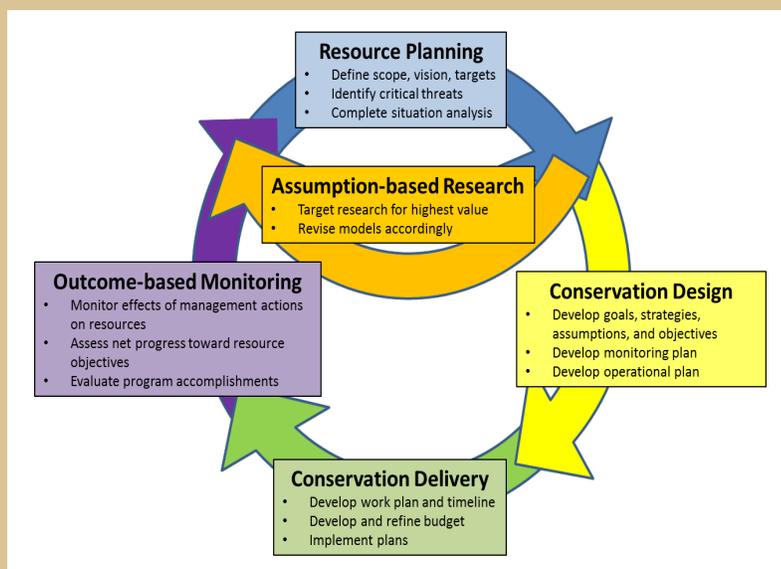
A subgroup of SC members is developing two documents slated for completion in 2017. The first document builds upon our previous Strategic Synthesis. It describes how our activities will address elements of the Strategic Conservation Framework and strategically bring science and decision support to bear on answering vital management questions about our conservation work: where, what, when, and how much. The second document aims to communicate how our Strategic Conservation Framework is guiding Landscape

Conservation Design and Adaptation Forums in the Green River Basin, Upper Rio Grande, and Four Corners geographies. This brochure also will describe the Tribal Forum and its role in helping to better address natural and cultural resource issues.

During our fall meeting in Santa Ana Pueblo, NM, David Anderson (Colorado Natural Heritage Program) and Rick Truex (US Forest Service) were recognized for their roles as past and out-going SC Chairs. Pam Benjamin (National Park Service) assumed the role of Chair for 2017 and Tammy Belone (Pueblo of Jemez) accepted the Vice Chair position.

In August, the Science Working Group (SWG) met to integrate participant feedback from the Adaptation Forum workshops (described in next section) and the recent planning efforts of the SC. This effort identified important goals that the partnership would like to achieve for the conservation of our focal resources. For each conservation goal, the SWG identified knowledge gaps, important management questions, and key information needed by resource managers.

The SWG also developed a strategy for acquiring and analyzing data, and delivering information to the partnership and other stakeholders. These efforts collectively inform the Science Investment Portfolio, which consists of projects selected by the partnership to help achieve the goals of our five focal resources.



The Southern Rockies LCC partnership follows an adaptive management approach.

INFORMING CONSERVATION

The SRLCC invests in science and delivers tools and information that inform management decisions to achieve shared landscape conservation goals.

Investing in Science

◆ Landscape-Level Assessments Across the Colorado Plateau Using BLM's Rapid Ecoregional Assessment Data

Lead by the USGS Utah Cooperative Fish and Wildlife Research Unit, the Utah Rare Plants Modeling project produced data and models for 19 plant species having formal designation under the Endangered Species Act or identified as of concern (i.e., "sensitive") in the Colorado Plateau. The products allow for greater identification of areas where proposed energy development and rare plant locations intersect. The models and raw location data also facilitate more robust risk assessments under different management scenarios.

Specific products from this project include: maps of species-specific predicted and classified distributions; ensembles of species-specific distribution models; species-specific modelling domains used to provide ecologically defensible sample and projection domains; and locations and measured presence:absence of the 19 plant species. Collaborators included the Bureau of Land Management, the State of Utah Department of Natural Resources and Division of Wildlife Resources, the SRLCC, and the US Fish and Wildlife Service.

◆ Identifying Climate Change Refugia for Rio Grande Cutthroat Trout

Jointly, the USGS Colorado Water Science Center, New Mexico Department of Fish and Game, Colorado Parks and Wildlife Department, and Colorado State University developed a Bayesian network model of Rio Grande Cutthroat Trout (RGCT) population persistence. The model uses input data related to stream temperature, stream flow, habitat size/quality, proximity of non-native fishes, and RGCT population size. The model output is spatially explicit, allowing data to serve as a map of RGCT vulnerability to climate change and other threats.

◆ NetMap Erosion and Sedimentation Analysis

The tools developed from this project allow managers in the Green River Basin, WY, to conduct analyses pertaining to erosion and sediment delivery to stream channels from unpaved road surfaces and uplands.

The tools can be used to identify high-priority areas for sediment control (mitigation).

◆ Broad-scale Analysis of Mule Deer Survival: Understanding Process and Improving Prediction

The mule deer is an indicator species for several habitats across the Southern Rockies geography and is one of the SRLCC's five focal resources. In 2016, the SRLCC funded a new project to develop a management-relevant model of mule deer survival that encompasses information from a large temporal and spatial scale. The project is coordinated through the Western Association of Fish and Wildlife Agencies' Mule Deer Working Group, and implemented by researchers at the University of Montana.

In cooperation with 23 western states and Canadian provinces, existing mule deer survival data will be used for model development. This large dataset allows a range-wide synthesis of temporal and spatial parameters that are important for use in mule deer management models. This analysis will help managers better understand processes driving mule deer survival and more accurately predict survival for more informed management decision processes. The project will deliver a tool for agencies to predict how mule deer populations will react to current conditions or proposed management alternatives.



Mule deer, Steve Torbit



Rio Grande cutthroat trout, Fish Eye Guy Photography



Graham's beardtongue, Wikimedia Commons

Delivering Tools and Information

◆ Green River Basin LCD

Efforts by the SRLCC to bring science and data to decision makers in the Green River Basin have resulted in several products. Conservation Science Partners and Northern Arizona University's Landscape Conservation Initiative have completed a needs assessment for the Green River Basin Landscape Conservation Design (GRB LCD). The report identifies opportunities for the GRB LCD to complement existing work and leverage limited resources into effective conservation, and reaffirmed the LCD's initial ecosystem targets: sage-steppe and riverine/riparian ecosystems. From the report, a social network map was developed to show the network of connections among individuals and groups.

In April, more than 40 participants gathered for a workshop in Rock Springs, WY. The workshop provided a forum to review, refine, and contribute to existing data, and to discuss opportunities for conservation and management across the landscape. Lastly, an assessment and modeling of current conditions has been completed for freshwater intactness and riparian vegetation. Analyses were presented via webinars and valuable feedback was received on utility and suggestions for future analyses.

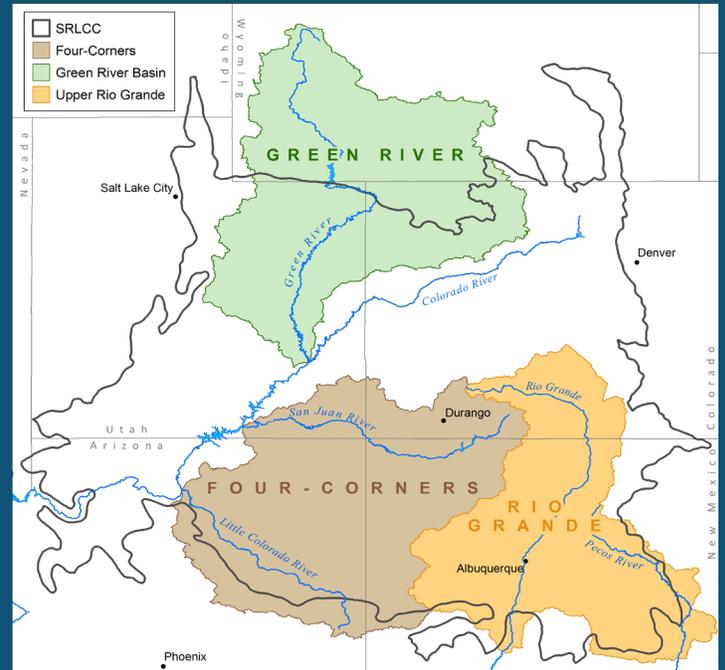
◆ Adaptation Forum Workshops

In May, SRLCC offered two Adaptation Forum workshops to gather information from resource managers on their needs for landscape-scale science. Workshops were held at locations within two focus areas: Durango, CO for the Four Corners geography and Albuquerque, NM for the Upper Rio Grande geography.

The workshops provided a platform to:

1. Receive input on the future development of science, decision support tools, vulnerability assessments, and adaptation strategies for SRLCC's five focal resources and other resources of local significance.
2. Provide science information from recent and ongoing SRLCC-supported projects.

The two-day workshops were well attended: 37 participants in Durango and 57 participants in Albuquerque. The workshop format consisted of full group discussions to identify resources of greatest



Southern Rockies LCC has three focus areas where the partnership is addressing pressing conservation issues: the Green River Basin, Four Corners, and Rio Grande.

significance in the geographies; breakout group discussions on management objectives and key science needs for high priority resources; and presentations by principal investigators on SRLCC-supported research and planning projects.

Participant feedback is currently guiding development of vulnerability assessments and is informing future SRLCC science investments. Webinars and workshops planned for 2017 will provide participants with a hands-on opportunity to explore these vulnerability assessments and develop adaptation strategies.

◆ Science Webinars

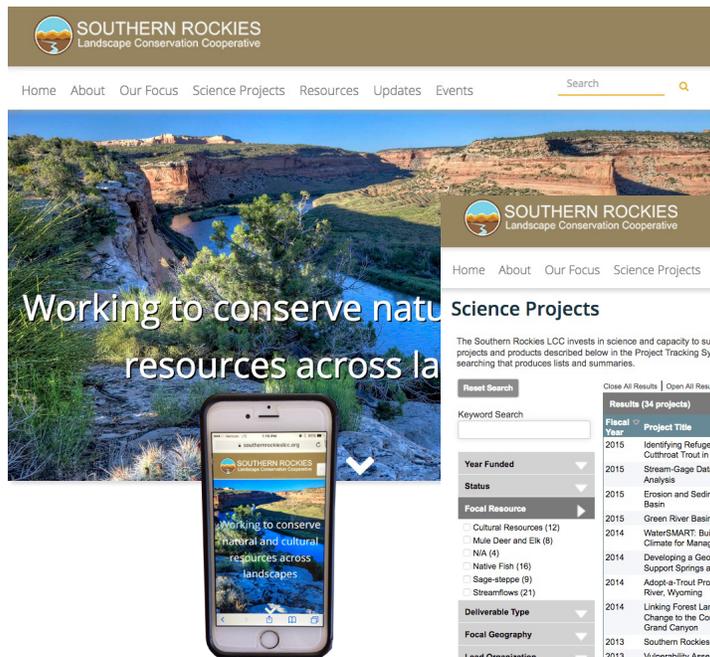
Our science webinars continue to be a valuable source of landscape science and information. We hosted 14 webinars, some of which were cohosted with other LCCs. Webinars were presented by SRLCC project principal investigators as well as other collaborators conducting landscape-scale work within the region and the West.

Learn more about SRLCC science products at <https://southernrockieslcc.org/pts>

ONLINE COMMUNICATIONS

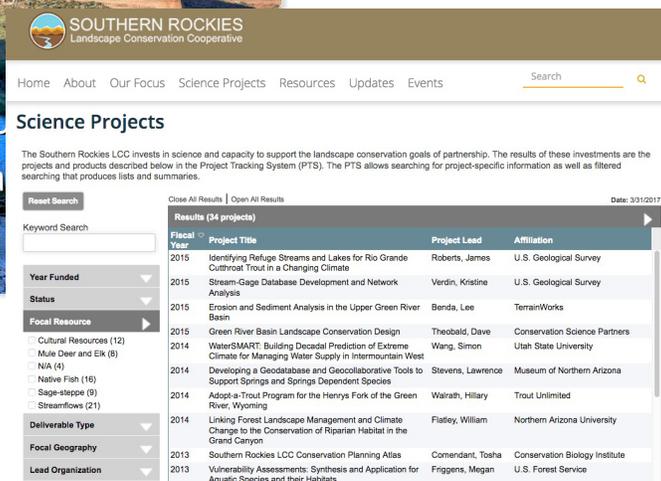
◆ New Website

In October, SRLCC launched a new website. The much-improved website makes navigation easier on desktop computers and mobile devices. Upcoming events, recorded webinars, and other resources are much easier to access. A new feature, the Project Tracking System, allows users to search SRLCC-supported projects and products. Users can narrow down searches with filters and view summaries of results.



◆ News and Announcements

MailChimp, a free email marketing tool, has been used by SRLCC since 2013 to send news and announcements to our geographically dispersed subscribers. Email content includes, results and products from SRLCC-funded projects, upcoming events such as webinars and workshops, and other updates. This year, the number of subscribers rose from 507 to 593, a 15 percent increase.



To learn more about the Southern Rockies LCC, please visit our website or contact us.

Kevin Johnson, Coordinator
Phone: 303-236-4404
Email: kevin_m_johnson@fws.gov

John Rice, Science Coordinator
Phone: 801-524-3685
Email: jrrice@usbr.gov

Mary McFadzen, Communications Coordinator
Phone: 406-994-2388
Email: mmcfadzen@montana.edu



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