

Editor's Preface and Executive Summary

THE 2006 COLORADO COLLEGE STATE OF THE ROCKIES REPORT CARD

By Walter E. Hecox, Bryan Hurlbutt, and Caitlin O'Brady

Editor's Preface

In our third year of the State of the Rockies Project, we still find ourselves working to better understand an incredibly diverse and complicated region facing a variety of unique challenges. Learning from past years, we have refined our research methods and recruited more students. We seek to take a fresh approach to putting together a credible written report and conference on pressing issues of community and environment in Colorado College's backyard—the eight-state Rocky Mountain West.

Thanks to generous funding, we were able to select a team of five exceptional student researchers to launch an early start on this year's research along with the State of the Rockies staff during summer 2005. To supplement their academic work in Colorado Springs, the research team took an extended field trip throughout the northern Rockies to visit ranches, communities, and natural areas, connecting their academic research with on-the-ground experience. Since the summer, the student researchers have met with scientists and community leaders and have continued fine-tuning their research projects with the help of the State of the Rockies staff to produce the *2006 State of the Rockies Report Card* and organize the 2006 State of the Rockies Conference.

This year's research topics take a new perspective on and delve deeper into critical topics we have studied generally in past report cards and conferences. Our aim is to cultivate a new vision of our shared home and to challenge the Mountain West to decide where we are coming from and where we want to go as a region.

We kick off the *Report Card* with the "Rockies Baseline," which examines key, annually updated demographic indicators for the U.S., the Rockies region, and each of the eight Rockies states, to lay out basic facts and track trends in this rapidly changing region. Next, "A Common Western Voice" suggests how the region can and must increase its national political influence through a shared, yet diverse vision of what matters in the West.

Population growth is still the main driver of change in the Rockies region, as the influx of people spurs development of once open land and increases the demand for limited water supplies among a variety of other impacts. In "Ranching in the Rockies" and "Conservation Easements," we focus on how private lands, which are so susceptible to development and other impacts of growth these days, are being preserved as agricultural and natural lands. In "New Resource Management" and "Experiments in Managing the Federal Estate: The Case of the Valles Caldera," we document specific cases around the Rockies where innovative, collaborative land management strategies are effectively protecting the landscape while supporting adjacent communities.

In additional reports, we move further into the realm of environmental science to assess human influence on ecosystems and other natural systems in the Rockies region. In "Climate Change," we evaluate potential future climate scenarios for the Rockies region and assess the influence such changes could have on ecosystems, agriculture, tourism, and water supply. In "Preserving Biodiversity," we explore the importance of biodiversity to both ecosystems and humans, measure habitat threat across the region, and highlight creative ways groups are working to support biodiversity. Guest contributors add their thoughts on what biodiversity is, how much it is at risk, and what can and should be done to protect these key natural systems. A companion guest contribution, "Fragmenting the Western American Landscape," measures the degree and impact of habitat fragmentation in the region.

The final two sections of the *Report Card* bring attention to community in the Rockies. In "Environmental Justice," we document the history of this movement for equal protection of all humans from environmental harm in the U.S., and we uncover the disproportionate burden certain demographic groups bear in the Rockies' metro areas. In "Grading the Rockies: Nurturing the Youth," we continue our tradition of assigning county grades to highlight communities that should serve as positive examples for other cities and towns throughout the region. This year's community assessment uses data on teen involvement, family support, educational opportunity, healthy surroundings, safe neighborhoods, and community engagement to grade all 281 counties in the region on their success at creating supportive environments for their youth—who may be our region's most vital asset in the future.

Central to this year's project activities, as in the past, are the three goals of the Colorado College State of the Rockies Project:

- To produce an annual research book, the *State of the Rockies Report Card*, on critical issues of community and environment in the Rocky Mountain West;
- To host an annual conference at Colorado College, the State of the Rockies Conference, bringing regional experts together with concerned citizens; and
- To involve Colorado College students as the main contributors to the *Report Card* and conference.

Through these goals, the project aims to inspire conference attendees and *Report Card* readers to creatively think about, discuss, and engage in shaping the future of our beloved region—the Rocky Mountain West.

About the editors: Walter E. Hecox is professor of economics and environmental science at Colorado College and project director of the Colorado College State of the Rockies Project. Bryan Hurlbutt (Colorado College class of 2004) is program coordinator and Caitlin O'Brady (Colorado College class of 2005) is research manager for the Colorado College State of the Rockies Project.

Executive Summary

“Rockies Baseline: Vital Signs for a Region in Transition”

State of the Rockies - Bryan Hurlbutt

Each year, the State of the Rockies updates a set of key demographic indicators—the Vital Signs—to take the pulse of the Rockies region. To track trends in the rapidly changing eight Rockies states, this year’s stats are compared to the baseline year 2000. The Vital Signs dispel common myths that the Rocky Mountain West is still a lawless, backward land of rugged cowboys roaming remote locations, fending for themselves, and living off the land. The Vital Signs show that we are diverse, well-educated, and mobile, and for better or worse, most of us work in offices. Perhaps the most critical indicator of all, the region’s population is still growing swiftly—over three times faster than the U.S. population.

“A Common Western Voice: Can the Rockies Be Heard in Washington, D.C.?”

State of the Rockies - Jared Kapela, Andrew Yarbrough, Caitlin O’Brady, and Bryan Hurlbutt

The Rocky Mountain region’s distinctive features—its vast open space, large proportion of federal lands, aridity, small population coupled with rapid population growth, abundance of natural amenities and natural resources, and popularity to vacationers—create a unique set of challenges for the region, which are often ignored in national politics. As a result, critical regional issues do not receive the national attention and support that they need. The State of the Rockies shows that during the 2004 presidential election, little money and time were spent by Bush and Kerry in the region. State of the Rockies urges the region to find a strong political voice and explores hosting a presidential primary and/or presidential debate in the Rocky Mountain West.

“Ranching in the Rockies: Threats and Signs of Hope”

State of the Rockies - Andrew Yarbrough, Jared Kapela and Caitlin O’Brady

Changes in the agriculture industry have made it tougher for traditional ranchers to make a profit in the Rockies region, and rapid population growth has increased the price developers are willing to pay for ranchland. As a result, many ranchers are cashing out, and their productive agriculture land is being converted into “trophy” ranches and subdivisions. Once a mainstay of the opening up of the West and of the rural economy, the role of ranching in the Rockies region has undergone a dramatic change. In the face of sprawl, environmental groups, who once viewed ranching as one of the biggest environmental threats, now see ranching as a protector of open space and wildlife habitat. Here, the State of the Rockies examines the economic challenges to ranching in the Rockies region, showing that more farms and ranches are losing money than in the past and that the amount of farmland and ranchland is declining across much of the region. However, this report highlights innovative ranchers who are diversifying their operations and making ends meet by targeting niche consumer markets with their products or by turning their ranches into destinations for hunters, artists, and vacationers.

“Conservation Easements: Preserving Private Land in the Rockies”

State of the Rockies - Jared Kapela, Bryan Hurlbutt, and Andrew Yarbrough

Nearly half of the land in the Rockies region is federally owned, and although these public lands still face a variety of environmental threats, private land is being altered at a faster rate. As a result, conservation groups are devoting more time and energy to protecting private land. Land trusts are leading the way through conservation easements. By placing a conservation easement on land, a private property owner sacrifices the right to develop that land in the future in exchange for tax relief. The State of the Rockies finds that conservation easements are successfully protecting private land in the region and their use is on the rise, but depending on the resolution of a few controversies involving easements, the movement’s pace could lose steam. County-level analysis shows that although private land is being well protected by easements along the Continental Divide, there is relatively little easement activity elsewhere in the region. Furthermore, the eastern Rockies states (Colorado, Montana, New Mexico, and Wyoming) have a much higher percentage of their private land under easement than do the western Rockies states (Arizona, Idaho, Nevada, and Utah).





“New Resource Management: Innovative Approaches in the Rockies”

State of the Rockies - Chris Jackson

Resource management in the Rocky Mountain West is often mired in bitter conflict between competing interest groups in the realm of law and politics. Today, however, ground is being broken in managing limited, highly valued resources through cooperative approaches that harness market incentives and, when necessary, implement tools to compensate resource loss. Here, the State of the Rockies highlights several successful examples of creative collaboration in managing land, water, and wildlife around the region.

“Experiments in Managing the Federal Estate: The Case of the Valles Caldera National Preserve and Trust”

F. Patrick Holmes, guest contributor

Patrick Holmes, former program coordinator of the State of the Rockies, takes an in-depth look at experimental federal land management of the Valles Caldera National Preserve in New Mexico. The preserve is managed by a nine-member board of trustees as a government-owned corporation of the U.S. Forest Service in an attempt at consensus-based public land management. Holmes sees hope in this new type of management but documents some flaws in the program. He notes that conditions specific to the Valles Caldera may make it better suited for this type of management than other federally owned areas.

“Biodiversity: A Coat of Many Colors”

Tass Kelso, guest contributor

Tass Kelso, Colorado College biology professor, explains the importance of biological diversity to human life. Not only does the variety of life forms in the Rockies region provide food and energy, shield against natural disasters, and support functional ecosystems, but they are a vital component of the Rockies’ unique, beloved natural landscape.

Challenge Essay: “The Invasion of Our Rockies: Hype or Management Priority?”

Anna Sher, guest contributor

Anna Sher, an invasive plant ecologist at the University of Denver

and the Denver Botanic Gardens, addresses the issue of invasive species as a threat to biodiversity. Sher argues that simply removing invasive weeds, which she calls the strip malls of nature, is too limited of an approach to solving the problem. The ultimate goal is to restore functioning ecosystems, which will require more research into the mechanisms responsible for the invasion. She challenges residents of the Rockies region to see invasive species not as necessarily “bad” or “good,” but rather to understand their broader ecosystem implications. How are invasives introduced to the Rockies region? How do they spread? How do they affect whole ecosystems? Upon answering these questions, the region can then begin to ask, “How can management strategies best deal with the problem?”

Challenge Essay: “Myths Versus Realities Concerning Threatened and Endangered Species in the Rockies”

Randy T. Simmons, guest contributor

Randy T. Simmons, senior fellow at the Property and Environment Research Center (PERC) and professor of political science at Utah State University, challenges a number of common beliefs about endangered species and “nature” in the Rocky Mountain West. Simmons questions assumptions, including that nature is highly structured and balanced, that wilderness has always been free from human impacts, and that ecosystems will return to normal if disturbances are removed. He illustrates the ways in which these assumptions have resulted in limited, inadequate approaches to saving species. Simmons challenges the region to look beyond these assumptions and argues for a stronger state role in ecosystem protection.

“The Endangered Species Act of 1973: An Overview”

Phillip M. Kannan, guest contributor

Phillip M. Kannan, distinguished lecturer and legal scholar-in-residence in the Colorado College environmental science program, introduces the Endangered Species Act (ESA), the federal government’s tool for protecting species and biodiversity. Kannan outlines the workings of the ESA and suggests that, although the individual species protection approach that the Act takes is limited, the ESA can play an important role in a larger plan to protect entire ecosystems.

“Preserving Biodiversity: Mapping Habitat Threat in the Rockies”

State of the Rockies - Amanda Strauss, Caitlin O’Brady, and Bryan Hurlbutt

Fresh air, productive agricultural land, and clean water are just a few of the many invaluable “services” that the biodiversity, or variety of life on Earth, provides for humans. But biodiversity is being devastated globally, nationally, and within the Rockies region. The State of the Rockies measures human-caused current and future habitat threat in every county in the region. The report finds that habitat destruction is taking place, it is on track to continue throughout the entire region, and the threat is much higher in some counties than in others. The report also outlines groundbreaking ways scientists, communities, nonprofits, and government agencies are working together to take a broader, scientifically sound approach to preserving biodiversity through whole ecosystems management.

“Fragmenting the Western American Landscape”

Chris Pague, Tyrone Guthrie, and Christina Supples, guest contributors, The Nature Conservancy

Habitat fragmentation—the breaking up of large areas of habitat into isolated parcels—is a leading contributor to the loss of biodiversity nationwide. As humans further develop the Western landscape, roads, subdivisions, fences, and power lines lock plants and animals into isolated pockets, which decreases the resilience of an ecosystem. The Colorado Nature Conservancy maps “natural” and “not natural” land across the region and uses sophisticated GIS analysis to rank every county in the region on the degree of habitat fragmentation within its boundaries.

“Regional Challenges of Future Climate Change: Endless Summer or Business as Usual?”

Matthew Reuer, guest contributor

Matthew Reuer, technical director of the Colorado College environmental science program, introduces climate change from a scientific perspective. Reuer presents data documenting the recent rise in global CO₂ concentrations and the corresponding rise in global temperature. Reuer suggests that, although the study of climate change is rife with uncertainty, further study and analysis of historic and projected climate warming is essential, because of the many environmental, social, economic, and political implications of climate change.

“Climate Change: Modeling a Warmer Rockies and Assessing the Implications”

State of the Rockies - Gregory Zimmerman, Caitlin O’Brady, and Bryan Hurlbutt

Will the Rockies region still be the world’s prime skiing destination? Will the region’s already limited water supply dwindle and further ignite water rights conflicts? Will our ecosystems wither and be overrun by invasive species? Recently, devastating hurricanes and floods, melting ice caps, and species extinctions have made humans aware that global climate is changing, and it is expected to continue changing into the future. The State of the Rockies acquired temperature, precipitation, and snowpack projections from state-of-the-art climate models to understand how the region could be affected by climate change. The analysis both projects changes in temperature, precipitation,

and snowpack, and assesses potential impacts on the region’s ecoregions, river basins, and skiing communities. To maintain the current human way of life, people must understand and be prepared to adapt to these changes.

“Environmental Justice: Income, Race, Ethnicity, and Toxic Pollution in the Rockies’ Metro Areas”

State of the Rockies - Angela Banfill, Bryan Hurlbutt, and Caitlin O’Brady

Environmental justice is hailed as the confluence of the two great movements of the 20th century, the civil rights movement and the environmental movement. Towards the end of the 20th century, it became apparent that certain demographic groups tend to bear a disproportionate share of environmental harm. Although the environmental justice movement has made some headway, there is still a long way to go, especially in the Rockies region where mainstream environmental issues tend to focus on “nature” while overlooking social issues related to environment. The State of the Rockies maps sources of toxic pollution in the 23 largest metro areas in the region and analyzes the income, race, and ethnicity of neighborhoods near these polluters. The study finds that environmental inequity is indeed a reality in the Rockies and environmental justice issues deserve equal attention to mainstream environmental issues.

“Grading the Rockies: Nurturing the Youth”

State of the Rockies - Caitlin O’Brady and Bryan Hurlbutt

The State of the Rockies continues its tradition of assigning grades to all 281 counties in the region on critical community issues. This year the topic is nurturing the youth. Although data can hardly speak to the most important ways the youth can be supported—like loving, appreciating, and believing in them—the 24 indicators used to grade the counties shed light on community efforts to create a positive environment in which the youth can develop into the future leaders of the region. The indicators are divided into six categories: teen involvement, family support, educational opportunity, healthy surroundings, safe neighborhoods, and engaged communities.

