



# Colorado College State of the Rockies

**The State of the Rockies Project 2016-2017 Prospectus:**

## **Inclusive River Governance in a Changing West**

**May 2016**

### **Establishing a New Rockies Project Approach to Western Water Issues**

Recognizing the critical role water plays in the American West, we continue our commitment to critical assessment of conservation issues with this year's comparative investigation into governance of the West's two great rivers: the Columbia and Colorado. While the hydrology of the two basins may differ, the issues surrounding each river's management present many parallels. Of major significance is the multi-jurisdictional and multi-stakeholder nature of management: both watersheds touch seven states and extend into neighboring countries with the headwaters of the Columbia River in Canada and the terminus of the Colorado River in Mexico. While there is an enormous difference in the average annual flows of each watershed, with the Columbia River's average annual discharge nearly ten times the Colorado River's, the uses of water and invested stakeholders show many similarities.

Furthermore, rapid changes are occurring across the American West, from climate change to demographic shifts. The occurrence of a strong El Niño during the winter of 2016 will add an additional variable to each region's water management, as precipitation and temperature shift away from traditional norms. The natural variability of a strong El Niño event, and the response by water users across the West, will present some insight into the greater volatility under the anticipated scenarios of a changing climate. Thus, climate and its role on the changing West will also be a salient and common element of student research.

In addition to a changing climate, demographics and the cultural fabric of the American West are changing with an influx of new residents and rapidly growing urban populations. With a shifting and increasingly diverse population, recognition of environmental values has increased. Furthermore, groups that have historically been denied their water allocations, such as tribes, are gaining ground in securing their water rights and protecting their culture. In some watersheds, a changing West has amplified

contention over water governance, while in others collaborative processes have evolved as an inclusive governance mechanism. The very rivers championed and used by first nations may be a broader and more tangible way to effect governance changes in water across the West. By comparing these changes across river basins, the Rockies Project hopes to better understand the challenges to inclusive river governance as well as innovative solutions for a water-stressed future.

Under this focus we will facilitate student research on a variety of topics, while also encouraging and informing discussions on the Colorado College campus, and across the West to better understand what lessons might be transferred between the Southwest and Northwest. What can we learn about river governance from the history of dams in each region? How have Native American interests been incorporated or ignored? How have ecosystems been affected as waterways have been increasingly governed for human's beneficial use? While on the surface, the comparison is wet versus dry, the environmental and societal issues occurring in the two regions speak to one another.

We thus propose a comparative approach—of the Northwest and Southwest—to study and understand the challenges of inclusive governance posed to all communities throughout the changing American West.

### **State of the Rockies's Model for Investigating Western Water**

The Rockies Project has addressed Western water issues from diverse angles. From 2011-2013 the Rockies Project looked specifically at the Colorado River Basin, and this past year the Project looked at multiple scales of western water across the Southwest. Moving forward, we intend to take the multi-scalar approach further by comparing two distinct watersheds in the American West: the Colorado River and Columbia River Basins. This comparative approach will allow liberal arts graduates at Colorado College to fully understand the new dimensions to water in the Rockies and the American West.

Rockies Project student researchers during summer 2016 will each adopt a particular subtopic of water issues to comparatively study across the Colorado and Columbia River Basins. This research will then be conveyed to a larger audience on the Colorado College campus, and to our regional stakeholders who receive the Rockies Project *Plains to Peak Bulletin* publication or track us on social media. Student researchers will investigate their project through the student-faculty collaborative research approach that the Rockies Project has been utilizing for the last twelve years.

In order to achieve these goals, and ultimately a comprehensive understanding of these important issues, we will engage stakeholders on all sides of the debate. Through fieldwork, data analysis, and geographic information systems, we will form a well-balanced perspective on these issues. Engagement will occur through fieldwork based in Colorado, but also beyond, during an extended trip to other important locales in the headwaters of the Colorado and Columbia Rivers. By seeking diverse perspectives, we seek to strengthen this research and outreach aimed at the greater region.

By comparing water issues between the Northwest and Southwest, we hope to reflect on the differences and similarities between the two regions with regard to various subtopics: climate change, Native American water rights, endangered species, population growth, agriculture, and industry. This comparison will facilitate a more critical reflection on larger forces affecting water and conservation issues in the West. With new models for water conservation across the American West calling for or actually using collaborative efforts, it is important to assess the successes and limitations of these efforts and elucidate what different river basins can learn from one another.

### **Researching, Reporting, and Engaging: The Scales of Western Water**

By examining common themes related to water between the Northwest and Southwest, we will analyze the changing scale and nature of water scarcity and availability in the West. The intricate and often ambiguous factors affecting water scarcity and availability stem from economic, social, cultural, and biological factors. Our analysis of these complex interactions will provide insight to practitioners, policymakers, and citizens of the West. In addition to this broad examination of the state of water across two distinct river basins, we will also directly address specific case studies that best represent the various approaches to conservation and water management in the two regions. These case studies provide context to the broader trends examined throughout the West.

Some examples of research might include:

- How do the two major guiding documents of the Columbia and Colorado Rivers address tribal interests?
- Is collaborative watershed planning an effective strategy for inclusive river governance?
- What states are leading by example in modifying western water rights to recognize in-stream flows, recreation, and tourism under changing climactic conditions?
- What happens on over-allocated streams during a drought in the west? Who wins, who loses?
- How do the history and future of dams across the Columbia and Colorado River Basins compare?
- Can we value water differently?

The Colorado College State of the Rockies Project looks forward to critically assessing Western water issues across the traditional eight-state Rockies region and beyond into Northwestern states. Building upon our experience over the past five years on conservation landscapes in the Colorado River Basin and then in the larger Rocky Mountain West, we intend to find fresh approaches and emphasize the important role of giving today's youth a voice in the management, policy, and conservation dimensions of water challenges that they will inherit.

Allocating, managing, and using waters in the American West is a real challenge. Water by its nature is multijurisdictional, multipurpose, involve diverse stakeholders,

operate at various geographical scales, and involve a variety of governance arrangements. These elements make clear that a key dimension to successful water management, water policy and water conservation is the ability to work across boundaries – physical, political and socio-economic. The Rockies Project made great strides over the last twelve years address the major landscape concerns of our beautiful region. By drawing together a better understanding of the American West’s water resources and challenges, and leveraging our summer research, we seek to achieve the same goal for river and water governance in the West.