Western Water Assessment

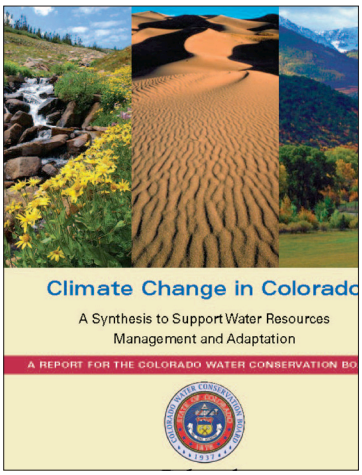
The Western Water Assessment (WWA) produces useful information about natural climate variability and change to natural resource managers in the Intermountain West. WWA is a collaborative government and university research institute, funded through NOAA's Climate Program Office, and uses multidisciplinary teams of experts in climate, water, law, and economics to work with decision makers across the region.

In the West, many of the impacts of climate change will be delivered through changes in the hydrologic cycle that have affected, and will continue to affect, water resources. WWA has focused on building relationships and networks of water-resource decision-makers, and has used these relationships to develop practical research programs and useful informational products. WWA involves researchers and staff from NOAA's Earth System Research Laboratory and National Climatic Data Center and the University of Colorado at Boulder's Cooperative Institute for Research in Environmental Sciences. Some of WWA's projects are highlighted below.

WWA's Mission is To identify & characterize regional vulnerabilities to climate variability and change, and to develop information, products, and processes to assist decision makers throughout the Intermountain West.

Climate Change in Colorado

In October 2008, WWA released the Climate Change in Colorado report at the Governor's Conference on Mitigating Risks of Drought and Climate Change. The report—commissioned by the Colorado Water Conservation Board in support of Governor Ritter's Colorado Climate Action Plan—is a synthesis intended to support water resources, management, and adaptation efforts throughout the state. The report was a finalist for the Governor's Research Impact Award. It also provided a springboard for several climate initiatives within the state, and the authors have given more than 30 public presentations about the report. As a follow-up, WWA is developing a Colorado Climate Roadshow, working with colleagues to adapt a NOAA Climate 101 training workshop for Colorado stakeholders.



Intermountain West Climate Summary (wwa.colorado.edu/IWCS/)

The Intermountain West Climate Summary (IWCS) is WWA's most prominent outreach and education product.

WWA distributes the IWCS to more than 400 decision makers, scientists, and climate information providers. The IWCS provides the latest climate and forecast information in a simple, compact document aimed at managers, planners, and policy makers with water-related interests. During an extensive evaluation in 2008, WWA found that the IWCS is improving awareness and understanding about forecasts and climate phenomena; facilitating a dialog among potential users, researchers, and operational providers of climate information; and improving climate literacy.

BLM Photo

Western Water Assessment

Reconciling Streamflow Projections

WWA is leading an effort to reconcile future Colorado River streamflow projections by evaluating the various methods and models being used. They hope to understand why different modeling approaches produce varying flow reduction amounts. Within the Upper Colorado River Basin, projected reductions in naturalized streamflow by the mid 21st century tied to climate change range, from about 6 to about 45 percent. This wide range makes it difficult for decision makers and water managers to prepare and plan for potential future reductions in streamflow resulting from climate change. In 2008, WWA led a series of discussions culminating in a "model bakeoff," with the intention of narrowing the range of projections so that decision makers can identify vulnerabilities and develop planning strategies. Initial findings were presented in a meeting involving water managers, non-governmental organizations, tribes, and consultants. WWA is also trying to understand how this physical information feeds into the decision making process. Initial findings from this work indicate that there is broad and deep confusion over the variety of available climate change scenarios and how differences affect Colorado River flow projections.

Stakeholder Engagement & Collaborations

WWA is a trusted source of climate information for stakeholders and decision makers. Collectively, WWA researchers gave more than 60 public talks and seminars, were cited or quoted by the media more than 75 times, sponsored several streamflow and drought workshops in the Intermountain West, and served as members of many committees and organizations. Our partners are diverse, including non-governmental organizations, local water providers, state universities and governments, and federal agencies.

Future Projects & Directions

Decision Support for the Colorado River System

Reconciling Colorado river flow projections; impacts of climate change and dust on water resources; inflows between Lakes Powell and Mead.

Climate Adaptation and the Adaptation-Mitigation Nexus

Drought impact and climate change vulnerability assessments, and research at the nexus of energy, water, and climate.

Ecological Vulnerabilities, Impacts, and Adaptation

Forests, climate change, and water resources; climate change impacts on public lands in the Upper Colorado River Basin; pine beetle effects on water quality.

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