

Water and Climate in the Western United States

edited by William M. Lewis Jr., University Press of Colorado, \$29.95.

Reviewed by **Gregg Garfin** – *Climate Assessment for the Southwest, University of Arizona*

Water and Climate in the Western United States, a book impressive in its breadth, takes on a confluence of topics related to climate variability, change, prediction, and modeling, and the roles and influences of institutions, economics, and law on the ability to use climate knowledge to improve water management. Editor William M. Lewis Jr. has assembled an all-star cast of climatologists; hydrologists; legal, economic, and policy scholars; and water managers to meet this task, and the effort provides a nice blend of policy, hydrology, and climate science. The book is partly based on a workshop held in 1999 in Boulder, Colorado, and the conclusions of various working groups punctuate each of the four major sections of the book.

One highlight is a cogent section on issues regarding climate variability—still relevant, even though multi-year drought in the West commanded our attention only after the book was in press. The chapters

on hydrologic prediction give a reasonable sense of the strengths, weaknesses, prospects, and practicalities of dynamic and empirical approaches to using climate information in hydrologic modeling. Chapters written by water managers are especially valuable for their historical perspectives, insights on the constraints on water management, and the challenges of management, given uncertainties introduced by climate and society. The managers collectively assert that adaptation to climate variability, policy considerations, and engagement with stakeholders will provide the robustness needed to meet future challenges. The chapter on economic strategies for adapting to projected climate change impacts on water resources highlights some actions pioneered in California that are becoming more common since the ongoing drought, including water banking, water transfers, short-term market arrangements, and creative water pricing.

The tour de force of the book is an informative and fairly comprehensive chapter on the complex legal, policy, and institutional issues facing water managers



and stakeholders. The chapter's author concludes that attention to actual or anticipated water supply shortages, often precipitated by severe droughts, creates opportunity for water policy reform.

A major shortcoming of the book is the lack of a stronger editorial presence to provide a synthesis of the array of topics covered. One senses little or no

interplay between the workshop participants and the chapter authors. The structure of the book and its association with the workshop is never explicitly mentioned until the final chapter, which does not serve well its function to pull the multidisciplinary strands of the book together in a satisfying way. Nevertheless, the attempt to blend management concerns, needs, and critiques with academic approaches to major water and climate issues is a refreshing goal. Although the book's jacket claims it will appeal to academics and policymakers alike, policy makers may find the technical chapters on linkages between prediction of climate and hydrology a difficult read.

Will you want to own a copy of *Water and Climate in the Western United States*? You bet. Is it the “go to” reference that will allow you to clear reams of books and articles from your bookshelf? No way. Much has changed in the three years since the book was released and eight years since the workshop on which the book was based; thus, the book provides a snapshot in time of its subject. There are now more compelling success stories on using climate in hydrologic prediction; there have been notable changes in water policy, drought, and climate change preparedness in western states, as well as improved understanding of drought variability and observed climate changes in the West. Of course, much is frustratingly the same, even in light of multi-year drought and increased demands on water supplies, and this opens a window of opportunity for an updated volume on these always engrossing topics.

Contact Gregg Garfin at gmgarfin@email.arizona.edu. Also visit www.upcolorado.com.



Water-quality data for selected National Park Units within the Southern Colorado Plateau Network, Arizona, Utah, Colorado, and New Mexico, water years 2005 and 2006, by Macy, J.P. and Monroe, S.A. <http://pubs.usgs.gov/of/2006/1300/>

Post-Wildfire Sedimentation in Saguaro National Park, Rincon Mountain District, and Effects on Lowland Leopard Frog Habitat, by Parker, J.T.C. <http://pubs.usgs.gov/sir/2006/5235/>

Selection of Manning's Roughness Coefficient for Natural and Constructed Vegetated and Non-Vegetated Channels, and Vegetation Maintenance Plan Guidelines for Vegetated Channels in Central Arizona, by Phillips, J.V. and Tadayon, Saeid. <http://pubs.usgs.gov/sir/2006/5108/>

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