

The Consumption of the Colorado River:
Water Supply Management in the Southwestern United States

By Patricia-Ann Caton

Center for Environmental Studies
Brown University, Providence, RI
May 15, 1992

Abstract

In the arid and semi-arid southwestern United States, headlong development and inappropriate agricultural practices have over-used the available water supply, leading to water shortages, inequitable distribution, and environmental degradation. This thesis investigates the path to the present situation, explores current efforts to solve water problems, and offers suggestions for the sustainable and equitable use of water.

Because the Colorado is one of the nation's first major rivers to become fully apportioned, it has become a focal point of debate for water supply and environmental issues throughout the U. S. and the world. This thesis traces the history of water policy in the developing West, with special emphasis on the immense body of documents and laws which determine how and where the water from the Colorado River is used, and the development of that water by the Bureau of Reclamation. This leads to an examination of water use in the seven states which share the Colorado's water, and the adverse environmental effects of that use.

Because the options for development of new water supplies are severely limited by financial, environmental, and physical concerns, this thesis explores methods to stretch existing supplies, specifically, conservation, water marketing, and desalination. The final recommendations include legislative changes which would allow re-evaluation of expiring agricultural contracts to shorten their duration, raise prices, and eliminate subsidies for surplus crops. These changes would encourage agricultural conservation, as they would reduce, or remove, the profit made from inefficient use of water. The water saved would then be available for re-allocation to more efficient uses. This could be facilitated through a wider public participation process, as decision-making by those with narrow self-interests has resulted in the present situation.

While re-allocation is recommended, trading of water, or water rights, on the free market is not. The expected rapid growth of population and industry in the West will put a severe strain on already strained water supplies, and the possibility exists that a free-market would price water out of reach of the common person, particularly in the event of a long-term drought, or similar event. Therefore, this thesis recommends that water be treated more as a common good than a commodity, and that re-allocation be facilitated through mechanisms such as government-operated water banks which would regulate pricing.

Finally, while recognizing that desalinization is presently not economically feasible, it is recommended that research and development of this technology be continued, as future needs may make desalination more necessary than infeasible.