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Lawrence J. MacDonnell

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FACTORS AFFECTING COLORADO'S WATER FUTURE

SUMMARY OF RESULTS OF SURVEY
CONDUCTED APRIL 1985

Lawrence J. MacDonnell
Director
Natural Resources Law Center
University of Colorado School of Law
Boulder, Colorado

COLORADO WATER ISSUES AND OPTIONS:
THE 90'S AND BEYOND
Toward Maximum Beneficial Use
of Colorado's Water Resources

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FACTORS AFFECTING COLORADO'S WATER FUTURE

Lawrence J. MacDonnell*

Colorado's future depends upon the availability of quality water at a reasonable cost. This availability hinges on the way in which we respond to important changes that are underway in Colorado and in the West.

To explore these changes, we asked a selected group of leaders familiar with water issues in Colorado to identify for us the factors they feel will have the greatest influence on Colorado's future. Twenty possibilities were listed. The respondents were invited to add others and to make comments. We asked them to choose the 10 most significant factors and to rank these factors according to their relative importance. The results from the more than 100 respondents are revealing.

* **Population growth along the Front Range** dominated all other factors in the responses. Growing demand for water on the side of the mountains with the most limited surface supplies was seen as the "driving force," in the words of one respondent. Although there are indications that the rate of growth is slowing, the magnitude and effects of this demand make Front Range growth Colorado's most important water issue.

* Director, Natural Resources Law Center, University of Colorado School of Law.

* **Changes in federal funding support for new water projects** ranked next in importance. Federal support of western water development has kept the cost of water supplies artificially low. As the federal government withdraws from its traditional role as banker and builder of large water storage projects, water development interests in the West are scrambling for alternatives. The low economic returns from water projects limits private financing. State funding for such projects must be balanced against all other demands for limited state monies. these financing constraints suggest the need to explore alternatives to the construction of large storage projects. More cost-efficient supplies of water may be available from transfers from existing lower value uses and from more efficient use of water.

* **Statewide water policy and management coordination** rated third in importance among our respondents. State government in Colorado traditionally has played a minor role in state water matters, deferring to private interests to decide how and when to develop and use water. Our survey reflects the growing debate about whether this role should be expanded, and if so--how. For example, there are proposals to tap state sales tax revenues to finance water development projects. Others urge that the state become more involved in anticipating future water requirements, planning for them, and guiding public and private decision making to help ensure that those requirements are met.

* **Depletion of groundwater aquifers** was a close fourth. In some areas of the state, such as the eastern high plains,

agriculture is highly dependent on groundwater supplies that are becoming expensive to tap. There is concern about the "mining" of these and other essentially nonrenewable groundwater supplies. The Colorado legislature established a revised system for administering such groundwater supplies in the last session, but vested control of the resource in the overlying landowner rather than in any governmental entity. Questions remain, however, as to whether this system adequately addresses our need for comprehensive groundwater management.

* **Interstate compact rights and delivery requirements** showed up next among the factors. Colorado is the headwaters for a number of significant rivers flowing into other states. Use of these rivers is apportioned among the states by nine interstate compacts and two U.S. Supreme Court decrees. The Arkansas River allocation is the focus of a present controversy with Kansas. Demands from faster developing downstream states like California and Arizona continue to raise questions about the ability of Colorado and other upper basin states to reclaim their entitlement when they are ready to apply it to beneficial use.

* **Changes in Colorado's agricultural sector** ranked sixth in the survey. Crop irrigation and other agricultural requirements account for roughly 85 to 90 percent of all water consumed in Colorado and other western states. Declines in the agricultural sector are speeding up the transfer of some of this water to other uses. While such transfers generally make good economic

sense, there is concern about the long-run impacts on agriculture and the local economies dependent on this sector.

* **Demand on water resources for fish, wildlife, and recreation and water requirements to protect endangered species** are related factors that showed up seventh and eighth on the list. Only recently have we come to appreciate the significant economic and other values of water in providing recreational opportunities and in protecting the natural environment. Much of this need involves leaving water in streams and lakes rather than diverting it for consumptive uses. Colorado law provides a means whereby the state can file for water rights to establish minimum flows of water in specified portions of streams. Since these claims are filed subject to senior water rights, there has been little conflict with existing uses. The importance of instream flows to Colorado's \$4 billion per year recreation industry suggests a continued need to reallocate water to this purpose to meet this increasing demand.

* **Availability of acceptable sites for water storage** ranked next in importance. Construction of water storage has become more difficult not only because of the withdrawal of federal funding but also because of objections regarding the adverse environmental effects of such projects. As one respondent noted, "The limited number of 'acceptable' sites from a technical standpoint are generally not acceptable from environmental and/or political standpoints."

* **Operation of the Central Arizona Project** concluded the list of ten factors. Completion of this project will enable Arizona to take its full share of Colorado River water, considerably reducing the amount presently enjoyed by southern California. With lower basin states fully utilizing their allocation and developing a reliance on part of the upper basin share, Colorado water interests are becoming more concerned about protecting the state's allocation of Colorado River water.

Pressures on the legal and institutional systems governing the provision of Colorado's water have been building as the result of these and other factors. Yet, as one respondent noted, "our present procedural and political inability to deal with emerging issues may preclude effective resolution." At a recent water conference in Gunnison, Denver attorney John Carlson referred to a "paralysis" in decision making on water issues.

Although the increased demand accompanying population growth may be a driving force, water scarcity is not the real issue. Daniel Luecke, senior scientist with the Environmental Defense Fund, commented: "In my opinion the only kind of water which might be in short supply is cheap water. At a reasonable price there is plenty to go around for quite some time."

The disappearance of major federal subsidies for water supply coupled with new costs resulting from recognition of environmental and other water values mean that water will be more expensive in the future. Just as in the 1970's we went through a

painful readjustment to increased energy costs, so today we anticipate making similarly painful adjustments to rising water costs. As yet there is no real consensus on how best to make these adjustments. Continuing dialogue is necessary to identify needed changes in our legal and institutional policies to accommodate these adjustments.