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Richard D. Lamm

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# Colorado, Water, and Planning for the Future Keywords Water Law, Irrigation

## Colorado, Water, and Planning for the Future

RICHARD D. LAMM\*

One of the things that intrigued me when I was at the University of Denver law school and now as Governor is the whole question of natural resources and the way in which we commit those resources. In 1968 my wife and I had the opportunity to view the remains of the ancient civilization of Angkor Vat in Cambodia, and we heard the story of its discovery by a French priest in the 1860s. Angkor Vat was built in incredible proportions; it extended over 50 square miles with various buildings and settlements. As one settlement after another dried up, due to misuse of water resources, they would simply build another city, much as the Mayan and other civilizations of the time did. One of the least understood questions in our civilization is the relationship of natural resources to our standard of living and to our well-being in every way. Let me illustrate.

There is a book, titled Topsoil and Civilization, written about twenty years ago, which says that "one man has given a brief outline of history by saying that civilized man has marched about the face of the earth and left a desert in his footprints." This may be an exaggeration, but it is not without foundation. Civilized man has spoiled most of the land upon which he has lived, and this is the main reason why civilizations have moved from place to place. Despoilation of land was the chief cause for the decline of civilizations in older settled regions and is a dominant factor in historical trends. Historians seldom note the importance of the wise use of resources; they seem not to recognize that land and resource use may determine the destinies of empires and civilizations. Most historians point out that many wars and colonial movements began because someone wanted more land, but they fail to note that conquerors often ruined their own land prior to seizing that of their neighbors. Current historians know that the strong and wealthy nations of today are those with abundant natural resources, but they often forget that many poor and weak nations

 $<sup>\</sup>mbox{*}$  Governor, State of Colorado; former Professor of Law, University of Denver College of Law.

were once similarly blessed. Some of the poor people on this earth are poor because their ancestors wasted the natural resources upon which present generations must live.

It is apparent that one of the major issues facing the United States, the West, and Colorado is the question of how we use our land, our water, and our natural resources and how we are inextricably tied to the natural resource base of the world. One of the pressures on the West comes from the energy crisis and the increasing number of resource cartels in many valuable minerals or materials upon which the United States depends. The cartel list is a long one. There are 12 OPEC nations. Seven countries have formed a bauxite cartel with great success and have increased the price of bauxite by a factor of seven. Six nations have formed a semi-successful phosphate cartel. Four countries have banded together on copper. Tin or other natural resource cartels may be formed. The same thing is happening with coffee and bananas, and we may be seeing a whole new chapter in world history, where, in the wink of an historical eve, the power to set prices and control availability of resources has been transferred from the consuming nations to the producing nations. I suspect that one of the current trends of history is movement from the politics of plenty to the politics of scarcity. This of course brings us to the topic of water.

An exorbitant amount of my time in the last two years has been spent on dealing with water problems—either too much water, or too little. Walter Orr Roberts, of the National Center for Atmospheric Research in Boulder, speaks articulately about the next drought, which in his opinion is likely to hit Colorado and the West in the near future. At the same time we have disasters such as the Big Thompson flood where we got much more water than we wanted in one place. In addition to the problems created by nature we face problems in planning for the use and distribution of normally available water. As you know, competition for water in this state is tremendous. I recently looked up the figures for the number of adjudications under the 1969 Water Rights Act. The number of adjudications has increased from 85,000 in 1969 to 121,000 by the end of 1974. Over 7,000 cases have been filed in Division One of the Water Court alone. We are being swamped with a backlog of adjudication claims, petitions for change of use or point of diversion, and other adversary actions arising out of water administration. Both Texas and New Mexico have recently sued Colorado over the water of the Rio Grande. A few years ago Kansas initiated action against Colorado over the water of the Arkansas River. Recent federal and state legislation concerning water pollution controls have imposed standards which a number of people in this state find intolerable.

Geographically, Colorado is unique. There is an old Chinese proverb that states: "He who rules the mountain rules the river." That may be true in China, but it certainly is not true in the West. Almost 50 percent of Colorado's mountain water is obligated to other states. As far back as 1900 the dependable flows of the Rio Grande, the Arkansas, and the Platte Rivers had already been appropriated. Since that time we have spent hundreds of millions of dollars in diverting water and capturing flood flows. At this point the Colorado River is also fully appropriated, but not yet fully utilized. The whole question of how we manage Colorado's remaining water is now of vital importance, perhaps of greater importance than the traditional question of how we can develop additional water. In short, the only water available in Colorado is the water we now have. Faced with this, with the rapid growth of energy development, and with growth in the Front Range and elsewhere, the challenge will be to manage the use of our remaining water without destroying the quality of life in the state.

One lesson from history is that when a commodity becomes scarce, the government comes to play at least a mediating role. One can like it, decry it, or bemoan it, but whether the scarce commodity is game animals, petroleum products, or natural gas, the government invariably intrudes into the system of allocation in some way to try to assure equity and fairness in the method of distribution. Thus it seems clear to me that we are in a transition period moving from the development and storage of water to a period which will be characterized by management and distribution. This new era will be characterized by increasing conflicts between the agricultural use of water and the transfer or attempted transfer of agricultural water to municipal, industrial, recreational, and other environmental uses. We will not be as preoccupied with the development of new water supplies as we have been in the past.

Any government intrusion in water matters has historically been only on the supply side of the demand and supply equation. In the last hundred years we have never really looked at different methods of allocation of water, other than the appropriation doctrine. In the future I suspect that we are going to have to look at how government may have some control, or at least some influence, on the demand side of that equation. We must, therefore, focus our attention on the changes in use of available water. The whole question of continued exploitation of water and land is before us, and I think that to preserve Colorado as a livable, attractive place, we must reconcile ourselves to some increase in governmental control over natural resources. Some controls will be at a federal level, some at a state level, and perhaps some at an international level. Human society, through government, must exercise controls to insure that we do not destroy those resources upon which we depend. Unlike water and air, land masses have a fixed location, and are thus more susceptible to degradation. Land use and water use are, however, inseparable. Unlike land, water is an easily transportable commodity, and the method and place of using water is nearly always dictated by the use of the land. It is difficult if not impossible to control the use of water unless we also control the use of land.

The present Colorado water laws were designed as the result of virtually unrestricted use of land. Water can be appropriated for almost any use incidental to the use of land. Such appropriations can be modified to change the place and purpose of use with no restriction other than protection of other appropriators. It, therefore, seems both proper and logical to attach the same type of control over the use of water as we do over the use of land. For example, if certain land is owned for agricultural use, then perhaps water decreed for those lands might not be changed to serve another use unless that change would be in the best interest of the people of Colorado. The current test, however, is not the overall public welfare, but only whether the proposed change would injure other appropriators. This problem poses one of the more difficult aspects of managing our water-how do we establish and measure our values? Historically the yardstick has been the measure of economic values. We all know that water runs uphill toward money. Other values are largely ignored. A clear mountain stream is

nice; irrigation water might be helpful in the future to produce food; but there is a greater dollar value when we divert that same water for municipal or industrial use. I hope that we are beginning to realize that other values have at least some importance in water matters and that today's economic values might, in the long run, be counterproductive to the economy of tomorrow.

Some of you may have seen an equation dealing with social change. The first stage is "no talk, no do." There is no conversation about a subject, and there is nothing done about it. The second stage is "talk, no do." People are starting to talk about a problem, but still nothing is done. The third stage is "talk, do." People are both discussing the problem, and acting on it. The end result of the discussion results in some sort of plan. The final, fourth stage is "no talk, but do." The social change has become an accepted reality. I suspect that as to water in Colorado, we have arrived at the "talk, no do" stage. The past few years have brought an increasing crescendo about the way in which Colorado appropriates and allocates its water. A recent executive order on growth and development policy identifies water as an important component. In addition, we are working toward a more comprehensive and coordinated planning of our resources through a Policy Coordinating Council. More than 4.2 million dollars in federal funds are now being spent for local planning in regions along the Front Range and in other areas of rapid energy development. A water policy study is now underway in the Department of Natural Resources which will provide guidelines for me and the Executive Branch on water and water related decisions.

During the past 15 years we have seen a phenomenal growth of agencies dealing with development, use, and control of water resources at both the local and national level. The Congressional Select Committee on National Water Resources has produced voluminous reports on the state of the nation's water. Congress created the National Water Commission to follow up on the work of the Select Committee, and they have produced more reports. The Water Resources Council was created by Congress to coordinate the national water policy, and the Environmental Protection Agency has the responsibility for water quality standards. The question of implementation of \$208 of the Water Pollution Control Act is one of the more

intriguing and complex problems the state will face in the next year. We certainly do not lack for agencies to deal with problems relating to water. The agencies, however, will not produce automatic answers, because there will never be a simple or even a best answer. Water will continue to be a contentious area of endeavor.

If there is any future to water planning, however, some assumptions must be made. Let me share with you those now being made on a state level. First, population and industrial growth in Colorado will continue, but at a less accelerated rate. Secondly, continued agricultural production at present or greater levels is absolutely essential to the welfare of the state and the nation. We are genuinely concerned about agriculture in Colorado, its relationship to municipal water supply problems, and the fact that twenty dollar per acre-foot agricultural water cannot compete with energy water at two hundred dollars per acre-foot. Assumption number three is that the use of water for the production of energy will continue to grow. Number four is that the pressures for more water-oriented recreation and for protection of the natural environment will continue to increase also. Finally, we assume that the amount of water available for use within Colorado will remain relatively unchanged for the foreseeable future. It is an illusion to think we can develop as much water in the future as we have in the past.

With these assumptions in mind, the objectives of the state as they relate to water resource planning are as follows:

- 1. To examine closely the feasibility of encouraging industrial growth in Colorado on a selective basis, considering those industries which are heavy water consumers and which would have a significant adverse effect on the natural environment as less welcome than others.
- 2. To maintain Colorado's agricultural industry and the amount of land dedicated to agriculture at or near the present level and to strengthen the agricultural industry whenever possible.
- 3. To insure that the allocation of water for the energy industry is consistent with other state goals and will not undermine the agricultural goals of the state.
- 4. To prevent further depletion of our mountain streams at the higher elevations so we can preserve our mountain environment and our recreation opportunities to the greatest extent possible.

- 5. To explore the possibilities of amendments to our laws relating to changes in points of diversion, or changes in use of existing water rights, so that such changes can be made to conform with state and local land use laws and policies.
- 6. To dedicate the energies of state government to research in water use efficiency and water conservation.

I am aware that it will be difficult to reach many of these objectives, but difficult or not, these goals are essential to the maintenance of the quality of life in Colorado. I am of course not the only person in the state concerned with the proper management of water. Others are giving serious thought to waste and inefficiency and are proposing innovative solutions to some water problems. I know that the Pikes Peak area is considering the use of effluent from secondary sewage treatment to irrigate golf courses and parks, and Denver is looking at a project to pump its wastes out to a drving process for use as fertilizer. In the Grand Valley there are demonstration projects to reduce salinity in the Colorado River. Sterling has a water project under way, and the city of Northglenn is working out a relationship for use and return of nearby agricultural water. This last item is an innovative idea that has generated great interest. With greater efficiency and better management the available water resorces can be made to serve us better. Since we have no feasible way to manufacture water, we have no choice.

In summary then, it is difficult, if not impossible, to control the use of water unless the use of land is also controlled. In Colorado we are beyond the stage of only developing our water resources; they are already largely developed. We must instead look to better management and careful allocation of this important resource. This is truly an historical shift, but it must come. Thank you very much.