

WATER POLICIES FOR THE FUTURE: AN INTRODUCTION

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INTRODUCTION

U.S. water policies reflect the temporal perceptions of society as codified by political forums. They often flow from confrontation with crisis. Federal and state statutes, case laws, regulations, and administrative actions define U.S. water policies. New courses of action reflect changing times and perspectives, but old ones cling to traditions and many are associated with institutions having parochial rather than global outlooks. Furthermore, many outdated policies linger on interminably, often conflicting with contemporary beliefs. Water policies of other nations have similar roots and failings, as their nature is also shaped by prevailing demographic, economic, political, and social forces.

Since the turn of the 20th Century, there have been many attempts to reshape U. S. water policy (Holmes 1972, Viessman and Welty 1985). In 1973, the National Water Commission (NWC) released its landmark report "Water Policies For The Future;" in 1978 President Carter developed his "Water Policy Initiatives;" and in 1981, President Reagan established a Cabinet Council on Natural Resources and Environment with authority to address water-related issues. The NWC report emphasized a shift in focus from water supply to water quality and environmental protection, and strongly endorsed a "user pays the cost" principal. Carter's water policy reform proposals were designed to improve water resources planning and management, to permit construction of sound water projects, to emphasize water conservation, to enhance federal-state cooperation, and to increase the focus on environmental quality. The Reagan Administration's approach embodied the philosophy of transferring responsibility for some of the water programs to the states, increasing the level of non-federal cost sharing for water projects and programs, and encouraging full cost recovery. The Clinton Administration has not taken a specific water policy stand, but its strong environmental focus clearly bends water policy decision-making towards environmentally compatible projects and programs.

And while considerable progress has been made in our ability to identify, understand, and deal with the many aspects of water management, new and more holistic thrusts are needed (Ballweber, 1995; Bulkley, 1995; Deyle, 1995; Hall, 1996; Born, 1989; Sheer, 1989; U.S. Congress, 1975). Many of yesterday's policies are inadequate for dealing with today's problems, and the global need for contemporary water management protocols is clear. Pertinent topics include: expanding populations, especially in Asia and Africa; poverty -- over one billion people living under squalid conditions; avoidable water-borne diseases that cause the deaths of thousands of children; the destruction of forests, wetlands, and croplands; the depletion of natural resources; injurious land development and management practices; solid waste disposal; acid precipitation effects on lakes, forests, and structures; contaminated drinking water -- about two-thirds of those residing in developing nations do not have access to safe drinking water; ocean disposal of threatening substances; offshore developments, including oil drilling; nonpoint pollution; and earthquakes, volcanic eruptions, floods, and droughts. While all of these issues do not directly confront the U.S., their spill-over effects make them our problems as well. To deal with them, we must better inform and educate society; modernize our institutions; provide adequate resources; improve planning and forecasting capabilities; unify land and water management policies; unite technology and public policy; improve our understanding and handling of risk; and provide the "right" forums for problem solving.

Contemporary water policies must embrace both resource-related and institutional issues (National Water Commission, 1973). The physical properties and distribution of water are keystones, but legal, political, social, economic, and environmental building blocks must be crafted into these policies as well. Dimensions of uncertainty, public perception, and political sensitivity must be addressed. Hard-line technical approaches may be, and often are, socially unacceptable, and compromise

is usually required. Such settlements should be based on the best information available. And every knowledgeable stakeholder has an obligation to ensure that those making decisions fully understand the consequences of implementing proposed courses of action (Viessman and Welty, 1985). Unfortunately, institutional and social configurations and attitudes often impede objective analyses and encourage policy designs that are narrowly focused and/or inefficient. Humans and their institutions are highly resistant to change. Louis L'Amour, in his book the Haunted Mesa, said it well: "Men have never readily accepted new ideas. Our schools and general thinking are cluttered with beliefs long proved absurd by contemporary knowledge. Man has demonstrated over and over again that the last thing he wants are new ideas, even when they are desperately needed. Ideas are welcomed as long as they do not contradict theories on which scholarly reputations have been erected."

In the final analysis, political feasibility determines what will be implemented. Complex political agendas must be navigated if proposed options for water management are to be effected. Consent building among stakeholders must be generated to support proposed policies, whether they be targeted at the international community, the Congress, state legislatures, or local governing bodies. Those who can maneuver well in the political arena are most likely to be influential in formulating new water policies. Clearly, stakeholders must be conversant with prevailing political realities.

A LOOK AHEAD

There is a need for improved coordination and collaboration among governments and agencies engaged in water management. Policy makers must be sensitive to the impacts their proposals may have on other governments and/or agencies, and they need to take into consideration the views of these entities as they develop their proposals. What is considered best at one level is not necessarily the best at another. Water policies should be developed in recognition of such differences and made as accommodating as possible, as decision-making in a tunnel is costly and ill-fitted to today's needs. Policies should be crafted in forums designed to address the totality of the outcomes that would flow from the policies if they were implemented.

Designing water policies that will be politically and socially acceptable requires providing the right forums. In general, two classes of needs are apparent -- those related to resolving or avoiding conflicts (consent-building), and those related to solving problems that transcend political and/or agency boundaries and that support analysis of problems in their proper context

(system-encompassing). Historically, we have not done well in organizing either type of forum, but there is evidence that some progress is being made (Viessman and Welty, 1985; Sheer, 1989). The problem is that most of our institutions have limited authority and views, and too few individuals understand the benefits that can be achieved by integrating the management of water resources systems. Institutions that have holistic system-wide responsibility and understanding, and the expertise to manage multi-party, multi-jurisdictional water management systems are badly needed.

The U.S. federal government is deficient in its structure for assessing the status of the nation's and the globe's water resources, coordinating the water planning and management functions of the states, and fostering regional and global approaches to water management. This missing link needs filling. Institutional formats having some of the attributes of the former Water Resources Council are needed to provide guidance in designing federal water policy; coordinate federal water programs and agencies; assess the status of the nation's and the world's water environment; provide foresight capability; facilitate research; and to coordinate and support state water resources planning and management programs. As noted by Peterson, "It is puzzling, even amazing, that this nation, with the most sophisticated data processing systems in the world, a high degree of computer modeling expertise, unexcelled policy-analysis capability, plus an awareness of the need for long-range planning, has reached the last decades of the 20th century without a single institutional entity for applying the process at the highest level of government, where it is most needed" (Peterson, 1988).

System-encompassing local, regional, national, international, and global institutions must be created to overcome the fact that cities, counties, states, and even nations, are often too limited in jurisdiction to deal appropriately with water management issues that transcend their geographical and institutional boundaries. More often than not, locally perceived problems have regional, if not global, dimensions, and they must be dealt with in that context. A system cannot be managed effectively if only part of it can be manipulated. There will have to be international acceptance of rules of conduct that go well beyond simple agreements on pollution control. A broad understanding of the functioning of entire ecosystems must become the basis for unified action. The institutions to do the job can vary from regional authorities with broad powers to international cooperative agreements among nations. There is no uniformly acceptable format -- what works well under one circumstance might not work under another. International and regional institutions must,

however, be designed to function effectively within their geographic, social, and political bounds.

WATER POLICY ATTRIBUTES

Water policies for the 21st Century should have the following attributes:

- They should focus on the right “problemshed.” That is, they should be system-encompassing, to assure that policy boundaries are defined by their true temporal, spatial, environmental, and institutional dimensions.
- They should be flexible -- standardized, uniform formats for dealing with water management should be avoided. The key is to look for the approach that works for the problemshed and problem to be addressed.
- They should be holistic, considering all of the relevant interacting components of the system of concern.
- They should be designed to support sustainable development.
- They should embrace public views.
- They should encourage partnership approaches to resolving conflicts and designing water management strategies.
- They should be the driving force for regulatory programs, not the result of them.

CONCLUSIONS

U. S. water management policies and practices are in a state of transition. New federal, state, and local government mandates address an array of emerging water-related problems and evolving public perceptions about the environment. About thirty years ago, U. S. water management was focused almost exclusively on issues related to water supply and flood control. Today, these subjects remain important, but environmental protection and restoration, ensuring safe drinking water, and providing aesthetic and recreational experiences compete equally for attention and funds. Furthermore, the environmentally-conscious public is pressing for greater emphasis on water management practices with fewer structural components. The notion of continually striving to provide more water has been replaced with one of husbanding this precious natural resource. The National Water Commission's seven recurring themes, although published in 1973, reflect the changes that have been taking place and that are still relevant (National Water Commission, 1973).

- Future water demands are not inevitable, but are the

result of policy decisions within the control of society. Planning should be based on a range of plausible alternative futures.

- National priorities are shifting from water resources development to restoration and enhancement of water quality.
- Water resources planning must be tied more closely to land use planning.
- Water use efficiency should be emphasized, and policies to encourage wise water use and conservation practices should be promoted.
- Sound economic principles should be incorporated in decisions on whether to build water projects.
- Beneficiaries should pay for the costs of the services they receive and unjustified subsidies that distort allocation of scarce resources should be eliminated.
- Laws and legal institutions should be reexamined in the light of contemporary water problems.
- Development, management, and protection of water resources should be controlled at that level of government nearest the problem and most capable of effectively representing the vital interests involved.

It is this author's view that it is not the physical limit of the water resource that presents the challenge to society, rather it is transitioning to policies and management modes that fit today's, not yesterday's, needs. We must push our imaginative and innovative talents to the limit, break loose from historical constraints, and seek solutions to problems with respect to their total dimensions. No other approach can be expected to yield substantial gains. Water policies of the future must be sized to fit. They must be flexible, holistic, environmentally sound, and supportive of sustainable development. We must move from narrow interest-based water policies to ones that are objective and knowledge-based.

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