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# Perspectives on a National Water Policy

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When the well's dry, we know the worth of water.
-Benjamin Franklin-
*Poor Richard's Almanac*, 1746

Today, it is difficult to pick up a newspaper and not find a national or international story about water. Droughts, floods, climate change, navigation, water quality, riverine and estuarine ecology are all in the headlines on a frequent basis. Companion articles focus on the deteriorating infrastructure that supports these systems. Scholars studying world water resources see water as a source of conflict and discord throughout the world. A recent photo of farmers fighting with government officials to open the taps for irrigation in the Klamath Valley, Oregon, illustrates that such conflicts are not just overseas. Yet, when one searches the Internet for a national water policy or vision statement that might in some organized fashion inform government and public action, nearly every citation deals with a country other than the United States. Unless you consider the jumble of laws, policies, and procedures that deal with the various aspects of water use and control as policy or vision, the United States is operating without any such policy or vision. The Nation's policy is no policy; its vision is no vision.

In September 2002, the American Water Resources Association, with the support of ten federal agencies and 25 non-federal co-sponsors, convened a National Water Policy Dialogue in Washington D.C. More than 250 water resources experts, representing the public at large; industry, federal state and local government; environmental groups; and academe met for two days to review the above challenges and to discuss what could be done to head off a looming crisis (AWRA, 2002).

## The Setting

The Nation clearly faces water resources challenges. While there may be disagreements about the specific nature of the problems and their relative importance when weighed against other problems, there was consensus on areas of concern.

- Drought is a continuing problem across the country. During the summer of 2002, 49 percent of the contiguous United States was in moderate to extreme drought. Precipitation had been significantly below average in 27 states, and the months preceding the summers were the driest on record in four southeastern states and two Rocky Mountain States. Although 2003 offered some relief to the East, parts of the Southeast and Western United States have been in various stages of drought since 1998 (NOAA, 2003). Bills to deal with advanced planning for drought have been raised and left on the table in Congress year after year. In February 2003, through the Agricultural Assistance Act of 2003, Congress voted to give over $3 billion in emergency drought relief aid to U.S. farmers and ranchers to mitigate the short-term but not solve the long-term challenges of drought.
- There are strong concerns that in many areas there is not enough water in the long-term for municipal and industrial use. Climate change or variability is certain to exacerbate these demands for new supplies. To add to the challenge, the potential of terrorist activity threatens those supplies that we now have.

- Many of our ports are operating at the margin in terms of channel depths. Ports are gateways to domestic and international trade and support mobility of our armed forces. In the late 1700s, the average three-masted schooner required only a draft of eight feet; by the early 1930s, the average steamship needed a 26-foot (7.9m) draft. Today, modern container ships are likely to need drafts of more than 45 (13.7m) feet and bulk vessels may need drafts of 60 feet (18.3m) or more (AAPA, 2002). What depths can we afford and where do we need them?
- Annual flood losses in the United States continue to worsen in spite of nearly 70 years of federal flood control and more than 30 years of the National Flood Insurance Program. Average annual flood losses in the United States are currently estimated at $6 billion, a figure that represents a four-fold increase over the last decade, or a doubling of dollars of damage per capita in the United States (Larson and Plasencia, 2001).
- The impact of human activity in riverine areas has been profound. In the 1600s, over 220 million acres of wetlands are thought to have existed in the lower 48 states. Since then, extensive losses have occurred, and over half of our original wetlands have been drained and converted to other uses. Recent estimates of wetland trends on non-federal lands indicate an annual rate of loss of between 70,000 and 90,000 acres (EPA 2002a). Partially as a result of loss of wetlands and partially as a result of other human actions, today the Fish and Wildlife Service lists 1260 plants and animals as threatened or endangered. Recovery plans have been prepared for 976 of these species, but the actions to carry them out are difficult and will require significant investment (USFWS, 2002).
- EPA's 2000 assessment of U.S. water quality (1998 data) found that more than 291,000 miles of rivers and streams do not meet water quality standards. Across all types of water bodies, states, territories, and tribes report that poor water quality affects aquatic life, fish consumption, swimming, and drinking water. Of the assessed ocean shoreline miles, 12 percent were impaired, primarily because of bacteria, turbidity, and excess nutrients. Existing data show that the overall condition of the U.S. coastal waters as fair to poor, varying from region to region and that 44 percent of estuarine areas in the U.S. are impaired for human use or aquatic life. The threat from new chemicals and chemical combinations is growing each day. Although the Clean Water Act recently celebrated its thirtieth birthday, it is a long way from attaining its goals of fishable, swimmable, and drinkable waters throughout the United States (EPA, 2000, 2002b).
- Flood control, water supply and quality, hydropower generation, and navigation all require a supporting infrastructure—dams, treatment plants, and other important facilities. The American Society of Civil Engineers (ASCE) Report Card for America's Infrastructure assessed 12 areas of infrastructure that are vital to the nation's economic survival and quality of life. Five of the twelve areas involved water (ASCE, 2001). ASCE gave:
    - Dams a grade of D, citing 2,100 unsafe dams in the United States. These are dams that have deficiencies that leave them highly susceptible to failure.
    - The nation's 54,000 drinking water systems received a D as did waste water systems. To comply with federal water regulations, drinking water systems face an annual shortfall of $11 billion needed to replace facilities that are nearing the end of their useful life, and wastewater systems face a $12 billion annual shortfall in funding for their needs.
    - Navigable waterways were graded D+ with a backlog of $38 billion in active authorized projects.
    - Energy, which includes hydropower, also got a D, citing that since 1990 actual capacity has increased only 7,000 megawatts per year, an annual shortfall of 30 percent. The recent power failure in the Northeast speaks legions about the challenges to be faced in the energy arena.

While ASCE calls for infrastructure action, other groups cite the need to remove dams that either no longer serve their original purpose or threaten natural systems. They call for more use of non-structural means of preventing flood damages, new and innovative methods of producing energy, reduction

and elimination of pollution and more efficient use of the waters that we have.

As we debate over water supply, other issues surround the primacy of one water use over another, including the rights of natural systems and those of Native Americans. These differing viewpoints can be seen in the nearly 15 years of disagreement over management of the Missouri River; the decade-long debate between North Dakota, Minnesota, and the Canadian Province of Manitoba over construction of an outlet from Devils Lake (ND) into the Red River of the North; and the nearly 4 years that Alabama, Georgia, and Florida have been working under a compact to allocate waters of the Apalachicola-Chattahoochee-Flint Rivers. On the positive side, the results of consensus building are reflected in the ability of myriad parties to come together to define the Everglades project in Florida and to work together on restoration of coastal areas of Louisiana.

## The Dialogue

The National Water Policy Dialogue brought together individuals from all segments of the water resources community. After two days of intense discussion among the 35 speakers and other dialogue participants, it was obvious that there were many opinions and that not all of them coincided. However, not surprisingly, there were many areas in which there seemed to be general agreement among Dialogue participants:

- Balance and sustainability. Our natural systems are in danger. We have put them at risk by our actions. Environmental needs should be balanced against economic requirements with the focus on long-term sustainability of our nation's water resources.
- Holism and watersheds. Decisions about water resources are most appropriate at a watershed level.Water resources decisions need to be based on a comprehensive consideration of the full range of factors that influence and are influenced by the use of the resource. However, participants shared a view that all watersheds are not the same—one approach does not fit all watersheds. The watershed should be the fundamental building block for program planning.
- Alignment and integration. Too many conflicting goals and mandates are being pursued at the federal level. Priorities are too often pursued in isolation and create needless conflict and gridlock. Participants called for the development of greater synergy among federal agency programs and the pursuit of complementary objectives by these agencies.
- Collaboration and cooperation. All levels of government should be working in collaboration to achieve sustainable water resource solutions to critical issues. Incentives need to be put in place by government to encourage greater cooperation among agencies. Solutions to many water problems require collaboration among interests that traditionally compete with each other.
- Information and education. The public must be informed and educated about a looming water resources crisis and the need for action. There should be more innovative information sharing among governmental agencies to include development of common web-based platforms for accessing water resources data.
- Blunt instruments. The federal government must be careful not to impose programs on the nation without adequate deliberations with all stakeholders. Water issues and their solutions require carefully crafted tools rather than blunt instruments.
- Physical security. Protection of our water resources is important and needs attention, but there also is a need to recognize that security costs money and that it requires not only more money and more guards but also changes in culture.
- Looking ahead. We need to be looking ahead to the challenges we face, not reacting to those we could have dealt with yesterday.
- Water and the land. Water and land issues are linked inextricably. A failure to recognize this relationship inevitably leads to long-term problems.

## A Letter To Leadership

The general conclusions cited above set the tone for definition of four areas that the Dialogue believed required action by political leaders. The group recognized that a variety of programs, legislation, and initiatives were addressing some or part of many of the current water challenges. However, it was

concerned that, given the interrelationship among the many uses of water, the issues were not being addressed as a whole across the Nation and that, when addressed, they were addressed on a reactive basis (post-drought and post-flood relief versus advanced planning). We deal in watersheds at the local level, but we do not treat the Nation as a whole. The Dialogue urged leadership at all levels of government to deal with these issues and to formulate policies and a vision that could guide efforts at all levels. On behalf of the Dialogue, the General Chair and the President of AWRA sent a letter to the President of the United States, the Speaker of the House of Representatives, and the Senate Majority Leader with copies to all governors. The letter noted that "a failure to address . . . water resources issues now, as we move into the 21st Century, could significantly impact the economy; reduce our capacity to participate in global markets; increase legal conflicts over rights and uses; reverse progress on cleaning up our rivers and restoring our natural areas; continue the escalation of flood damages; stalemate our ability to effectively manage water; increase our vulnerability to terrorism both at home and abroad; and dramatically diminish our capacity to help prevent violent conflict in the third world."

The letter went on to state, "During the 19th and 20th centuries, the management of our rivers has been synonymous with building the Nation. It has brought major sections of the country out of poverty and now helps keep our natural systems and people healthy. Recent reviews of the condition of the Nation's water infrastructure paint a gloomy picture. The massive multi-trillion dollar investment that made our growth possible is at risk. Our Nation once led the world in water technology and management. Today, our water expertise is dwindling and with it our capacity to help lead the world's growing efforts to avert famine, drought and related humanitarian disasters—the breeding grounds of terrorism and violence. It has been over a quarter of a century since the last comprehensive assessment of U.S. water needs. The federal guidance document for development of most water projects is nearly 20 years old. Efforts to deal with water issues are met by a plethora of interest groups, a dozen committees in Congress, numerous federal agencies, and programs that are narrowly focused and fail to recognize the interrelationship among water uses and the management of water."

On behalf of the Dialogue participants, they asked the President and Congress to:

- Develop a National Water Vision. Where does the nation wish to be in 2020? Determine, in cooperation with the states and local governments, how the nation wants to deal with water, address competing goals and objectives—social, environmental, and economic—and establish broad priorities for resource expenditures.
- Formulate a National Water Policy that translates the vision into action. *This is not a call for a federal water policy that directs the actions of federal, state, and local governments*. Rather, it is a call for a policy that defines the shared responsibilities at each level for dealing with water or the lack thereof and addresses how our citizens should adjust to the realities of floods and droughts.
- Ensure coordination and collaboration among federal agencies and with other agencies at state, regional, and local levels; consider incentives for gaining cooperation to reach policy objectives and connect water quality and water quantity for a unified water policy.
- Deal with water issues on a holistic basis. Use watersheds and basins as the setting for water resource projects and programs.

Finally, the letter called on the Administration and Congress to, ". . . challenge the government agencies under their authority to collaboratively create an "action agenda" to address the critical water resources challenges facing the Nation and to create such an agenda as soon as possible. . . . The time for action is now."

## Whither A Policy?

In the more than a year since the Dialogue, there has been little movement towards development of a National Water Policy or Vision (or even increasing the level of coordination among federal agencies). Both the Administration and Congress have been focused on international issues, tax and health concerns, and domestic politics. The administration has placed its environmental efforts in areas other than water. In January 2003, Congressman John Linder, who participated in the Dialogue, along with

Representatives Calvert, Duncan and Shuster introduced House Resolution 135, "To establish the "Twenty-First Century Water Commission" to study and develop recommendations for a comprehensive water strategy to address future water needs." The initial sponsors have been joined by 21 other House members and the bill is now in committee. Thirty-five other bills pertaining to water were introduced during the same session.

Speaking to the Dialogue, Senator Harry Reid indicated, "It is time for the federal government to broaden its scope and provide a new clearly defined federal role in nationwide water resource policy." However, no action on water policy is pending in the Senate.

In 1959, Charles E. Lindbloom wrote an article, *The Science of Muddling Through*, in which he posited that policy making is not a logical and rational process but an incremental process that is opportunistic—it happens when it can happen. Progress is achieved through small incremental steps that can result in the appearance of a new public policy over time. Some might say that Lindbloom was thinking of the water arena when he wrote the article. However, analysis of where we stand today would indicate that the myriad baby steps that have been taken in regulation and development of water have not produced, in the aggregate, a comprehensive or visible policy. The nation needs a water policy and a vision to guide its stewardship of this precious resource. Development of such policy will require pointed action and not more muddling through.

## The Role of Geography

The pointed action required to develop a water policy and vision will require effort at all levels of government and interest on the part of the public at large. While government officials will do much to inform the debate, the academic community will play a major role in ensuring that the facts stay on the table and that thorough analysis supports any discussions. Because of geographers' innate interest and understanding of both location and environment, they are in a position to foster the dialogue and engage in research to enhance our knowledge of the factors driving the use of water resources. On-going research by geographers into land use, human occupance of the floodplain and other hazard areas, impacts of climate change and ecosystem relationships is informing both colleagues in academe and the public. Extensions of this research taking full advantage of new geospatial technologies cannot help but improve the quality of the decisions that will be made in the years ahead. Geographers must not be shy but must be involved in this effort to develop a national water policy and vision.

## Concluding Comments

The breadth of support for a Water Policy Dialogue is reflected in those who made possible its conduct. Sponsors included the Army Corps of Engineers, the Bureau of Reclamation, the Environmental Protection Agency, the Fish and Wildlife Service, the Federal Emergency Management Agency, the Forest Service, the U.S. Geological Survey, the National Ocean Service, the National Weather Service, and the Natural Resources Conservation Service. Co-sponsors were American Rivers, the Association of State Floodplain Managers, Beaver Wood Associates, the Delaware River Basin Commission, the Geological Society of America, the Groundwater Foundation, the Interstate Council on Water Policy, the Missouri River Basin Association, the National Association of Conservation Districts, the National Watershed Coalition, the National Wildlife Federation, the Ohio River Basin Commission, the Ohio River Basin Sanitation Commission, the Red River Basin Commission, the St. Johns River Water Management District, Sandia National Laboratories, the Soil and Water Conservation Society, the South Alabama Regional Planning Commission, the Susquehanna River Basin Commission, the Universities Council on Water Resources, the Upper Mississippi River Basin Association, and Waterways Work! Special note should be made of the work of Richard Engberg, AWRA, who chaired the Dialog Steering Committee and Dr. Mark Dunning, Institute of Water Resources, who prepared the conference summary.

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