Does the United States have the right water resources policies for the 21st Century? The concern that the nation’s water policies are in need of reform brought 250 people together in Tucson, Arizona, in February 2005 to participate in the Second National Water Policy Dialogue. Water policy defines the “rules of the game,” guiding water resources development, allocation, and protection. Few would likely disagree with the assertion that the nation has significant water resources challenges in these areas. Major population shifts into the Sun Belt have brought municipal and industrial water needs into competition with traditional agricultural water uses. Additional demands for instream flow and environmental needs further complicate water allocation and management. Despite years of flood damage reduction projects and billions spent to control floods, the nation’s losses from floods continue to mount (Cartwright 2005). Water resources infrastructure suffers from serious funding shortfalls in drinking water and wastewater treatment systems (Environmental Protection Agency 2002), and for water transportation systems (American Society of Civil Engineers 2005). At the federal level, presiding over the tangle of more than a dozen federal agencies and bureaus with water resources responsibilities are six cabinet departments, at least thirteen Congressional committees, and twenty-three subcommittees funded by five appropriations subcommittees.

The American Water Resources Association (AWRA), in partnership with nine sponsoring federal agencies and forty co-sponsors from state and local agencies, professional associations, and the private sector, conducted the dialogue to create a forum where stakeholders representing all points of view could come together to discuss the policy choices that need to be made to confront the nation’s water resources challenges. The second dialogue was a follow-up to the First National Water Resources Policy Dialogue held in September 2002 in Washington, DC. (Engberg 2003). Like the first dialogue, the Water Policy Dialogue II was national in scope, but the second Dialogue had a greater emphasis on Western water issues. The Dialogue featured a number of keynote speakers including the Honorable Janet Napolitano, Governor of Arizona, and Senator Pete Domenici of New Mexico. Three issue panels with expert speakers focused attention on the broad water resources issues of water supply and demand, infrastructure management, and environmental quality. Dialogue attendees also participated in small group discussions on the panel topics and presented views on the kinds of improvements needed to address critical water resources issues. A voting procedure was employed to gain a sense of the relative priority of views expressed. Attendees also participated in a number of “Leadership Insight Sessions,” offered by senior executives from federal agencies. These sessions focused on current water resources issues within the agencies’ operating charters. Finally, three “Provocateurs” presented their views to help stimulate discussion and participant dialogue. The Proceedings of the Dialogue are available on CD from AWRA (Engberg 2005).

This paper summarizes some of the key conclusions about water resources policy improvements that were reached in the Dialogue. These conclusions point toward an emerging national vision for water resources. While sweeping, broad policy changes supporting this vision are not likely, there
is ample evidence that myriad small changes are occurring that are consistent with this vision and that incremental policy shifts are underway. Forums like water policy dialogues perform a valuable service in helping to focus attention and energy on bringing this vision to reality.

Dialogue Outcomes

What did Dialogue conferees have to say about the kinds of policy changes that are needed to improve water resources management? While there was naturally a diversity of opinion, as befits the heterogeneous make-up of the attendees, there were a number of clear areas of agreement articulated at the Dialogue. The Dialogue after-action report (AWRA 2005) identified several key themes for water resources policy improvement.

Integrated Approaches

There is a need to address the Nation’s water issues in an integrated manner, dealing not with single, isolated projects but with broad programs and watershed-level problems. Participants generally concluded that integrated management is the key to effectively resolving water resources problems. Characteristics of integrated water resources management include using systems approaches and comprehensive GIS-based data to understand the connection between natural and human-made systems; analyzing water resources problems on basin or watershed scales; addressing both the quality and quantity of surface and ground water resources; striving to achieve multiple goals and purposes using water resources in a balanced manner; and collaborating across all levels of government and with all stakeholders to find appropriate solutions.

Consistent, Clear Vision for Water Resources

There is a need to reconcile the myriad laws, executive orders, and Congressional guidance that have created the current disjointed ad hoc national water policy and to clearly define the 21st Century goals and values that should be met. Participants felt that conflicting goals and mandates for water resources are being pursued at the federal level. Priorities are too often pursued in isolation and create needless conflict and gridlock. Participants called for clarification of roles and responsibilities among federal agencies, for establishment of a clearer vision for uses and priorities for the nation’s water resources, and for the development of coordinating mechanisms to harmonize and reconcile policy differences before they lead to gridlock. A national commission was discussed as one means of addressing this critical need.

Greater Collaboration

The fiscal realities facing the nation underline the need to more effectively coordinate the actions of federal, state, and local governments in dealing with water and to ensure that collaboration as opposed to coordination is the order of the day. The water resources decision-making environment is extremely fragmented and complex. It is marked by different laws and authorities that address different and sometimes conflicting purposes such as water supply, water quality, endangered species, navigation, and so forth; different levels of government with overlapping responsibilities; and a wide array of stakeholders with diverse values and views on water resources. In the absence of integrating mechanisms and problem-solving forums, litigation typically becomes the way of resolving differences leading to delays, lost resources, and constrained options. Participants wanted to see all levels of government working in collaboration (i.e. working together from the inception of a project or a program to its completion) to achieve sustainable water resources solutions to critical issues. They noted that water policies should:

- Integrate water quality and water quantity management—they aren’t separate and shouldn’t be treated independently;
- Establish or invigorate forums to resolve differences in federal agency policy and mission foci and to deal with multi-jurisdictional coordination, interstate, and cross-jurisdictional water management issues;
- Cut across boundaries at all levels by encouraging federal/state/local partnerships to address water resources comprehensively and in an integrated manner;
- Determine how best to assign the “lead facilitator” or “lead integrator” role in multi-agency collaborative frameworks.
Information for Sound Decision Making

The nation’s superb scientific capability and cutting-edge information technologies need to be focused on supporting water policy decision makers as they carry out their challenging responsibilities. Participants at the dialogue concluded that decisions on the uses of America’s water resources must be based on good science and complete information. Science and information need to be available to all stakeholders and responsible authorities so that decisions can be made in open, collaborative ways in a trusting environment. Many participants believed that information on water use, availability, water quality, environmental impacts, and results being achieved in pollution control, as well as projections on water demand and use, need to be more accurately quantified and that such data must be better coordinated at all levels so that appropriate information can be marshaled for integrated water management and problem solving. A national assessment of water availability and use was thought by many to be long overdue.

Crosscutting Issues

Many participants believed that, in order to effectively address water resources challenges, two additional issues needed attention.

Financing Water Resources Improvements

Funding for our nation’s vital water infrastructure is not keeping pace with repair, replacement, and renovation requirements. There is a need for innovative cost-recovery, pricing, and financing mechanisms to address infrastructure funding needs. Participants in the dialogue recognized that there are many competing national requirements for public funds. Many felt frustration that the water resources community has not done a good job of conveying the risks associated with continued under-funding of the Nation’s water infrastructure. Others pointed out that in the climate of fiscal austerity there have of necessity been increased prioritization, conservation, public-private partnerships, reliance on market forces, and other innovations in cost recovery and funding mechanisms that would probably not have occurred if resources were plentiful. These innovations have been helpful; however, most agreed that more needs to be done. Many called for leadership to recognize the need for rate increases, to provide appropriate additional funding for water infrastructure, and for policies that would encourage the expanded use of innovative self-financing mechanisms such as trust funds.

Educating the Public and Public Officials about Water Resources Challenges

Much of the public at large and many public officials lack an understanding of the water resources challenges facing the nation. Participants continually stressed the need to better educate and inform the public as well as decision makers in local, state, and federal governments about the conflicts and limitations associated with water availability and use. Topics in need of coverage include the value of water, real cost of water, environmental needs and the consequences of use, trade-offs associated with different uses, importance of balancing needs and uses, availability of supplies in relation to demands, risks associated with aging infrastructures, the importance of regional solutions to water use, long-term consequences of unwise use, and the impacts of political and jurisdictional decisions and differences.

Calls for Action

As part of the process to focus attention and action the AWRA sent letters to the President, to Congressional leaders, and to all Governors presenting the major points raised during the Dialogue. The letters called on leadership to help in achieving the following water policy improvements:

• Develop a national water vision: Working with all levels of government and the private sector, lay out a framework for the future for water resources. Address competing goals and objectives, and establish broad priorities for resource allocation and expenditures.
• Formulate policy principles for translating the vision into action: Focus on shared responsibilities and accountability at all levels of government as well as in the private sector for addressing our water resources challenges in an integrated, holistic, and cooperative fashion.
• Insist that appropriate coordination and cooperation takes place: Federal agencies must work together more collaboratively and they must work with other levels of government about water resources issues.
• **Assess water resources information and policy needs and propose solutions**: Rapidly examine the water issues we now face and propose strategies for dealing with the issues and conflicts surrounding them. A national commission was suggested as one means of accomplishing such a comprehensive assessment.

Since the Dialogue, AWRA senior leaders have met with staff members of the Office of Management and Budget, Office of Science and Technology Policy, and Council on Environmental Quality in the Executive Office of the President, and with staff representatives of the Senate Majority Leader and the Speaker of the House of Representatives, to review the letters and to discuss possible actions by their offices. Six governors or their representatives have replied to the letter and have indicated their support of action on water policies.

**Is There an Emerging Water Vision?**

A main call for action from the Dialogue was for concerted effort to help form a national water vision—a clear picture of how water resources are to be managed and how competing goals and objectives can be accommodated. It is clear that the key themes for improving water policy that participants articulated at the Dialogue—integrated approaches, greater collaboration, and improved information—can form the main elements of a national water vision. In broad outline this vision might include:

- **Desired end state for water management**: balanced, sustainable development; multiobjective, watershed based solutions.
- **Key principles for management**: use of market forces, employment of cost recovery and decentralized decision making, creation of data and information-rich environments, focus on results.
- **Federal roles**: facilitator, technical resources provider, information provider for state water planning, promoter of collaborative problem solving among all levels of government.

While much more needs to take place, it is nevertheless evident that the key themes are being manifested in federal agency strategic plans and programs. States, such as Texas, Pennsylvania, Florida, and others are developing water plans with a watershed orientation that are multiobjective in scope. Federal agencies are seeking new ways to interact and collaborate with each other about water resources issues and are, in some cases, executing formal Memoranda of Agreement to define their terms of cooperation.

Much remains to be done. New multiobjective and watershed-oriented authorities that promote greater interagency collaboration are needed for federal water agencies. A national assessment like the one proposed in Congressman John Linder’s Twenty-first Century Water Commission Act (HR 135) would help address critical data gaps and provide a better understanding of requirements and funding needs for water resources improvements. Federal agencies need to better coordinate, collaborate, and resolve differences at a national policy level. In this regard the conclusion reached in an earlier report still applies; “At a time when our water resources policies are in such rapid transition it is remarkable that there is no regular forum for discussion of these issues by involved federal officials” (Western Water Policy Review Advisory Commission 1998). The issue of how to accomplish such coordination remains controversial. Some have called for the reestablishment of the Water Resources Council to serve as a coordinating forum; others argue against adding another layer of organization. Nevertheless, the push for better coordination of federal activities remains strong.

**Water Policy Improvement in the Post-Katrina Environment**

The Second National Water Policy Dialogue took place before the world of water policy changed forever. Katrina has called into question a number of fundamental principles of water management and has reshaped the debate about many of the nation’s water policies. A provocative question could be raised: If the themes of the national water vision that were evidenced in the Water Policy Dialogues had been in place, how might the Katrina disaster have played out differently?

Events such as the Second National Water Policy Dialogue that are explicitly focused on water policy improvement must continue to help nurture the emerging water vision and call attention to opportunities that can be undertaken at the margin that result in small, incremental, but collectively significant, changes. In our political system,
such change has been represented as a process of “muddling through,” in contrast to broad, sweeping direction shifts (Lindbloom 1959). But what appear to be minor course corrections can result in substantial changes in the ultimate direction.

Planning is now beginning for a third Dialogue that will be held in January 2007 in Washington and that will focus on implementation of the ideas generated during the first two Dialogues. We are trying to learn from past efforts and are looking to create a forum that can be more effective in helping to shape an emerging consensus about water resources policy and initiatives. Hopefully, more incremental “muddling through” changes may result, and a national water vision will move closer to reality.

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