



Cooperation Key to Reclamation's Future Water Works

John Keys III – Commissioner, Bureau of Reclamation

Arrowrock Dam in Idaho. (Source: U.S. Bureau of Reclamation)

The Bureau of Reclamation was established in 1902 with the objective of irrigating the arid West to make agriculture viable. Water was a precious commodity then, and the changing face of the West has only made water more precious today.

Several factors contribute to the increased demands for water. Drought has always been a concern for Westerners, but, as significant as it is, drought will not be the only cause of future water shortages. The West is our nation's fastest-growing region, and demands for water and hydropower are expanding along with the population. Between 1990 and 2000, the populations in Colorado, Idaho, and Utah grew by more than 30 percent. Over the same period, Arizona's population grew by more than 40 percent, and the population in Nevada grew by more than 60 percent.

The dramatic growth experienced by many Western communities, coupled with the existing requirements of farmers, power producers, and the environment have resulted in increased competition for this finite resource. And, while the dams and reservoirs built by Reclamation a century ago continue to do a tremendous job, they were not designed for the growing needs of the modern West.

Several options exist for meeting these needs, now and in the future. The most effective answers lie in two programs that are priorities for Reclamation in the coming years: Interior Secretary Gale Norton's Water 2025 initiative, and Reclamation's program to improve aging infrastructure.

We are looking to Reclamation employees across the West to lead the way in bringing

together competing interests to arrive at collaborative, local solutions. By practicing Secretary Norton's four C's—conservation through cooperation, communication, and consultation—we can hope to achieve lasting local solutions to prevent crises and prolonged, expensive litigation.

New storage may help meet Western water needs. In some cases, new storage projects may be the only viable solution to local water supply issues, and Reclamation is working with a variety of stakeholders to explore those possibilities. But we have to be realistic. New storage may require long and complicated approval and funding processes and take years to build. Modern environmental and cost constraints must be considered. The days of the large project with the federal government as the sole funding source are over. There is still an integral federal role, but as a cooperating partner. Decisions about any new storage will have to be shared, locally and nationally.

Near term, the quickest and most effective way to alleviate shortages is to stretch the water supplies that we already have. There are many opportunities for water projects and water supplies to be managed more efficiently and for collaborative, market-based solutions to be found. Project reoperation, new technologies, and innovative solutions such as conjunctive groundwater and surface water management and water banks can help us to stretch existing water supplies.

Partnering Through Water 2025

Water 2025 frames our work to stretch water supplies. One part of Water 2025, the Challenge Grant program, is a 50-50 cost-share program that has enabled Reclamation

to partner with local water districts to focus resources and leverage limited funds where they can have the greatest impact.

In 2004 and 2005, the Challenge Grant Program awarded \$15 million for 62 projects. This funding returned almost \$60 million in on-the-ground water delivery system improvements, a return of four times the investment.

One challenge grant went to the Yuma County Water Users Association in Arizona, which is lining 5.8 miles of canals to reduce seepage and save more than 7,500 acre-feet of water annually in this very dry region.

Another challenge grant went to the Elephant Butte Irrigation District in New Mexico, which is installing 100 flow control meters to better monitor water deliveries to farms. By installing these meters, the project is expected to save 8,000 acre-feet of water and more effectively manage 75,000 acre-feet of water.

But Water 2025 is more than just a grant program. It's a new way of thinking about how to avoid conflict before the crisis hits.

Infrastructure Rehab Underway

Reclamation also is anticipating future water and power demands by making it a top priority to improve the safety, security, and efficiency of our existing structures. About half of Reclamation's dams are older than 50 years, and only 10 percent of them were built under current design and construction practices. We are rehabilitating these aging facilities by incorporating new technologies that improve operations and bring environmental benefits.

Rehabilitated dams will not look a lot different on the outside, but the

improved technology inside will bring great improvements. One recent example is Arrowrock Dam in Idaho. When completed in 1915, Arrowrock was, at 350 feet, the highest dam in the world. It served Idaho well for a long time, but equipment inevitably wears out and new technology had been developed. So in 1997, Reclamation embarked on a project to replace the old Ensign valves with a new technology, clamshell gates.

These clamshell gates were designed specifically for the project in Reclamation's Hydraulics Laboratory in Denver. The height of the clamshell gates will permit future maintenance and inspection of the dam while the reservoir is full. Consequently, the technology enhances the operation while benefiting the fish population in the reservoir.

Other Reclamation improvement projects include placing filters in embankment dams to prevent internal movement of soil particles, installing drainage features to better manage seepage in dams,

and making foundation improvements to enable dams to resist large seismic events that were not well understood when the dams were constructed.

Dam Safety Legislation

A significant piece of legislation that has helped Reclamation's work is the Safety of Dams reauthorization that Congress passed in December 2004. This bill has three key features:

1. It increases the appropriation ceiling to allow this program to continue completing important Safety of Dams risk reduction projects over the next ten years as we identify them, instead of having to seek individual project authorizations.
2. It increases the threshold for small projects that do not require Congressional notifications.
3. It strengthens the role of the project beneficiaries, the water districts, as the safety modifications are being designed.

In short, this legislation provides Reclamation with the authority to fast-track actions to ensure the structural integrity of its dams. It is a continuation of the legislation that enabled Reclamation to make substantial safety improvements to Theodore Roosevelt, Stewart Mountain, Bartlett, and Horseshoe dams on the Salt and Verde rivers.

The common thread in the work we have before us is cooperation. Cooperative work is the future of water management, whether we are talking about new projects or maintaining existing ones.

The idea of cooperative projects is here to stay; it has to be. Neither the federal government nor the localities can go it alone. The enthusiastic and effective cooperation Reclamation has had with its stakeholders and customers gives all of us a solid basis for optimism about the future of water management in the West.

Visit www.usbr.gov and www.doi.gov/water2025/.

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