# RECLAMATION Managing Water in the West

# **Efficiency Transparency Accountability**

## **Culture of Collaboration Runs Deep through** Reclamation

### A Letter from **Commissioner Johnson**

y the nature of our mission, the people of Reclamation have always worked in partnership with many others. In the past, the scope of our work called for collaborative efforts—building a dam is not a solo project. This spirit fit right in with the Western tradition of neighbor helping neighbor.

Today too, our work as water resources managers calls for collaboration. The complexity of the issues we face calls for us to tap the expertise that is available both inside and outside Reclamation.

It makes good business sense for us to seek out collaboration when we can meet multiple goals more efficiently. A great example is the Joint Federal Project at Folsom Dam, where Reclamation is working with the U.S. Army Corps of Engineers. High cost estimates were impeding the Corps' work to improve flood control

downstream of Folsom Dam.

Together with the Corps, we created a design that is simpler and meets the aims of each agency. Work is now under way on flood control and

safety of dam improvements at a cost that is less than it would be with each agency working separately.

Another example of successful col-



Secretary of the Interior Dirk Kempthorne emphasizes a point during a meeting he convened on the Southeast drought and interstate water rights dispute. Seated to the Secretary's left is U.S. Army Corps of Engineers Lt. Gen. Robert Van Antwerp, Chief of Engineers. To the Secretary's right is the White House Council on Environmental Quality Chairman Jim Connaughton. Commissioner Johnson, far left, advised the Secretary on Reclamation's model of collaboration in the Western States.

laboration where we tap local expertise is the Water 2025 Challenge Grant program. By providing seed money to facilitate the completion of water-stretching projects, we have saved dollars and water.

Collaboration is a highly effective way

to leverage resources, "It makes good business sense both technical and fiscal. We are in a time of flattening budgets. None of us can afford to go it alone. Our

> important partnerships with other federal agencies, with states, and with key stakeholder groups enable us to get done what we need to.

The recognition of our success in building collaboration goes all the way to the top. Because collaboration is so much a part of the way Reclamation does business, Secretary Kempthorne recently asked me to meet with the governors of Alabama, Florida and Georgia concerning the protracted water rights dispute among the states, exacerbated by the severe drought this year. The governors are enthusiastic about how approaching issues in the spirit of collaboration promised an effective way to resolve problems.

Collaboration has always been a part of Reclamation. The Managing for Excellence plan furthers our efforts to instill throughout Reclamation a culture of collaboration. I have great confidence that Reclamation and our partners will continue to get the job done.



U.S. Department of the Interior Bureau of Reclamation Washington, D.C.

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goals more efficiently."

### **Monticello Dam Turns 50**

# Solano County Celebrates Dam's Impact on Regional Economy

n California, Solano county farmers call it the gold rush of 1957. That was the year the last bucket of concrete was poured on Monticello Dam.

"The value of agricultural products doubled right away and went on from there," said then-Solano County Administrator Dave Balmer. "The significance of agricultural products was really enhanced, and cities with reliable water supplies were then able to grow."

Monticello Dam, the principal feature of Reclamation's Solano Project, is located in Solano County, about 65 miles west of Sacramento, Calif. Standing as tall as the Statue of Liberty at 304 feet from base to crest, it stores water from Putah Creek and forms Lake Berryessa.

When Lake Berryessa water became available to farmers in 1962, the proportion of irrigated crops rose 13 percent in twelve months to 41 percent. Between 1955 and 1966, farming income skyrocketed from \$12.7 million to \$50.4 million.

The impact of Monticello Dam extended well beyond agriculture, as prominent businesses relocated to the area in search of a steady, reliable water source. In 1976 Anheuser Busch opened a brewery in Fairfield, Calif. Representing seven percent of Fairfield's entire consumption, the brewery exclusively uses two million gallons of Lake Berryessa water per day.

The 50th anniversary of this remarkable turning point in Solano County history was

celebrated Oct. 12-13, 2007. The formal dinner program



Commissioner Robert Johnson reads a resolution on Monticello Dam's 50th Anniversary commemoration to a group of leaders from the cities, water agencies and irrigation and water districts that receive water from the Solano Project. Standing to the right of the Commissioner is Len Augustine, Mayor, City of Vacaville.



titled, "Grown With Berryessa Water," featured a keynote speech by Reclamation Commissioner Robert W. Johnson, capping an evening of festivities on Oct. 12.

"When you think back to the hardships that people went through years ago to build this dam – hard work; dangerous work; long hours for little money – it really drives home the debt we owe them," Commissioner Johnson said.

About 600 people attended festivities on Oct. 13, which included tours of Monticello Dam and informational booths from local organizations. The day's events were held at Lake Solano Park. Lake Solano was formed by the Putah Creek Diversion Dam,

another Solano Project feature.

## **Backwater Habitat Restoration Projects Completed in Yuma**

The endangered razorback sucker and bonytail fish now have 80 acres of new habitat to explore, thanks to Reclamation's Lower Colorado River Multi-Species Conservation Program (MSCP). The six large ponds, built by Reclamation's Yuma Area Office at the Imperial National Wildlife Refuge, are the first completed backwater habitat restoration projects of the MSCP.

This program will address the conservation needs of 26 species, six of which are endangered, by restoring the Lower Colorado River, while providing critical water and power supplies. More than 50 entities collaborate with Reclamation in the program through its Member Steering Committee.

"This is a prime example of a partnership program in a river basin that is itself one of the best examples of collaborative efforts in the United States," said Reclamation Commissioner Robert Johnson at the Imperial Ponds Project dedication on Nov. 5.

The program, slated to continue through April 2055, provides Endangered Species Act coverage for the proposed Lower Colorado River shortage guidelines. Additional projects scheduled for completion include a twelve acre marsh for marsh birds and waterfowl and the planting of 34 acres of native cottonwood-willow trees.

To learn more about the Lower Colorado River Multi-Species Conservation Program visit: http://www.lcrmscp.gov/.

# Deputy Secretary Awards \$290,000 in Water 2025 Grants to Goleta Water District

eputy Secretary of the Interior Lynn Scarlett presented The Goleta Water District (GWD) \$290,000 in Water 2025 Challenge Grants at a ceremony held near Santa Barbara, Calif. at the Corona del Mar Water Treatment Plant on Oct. 26.

Deputy Secretary Scarlett presented

two oversized checks to Jack Cunningham, Vice President, GWD Board of Directors, and Civil Engineer Matt Vanderlinden.



The first check, in the amount of

\$58,000, represents a grant to replace outmoded water meters with modern devices that more accurately measure flows. The total cost of the project is \$148,000.

The second check, in the amount of \$232,000, will pay a share of the \$800,000 cost for a radio telemetry system that allows for remote control of pump stations, wells and reservoirs.

Since its inception more than three years ago, Water 2025 has been the catalyst for creative solutions in the prevention of critical water conflicts. By working with irrigation and water districts, Western States, Tribes, and other local entities to develop innovative on-the-ground solutions to water supply problems, competing interests can be brought together to find collaborative and local solutions for the future. Through the Water 2025 Challenge Grant program, Reclamation enters into collaborative partnerships with local entities on a 50/50 cost-share basis to implement projects that will stretch water resources through conservation, efficiency, and water marketing.

To learn more about Water 2025 or to apply for a Water 2025 grant, please visit: http://www.doi.gov/water2025/



### A NEW VISION FOR 1924?

The following is quoted from the January 1924 edition of the agency's historic journal: *The Reclamation Record*.

The employees of Reclamation are asked to study their service from a new viewpoint and, if possible, to fit themselves into it...

The future of Reclamation has never been so acute in its history as now. With a practical, reasonable scheme of operation; with the primary purpose of developing new country and finding permanent homes for people, instead of construction at any cost with final payment in doubt, the greatest step in the history of Reclamation has been taken.

## **Managing for Excellence Status Report**

The *Managing for Excellence* initiative is nearing completion. Work is proceeding on 12 outstanding Action Items and all are scheduled for completion by Dec. 2007. Implementation of the recommendations derived from the Action Items is also progressing with 31 of 72 tasks completed. Visit www.usbr.gov/excellence to learn more on the *Managing for Excellence* initiative.

### **Highlights include:**

- 29 of the 41 Action Items are completed.
- Seven public meetings, plus stakeholders meetings have been held throughout the West.
- Four Managers' meetings have been held to facilitate communication.
- Reclamation management has hosted numerous employee meetings throughout the period.

# Collaboration Key to Improved Relationships on Animas-La Plata Project

he Animas-La Plata Project (ALP), located in southwestern Colorado and northwestern New Mexico, in Reclamation's Upper Colorado Region, has been the subject of substantial public interest and environmental review since its 1968 authorization. Through a combination of best practices and the implementation of a Project Coordination Committee (PCC), Reclamation's largest construction project now appears to be headed for successful completion in 2012.

After the update of the Project Construction Cost Estimate in 2003 revealed a cost increase from \$338 to \$500 million. Reclamation committed to

Aerial view of the nearly completed Ridges Basin Dam on Aug. 29, 2007.

a transparent critique of its internal project management practices. As a result, Reclamation reconfigured its external communications with project stakeholders in order to communicate more effectively.

"Bottom line, the project sponsors deserved a more transparent understanding of the costs and critical decisions associated with building a public works project of this scale," said Rick Ehat, Project Construction Engineer for the ALP Project. "By maintaining open and honest communication about our work and procedures, the easier it is for the sponsors to understand our issues and provide meaningful input."

The key to the successful transformation of the Project's Coordination Committee process has been the willingness of the Bureau to share information -- both good and bad."

The successful progression of the ALP Project, most notably the topping out of Ridges Basin Dam on Nov. 9, stems from the collaboration of Reclamation and its nine Project stakeholders that comprise the PCC.

"Managing construction projects of this magnitude requires a highly collaborative process," said Randy Kirkpatrick, Executive Director of the San Juan Water Commission. "It requires close coordination among government agencies at all levels and coordination among

sponsors and other stakeholders. Water agencies must have members and staff who can collaborate with others as they are expected to work across disciplines and with the public."

"The key to the successful transformation of the Project's Coordination Committee process has been the willingness of the Bureau to share information -- both good and bad -- with the sponsors long before concerns mature into serious problems," said Scott McElroy, attorney for the Southern Ute Indian Tribe. "True cooperation between the sponsors and the Bureau requires both a fully open process on the part of the Bureau and a willingness on the part of the sponsors to recognize that they need to be a part of the problem-solving, not just outside critics. This has not been easy but we and the Bureau have worked hard to approach the issues in this fashion."

Once completed, the ALP will provide water to fulfill the water rights settlement of the Ute Mountain Ute Tribe and the Southern Ute Indian Tribe. The Project will also provide 33 percent of the storage in Lake Nighthorse for use by non-Indian entities in the Four Corners region.

# **Project Sponsors**

**Bureau of Reclamation** 

**Ute Mountain Ute Tribe** 

Southern Ute Indian Tribe

Navajo Nation

La Plata Water Conservancy
District of New Mexico

San Juan Water Commission

State of Colorado

Colorado Water Resources & Power Development Authority

Animas-La Plata Water Conservancy District

City of Durango







# **Workers at Ridges Basin Dam** Celebrate 'Last Load'

Durango, Colo. – Reclamation joined with the Colorado Ute Tribes, the Navajo Nation, and non-Tribal Project Sponsors at a Nov. 9 celebration to mark the final placement of embankment material on Ridges Basin Dam. The event signals the completion of the main feature of the Animas-La Plata Project (ALP) and is an example of a major collaborative success story. Rick Ehat, Lead Construction Engineer and Manager of Reclamation's Four Corners Construction Office, hosted the celebration which honored workers, including the Native American employees of the Weeminuche Construction Authority (WCA) - the principal contractors for the project. WCA employee Greg Cantsee drove the dump truck with the ceremonial 'last load' to the top of Ridges Basin Dam; Cantsee drove a similar truck with the first load of materials when construction began in 2001. When it is completed in 2012, the project will boast some of the world's most modern engineering, design and structural integrity features and will provide the Four Corners area with an additional 120,000 acre-feet of long-term water storage, and an inactive pool of approximately 30,000 acre-feet for recreational, fishery and water quality purposes.

Construction of the facility has been followed worldwide by leading engineering firms, public works contractors and water agencies.



Photos from top right counter-clockwise:

- 1) Terry Knight, Ute Mountain Ute Tribe, gives the opening prayer on top of Ridges Basin Dam.
- 2) Two WCA employees, Tyrell Vicenti (left) and Ira Murry (right), hold the last load banner as the truck closes in.
- 3) The crowd of 300 spectators cheer the Cat 773 dump truck, driven by Greg Cantsee of WCA, as it rumbles up the abutment
- the WCA shop after the topping out. All photos by David Gates.

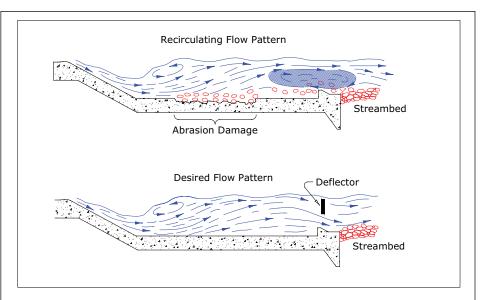
# From Start to Finish: What Exactly *Is* a "Project"?

ow do you define "project"? In Reclamation's world, "projects" are vast networks of dams, reservoirs, canals and aqueducts, legislatively authorized for construction, and supplying rural and urban areas with water. But today's business world has come to know "projects" as something more temporary - creating a unique product, service or outcome. The Upper Colorado (UC) Region is making this leap from the old definition of a "project" to the business world definition, moving toward achieving better management and results.

As a result of the National Research Council 2006 Report, Reclamation made the implementation of project management methodologies and concepts a priority. The UC Region has spearheaded this effort through its project management training. The first training sessions were held Oct. 1-5, 2007 with a second group scheduled in Jan. 2008. Future project management training will also be offered for the non-project manager in half-day sessions.

At the regional level, UC is piloting the use of project management on selected work activities and drafting policy for the application of project management methods in day to day business operations.

The Lower Colorado Region Yuma Area Office has included the use of project management in its activities for many years. UC consulted Yuma on the incorporation of these methods and on the development of a Project Management web site.



The top graphic is a representation of abrasion damage caused by a recirculating flow pattern in a stilling basin. The bottom graphic shows how a flow deflector improves the flow pattern, thus preventing the abrasion damage.

# New Reclamation Technology Prevents Stilling Basin Damage

Reclamation has developed a new, costeffective solution to what has been a problematic maintenance issue for the agency and its customers.

The new technology will help prevent the condition in which the downstream, recirculating flow of water can draw sand, gravel, rock and other abrasive materials against the concrete surface of a dam structure. When the water becomes turbulent it can pound the dam surface with abrasive materials and cause damage rapidly. The process is called "stilling basin abrasion."

Reclamation's new technology utilizes flow deflectors that alter downstream water flow patterns, minimizing the attraction of abrasive materials and minimizing the potential for costly damage.

The flow deflector, developed by Hydraulic Engineers Leslie Hanna and Brent Mefford in Reclamation's Technical Service Center, improves the flow through the stilling basin and into the riverbed, preventing the abrasive materials from entering the stilling basin.

"Each dam will require a different design based upon the geometry and the flow characteristics of the basin," said Hanna. "Right now, the flow deflectors are limited to basin widths of 30 feet, but we are in the process of studying the use in wider basins."

The first flow deflector was installed in 2002 at Mason Dam in Ore., through a partnership of Reclamation's Science and Technology Program and Snake River Area Office with the Baker Valley Irrigation District. Reclamation has calculated the District will save an estimated \$375,000 in reduced maintenance needs and increased water reliability over the anticipated 50 year lifespan of the flow deflector.

"This is a great example of Reclamation and our irrigation districts working together to bring a water management solution from the laboratory to practical use," said Chuck Hennig, Reclamation's Research Coordinator. "Once success was demonstrated at Mason Dam, Reclamation was soon receiving other requests to design and install flow deflectors at other dams."

One of those requests was to install two flow deflectors at Choke Canyon Dam, operated by the city of Corpus Christi, Texas. Reclamation calculated that they will save an estimated \$1.2 million over the 50 years the flow deflectors are anticipated to be in operation.

Hanna's research was funded by Reclamation's Science and Technology Program. To learn more about this project or other Reclamation research activities, please visit:

http://www.usbr.gov/research.

Every day, those who work at Reclamation dedicate themselves to bringing water and power to the people of the West. We see their commitment to their work but it can be fascinating to look behind the scenes - to get a glimpse into their achievements and interests. This section of ETA will give you that glimpse and introduce you to some of the faces of Reclamation.

**AMY STEPHENSON** joined Reclamation in 1998. She manages the Lower Colorado Region Soils Laboratory, one of only two labs in Reclamation, and is the only chemist who performs soil analysis. When not wearing a lab coat, she might be found in Mediterranean costume, teaching bellydancing.

**LEVI BREKKE**, a Hydraulic Engineer in the Denver, Colo. Technical Service Center, is studying climate change and its effect on operations at Reclamation's facilities. He is finishing a report that will provide information on the effect of climate change on operations at Reclamation's facilities in Northern Calif.

**SONJA NORTON**, a civil engineer in the Pacific Northwest Region, has been with Reclamation for nine years. She has a tool chest of experience from the private sector and the US Forest Service. When Sonja isn't hanging over the face of a dam or inspecting the stability of a bridge, this Boise, Idaho resident enjoys cross country skiing, mountain biking, running and hiking.

BLAIR GREIMANN, a hydraulic engineer at the Technical Service Center. Currently, he is working with the US Army Corps of Engineers on the removal of Matilija Dam on the Ventura River in Calif. Through this work, he will be able to better understand river sediment loading and what is needed to protect structures and diversion capability while improving river and riparian habitat.

### **Faces of Reclamation**



"Chemistry has always fascinated me and my career at Reclamation allows me to provide technical support for a variety of projects that positively affect how we manage resources."

Amy Stephenson, Regional Chemist Soils Laboratory Lower Colorado Region



"I enjoy working on climate information applications and providing information from those applications to Reclamation managers so they can incorporate it into their planning process."

Levi Brekke, Hydraulic Engineer Technical Service Center



"I think it's important to keep up with technological advances and being versed in the different construction products. Civil engineering is a great job because it allows you to work in small towns or large cities, but I would say that the first priority is education."

Sonja Norton, Civil Engineer Pacific Northwest Region



"By having a better understanding how water and sediment interacts in a river, Reclamation will have the necessary tools to optimally operate a river to benefit the natural ecosystem and water users."

Blair Greimann, Hydraulic Engineer Technical Service Center

### From GS-1 to Regional Director - Lorri Gray's Inspiring Career Path at Reclamation

orri Gray's unprecedented 24 year career with Reclamation made agency history in September of this year when she was appointed Regional Director of the Lower Colorado (LC) Region. She is the first woman to hold the position in the LC Region since its establishment in 1943.

Prior to her appointment as Regional Director, Gray was the Program Manager of the Lower Colorado River Multi-Species Program (LCR MSCP). This multi-agency program provides Endangered Species Act compliance on the lower Colorado River, while allowing continued use of the river for water and power.

Gray helped negotiate and launch the implementation of the LCR MSCP when she served as Deputy Regional Director. In that position, which she held from 2004 to 2006, she also managed the Region's financial and security programs, Salton Sea Restoration study program and the permitting process for lining of the Coachella Canal. With an expertise in facilitation and mediation, Gray has coordinated and collaborated with federal, non-federal



government organizations on numerous Colorado River issues and worked on key regulations affecting management of the lower river. The needs

and non-

of customers have always been her top priority in carrying out the Reclamation mission.

"Our customers are entitled to know what's going on," she says. "We need to make good business decisions, and explain to them why a decision was made. That is where efficiency, transparency and accountability come in. We need to look for opportunities to improve all the time. I think this Region is renowned for its ability to collaborate with our customers, and I

think we'll see even more opportunities to demonstrate this in the future."

Gray's 24 years of Federal service are all with Reclamation's Lower Colorado Region. She is an example of what can be achieved through hard work, education, and a willingness to stretch beyond one's "comfort zone," by taking on non-traditional and challenging assignments.

She began her federal career as a GS-1 clerk. As she progressed upward, demonstrating her capabilities and adroit skills, her responsibilities increased while, at the same time, earning a bachelor's degree in business management while raising a family.

Gray has held several other management positions, including Regional Training Officer and Quality Program Manager. She also served as the LC Regional Liaison in the Office of the Commissioner in Washington, D.C.

She has received numerous awards during her career, including the Superior Service Award and the Meritorious Service Award, two of the Department of the Interior's highest for career employees.

# The Folsom Dam Joint Federal Project: a Model of Cooperative Partnership

If the levee breaks at Folsom Dam in Sacramento, California's State Capitol could be engulfed in a 15-foot wall of water. Situated in a valley, at the confluence of the American and Sacramento Rivers, Sacramento's flood risk is considered the highest of any major city in the nation, according to the Sacramento Area Flood Control Agency (SAFCA).

This worse case scenario has been the subject of flood control plans since 1986. That was the year a record flood tested Folsom Dam's outlet capability for accommodating releases in preparation for, or during, an extreme storm. After this flood, a plan was developed to enlarge the eight existing outlets, add two new outlets and raise the dam by seven feet. However, when expected costs eclipsed \$600 million by 2005, three times the original estimate, a new plan was needed.

Reclamation, the U.S. Army Corps of Engineers (Corps), the Department of Water Resources-Reclamation Board and SAFCA then joined together, in an unprecedented collaboration of Federal, State and Local partnership, to form the Joint Federal Project (JFP). The revised plan will build an auxiliary spillway, just south of the main Folsom Dam, to allow for earlier, and larger, water releases from the reservoir during a major storm. The JFP is expected to save seven years in construction time and approximately \$1 billion in construction costs. Unparalleled in its scope, the JFP will also address

dam safety issues posed by hydrologic (flood), seismic (earthquake) and static (seepage) events. When completed in 2014, the JFP will bring the Sacramento area to a 200-year flood protection.

Congress authorized construction of Folsom Dam on the American River in 1944 as the Central Valley's key flood control feature. Completed in 1956 by the Corps, ownership of the dam transferred to the Department of the Interior, Bureau of Reclamation, to become a component of the massive Central Valley Project in Reclamation's Mid-Pacific Region.

Folsom Dam is a concrete gravity dam, 340 feet high and 1,400 feet long, with two earthfill wing dams flanking the main section. The dam includes one auxiliary dam and eight smaller earthfill dikes.

### **News Team**

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Dan DuBray - Chief of Public Affairs, Commissioner's Office

### **Managing Editor**

Hannah Key - Office of Public Affairs, Commissioner's Office

### **Assignment Editor**

Peter Soeth - Office of Public Affairs, Commissioner's Office Denver, Colo.

### **Editorial Assistants**

Gertel Harris-Brace - Office of Public Affairs, Commissioner's Office Kip White - Office of Public Affairs, Commissioner's Office

### Contributors

Stanley Dambroski - Office of Public Affairs, Commissioner's Office Robert Gabour - Office of Public Affairs, Commissioner's Office Doug Hendrix - Upper Colorado Region David Jones - Mid-Pacific Region Deborah Lawler - Upper Colorado Region Steve Leon - Lower Colorado Region Janet Sierzputowski - Mid-Pacific Region Winetta Owens - Mid-Pacific Region Ginger Reeve - Upper Colorado Region Bob Walsh - Lower Colorado Region

### **Photographers**

David Gates - Upper Colorado Region David Walsh - Pacific Northwest Region

### **Editorial Board Members**

Rick Ehat - Four Corners Area Office Lorri Gray - Lower Colorado Regional Director Fred Ore - Special Asst. Deputy Commissioner PAB Larry Todd - Deputy Commissioner, PAB