Welcome to our 2012 Year in Review

This year we debut a new report format which we hope will better reflect the opportunities and challenges that affected Central Arizona Project (CAP) last year. We’re featuring four examples of these important events and also providing highlights of many other programs and accomplishments from throughout the year.

Thanks to the dedication, skill and experience of our staff, CAP’s first-ever breach in the canal was repaired quickly and without disrupting deliveries to our customers who depend on us for reliable water supplies. This incident demonstrated a superior effort by staff from all departments and levels to safely and professionally address what could otherwise have been a major supply disruption for all of our customers.

In 2012, we continued to actively work on issues related to EPA regulations on nitrogen oxide emissions at Navajo Generating Station. We partnered with elected and appointed officials, agricultural and municipal entities, Native American tribes, and many others to impress upon EPA the enormous impact that their emissions technology decision would have on the use of renewable Colorado River water in Arizona.

CAP’s Colorado River expertise helped us play an important role in a major bi-national agreement with Mexico to better share the fluctuations in river flows and provide opportunities to address water supply and environmental challenges facing both nations.

You will also read about our successes in workplace safety, integration of new technologies, ‘greening’ our operations and supporting the communities we serve through our volunteer involvement projects.

Please enjoy this report, and visit our web site at www.cap-az.com for additional information about the topics we highlight and much more.
A 12-foot concrete panel along canal left had collapsed and the soil behind it had eroded. The water had spread into the desert well over 100 yards in both directions from the breach. The water then went through a set of under chutes, which, fortunately, acted to slow the water flow, and continued for several miles, causing a brief closure of Highway 72. About 400 acre-feet of water were lost.

Water Control operators quickly shut down the Mark Wilmer and Bouse pumping plants. They continued to run Little Harquahala to drain the water from the canal, and they shut down the gate structure isolating a 5-mile stretch of canal that was breached. They began releasing water from Lake Pleasant to continue water deliveries to CAP customers. All the Municipal and Industrial customers were notified that they would be seeing a change in the quality of their source water and that all deliveries would continue.

“If a catastrophic failure had to take place, this was certainly the right place for it to happen. Bouse is in a remote area, so there was no real damage to life or property,” said Greg Ramon, Assistant General Manager of Maintenance.

At 2 p.m. Sunday Ramon held a conference call with 17 employees from Engineering, Maintenance, Senior Management, Communications and Operations. It was decided that CAP would do the designs for the repair, maintain oversight of the construction, and the inspection work internally. A contractor was hired to work with Maintenance on the actual repairs. A forensics team began a root-cause failure analysis. Ground penetrating radar began to check for voids under the lining in other places.

Arrangements were made to get equipment to the remote area. Crews worked around the clock in 12-hour shifts. The nearest hotels were in Parker, 90 minutes away.

Less than three weeks from the day of the breach, the concrete was poured, sealed and dried. Water began to flow back into the canal and it took about 12 days for that section of the canal to reach its normal depth of about 16 feet.

“We might have been able to do this job more slowly,” said General Manager David Moden, “but then we would have failed in getting all of our water off the Colorado River, and we would have taken Lake Pleasant down significantly more than we did. The response by everyone who worked on this was quick and cooperative.”

About 2:30 a.m. September 30, Water Control Operator Lou Oster saw an indication that there was a problem with the CAP system near Bouse.

“As I watched my monitors, the blue trend line just took a dive,” Oster said. “We began to suspect we might have a breach.”

The Water Control personnel didn’t know it, but water had blown through the concrete canal lining near Bouse, spilling water into the isolated desert. The supervisor was notified and it was decided to wait until daylight to dispatch a field crew to determine the problem.

At 7 a.m. Maintenance Supervisor Dallas Hillhouse began driving along the canal.

“I started in that direction and when I saw a DPS officer sitting alongside the road watching water go by in the wash, I knew immediately we had an issue,” he said. “As I rounded the corner near the wildlife crossing, I saw the water flooded across the desert like an oasis, and I said, there she is, there’s our problem.”

The massive reconstruction of the breach involved pouring approximately 150 cubic yards of concrete and bringing in 2,800 cubic yards of engineered (graded) material and 1,800 cubic yards of fill material, totaling 4,600 cubic yards or 320 semi-trucks of material delivered to the job site.
On November 20, an official signing ceremony of Minute 319 was held between the United States and Mexico. The Minute 319 is an agreement (similar to an amendment) to the 1944 Water Treaty between the two countries. This Minute will guide future management of the Colorado River for the next five years.

Key issues addressed in the Minute are:
— Managing shortages in the Colorado River system
— Managing surplus conditions
— Providing operational flexibility and storage in U.S. reservoirs of Mexico’s Colorado River supply
— Maintaining salinity standards
— Encouraging water conservation and bi-national water development projects
— Providing for environmental benefits in the Colorado River delta region of Mexico

The agreement provides direct benefits to CAP and Arizona by establishing a fundamental concept that when the U.S. is suffering reductions in deliveries due to low reservoir conditions in Lake Mead, Mexico will voluntarily share in those reductions. When Mexico shares in shortages, it reduces the impact of those shortages to CAP and Arizona.

The agreement also provides for Mexico to store water it cannot use in Lake Mead. The increased storage assists in avoiding low reservoir conditions that could lead to shortages. Also, the agreement provides for a joint project for developing water conservation programs which will allow Arizona to ultimately receive 23,750 acre-feet of new water supplies.

The agreement is the result of four years of discussions, studies and negotiations among the U.S., Mexico, Basin States, key water providers including CAP and environmental organizations.

The latest agreement grew out of three previous Minute agreements (Minute 316, 317 and 318) completed in 2010. CAP played a key role in the development of the pilot project concept and negotiating appropriate shortage sharing conditions.

“This agreement is another step in cooperation among all users of Colorado River water,” said CAP General Manager David Modeer. “We all depend on the river and our willingness to work together bodes well for the future. The agreement is historic in the sense that it is a unique collaboration between the U.S. and Mexico, the seven Basin States and key water users such as CAP to resolve the significant challenges of protecting Colorado River users from shortages as well as developing new water supplies.”
Colorado River Basin Study

Colorado River stakeholders have long known that the over-allocation of the Colorado River system is insufficient ultimately to meet the growing water needs of the basin, particularly given the potential for reduced supplies due to climate change.

A 1975 Department of the Interior study concluded that even the best water management strategies would only delay, not prevent future shortages and that the continued growth would eventually require system augmentation. The Basin States completed a review of long-term options to augment the water supply of the Colorado River system in 2008, and the next year began working with Reclamation to prepare a more comprehensive study of the basin’s needs. That study — the Colorado River Basin Water Supply and Demand Study (Basin Study) — was completed in December of 2012.

The Basin Study was a coordinated effort to assess potential imbalances between supply and demand within the Colorado River basin and to develop and evaluate solutions for resolving those imbalances.

The study was the product of a comprehensive three-year effort by the Bureau of Reclamation and the seven Colorado River Basin States (Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming). The study confirms that without action, the Colorado River system will become increasingly unreliable and may no longer be able to sustain communities and resources that rely on Colorado River water. But the study also shows that targeted investments in water conservation and augmentation projects can restore the reliability and sustainability of the Colorado River to meet current and future water needs.

To implement the water conservation and augmentation projects identified in the study, significant additional steps are required. These steps include feasibility studies and potential legislation and policy development. To implement these next steps, the United States, the Basin States, key water agencies, tribes and other stakeholders in the Colorado River system will need to work cooperatively to protect and enhance the Colorado River system and its water supplies.

CAP, an active participant in the study, is committed to engaging in additional efforts and activities to help resolve the Colorado River supply and demand imbalance indicated in the study.

"With the release of the Basin Study, CAP needs to take additional steps to prepare for investment in large-scale augmentation projects, such as desalination projects or water transfers," said Pamela Pickard, CAP Board President.
These efforts included engaging directly with our Congressional delegation (as detailed elsewhere in this report), significant interaction with Arizona’s Native American tribes, and interfacing with statewide and regional organizations such as the League of Arizona Cities and Towns, AZ Water, Agribusiness Council, and the Colorado River Water Users Association. NGS presentations were also made to more than three dozen town/city councils, businesses, and social and service clubs throughout Arizona.

CAP made substantial use of our social media and web-based communication avenues. NGS outreach activities were highlighted on Facebook and Twitter, and CAP’s NGS web pages and the CAP Smart Energy web site were kept up to date to ensure visitors received relevant and timely information.

2012 saw considerable media attention to the issues surrounding NGS. More than 50 NGS related articles appeared throughout the year, including five guest editorials by Board members or the General Manager which appeared in numerous media outlets in the southwestern U.S.

One of the most significant efforts in 2012 was the completion of a study conducted by the Department of Energy’s National Renewable Energy Laboratory (NREL). The NREL study examined both the economic and technical issues related to the use of SCR technology at NGS.

Significantly, the study concluded that additional nitrogen oxide (NOx) controls yield imperceptible changes in visibility. “The body of research to date is inconclusive as to whether removing approximately two-thirds of the current NOx emissions from NGS would lead to any perceptible improvement in visibility at the Grand Canyon and other areas of concern,” (Report, pp 113, IV)

The study also found that the method used by EPA to calculate the visibility benefits of SCR was flawed and did not accurately represent actual measurements in the field.

In January, 2013, CAP received the U.S. Environmental Protection Agency’s (EPA) proposed federal implementation plan (FIP) for installing NOx emission controls for NGS. The rule sets a NOx limit that can only be met by the installation of very expensive SCR technology. However, the proposal lengthens the time-frame for compliance to 10 or more years.

“I believe that without the considerable efforts made by CAP, its customers, partners and elected representatives, EPA would not have recognized the significant impacts that changes to NGS will have on CAP and its customers, Arizona Native American tribes that have settlement agreements involving CAP’s Colorado River allocation and the financial impacts to the Navajo and Hopi tribes,” said CAP General Manager David Modeer.

“The fact that EPA has at least considered these impacts in their proposed implementation plan provides a measure of hope that they will further consider the cost impacts during the public comment period in 2013,” Modeer said.
New CAP logo symbolizes leadership, strength
CAP’s logo received a “facelift” which more strongly identifies the two most important elements that are critical for CAP: water and Arizona. A complementary tagline was also created to engage all customers and stakeholders, “Your Water. Your Future.”

Legislative affairs extends presence of CAP
CAP provided numerous workshops, tours and presentations to local, state and federal elected officials and their staff members throughout 2012 on water and power issues affecting CAP and its stakeholders.

Board interviews Congressional delegation in Washington
CAP’s Board officers traveled to Washington, D.C. to meet with Arizona’s congressional delegation to discuss the effect that increased regulation on the coal-fired Navajo Generating Station would have on the price of CAP water supplies.

External Accomplishments

Tribal outreach efforts enhance partnerships
Among many other activities, CAP hosted tours and presentations for various Tribal leadership members and is producing a new quarterly newsletter to increase awareness and understanding of one another’s issues.

Finance group recognized with GFOA award
The Government Finance Officers Association (GFOA) has awarded CAP the Certificate of Achievement Award for Excellence in Financial Reporting for the fiscal year ending December 31, 2011. The receipt of this award complements CAP’s 9 GFOA Distinguished Budget Presentation awards covering 13 years.
**Election results for CAP Board**

Five seats, out of a total of 10 in Maricopa County, were filled when Lisa Atkins, Guy Carpenter, Terry Goddard, Heather Macre and Pamela Pickard won the November general election. In addition, Board Member Tim Bray resigned and Governor Jan Brewer named Gayle Burns to complete his term. Earlier in the year, former Pinal County Board member Jim Hartdegen was appointed by Governor Brewer to replace Terri Kibler who resigned when she moved out of Pinal County.

**Board President featured as a Woman in Public Policy**

President Pamela Pickard was chosen to participate in a panel discussion hosted by the Arizona Capitol Times on how women impact state and national elections and what that means for the country and Arizona.

**CAP presents information to eager listeners**

A grassroots strategy to meet with hundreds of community and business leaders, elected officials and members of the general public regarding CAP issues including Navajo Generating Station, drought, future water supplies and sustainability efforts was successfully executed in 2012. Presentations were also made to international delegations from Chile, China and Mexico, among others.

**GRANTS IMPACT COMMUNITIES**

Twice a year, Central Arizona Project provides financial support for non-profit water and environmental educational organizations in Maricopa, Pima and Pinal counties. CAP’s Community Investment Program is one of many community outreach programs created to provide information, support and education to Arizonans to help ensure the sustainability and economic vitality of our state.

**CAP educates/engages the public**

General Manager David Modeer, Kara Young and Tim Salgado represented CAP in televised messages communicating the importance of our Colorado River water supply in an arid state.

**Mark Wilmer entrance improved for safety**

Safety concerns prompted CAP to relocate the entrances for Mark Wilmer Pumping Plant because SR 95 has a 55 miles per hour speed limit. The entrance was moved 550 feet north and the highway was widened to accommodate deceleration and turn lanes.

**CAP receives prestigious federal award**

CAP, the Arizona Department of Water Resources and other partners in the Colorado River Supply and Demand Basin Study were presented with a "Partners in Conservation Award" by the Department of the Interior.
Blazing trails in 2012

CAP continued its partnership with municipal, county and tribal agencies to develop a non-motorized, multi-use recreational trail corridor to run the entire length of the CAP canal. When completed, it will be the second longest trail in Arizona.

Educational programs teach kids of all ages about water

CAP provides free curriculum resources to K-12 teachers. Lessons are correlated to Arizona state education standards. Materials include teacher’s guides, student activity books and videos and an interactive online program for middle and high school students.

CAP provides awards for water research

The 2012 CAP Award for Water Research recognized excellence in graduate or undergraduate student research addressing water issues facing the lower basin states. Matthew Stroud from the University of Arizona received $1,000 and Elizabeth Martin from Arizona State University received $500.

CAP celebrates Arizona Centennial

CAP participated in many activities and events in helping Arizona celebrate its 100th Anniversary of Statehood, including an online oral history library and in a book produced by the Arizona Historical League and Arizona Historical Society.

Front and center at CRWUA

CAP was involved in several panel discussions at the annual Colorado River Water Users Association conference in Las Vegas. Experts from CAP participated in a discussion on the Colorado River Basin Study, a panel providing perspectives on the Colorado River Compact and a Management Colloquium on succession planning and workforce development.

CAP WEBSITE RECEIVES A FACELIFT

The CAP website was redesigned and optimized to integrate tools to more effectively communicate with visitors, now reaching more than 7,000 per month.
President’s Award recognizes community service

On their own time, CAP employees devote their expertise and compassion to others less fortunate, upholding CAP’s Value of “community involvement through volunteerism.” To recognize that commitment, CAP annually hosts the President’s Award for Community Service luncheon to honor CAP employees and the organizations they help.

Turnouts serve the community

CAP Turnouts, employee-volunteers, donate time, energy and funding to local charities through payroll deductions and a variety of work activities at non-profits throughout the year.

Safety Week Reaches All Employees

Each year CAP sets aside one week for a variety of programs promoting health and safety training classes. Some are mandatory, others are voluntary.

Some examples include Confined Space Entry, Personal Safety, Hearing Loss Prevention, Office Ergonomics, Desert Survival and First Aid/CPR.

CAP recognized as “Best Workplace for Commuters”

The Best Workplaces for Commuters recognized CAP as a Silver Employer in the “Race to Excellence.”

The award recognizes employers that take exemplary steps to offer transportation options such as vanpools and compressed workweeks.

Diversity and Inclusion team brings new ideas

CAP’s Diversity & Inclusion team continued to encourage a diverse and high performing workforce that reflects the communities we serve; promotes opportunity at all levels of employment and creates an inclusive work environment free from personal or organizational biases.
In 2012, CAP accomplished a “first” with one million hours worked without a lost-time injury or illness. It took hard work and dedication on the part of each and every employee and a commitment to our belief that every job can and should be done safely.

Emergency planning a priority
In the event of an emergency, CAP is well prepared to respond. Drills were regularly performed in 2012 using emergency operations plans, business disaster recovery plans, and emergency response plans. Drills are followed up with a ‘lessons learned’ session to identify and correct identified weaknesses/gaps.

Developing employees, developing CAP
CAP created several new employee development programs in 2012, including a Personal and Organizational Development Process and a Leadership Training Program, both with objectives to increase opportunities for employees to enhance their skills, abilities, performances and opportunities in the workplace.

Fleet Services Goes Green
CAP’s fleet service department was designated an “Arizona Green Shop” by replacing toxic chemicals with environmentally friendly alternatives, converting to bulk fluids, recycling oil and filters and compressing in-house air instead of using individual aerosol cans.

Big 5 goals create employee enthusiasm
CAP employees shared in the success of the organization by meeting five organization-wide goals, otherwise known as “The Big 5.” This incentive program ensures company-wide goals, rather than solely individual goals, are embraced and met by employees throughout CAP.

Kids Day 2012 Explores Careers
CAP’s Take Your Kids to Work Day goes beyond the shadow-your-parent experience. The day showcases hands-on work experiences and information about various positions and departments around the company.

CAP safety record hits milestone
1,000,000 HRS
In 2012, CAP accomplished a “first” with one million hours worked without a lost-time injury or illness. It took hard work and dedication on the part of each and every employee and a commitment to our belief that every job can and should be done safely.
**Revolutionary upgrades for checks, turnouts**

Outdated water level and gate position controls were replaced by new Human Machine Interfaces at all 39 check structures and 36 turnouts to improve communications between employees in the field and water operators.

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**Mobile radio system improvements made**

Communicating inside pumping plants improved with the installation of bi-directional amplifiers to deliver usable levels of radio signals at pumping plants. With this new technology, employees can effectively communicate with each other throughout the CAP system.

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**Southern plants inspected during Fall outage**

Extensive maintenance and inspection took place at ten southern pumping plants during CAP’s annual Fall outage, scheduled to coincide with reduced agricultural customer demand during the harvest season.

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**Western plants overhauled**

Extensive maintenance took place at four western pumping plants, including dewatering, inspecting, and performing maintenance on discharge valves and pipelines. High voltage systems and pump motors were also inspected during the two-month outage.

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**Cable installation goes underground**

Phase 3 of CAP’s Communication Cable Replacement project was completed successfully, installing 95 miles of cable, in part through a 2,800-foot-long tunnel.

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**CAP UPGRADERS RECYCLING PROGRAM**

CAP employees committed to a new recycling plan to promote waste reduction and material reuse throughout CAP.
Our Mission  Central Arizona Project is the steward of central Arizona’s Colorado River water entitlement and a collaborative leader in Arizona’s water community.

Our Vision  The Central Arizona Project will be a collaborative, innovative leader in the management and the delivery of water to central Arizona.

It will enhance the state’s economy and quality of life and ensure sustainable growth for current and future populations of Arizonans.

Our Beliefs  Central Arizona Project employees work with pride to create a safe, supportive and friendly workplace.

WE BELIEVE IN:
– Employees who are reliable and principled
– Service that is top notch for our internal and external customers
– Work done professionally and responsively
– Community connections through volunteerism, charitable contributions and public education
– Relationships among employees and customers that are collaborative and innovative