

# ICMA

## Program Excellence Award for Innovations in Local Government Management

### Descriptive Narrative for

### The Alamogordo Water Conservation Program

#### Challenge to address

Potable water is scarce in New Mexico, and steady population growth has placed a high demand on any easily accessible water sources. This is compounded by the fact that our region is experiencing a severe drought. Some drought experts have called this current cycle a “mega-drought.” Alamogordo’s challenge was to search for an alternative water supply while learning to conserve our current resources.

#### Measurable outcomes/ results

The City of Alamogordo established a Water Conservation Program to ensure responsible water stewardship. In 1995, the Commission adopted a Water Conservation Ordinance, establishing limits for outdoor watering, and conservation methods such as: automatic shutoffs of hoses, recirculation equipment on pools, smaller bleeder lines on evaporative coolers, water-on-request in restaurants. The Ordinance prohibited water wasting and established a fine for violation. The Commission has upgraded the Ordinance several times. Presently, covers are required on pools, outdoor fountains are prohibited, and restrictions are imposed on vehicle washing, percentage of landscaping for new construction, and types of irrigation. In 2002 emergency water rationing was enforced, with immediate results due to surcharges. Enforcement is accomplished through the use of a broad group of City employees.

Innovative water saving measures started in the 1990s with the development of an

extensive reclaimed water system. The system converts waste from the sewer treatment plant, disposal of which was costly, into useful, safe, recycled water. The City initially routed reclaimed water to the golf course, ball-fields, and the soccer complex. Now virtually all city parks, green spaces, some public school fields, two cemeteries, city-building landscaping, and the city zoo use reclaimed water. Construction contractors are required to use it for dust control and earthwork. The Public Works Department uses reclaimed water in the yard and for street repair work. Water that would otherwise be lost is now put to beneficial use. All reclaimed water use is metered. During peak months, we average three million gallons reclaimed water used per day. In the winter we average two million gallons per day. This system accomplished a reduction in just municipal government-account consumption from approximately 10,296.58 million gallons per year in 1997 to 3,611.39 million in 2002. These City-accounts have shown a reduction in potable water consumption of 38% since 1997. To date, we have spent approximately \$4 million in local funds on the development of the reclaimed water system, constructing 16.2 miles of pipeline, two booster stations, and covering the reclaimed water reservoirs to eliminate evaporation.

We also covered and lined the three major potable water reservoirs. Completed in March 2003, covers reduced evaporation by approximately 500,000 gallons per day. The covers are especially effective during hot, windy months. To our knowledge, this is the only reservoir cover/lining program in the State and one of few throughout the nation. We reconditioned three steel tank reservoirs to avoid leakage. The success of lining and covering the reservoirs was immediately evident. The largest reservoir had developed leaks that seeped 200,000 gallons per day. The liner installation has stopped all leakage. Covering also reduced turbidity, to meet new standards.

Alamogordo has implemented a broad-based conservation program that incorporates the

customer's freedom of choice, economic considerations, and good stewardship of water to provide a high quality delivery system. Per capita water consumption, while not the only gauge of conservation efforts, is probably the best available for measuring progress. In 1992 the City of Alamogordo used 261.28 gallons/capita/day (gpcd). In 2003 the City had a rate of 135.33 gpcd, based conservatively on the 2000 Census population of 35,582. We have reason to believe the 2003 population was over 37,000. That is a 48% reduction, coinciding with a population change of 28.9% from 1990 to 2000. Furthermore, if we were to look at strictly residential use, the numbers are even more impressive. Residential use is approximately 80-82% of our total usage.

Another important aspect of our program is education. Water conservation is encouraged by monthly messages on the back of water bills, radio announcements, local newspaper articles, in the City's quarterly newsletter that is mailed to each residence, and the City's Annual Water Quality Report. Xeriscape gardens are located in several visible areas around Alamogordo, including City Hall. The City is demonstrating the use of a product called "Dri-Water" at the Visitor Center Garden, and utilizes artificial turf at Airborne Memorial Park. A low-water use gardening guide is available through Keep Alamogordo Beautiful (KAB), which also has trained volunteers who offer free xeriscaping workshops. The City regularly promotes water conservation at environmental exhibits and events where a large and diverse segment of the population is reached. Annual programs include the Arbor Day Celebration, the Earth Day Festival, and the Otero County Fair. Water conservation information and brochures are given out at these events and at elementary schools. Speaking engagements are made throughout the year to service organizations and community groups through the KAB program.

To address the need for a continuous, reliable water source, the City developed a 40 Year Water Development Plan. After much research, it was determined that a desalination plant utilizing our brackish aquifer is the most feasible approach. The City applied for a water rights

allocation through the Office of the State Engineer. We have begun the planning stage for the plant and system, and the water allotment is under review.

### *Lessons learned*

Not everyone views the need to conserve water with equal urgency. Government is charged not only with providing an adequate quality of life for today's citizens, but also planning ahead to ensure the sustainment of the community. Sometimes this requires unpopular decisions. The surcharges that were enforced during the summer of 2002, when our water storage dropped below a reliable level, were largely protested. The same is true for water-wasting tickets that have been issued. However, with consistency in enforcement and continual promotion of the need for conservation, citizens have risen to the challenge and made a real difference in consumption. We needed to look internally also at our metering process and loss accountability. Water is lost due to line breaks, theft, and dead or slow meters. The City has addressed each of these challenges. Capital improvement projects are underway to update as many water and sewer lines as fiscally possible. Inactive accounts have been eliminated; all properties must now either pay a minimum monthly fee or the meter and connection will be completely removed. All meters over 12 years old will be replaced, to try to minimize loss due to slow or dead meters.

We feel this program is unique, innovative and exhibits our best practices. Alamogordo continues to upgrade our systems and look for new methods of conserving water. Supplying water to residents has been a challenge for Alamogordo since its establishment. Even with the implementation of a new water source in our near future, water conservation will continue as an on-going challenge that we cannot ignore.