DENVER WATER'S CONSERVATION PLAN

As the Denver metropolitan area continues to grow, it's important that Denver Water plans for a sustainable water supply for the future. Successful stewardship of this resource is critical to our community's welfare and is a vital component of the state's economy.

No single water resource is sufficient to meet this challenge. Denver's Board of Water Commissioners recognizes the need to invest in and manage a diverse portfolio of resources to meet its future needs. That is why Denver Water is increasing water supply through recycled water and the development of new water supplies and decreasing demand through conservation.

10-year Conservation Goal

In September 2005, a Board resolution stated its 10-year conservation goal, which was to develop a conservation plan "capable of achieving consumption that is less than or equivalent on a per capita basis to the long-term water conservation goals in the current Integrated Resources Plan."

Denver Water's conservation goal is to reduce water use from 211 gallons per person per day (pre-drought average) to 165 gallons per person per day, which is a 22 percent reduction of treated water use from pre-2002 drought levels by the end of 2016. Gallons per person per day is a calculation of the sum of all treated water delivered from the treatment plants in one year divided by the population served in the combined service area and the number of days in the year.

The goal has several components to it:

- Accelerated Natural replacement – In 1994, federal plumbing codes were changed to set minimum standards for toilets, showerheads and faucet aerators. Over time, older, inefficient water fixtures will be replaced with new ones that meet the new federal standards.
- Active conservation – Denver Water's Integrated Resource Plan targets a conservation goal that could be achieved with direct measures by Denver Water. These measures are described in this conservation plan.
- Higher density – In the future, experts predict residential lot sizes will decrease as a result of a growing population. Half of residential water use is outdoors; therefore, smaller yards and less landscape will mean households use less water.
- Cultural and behavior change – encouraging customers to change how they value water to make long-lasting behavior changes that decrease water waste

The conservation plan seeks to achieve 29,000 acre-feet of savings, plus an amount from the natural replacement of fixtures, from each of the four areas mentioned above, but its primary goal is to fully achieve the conservation goal with measures described in this plan. The various components of the plan mirror much of Colorado's Guidebook of Best Practices for Water Conservation. Those components are as follows:

Best Practice	Denver Water Programs
Metering, conservation-oriented rates	Denver Water has a fully metered system, provides monthly water bills that include a consumption graph showing demand over the last year so that customers can compare water use and set goals for reductions. A steeply increasing block rate structure for residential customers provides incentive to use less to avoid higher per unit costs. Commercial and industrial customers are charged via a seasonal rate structure that rises steeply during the six-month irrigation season and sends a strong price signal to irrigate only when necessary.
Integrated resources planning, goal setting, and demand monitoring	Denver Water uses a comprehensive integrated resources planning method that encompasses least-cost analysis of demand and supply options that compares supply-side and demand-side measures (water conservation) on a level playing field and results in meeting essential planning objectives. Conservation goals are a significant portion of the integrated resources planning efforts.
System water loss control	Denver Water has a leak detection unit and regularly exceeds the American Water Works Association standards for leak detection and remediation. Water loss control involves system auditing, loss tracking, infrastructure maintenance, leak detection and leak repair for the water system. In addition, Denver Water monitors its own use of water for irrigation at its properties to ensure that efficiency standards are met.
Conservation coordinator	Denver Water has assigned an entire section of the Public Affairs Division to be responsible for the successful implementation of its water conservation programs.
Water waste ordinance	Denver Water has adopted regulations to prohibit water waste by its customers. Operating rules prohibiting water waste are in effect, and a structure of fines for water waste is used to enforce the rule. Among other provisions, the rule states that from May 1 to September 30 Denver Water customers may not water more than three days per week, and may not water between the hours of 10 a.m. and 6 p.m.
Public information and education	A cornerstone of Denver Water's conservation plan is outreach to the public about the value of water and the importance of wise stewardship and efficiency. This effort includes an extensive advertising campaign, publications, community involvement, education materials, marketing program, and information specific to different types of customers and water use.
Water efficient design, installation and maintenance practices for new and existing landscapes	Denver Water requires the incorporation of soil amendment for new development. New development is inspected to ensure that the proper amount of compost is added to the soil so that installed landscaping will have a good start and will need approximately 20 percent less water.
Landscape water budgets, information and customer feedback	Irrigation customers are provided with an opportunity to receive an irrigation system audit. As a follow-up Denver Water provides annual report cards on how efficient the customer is compared a baseline efficiency number. Customers can access an online tool to develop their own landscape water budgets, and can access their water use online to develop goals and receive feedback on their water use.
Irrigation efficiency evaluations	Customers may request an irrigation system evaluation at no cost. Trained technicians will audit the system, making note of problems and make

	suggestions on proper irrigation scheduling. This is available as requested by all customers, but large irrigators are targeted for these evaluations and must receive them in order to take advantage of incentive programs.
High-efficiency fixture and appliance replacement for residential and non-residential sectors	The goal of this program is to increase the installation rate of water efficiency fixtures and appliances and to remove inefficient and wasteful devices from the service area. There are two programs in use. The first involves a direct rebate to the customer for a fixture, such as a high efficiency toilet. These rebate programs are available to both residential and non-residential customers. The second is a direct installation, such as in Denver Water's program to retrofit low income housing with high efficiency toilets, faucet aerators and showerheads.
Residential water surveys and evaluations, targeted at high demand customers	Denver Water offers its high demand customers a free audit of their water use to determine whether fixture and appliance retrofits and/or process changes can help lower their water use. Following this process, these customers are eligible for a financial incentive if they invest in water saving practices that lower their water demand by a set minimum amount. In addition, customers who deem their water use to be above the norm can request a free high bill audit to determine whether there are leaks occurring that are driving their water use up.