

## **Sterling Ranch Water Plan**

Sterling Ranch is the first new development in Colorado that has made water conservation a priority from the beginning. The community will provide an exemplary approach to water conservation and demand management standards for future developments throughout the state. Planning for everything from yard size and plant selection, to the size and creation of neighborhood parks and community recreational spaces, to traffic planning and placement of green spaces flowed from the Water Plan.

When efforts began at Sterling Ranch, the team took time to understand the water challenges facing current and future residents of Douglas County, surveying water conservation practices in Douglas County and throughout Colorado. The partners then expanded their research to leading water conservation developments in other parts of the West.

As a result, a water-use goal of less than half the currently accepted norm across the Front Range, and one-third of the water required by current Douglas County zoning regulations, is both achievable and appropriate for Sterling Ranch. While there are no easy answers, a sufficient, sustainable, high-quality water supply can be provided with appropriate planning. Sterling Ranch is committed to setting the standard for responsible delivery and use of water within the county and state. From the onset, the team instituted a requirement that Sterling Ranch would be based on renewable water supplies coupled with the most efficient use of water. At the same time, the team began working on water solutions for its immediate neighbors whose wells were failing.

The proximity of Sterling Ranch to the South Platte River allows renewable surface water to be integrated into its water supply. Communities in Douglas County have historically depended largely or entirely on ground water, a practice that has since been recognized as unsustainable. Sterling Ranch will instead rely on non-renewable ground water as a drought management tool and a supplement to its renewable water supply. This integrated management of multiple water resources creates a more sustainable, balanced supply. Sterling Ranch has further solidified its Water Plan through contracting to acquire a water treatment facility.

Demand management and water conservation will be another key element of the Sterling Ranch Water Plan. Successful water conservation occurs when precious water supplies are used conscientiously, employing a combination of new technology and solid conservation practices that have been proven to work elsewhere. Maximizing the efficient use of water in existing communities is often challenging and costly, requiring changes in both infrastructure and behavior. It's much simpler and more effective when a new community is designed around the theme. Prioritizing water resources planning has ensured that opportunities for prudent use of water were not overlooked and that water conservation will be convenient for residents of Sterling Ranch.

Sterling Ranch's ongoing commitment to responsible management of water resources is set forth in the progressive Water Conservation Plan that will be implemented throughout the existence of the community. Irrigated common areas will be strategically located to maximize usage while less active common areas will incorporate native plants that require minimal water use; many ball fields will utilize artificial turf.

A Waterwise Home Certification and residential landscape and irrigation system regulations, with post-construction audits, will enforce the installation and ongoing use of water-efficient fixtures and appliances in all homes and limit the need for outdoor water use, while still providing for an attractive landscape. Covenants, Conditions, and Restrictions and voluntary point of sale audit and rebate programs will be implemented to enforce ongoing water conservation. Sterling Ranch will have a dedicated water conservation staff that will continually communicate the importance of water and work closely with residents to minimize waste. They will educate residents about the inclining block rate structure under which rates will increase drastically when water usage exceeds budgeted amounts, and how these relate to individual and community water budgets. Comprehensive water use monitoring, with dual metering of indoor and outdoor uses, will enable Sterling Ranch and its residents to quickly identify and respond to problems such as leaks or improperly functioning irrigation systems. This level of water conservation ethic is unprecedented at the planning stages of a development, as is Sterling Ranch's pledge to share its renewable-based water supply with its neighbors, which is also set forth in the Water Plan.

### **Additional Water Planning Efforts**

Dominion Water and Sanitation District and Sterling Ranch have expended significant resources studying solutions for water-challenged areas throughout the western United States and beyond. One of the oldest and most obvious solutions resounds – rainwater harvesting. While the Sterling Ranch Water Plan doesn't depend on rainwater as an additional resource, the development is a proponent of rainwater harvesting and hopes to put it into practice.

In 2007, Dominion and Sterling Ranch collaborated with the Colorado Water Conservation Board, Castle Pines North Metropolitan District, Douglas County Government, and rural water users to commission a study titled a *Holistic Approach to Sustainable Water Management in Northwest Douglas County*. The study showed that, after water conservation measures, the next largest savings of water came from the effective use of rainwater, something that many states now practice. Using conservation and rainwater harvesting, outdoor water demand could be reduced by approximately 65 percent to 88 percent, while maintaining attractive landscaping. In June 2009, Governor Bill Ritter signed a new law that allows the state to approve 10 rainwater harvesting pilot projects during the next decade, to further study the impacts and benefits of the practice. Sterling Ranch hopes to become the site of one of those pilot projects.