



The first utility in the nation to work with EPA to customize WaterSense materials!



Works to Save Water!

As the primary steward of water resources for Spartanburg County, Spartanburg Water makes it a practice to be conscientious about water usage. During times of drought, conservation becomes a top priority. Be assured that when we ask our customers to cut back, we join them by reducing our own usage to preserve water resources for the community.

Leading the Way in Water Conservation Education for the Community

Spartanburg Water installed a Water Wise Garden in 2003 at its Commerce Street office to serve as a demonstration garden for residents and businesses. It incorporates seven principles of Xeriscaping™ to save water, including planning and design, soil analysis and preparation, careful turf and plant selection, efficient irrigation, use of mulches, and appropriate maintenance.



Spartanburg Water is proud to be a charter member of the national Alliance for Water Efficiency (AWE). Recognized as the authoritative voice on water efficiency, AWE offers training to water conservation professionals, coordinates green building initiatives, works on plumbing codes and standards, and develops water efficiency research recommendations for congressional funding.

Spartanburg Water was the second utility in South Carolina to partner with the Environmental Protection Agency's (EPA) WaterSense program to protect the future of the nation's water supply by promoting and enhancing the market for water-efficient products and services. The WaterSense label assures consumers that the products or services have passed independent testing and are certified as water efficient.

To further support the WaterSense effort, Spartanburg Water launched its own Every Drop Counts campaign and was the first utility in the nation to work hand-in-hand with EPA to customize WaterSense publications for use by a utility.



Reaching school-age children is a key component of Spartanburg Water's educational efforts, and its unique "pontoon classroom" is used to present water conservation topics to school groups.



To encourage customers to remain vigilant about the amount of water being used outdoors, Spartanburg Water recommends separate irrigation meters to customers so they can accurately measure total usage. Today there are 2,246 dedicated irrigation meters in use.

Rather than use spray nozzle irrigation, which can be wasteful, Spartanburg Water uses targeted drip irrigation at its Lake Blalock Park. This, along with automatic shutoff and low-flow faucets in public restrooms at both Bowen and Blalock Parks, demonstrates to the community that Spartanburg Water is actively committed to conservation.



Spartanburg Water is saving 650 million gallons of water annually! Making Changes in Day-to-Day Operations

Modifications to the filter backwash procedures at the water treatment plants have eliminated excessive filter-to-wastewater loss. At the water treatment facilities, as many as 38,000 gallons of water per backwash cycle are being saved.

Water savings? More than 13 million gallons per year!

Following principles ascertained through Spartanburg Water's involvement in the Partnership for Safe Drinking Water and Area Wide Optimization Program goals, backwash procedures have been optimized. For example, filter runs at the water treatment facilities have been extended, cutting the number of backwash cycles in half.

Water savings? 33.6 million gallons per year!

Variable frequency drive motor controls installed at the Landrum Water Treatment Plant allow greater flexibility in plant flow rates.

Water savings? Improved filter run times of 50 to 75% of standard run times dramatically reduce the amount of water needed for backwashing!

Distribution system flushing is conducted for water quality issues only, and line extensions are designed to recirculate wherever possible to maintain water quality and efficiency.

Water savings? More than 9.6 million gallons per year!

Recognizing that some flushing is necessary, Spartanburg Water has installed 65 automated flushing devices throughout the distribution system in both Spartanburg and Landrum, allowing flushing to occur during non-peak hours. The volume of water being discharged is metered, and the devices are monitored and adjusted weekly to reduce water usage.

Water savings? 45 million gallons per month!

Water usage at reclaimed water treatment plants is significant, often peaking at 1,500 gallons per minute. To reduce this, Spartanburg Water uses reclaimed water for automatic filter washing, solids dewatering, facility cleaning, equipment cooling, chemical dosing, and scum spraying.

Water savings? More than 94 million gallons per year!

Rather than draining water from a reservoir in need of maintenance, water is transferred to another reservoir using a mechanical pump.

Water savings? As much as 1.3 million gallons every time the process is performed!

Fleet vehicle washing has been significantly reduced so that washing occurs only for inspection, maintenance, and repairs.

Water savings? More than 1,000 gallons a month!

Capital projects are being designed for water efficiency. For example, the latest pumping technologies using variable frequency drives are being incorporated to eliminate wasted water during elevated tank maintenance.

Water savings? 4 million gallons per year!





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Taking a Strategic Approach to Leak Detection

Challenge	Solution	Benefits
Aging infrastructure demands early detection techniques to locate system stresses before wasteful and costly leaks occur.	Spartanburg Water launched a Distribution System Leak Survey and Detection Program in 1998 to identify subsurface leaks. Electronic leak loggers and leak correlators are used to survey the system, beginning with the oldest portions first. Going forward, the schedule is to survey the entire distribution system every five years and the oldest portions biannually.	<p>Reduces unaccounted for water.</p> <p>Accurately pinpoints leaks before they surface, preventing damage to public and private property.</p> <p>Assists in strategically planning future system rehabilitation projects.</p>
Large transmission line inspections often require taking the pipe out of service while the test is performed.	Spartanburg Water was the first in the Southeast to use a new pipe inspection technique on large transmission lines that allows the pipe to stay in service during testing.	Over 10 days, 25,000 feet of 14-inch to 24-inch diameter piping was tested, with two leaks detected that could have created significant problems—one had carved a 7-foot by 5-foot by 3-foot cavern under a road surface.

Repairing Leaks Quickly to Reduce Lost Water and Minimize Damage

Challenge	Solution	Benefits
One significant main break can result in millions of gallons of lost water if not located and repaired quickly.	To identify leaks quickly, Spartanburg Water enhanced its system with a Supervisory Control and Data Acquisition (SCADA) System. Operational staff monitor the system 24 hours a day to ensure problems are caught before they escalate into expensive and wasteful breaks.	<p>Response time has been reduced by half, especially for large breaks in areas where flow alarms are tied to the paging software.</p> <p>In one recent example, water loss was cut in half from a potential 12.8 million gallons to 6.4 million gallons because of rapid response.</p>
Leaks are often not discovered until a visual sighting is reported.	Spartanburg Water has made investments and enhancements in technology such as an automated paging system for critical alarms.	Unusual conditions that may be associated with water loss are identified and responded to quickly.
Leaks often occur outside of traditional working hours.	Spartanburg Water emergency response personnel work a 24-hour schedule to make repairs and stop leaks.	Water is conserved that would have been lost during non-working hours.

Helping Customers Identify Leaks in Homes and Businesses

Although not as dramatic in appearance as main breaks, household leaks can add up. Not only has Spartanburg Water focused on repairing leaks across the distribution system, but efforts have been ramped up to help homes and businesses identify leaks—information that helps preserve water, protect property, and save money.

Spartanburg Water customer account specialists and field service inspectors review meter readings prior to billing, alert customers to unusual increases in usage and/or generally high usage, and conduct field inspections for the customer.

To improve meter reading accuracy, in 2005 Spartanburg Water began installing automatic meter reading (AMR) technology as part of its systemwide meter changeout program. Installed in more than 35,000 meters to date, the system has a 99.6% read accuracy rate.

To further assist in detecting leaks, Spartanburg Water is installing low-power radio frequency drive technology on meters in the area with the oldest infrastructure. The program will ultimately result in 20,000 leak detection meters throughout the distribution system.

One dripping faucet can waste more water in one day than a person needs for drinking in an entire week!

