



When green isn't green



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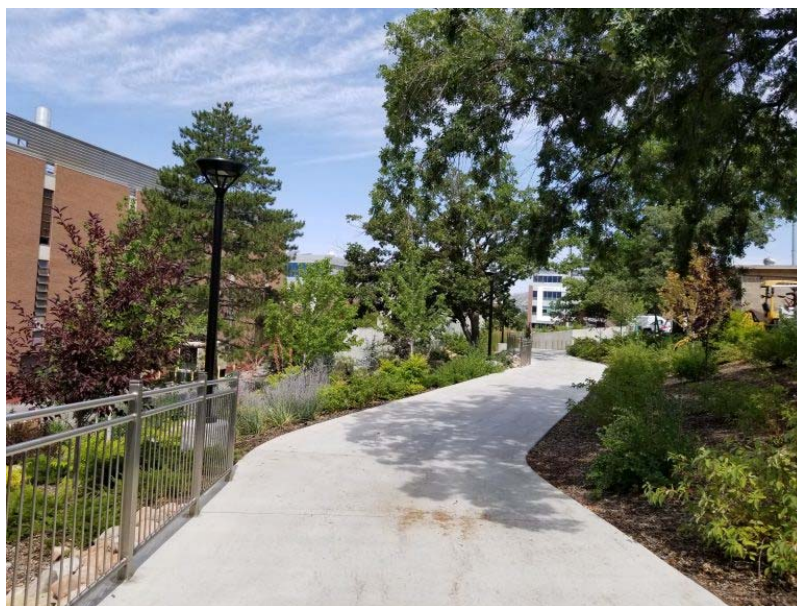
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Our landscape has slowly been changing around us. Those who have been on campus for more than 10 years remember when much of it was a vast expanse of lush green turf. As awareness of water conservation became more prevalent, the University of Utah began slowly adapting the landscaping.

Since then, the university's [Landscape Maintenance](https://facilities.utah.edu/landscape/) team has primarily focused on turfgrass replacement, water-wise landscape design and modern irrigation systems. By using "Slow the Flow" [guidelines](https://slowtheflow.org/) designed by our state water conservation experts, following the U.S. Green Building Council (USGBC) LEED standards for planting and expanding the use of well water for irrigation, the

team has created a dramatic transformation saving the university millions of gallons of water and hundreds of thousands of dollars every year. In 2018 alone, 3,093 centum cubic feet of water (CCF), which equals 2.3 million gallons, were conserved through the efforts of the landscaping team.



So, why do we still have so much turf on campus? Unfortunately, this isn't a process that can happen overnight both due to the enormous scope of the project and budgetary constraints. The university covers over 1,500 acres and manages 1,000 acres while about 439 acres have been set aside to remain in their wild state under the [Heritage Preserve Program](https://utahopenlands.org/heritage-preserve/) (<https://utahopenlands.org/heritage-preserve/>). Each year, the landscaping team reduces the amount of turf on campus and replaces it with water-wise landscaping. Where that happens is often a result of where the opportunity presents itself. The ideal opportunity to remove turf is often when a new building is erected or a large-scale remodel is occurring. In 2018, 12 acres of turf were removed.

While replacing turf with water-wise landscaping is immediately noticeable, a lot of water conservation related to landscaping happens behind the scenes. The irrigation team is completing a substantial upgrade to the central irrigation systems that involves installing equipment that improves the U's ability to manage irrigation, fine-tune water delivery and report outcomes. This project will conserve roughly 117,000 CCF (87.5 million gallons) water per year and provide better data for researchers. Because of the vast amount of water conserved through this project the return on investment is under four years. The project was jointly funded through the [Sustainable Energy Fund](https://sustainability.utah.edu/engagement/sustainable-energy-fund/) (<https://sustainability.utah.edu/engagement/sustainable-energy-fund/>) (\$150K) and Facilities' Sustainability & Energy Program (\$400K).

What is significant about this new system is that it allows each zone to be calibrated by the water delivery technology and associated flow rate, from the giant, high-flow spray nozzles used on big turf areas to slow drip used for xeriscape. Lisa McCarrel, the current landscape supervisor is responsible for overseeing the irrigation upgrade.

"The ability to monitor water used for irrigation purposes at the level that this equipment and program gives us is remarkable. It allows each irrigator or horticulturist access to the program to make changes based on root zones, soil type, slope and other landscape data



while in the field,” said McCarrel. “The system provides reports indicating water flow issues, which are received each morning. It provides information that helps the technician determine which problem should be addressed first, based on water loss or possible plant material loss. The calculated water cost savings could reach \$10 million in seven to 10 years. In addition to water savings, the reporting will result in a significant reduction in labor and maintenance costs.”

The irrigation overhaul and changes in planting practices are producing good results. When looking at the five-year average for total water usage (both irrigation and culinary) on campus, the numbers indicate that water efficiency has outpaced growth. Water use intensity (CCF/sq. ft) is continuing to trend down. This is a direct result of water-efficient appliances, well-managed central plants and growing utilization of well water (secondary water) for irrigation.

And yes, we have all walked by that rogue sprinkler that is going off in the hottest part of the day or leaking all over the sidewalk. Our landscaping teams get stretched thin at the height of the irrigation season, and they need our help to let them know when something is malfunctioning or broken. Any malfunctioning irrigation issues can be reported by tweeting @UofUFM or calling 801 581-7221.

As climate change alters our weather patterns and our summers become longer and hotter, we will all have to be ever more diligent about water conservation. We are grateful that the landscaping team is doing their part to adapt our landscape to the changing conditions providing a model for us all.

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