



2017 Water Conservation Annual Report



Meet the 2017 Water Conservation Team

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Cover photos (top to bottom, left to right):
watershed tour, sprinkler demonstration,
a sprinkler head, gaillardia flowers, the
Xeriscape Demonstration Garden

Introduction

The 26th *Water Conservation Annual Report* is prepared for the Fort Collins City Council and the Fort Collins Utilities water service area. This report includes accomplishments, information on water use in the Utilities service area and an update on the provisions of Utilities' *Water Efficiency Plan*.

Utilities' Water Conservation Program is a proactive response to the increasing demands for water, the natural variability of water supplies and the projected impacts of climate change on the water supply.

The Water Conservation Team offers a comprehensive portfolio of programs that provides resources and education for the community to achieve sustained reductions in water use. Programs include incentives for efficient landscapes, technology, appliances and fixtures, leak detection and reduction efforts, education and outreach, as well as foundational activities like building and land use codes and other regulations.

Water efficiency means doing more with less – not without. Utilities strives to ensure that water resources are used for beneficial purposes and not wasted. These efforts help reduce the long-term costs of water supply and meet the demands of current and future customers.



2017 Water Conservation Team

What Do We Do?



Educate and Inform

Education, information and outreach are the foundation of Utilities' Water Conservation programs. Events and programs raise awareness for residents, businesses and children about how and why to be water efficient. Staff provide in-person guidance, including facility assessments for commercial and residential programs, as well as Utilities' popular free sprinkler audit program. In addition to the community-wide campaigns, customized information is provided through the leak detection program, Home Water Reports and Utilities' online Monitor My Use tool.



Incentivize and Motivate

Utilities offers rebates for installing water efficient fixtures, appliances and irrigation equipment. This motivates customers to choose the most efficient options and replace old, inefficient models sooner than they might have otherwise. Staff continually evaluate these efforts and create new opportunities. For example, the newly revamped Xeriscape Incentive Program provides guidance and rebates for installing a water-efficient landscape at residential sites.



Develop and Support Regulations and Codes

Regulations ensure a minimum level of efficiency for both indoor and outdoor water use. Water Conservation staff review and inspect irrigation plans and sites, ensuring that new developments meet the water efficiency standards set out in the *Land Use Code*.



Participate in Community-wide Partnerships

Coordination and partnerships with other City departments and community organizations maximizes the effectiveness and reach of Water Conservation programs. For example, Utilities partners with the Gardens on Spring Creek to develop and support their annual education series.



Participate at State and Federal Level

The Water Conservation Team participates in state and federal organizations focused on water efficiency, including Colorado WaterWise, the Alliance for Water Efficiency, the Irrigation Association and more.

Did you know?

Water efficiency is cheaper than buying new supplies. Efficiency programs cost less than 1 cent per gallon saved annually (even less over the lifetime of action), while new water supplies can cost up to 15 cents per gallon.

Water Conservation Planning

In 2015, the Water Conservation Team began developing an update to the 2010 *Water Conservation Plan*, which the Colorado Water Conservation Board (CWCB) now refers to as a *Water Efficiency Plan*. Water Conservation staff recruited cross-departmental City staff along with members of the City Water Board to create a technical advisory group that met throughout the summer to discuss key issues, set goals and priorities and review content and materials.

Council approved and adopted this new plan on March 1, 2016. Staff sent the plan to the CWCB in early 2017 for state review and approval.

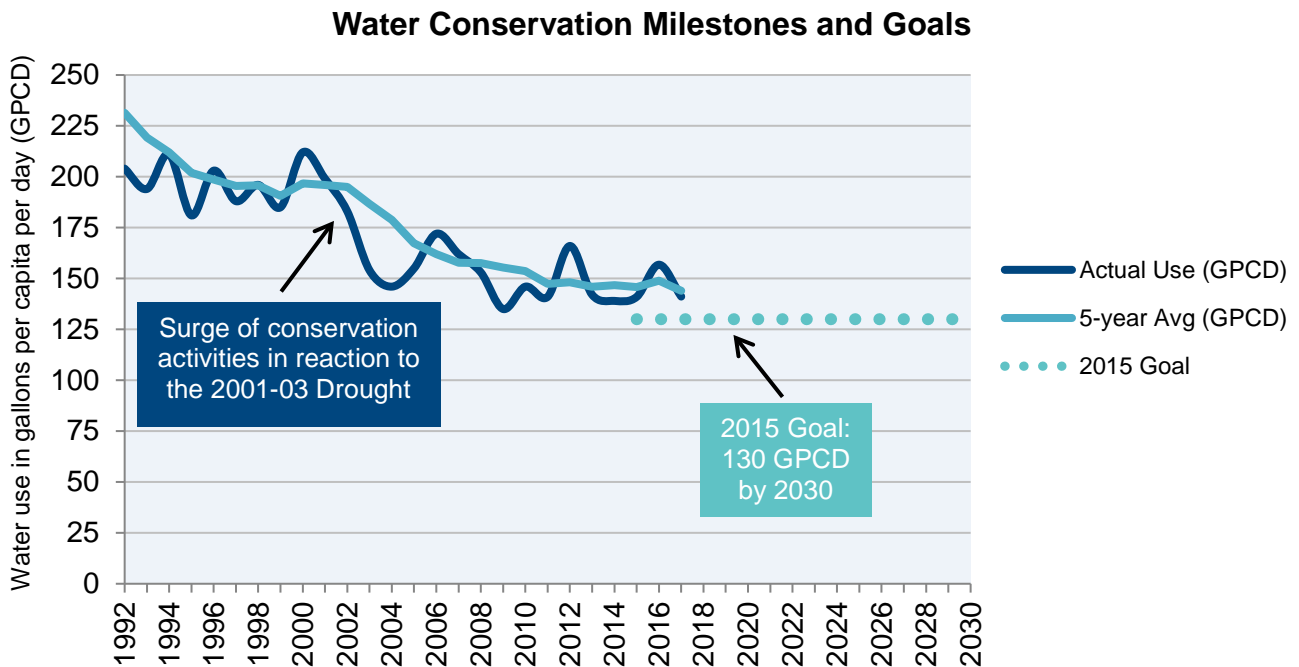
The new plan sets a goal to reduce community water use to 130 gallons per capita per day (GPCD) by 2030. It also outlines areas of

Did you know?

The savings from water conservation programs (about 86 million gallons in 2017) is enough to provide water for 1,023 homes in Fort Collins.

opportunity and implementation strategies to guide the Water Conservation Team's activities.

The graph below shows our actual GPCD each year, relative to our goal. You'll see fluctuations that reflect the weather of that year. This planning effort complies with the state's *Water Conservation Act of 2004*, which requires all water providers that deliver over 2,000 acre-feet of water to submit a plan outlining conservation goals and the specific measures to achieve those goals at least every seven years. Learn more at fcgov.com/water-efficiency-plan.



Water Use

Total treated water use was about 7.6 billion gallons, which was about 9 percent lower than demand in 2016. This was, in part, due to an abnormally wet period from late July to mid-August.

Water use in June and July was significantly higher in 2016 than in 2015. Precipitation in May was 83 percent higher than average, and precipitation in August was 50 percent higher than average. Utilities customers responded to these events and used significantly less water.

The highest daily water demand occurred July 19 with over 40 million gallons treated. As a comparison, the average demand was about 21 million gallons per day. Both are lower than in 2016.

Did you know?

It is illegal to waste water in Fort Collins. Water Conservation staff followed up and resolved 71 instances of reported water waste.



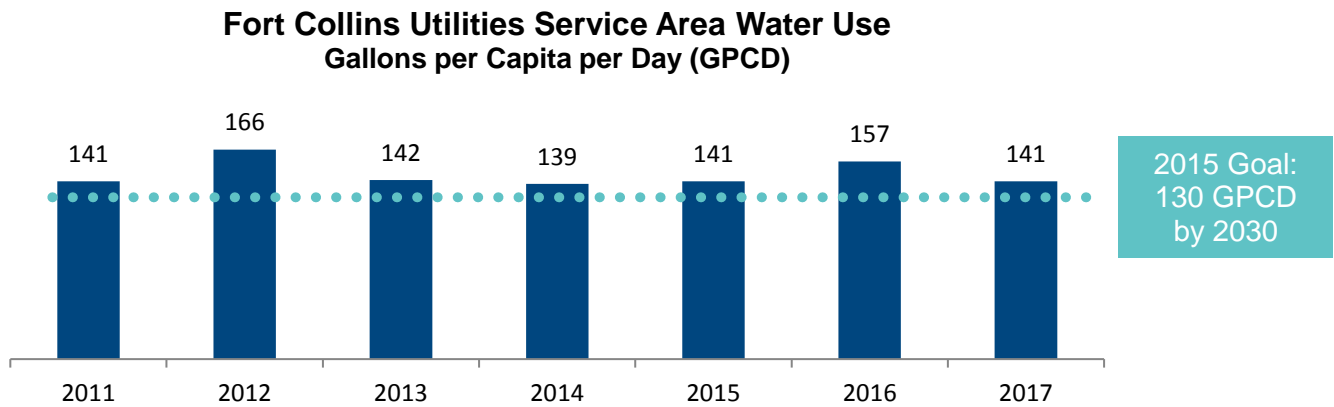
Sprinkler Auditors training with Northern Water.

Did you know?

Water use in 2017 was 141 GPCD for Utilities' water service area, down over 30 percent from the 200 GPCD of 204.

How Are We Doing?

The new *Water Efficiency Plan* goal is to reduce Utilities' water service area use to 130 GPCD. Since a significant portion of water use is driven by the weather, hot, dry years like 2012 cause average water use to spike, whereas cooler, wetter years like 2014 and 2017 result in less water use. We need average community water use to decrease by almost 8 percent to reach our 2030 goal.



Water Savings from Water Conservation Programs

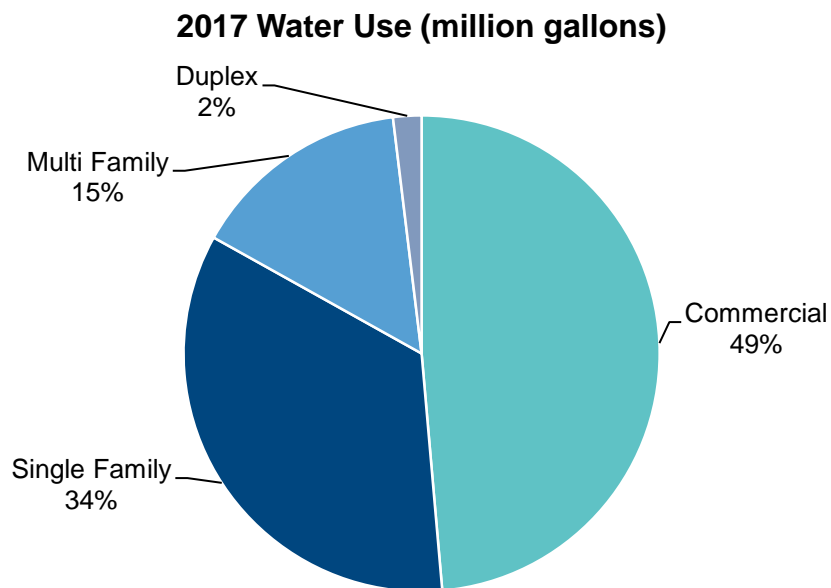
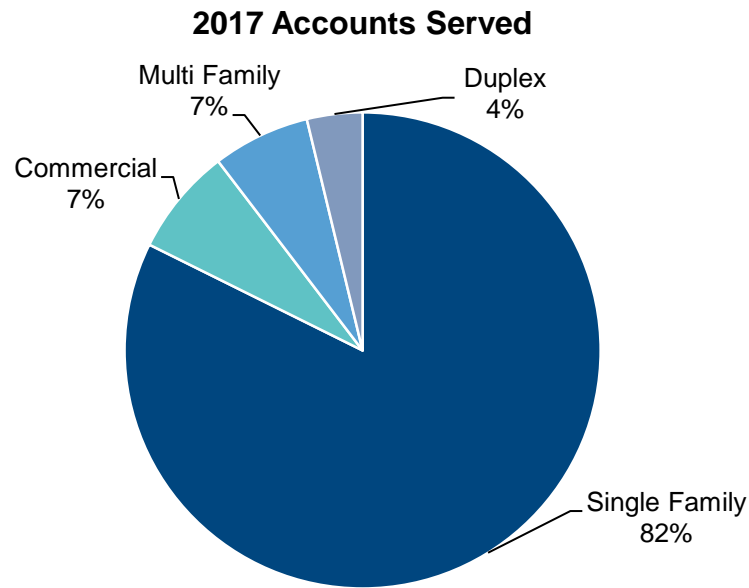
Total water savings from water conservation programs was estimated at about 86 million gallons. As a comparison, total water savings in 2014 was only 27 million gallons. The growth in savings is due to:

- Improved tracking and evaluation of conservation efforts
- Commercial customers taking on more efficiency projects
- More direct installs (rather than only recommendations) during home efficiency audits
- New and expanded programs and projects
 - Home Water Reports
 - Xeriscape Incentive Program
- Large water-saving projects on City properties

2017 Water Savings (Million Gallons)



Water Use by Sector



Did you know?

Over 20,000 Fort Collins residents received Home Water Reports that provide engaging, customized information about their water use. These customers reduced their use by an average of 3.4 percent, which resulted in 190 acre-feet of savings in 2017, or about 62 million gallons of water. This boils down to each recipient using about 8 fewer gallons every day!

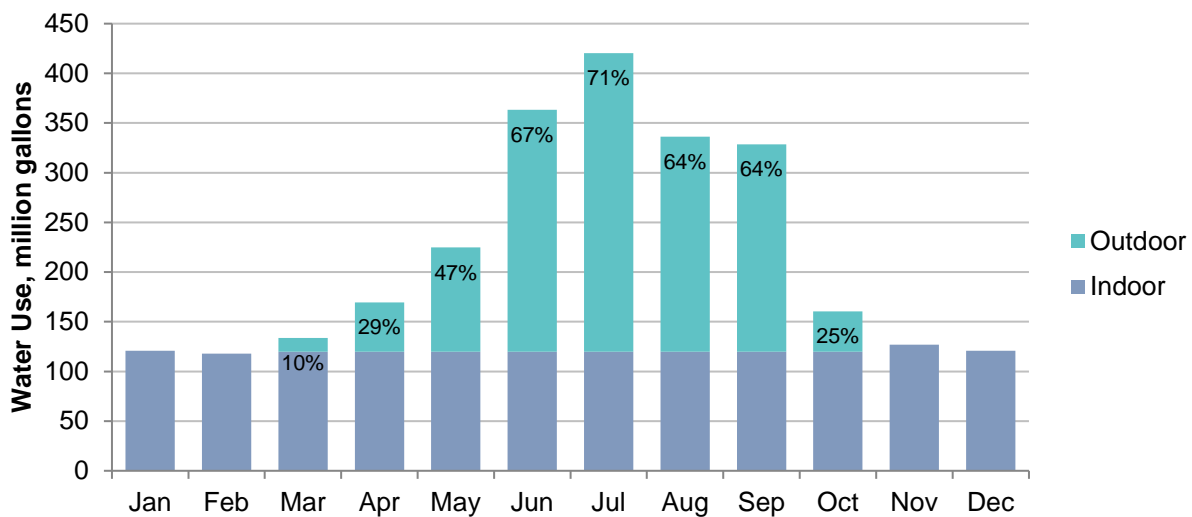
Water Use: Indoor vs. Outdoor

Using average winter water use levels as an estimate for average indoor use, we can estimate how much water is applied outdoors. In the hottest and driest months of the summer, Fort Collins used around 35 percent of all treated water outdoors. Average daily water use in the summer was about 27 million gallons each day; by comparison, only 15 million gallons are typically used on an average day in December.

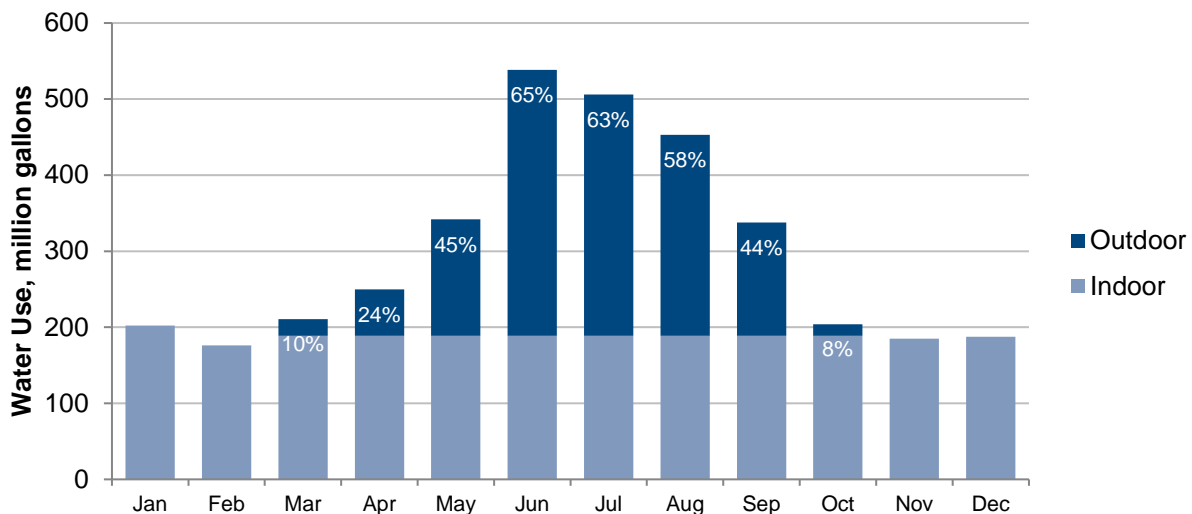
Did you know?

Residential water use in Utilities' service area was estimated at 73 GPCD in 2017, down 42 percent from 2000.

Estimated Indoor vs. Outdoor Use Commercial Customers 2017



Estimated Indoor vs. Outdoor Use Residential Customers 2017



How Did the Community Save in 2017?

- The Sprinkler Audit program had 381 homeowners volunteer for a free audit, reducing outdoor water waste while keeping Fort Collins beautiful.
- ClimateWise partners reported a total of 520 water-saving actions, and 37 did enough to earn a water badge. The most popular strategy was a simple one: ensuring that hand-washing sinks have an efficient aerator installed, reducing flow to only 0.5 gallons per minute.
- As part of the Xeriscape Incentive Program, 39 customers installed water-wise landscapes. These landscapes provide year-round interest and require less water.
- More than 1,000 customers were contacted via the Continuous Consumption program. This new service helps customers track down leaks, reduce water waste, save money and fix issues that would otherwise go unnoticed or cause significant property damage.
- Water Conservation staff reviewed 75 new construction landscape plans and 66 irrigation plans and site inspections. This helps generate efficient outdoor water use on new properties from the start.
- The City focused on improving the irrigation practices at the Police Services site. The upgrades, along with some leak fixes, are estimated to save 540,000 gallons per year.
- The City continued the pool remodel at the Eldora Pool Ice Center (EPIC). This project is estimated to save an additional 1 million gallons per year, in addition to the 662,570 gallons saved from the work completed in 2016.
- The City Parks Department has a goal to water park areas at 90 percent of the evapotranspiration (ET) rate or less. ET is effectively how much irrigation water is needed beyond the rainfall received. In 2017, the average water use was 93 percent of the ET rate. Audits at 11 Park sites identify improvements.
- More than 3,300 people attended a variety of classes and events, and about 3,000 benefited from an efficiency program like rebates or the free sprinkler audit program.
 - This includes the installation of 1,423 aerators, 679 toilets/urinals, 441 showerheads, 871 clothes washers/dishwashers and 877 pieces of irrigation equipment.



Before and after views of a Xeriscape Incentive Program project.

Where Were We in 2017?

- Colorado Water Congress Water Tables
- Poudre River Forum
- PROGreen Conference
- AWWA Sustainable Water Management Conference
- High Plains Landscape Workshop
- Fix-a-Leak Week
- Efficiency Technical Training Series
- Gardens on Spring Creek classes
- Certified Landscape Professional meetings
- Earth Day
- WaterSHED Summit
- Children's Water Festival
- EnviroVation – a celebration of ClimateWise partners' achievements
- Watershed Bus Tours
- Perennial Plant Association Conference
- RMSAWWA/RMWEA Annual Joint Conference
- National Mayor's Challenge for Water Conservation
- Xeriscape Garden Party
- Xeriscape Incentive Program Fall Open House
- PlantSelect Annual Meeting
- Xeriscape Contractor meeting
- Utilities Educators' Workshop
- Colorado WaterWise Conservation Summit
- WaterSmart Innovations Conference
- Growing WaterSmart Workshop
- Rocky Mountain Utility Efficiency Exchange
- Irrigation Association CLIA trainings
- WaterSmart Innovations Conference
- Irrigation Association Annual Show and Conference

Did you know?

The Xeriscape Demonstration Garden at City Hall, the second ever in the world, was built in 1986 after Denver Water's first demonstration garden. The garden is open to the public and demonstrates attractive, water-saving landscapes.



The Water Conservation Team hosts several events and booths throughout the year, like the Xeriscape Garden Party at the Demonstration Garden.

Water Efficiency Saves Money

Water conservation is the most cost-effective water resource. Sustained water savings allows Utilities to avoid or delay long-term capital expenses. For example, sustained conservation means that treatment facilities and other infrastructure do not need to be as large or expensive. As a result:

- The Halligan Water Supply Storage project does not need to be as big as originally thought, which results in \$6 million in avoided costs.
- The Water Treatment Facility was built for a larger average demand; the excess capacity now is rented to other providers, which results in millions of dollars of revenue each year.

Additional 2017 Highlights

Xeriscape Incentive Program



The Water Conservation Team developed a new program to help homeowners transform high water-use landscapes into water-wise “xeriscape” landscapes. The Xeriscape Incentive Program (XIP), includes free educational classes and online resources. It also puts greater emphasis on helping the homeowner adapt their watering technology and schedule to meet the needs of their new landscape and reduce summer water bills. Once a participant has successfully installed a qualifying xeriscape, they can apply for a \$0.75 per square foot rebate for up to 1,000 square feet. In 2017, 39 participants transformed over 50,000 square feet through XIP.

Landscape Water Budget Reports

Staff helped customers prepare for the 2018 increase in the Excess Water Use fee, an additional cost for every thousand gallons used over a customer’s annual water allotment. In 2018, the fee will increase from \$3.06 to \$8.14, which could mean a significant increase in bills for customers who tend to use more water in a year than their allotment. The fee is increasing because of the associated update to the water supply requirements and cash-in-lieu price. Staff developed tools to help customers understand their use and where they might be able to cut back and avoid paying the fee.

A total of 39 of affected customers (covering 81 water accounts) have committed to managing the higher costs through efficiency and conservation strategies. One new service developed to support customers is the Landscape Water Budget report, which shows a customer how their water use compares to what the landscape actually needs. This report, combined with a 1:1 consultation, brings together the account holder and their landscape contractors to get on the same page, develop a plan, and track progress. This free service benefited 25 customers covering 44 accounts in 2017. More tools for large-landscape customers are in the works for 2018.

Recognition

The Water Conservation Team recognized two efforts in 2017 that demonstrate a commitment to the wise use of water. At the 2017 Contractor Appreciation event, Pyramid Landscape was recognized for their water saving upgrades to HOAs and commercial water customers’ landscape irrigation systems. As part of the Certified Landscape Professional and Midstream Irrigation Rebate programs, Pyramid Landscape completed 18 commercial projects in 2017, anticipating over 2 million gallons of water savings.

2017 was the first year a key account customer received an award for water savings. The “Water Cooler Award” was earned by the key account with highest percent reduction in water use. The 2017 recipient was Banner Health for reducing outdoor water use by 35 percent and saving 4.1 million gallons of water through simple, no-cost irrigation schedule changes.



Abbye Neel presenting the Water Cooler Award.

Learn more at:

fcgov.com/conserve

fcgov.com/water-efficiency-plan

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