



WATER CONSERVATION ANNUAL REPORT



2018

Water Matters

Fort Collins Utilities has a strong commitment to ensure the efficient and responsible use of our natural resources. Our Water Conservation Program started in 1977 and we're continuing to innovate how we help the community use water wisely.



City Park Pooch Plunge 2018

Water touches every aspect of our lives and it is a key ingredient in the unique blend of activities and industries that make Fort Collins a vibrant and special place to live and work.

Water Efficiency Plan

Water efficiency and conservation programs and services help our community face challenges like population growth, drought, a changing climate and more. Water efficiency is a key part of our long-term strategy to ensure our community has a reliable water supply.

Learn more: fcgov.com/water-efficiency-plan

GOAL

Reduce community use to an average of 130 gallons per person per day by 2030, **which means using 10% less over the next 10 years.**

This average reflects *all* use: business, industry, residents and irrigation.

2018 WATER USE AND WATER CONSERVATION PROGRAM SAVINGS

TOTAL WATER
TREATED:

7.8
BILLION
GALLONS

Additional water is treated on behalf of the Fort Collins-Loveland Water District. Fort Collins Utilities also provided 185 million gallons of water wholesale to West Fort Collins Water District.

Unbilled use and system losses add up to **543 million gallons**.

Water Conservation programs and services cost less than a penny per gallon saved.



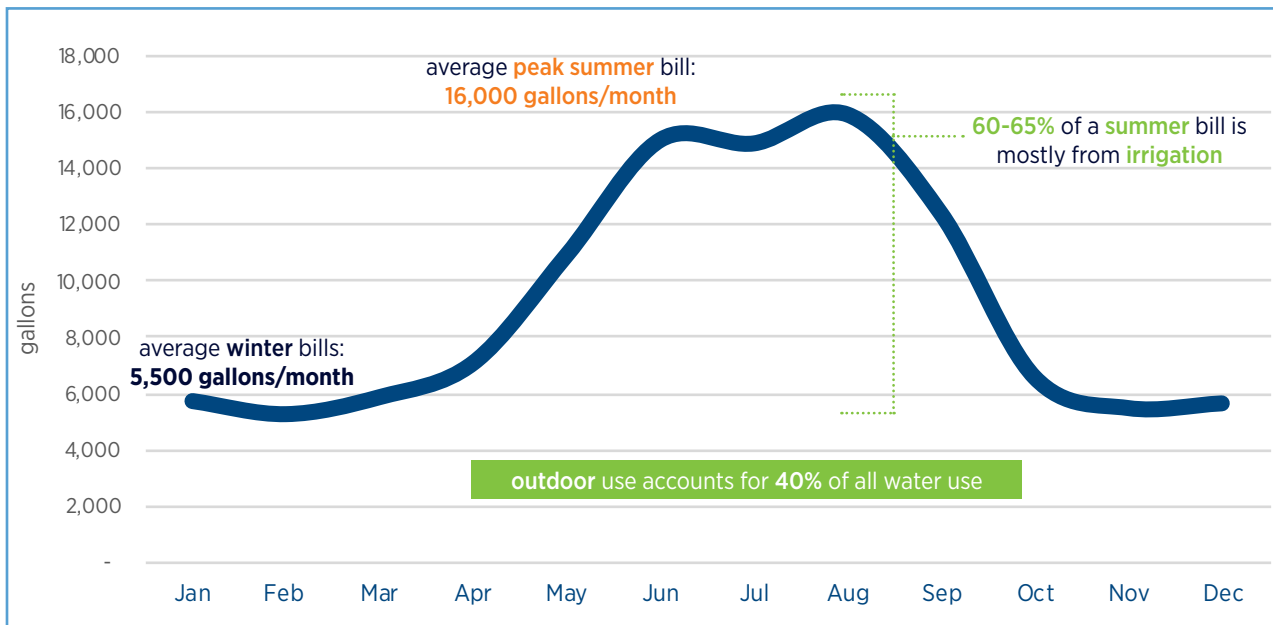
This \$0.007 per gallon value is **14 times cheaper** than the cost of buying more water.

32,935

Residential Accounts
(single-family, duplex,
multi-family)



2018 AVERAGE MONTHLY WATER USE PER RESIDENTIAL ACCOUNT*



*includes single-family, duplex and multifamily

TOTAL SAVINGS

90
MILLION
GALLONS

RESIDENTIAL PROGRAMS AND SERVICES

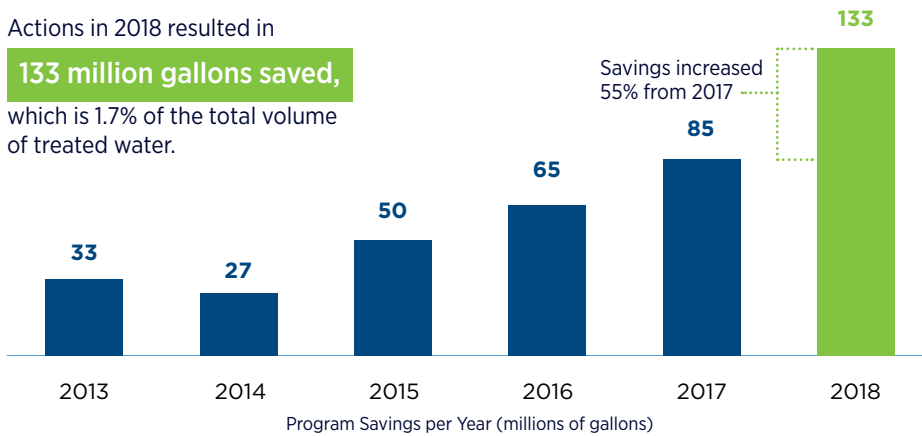
Focus: Outdoor Water Use		approx. savings in million gallons
Sprinkler Audits		5
Landscape Programs (XIP, GIAB)		1
Focus: Indoor Water Use		
Direct Install Partnerships (Larimer County, Xcel)		13
Focus: All Water Use		
Home Water Reports		65
Efficiency Rebates		4
Continuous Consumption (Leak) Notifications		2

In 2018, Residential customers used **3.65 BILLION** gallons

Actions in 2018 resulted in

133 million gallons saved,

which is 1.7% of the total volume of treated water.



Water Efficiency Plan Goal

Reduce community use to an average of 130 gallons per person per day by 2030, which means using 10% less over the next 10 years.

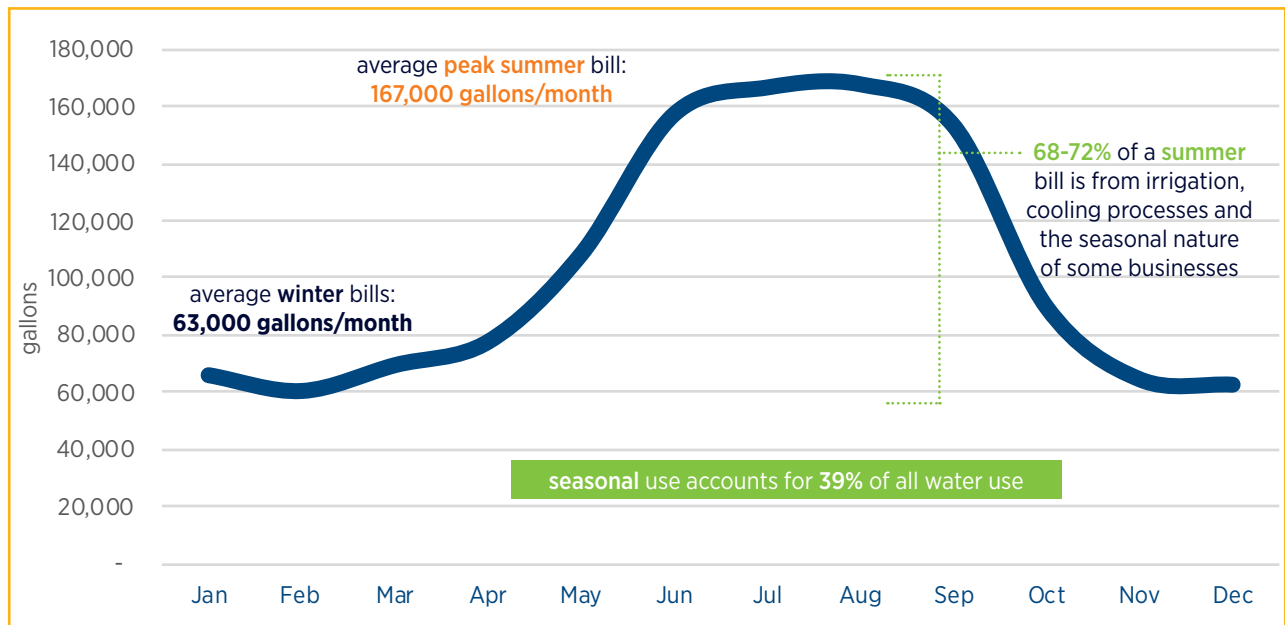
This average reflects *all* uses: business, industry, residential and irrigation.



2,761

Commercial Accounts
(business, irrigation)

2018 AVERAGE MONTHLY WATER USE PER COMMERCIAL ACCOUNT



In 2018, Commercial customers used **3.42 BILLION** gallons

COMMERCIAL PROGRAMS AND SERVICES

Focus: Outdoor Water Use

approx. savings in million gallons

Landscape Water Budget Program

22

Midstream Irrigation Rebates

7.1

Focus: Indoor Water Use

Efficiency Works Rebates

10.1

City Facility Retrofits/Projects

0.4

Small Business Toilet Install Program

0.4

Focus: All Water Use

Continuous Consumption (Leak) Notifications

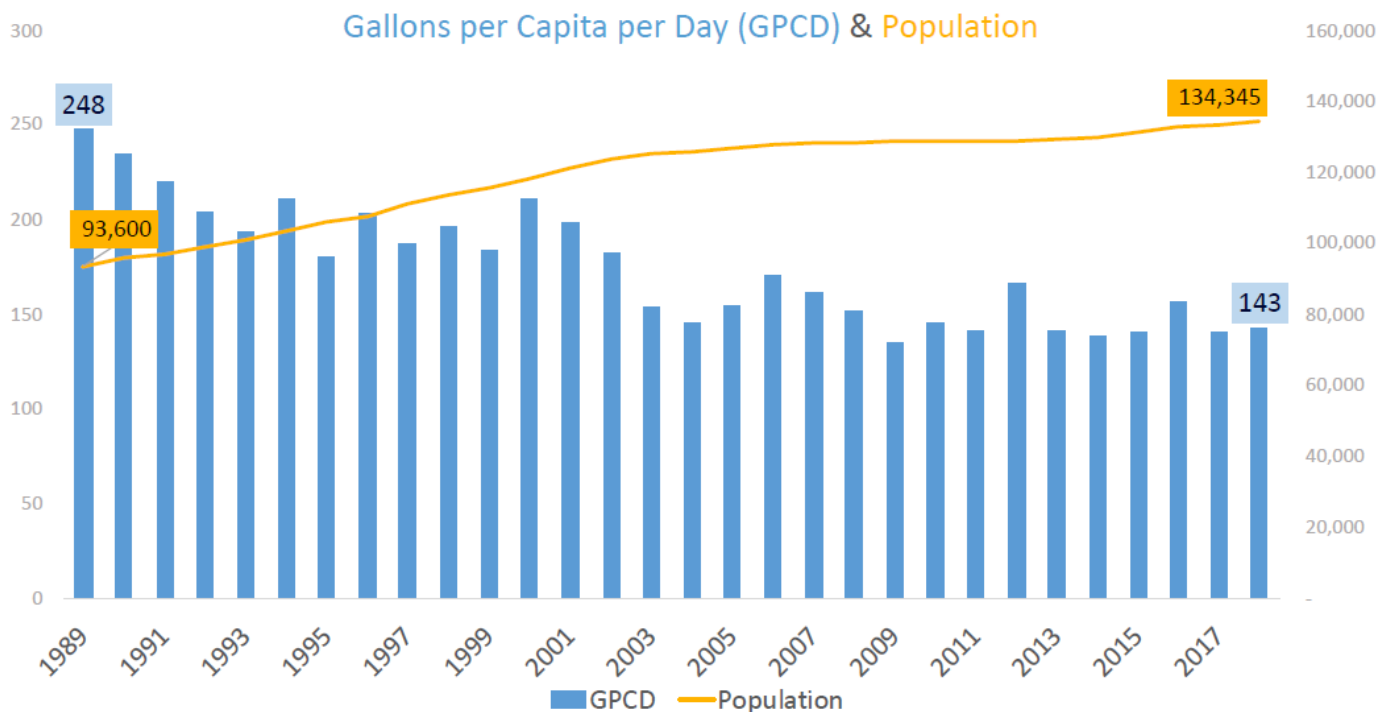
3

TOTAL SAVINGS

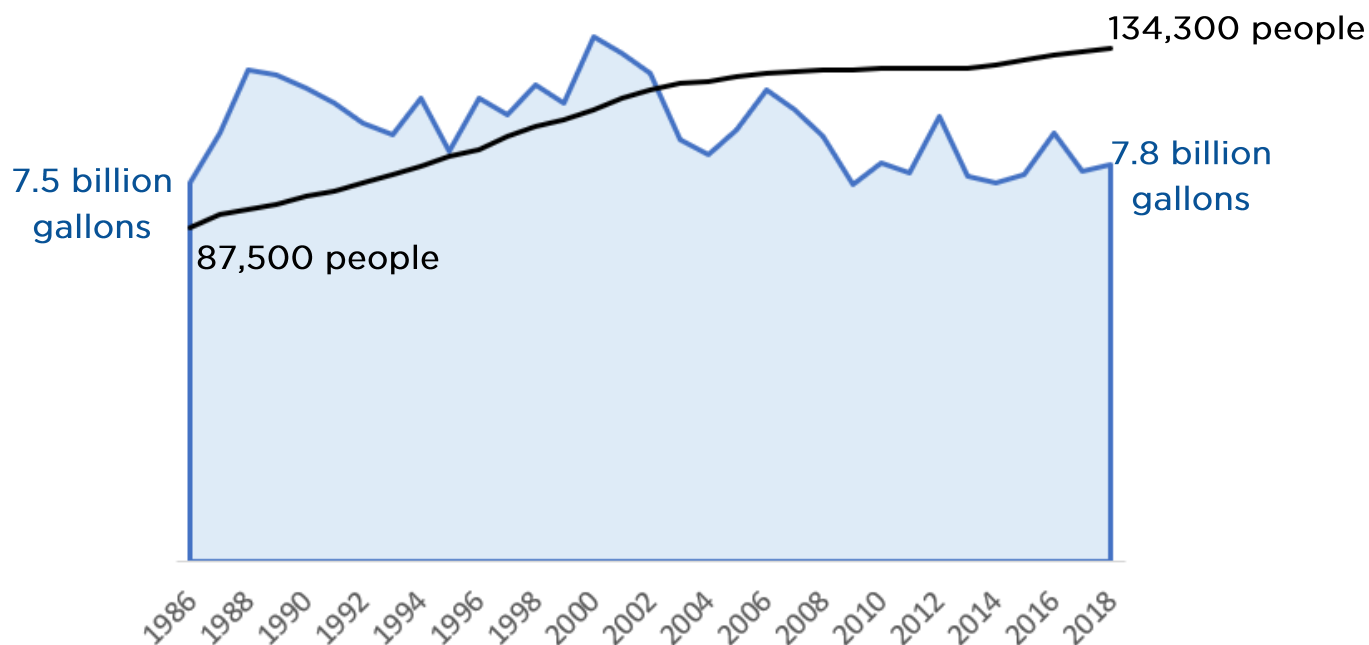


Fort Collins is Growing, but Our Water Use Isn't

Average water use is down 32% since 2000. Fort Collins Utilities customers once used an average of 211 gallons per person per day. In 2018, it was only 143 gallons.



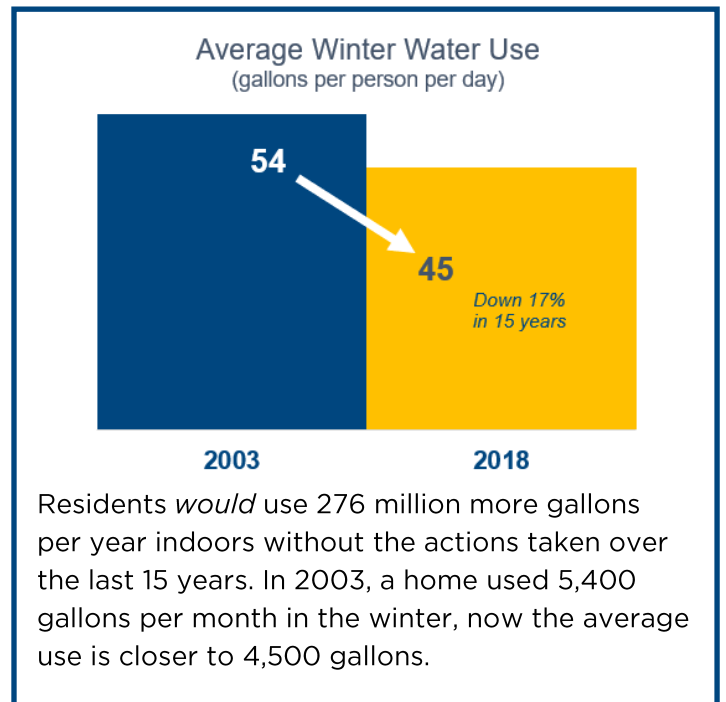
Residents use about the same amount of water that Fort Collins used in 1986, even though the service area population has grown 53% — nearly 47,000 more people.



Residents are More Efficient Indoors Than Ever Before

The **Home Water Reports** program reaches over 20,000 residents and saved almost **65 million gallons** in 2018 alone. This means that on average, every household that receives a report uses about six gallons less per day.

The **Continuous Consumption** programs leverage our Advanced Metering Infrastructure to detect and notify customers of continuous use, which often indicates a leak or other abnormal use. Notifications reached **1,535 customers, which saved at least 2.2 million gallons**. The average rate of continuous use was about 100 gallons per hour.



The **Larimer County Conservation Corps Water and Energy Program** visited 378 water-customer homes and installed 110 toilets, 208 showerheads and 557 aerators, free of charge. This will save customers **2.7 million gallons per year— over 7,000 gallons per participant**.



Xcel helped us save water, while they saved natural gas.

Through a program for multi-family properties, 1,908 high-efficiency aerators and 3,868 showerheads were installed to reduce hot water use.

We provide **rebates** to households that install **water efficient fixtures and appliances**. These upgrades saved households 2.2 million gallons per year.



277 clothes



93 toilets

These get recycled and used in roads!



12 showerheads

2018 Highlight: Building Code Updates



The **City of Fort Collins Building and Plumbing Codes** help ensure that our new buildings and homes are well-built. Regularly amending our codes helps keep up with changes in technology, safety, materials and more. Our goal in 2018 was to find cost-effective water-saving changes that work for builders and developers, too.

What Changed?

All water closets (tank-type toilets and flushometers) must be a minimum Maximum Performance (MaP®) score of 600 grams, up from 350 grams.

- This means your toilet can flush more of the 3 Ps (pee, poo and paper), which are the only things you should ever flush. Don't be fooled by those pipe-clogging "flushable" wipes!

Private, commercial lavatory faucets, excluding those installed in buildings identified as Institutional (I) and Residential (R) Occupancies, have changed to a maximum flow rate of 0.5 gallons per minute.

- This extends the existing code for public hand-washing sinks to private sinks.

Commercial and residential showerheads, excluding those installed in buildings identified as Institutional (I) and Educational (E) Occupancies, have changed to a maximum flow rate of 1.8 gallons per minute.

- This matches our friends in California. Showerheads are still subject to performance standards, so you still get a great shower with less water. This small change will save **264 million gallons** over the course of the city's buildout.

History of Water Efficient Fixtures in Fort Collins: Our community has always been ahead of the curve. The "green code" initiative in 2012 incorporated EPA WaterSense Standards. In 2016, Senate Bill 14-103 made it so that manufacturers can only sell WaterSense-labeled fixtures to distributors, wholesalers, retailers, developers and homebuilders for the sale/resale or installation in the state of Colorado, ensuring remodel projects are efficient.



Residents are Embracing Beautiful, Waterwise Landscapes



The **Xeriscape Incentive Program** continues to grow. Participants completed 47 projects, transforming over 53,000 square feet and saving about 768,000 gallons of water per year (over 14 gallons per square foot of landscape annually).

Residents installed 251 easy, do-it-yourself garden kits through the **Garden in a Box** program. Not only did this program help make about 17,700 square feet more beautiful, but it is also saving about 185,000 gallons per year.

Through the **Sprinkler Audit Program**, auditors visited 366 homes and evaluated over 1.3 million square feet in Fort Collins and beyond, empowering residents with simple system fixes and no-cost changes to their irrigation schedules. We also deliver this program to our neighbors: customers of the Fort Collins-Loveland and ELCO water districts. The **269 Utilities participants** are each saving over 19,000 gallons per year.

Annual Xeriscape Garden Party

Over 400 people visited us at the Xeriscape Demonstration Garden, located at City Hall at 300 Laporte Ave. Planted in 1986, it is the second oldest demo garden in the state.

XERISCAPE GARDEN PARTY



We sponsor and teach classes with our friends at the **Gardens on Spring Creek**. In 2018, we helped 315 attendees learn about a variety of waterwise topics, like drip irrigation and planting for pollinators.



Many households used our **rebate program** to install **384 smart irrigation controllers** and weather sensors, and swapped out 1,910 old nozzles and heads for water-saving ones, saving over **1.8 million gallons** per year.



2018 Highlight: Sprinkler Audit Program 20th Anniversary

Can you believe it? The **Residential Sprinkler Audit Program** launched 20 years ago in 1999. We started by completing only 61 audits a year. Now, we complete closer to 400 each summer with the help of passionate student interns. We've provided over 6,000 audits and helped residents tackle 20 million square feet of turf. We partner with Fort Collins-Loveland (since 2009) and ELCO (since 2012) water districts to offer audits to single-family residential customers in the Fort Collins area.



Continuous Improvement: We've listened and made improvements over the years to provide a valuable service.

In 2018, everyone surveyed said the audit met their expectations and **87% of participants said the audit exceeded their expectations.**

We're also making the report more useful. We added GIS maps of participants' irrigation systems and an easy-to-read graph showing their actual water use relative to a target customized for their landscape.



We had a reunion to celebrate! The 2018 Auditors and the Water Conservation Team reunited with Auditors from previous summers to play irrigation trivia and reconnect.

Commercial Customers are Taking Care of Business

The **Efficiency Works Commercial Rebate Program** focused on toilets in multi-family and student housing in 2018. We swapped over 1,000 toilets and urinals across **11 properties**, saving nearly **10 million gallons per year**.

We launched the new **Small Business Toilet Direct Install** program to accommodate the busy life of a small business owner. We do all the work to provide the high-efficiency toilet, the business just needs to schedule an appointment when installation works for them. At least 350,000 gallons per year were saved by installing **27 toilets**.

In 2018, we started a commercial leak detection and notification program. This expansion of our **Continuous Consumption** program, sent weekly postcards to 710 customers throughout the year, saving over 3 million gallons. To help customers tackle leaks faster, customers can opt into daily email or text notifications in 2019.



Fort Collins Utilities
Attn: Water Conservation
PO Box 580
Fort Collins, CO 80522



Please check your plumbing for a potential leak. Quickly repairing leaks will reduce water waste and ensure our water resources are used wisely.

AREAS TO CHECK

- | | |
|------------------------------|-------------------------------|
| Toilets | Hot water heater |
| Faucets (indoor and outdoor) | Evaporative cooler |
| Irrigation system | Ice maker |
| Swimming pool or hot tub | Dishwasher or other appliance |

LEARN MORE

970-221-6808
leaks@fcgov.com

fcgov.com/high-water-use
V/TDD 711

Fort Collins Utilities Customer
1234 Main St.
Fort Collins, CO 80521

Did You Know?

A leaking toilet can waste over 3,000 gallons of water in just a few days, while a leaky faucet can waste more than 3,000 gallons a year. Irrigation leaks can add up even faster.

10/17

Aids and services are available for persons with disabilities.

17-17725



ClimateWise is a free, voluntary program that recognizes the businesses in our community that take actions to be sustainable. In 2018, 43 business earned the Water Badge and reported over 300 strategies that use water wisely!

2018 Highlight: Commercial and Industrial Facility Training



The **Colorado Water Conservation Board**, a state agency that provides policy direction on water issues, funded a three-day training in Fort Collins for water-efficiency professionals in the region to learn how to assess and identify opportunities to save water in commercial and industrial facilities.

Helping commercial customers be more water efficient saves water and helps the business's bottom line.

This training is helping professionals across the state conduct better audits by making the site visit, the report and the recommendations more valuable and realistic for our customers.



Who participated?

- 23 individuals from 16 organizations (water utilities, non-profits, consulting firms and regional or state entities) across three states
- Colorado State University, Poudre Valley Hospital and Broadcom each graciously hosted a day of hands-on training.

The Landscape of Commercial Landscapes is Changing

The [Efficiency Works Midstream Irrigation Rebate Program](#) provides rebates to contractors who install water-efficient irrigation equipment. In 2018, this included 1,292 high efficiency nozzles and pressure-reducing heads, plus a few controllers and Wi-Fi flow meters, which help control water use off-site. These simple changes are saving over [seven million gallons](#) per year.

The [Certified Landscape Professional Program](#) is a group of water-savvy landscape and irrigation professionals who want to be part of the solution. We have [20 contractors enrolled from 13 local green-industry companies](#).



To improve efficiency and help customers who are challenged by their annual water allotment, the [Landscape Water Budget](#) program was a priority. We helped 17 customers with large landscapes manage their water use more efficiently with monthly reports and check-ins. They used [22 million gallons](#) less than the year before, often through no-cost irrigation management strategies.



2018 Highlight: Stonehenge HOA and the Landscape Water Budget Program

The **Stonehenge HOA** participated in the **Landscape Water Budget Program (LWB)**. The HOA used the monthly LWB reports and graphs in partnership with its landscape contractor to reach its goal of reducing water use on its 11.4-acre property by at least 20%, despite its 40-year old irrigation system.

Results: Stonehenge saved over 20%, close to **two million gallons**, in one year while maintaining a **healthy landscape**.

Its low- and no-cost strategies **saved the HOA over \$5,000** on water costs in 2018. These savings have been redirected into other HOA projects.



How did Stonehenge do it?

- Partnered with its landscape contractor
- Implemented cycle-soak watering strategies
- Capped about 100 heads that weren't needed due to proximity to homes
- Added mulch and edging instead of re-seeding areas where shade limited the success of turf grass



The City is Part of the Solution, Too

The [City of Fort Collins Parks Department](#) has a goal to water all park areas at or below 90% of reference ET (the amount of water needed to be applied for cool-season turf through a combination of rain and irrigation). Only 20% of parks are watered with treated (potable) water and the rest are watered with raw (untreated) water.



- [64% of sites used under or at the target water amount.](#)
- Of the parks that used more water, Parks conducted eight comprehensive irrigation system audits.
- Five Parks technicians earned a Certified Landscape Irrigation Auditor certification.
- Cloud-based central irrigation management technology allows control from anywhere at anytime. There have been [81](#) controllers installed at [63](#) sites over the last three years.

The [Water Conservation](#) team conducted [facility audits at four City buildings](#) and replaced pre-rinse spray valves, showerheads and aerators in the process, which will save [290,000 gallons](#) each year.

[Operations Services](#) also replaced 15 toilets in various City buildings, saving at least [100,000 gallons](#) per year.



We Can't Do It Alone — Our Utilities Education Team Helps Share Our Story

2018 marked the 27th year of the Children's Water Festival. It's a fun, interactive day for 1,820 of Fort Collins' third graders to learn all about water.

The Water Conservation Team hosted a relay race that taught students how they use water every day and why we should be careful not to waste it.



The **Education Team** delivers a variety of educational programs about water, wastewater, stormwater and electricity throughout the year. 2018 Water Conservation education highlights include:

- **Dr. Waterwise** taught conservation to 17 third-grade classes.
- Taught 1,597 students about stream ecology during **EcoWeek**
- Hosted two day-long bus tours for residents to see where their water comes from and what it takes to deliver water from **snowpack to sink tap**.

Can't imagine a day without water? Neither can we! Check out this video created for the national "Imagine a Day Without Water" campaign: <https://bit.ly/2F6UgzK>

Water Efficiency and Conservation are Part of Our Water Resources Plan



Utilities treated 23,928 acre-feet of water in 2018. This is equal to about 7.8 billion gallons of water.

We were able to store 7,522 acre-feet of water in Joe Wright Reservoir near Cameron Pass.

Utilities supported local agriculture by renting 23,641 acre-feet, or 7.7 billion gallons of water during the irrigation season. Some of these excess supplies cannot be used for municipal purposes, so it's a win-win!

About 56% of our water came from Horsetooth Reservoir, a reservoir in the Colorado-Big Thompson (CBT) project. The remainder came from Poudre River.

- Snowpack was average for the year.
- The CBT quota was 80%, slightly above average.
- Local precipitation was lower than average and temperatures were higher than average.
- Poudre River flows peaked earlier than normal on May 27, 2018. Flows were 110% higher, at 1,950 cubic feet per second.



Storage and Conservation: A Winning Combination

If approved, the Halligan Water Supply Project will enlarge Halligan Reservoir, an existing reservoir on the North Fork of the Poudre River. Additional storage will increase our resilience to things like drought and water-supply interruptions.



All Water Matters to Us, So We Investigate When It Goes Missing

Every utility treats more water than what is billed and every water distribution system experiences leaks and breaks. Fort Collins Utilities takes this seriously and works hard to understand where our water goes and how to keep it in the pipes.

Some “lost” water goes to beneficial uses like flushing the distribution system, which is an industry best practice to clean the system.

Some isn’t beneficial, like distribution system leaks and breaks. We have an excellent leak monitoring program and our field crews respond to leaks and breaks quickly, which can involve working through the night or a snow storm to minimize impact to our customers.



By the Numbers:

- **2.04 miles** of distribution infrastructure replaced (12% higher than 2017)
- **130.5 miles inspected** for leaks
- **145 water service line leaks detected**, helped residents address the leak quickly
- **1635** Fort Collins Utilities **water meters tested**

We started conducting the **American Water Works Association (AWWA) M36 water-loss audit**, a nationally recognized protocol for proactive water loss management that **reduces costs, recovers lost revenue, minimizes impact to the community and more**. It’s so valuable that some states require it. This audit helps us prioritize resources and make cost-effective decisions.



American Water Works Association



COLORADO

Colorado Water Conservation Board

Department of Natural Resources

In 2019-2020, Water Conservation will be participating in the **Colorado Water Loss Initiative**, a comprehensive training and technical assistance endeavor for Colorado’s urban water systems.

We Love Engaging with Our Customers and Strive to Be Leaders in Our Profession



**We love to learn and share our experiences.
We attended:**

- Landscaping with Colorado Native Plants Conference
- PROGreen
- G3 Watershed Certification
- Sustainable Water Management Conference
- WaterSmart Webinar
- Plant Select Workshop
- SHED Conference
- Colorado WaterWise Symposium
- Rocky Mountain Utility Exchange
- Irrigation Association Conference

Where did you see us in 2018?

- Poudre River Forum
- CSU Student Housing Fair
- CSU Lunch 'n Learn
- Gardens on Spring Creek classes
- XIP classes
- High Plains Landscape Workshop
- CSU Watershed Club
- Earth Day
- Efficiency Works Technical Training
- Children's Water Festival
- Garden-in-a-Box Pick Up Event
- Open Streets
- Xeriscape Garden Party
- Watershed Bus Tours
- CSU Community Issues Forum
- XIP Open House & Celebration



Grow Your Knowledge by Learning More About Our Programs and Services

- Certified Landscape Professional Program & Contractors: fcgov.com/landscape-pros
- Commercial Efficiency programs: fcgov.com/water-efficiency
- Community Outreach and Education: fcgov.com/utilities/community-outreach
- Daily Lawn Water Guide: fcgov.com/daily-lawn-watering
- Garden In A Box: fcgov.com/giab
- Home Water Reports: fcgov.com/water-reports
- Landscape Water Budget Program: fcgov.com/commercial-irrigation
- Larimer County Conservation Corps Water & Energy Program: larimer.org/ewd/young-adults/lccc/what-we-do/water-energy-program
- Leaks/High Water Use: fcgov.com/high-water-use
- Residential Efficiency Programs & Rebates: fcgov.com/save-water
- Service Line Information: fcgov.com/service-line-repairs
- Sprinkler Audit Program: fcgov.com/sprinkler-audit
- Utility Rates: fcgov.com/utility-rates
- Water Efficiency Plan: fcgov.com/water-efficiency-plan
- Water Resources: fcgov.com/water
- Xeriscape: fcgov.com/xeriscape

Saving Water Hotline

fcgov.com/saving-water-hotline

Do your part to help us eliminate water waste.
Please report if you see:

- pooling or a steady flow of water
- a leaking or broken irrigation system
- any other excess use of water

We'll reach out in a friendly manner to ensure the issue gets resolved.



We are Honored to Partner with Our Community. Thank You for a Great Year!



The Water Conservation Team at the 2018 Xeriscape Garden Party (from left to right):

Katie Collins, Water Conservation Coordinator
Kimberley Carr, Water Conservation Intern
Galen Burr, Water Conservation Intern
Eric Olson, Water Conservation Coordinator
Andrea Fairfield, Water Conservation Intern
June, Honorary Intern

Madison Wood, Water Conservation Intern
Megan Edwards, Water Conservation Intern
Abbye Neel, Water Conservation Specialist
Kelly Doyle, Water Conservation Assistant
Mariel Miller, Water Conservation Specialist
Liesel Hans, Water Conservation Manager



Auxiliary aids and services are available for persons with disabilities. V/TDD 711
Esta información puede ser traducida, sin costo para usted, 970-212-2900.