



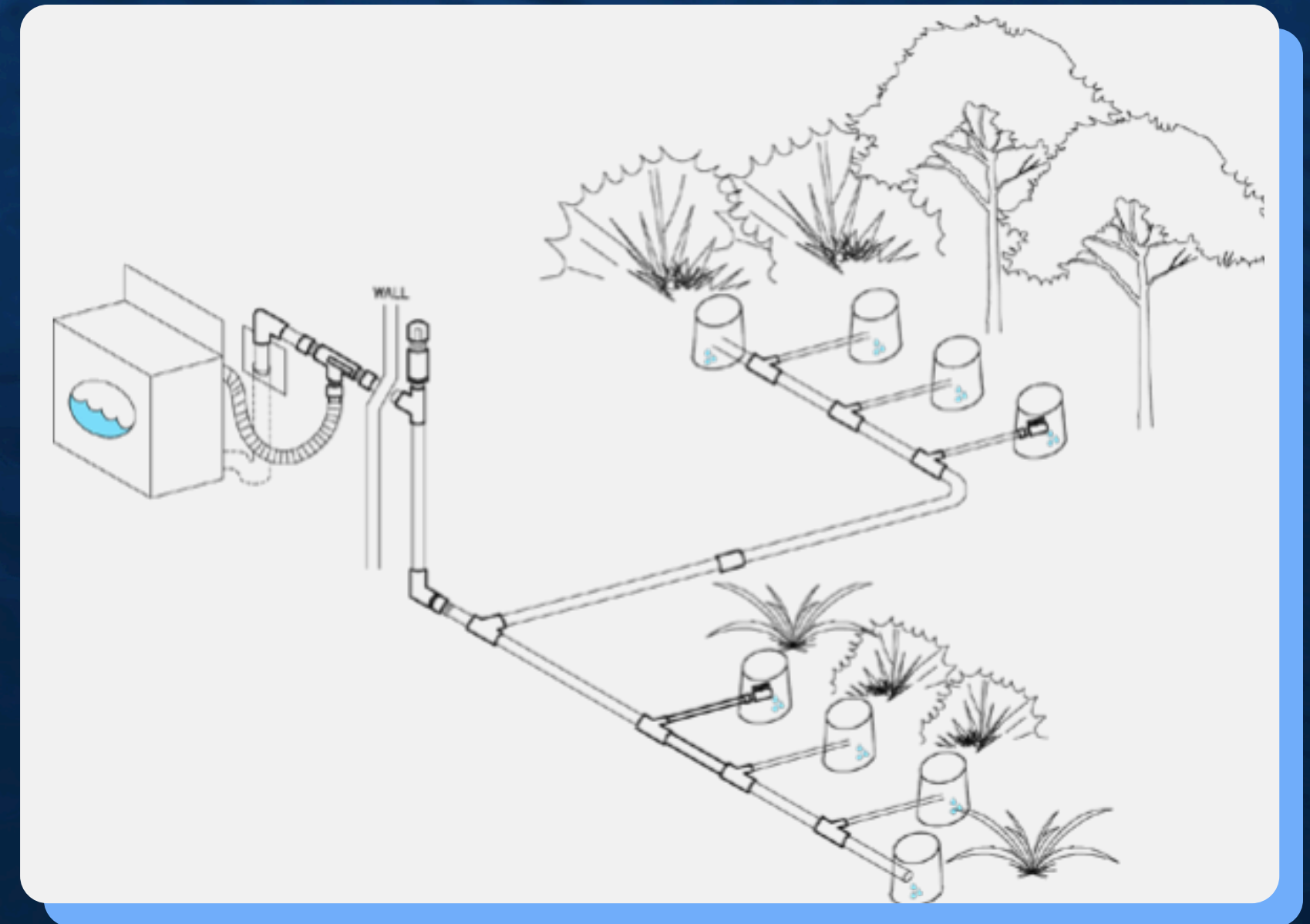
 Golden, CO

LAUNDRY TO LANDSCAPE ORDINANCE CONVERTS WASTEWATER INTO SUSTAINABLE ASSETS



OUR APPROACH

WaterNow Alliance and Western Resource Advocates (WRA) partnered with the City of Golden to develop Colorado's first graywater laundry-to-landscape (L2L) ordinance, aimed at reducing water usage by allowing laundry water to irrigate non-edible plants on single-family residential properties. To draft the ordinance, the team researched existing graywater programs and Colorado regulations. They also interviewed water agencies in Colorado, Arizona, and California that implemented similar programs to gain insights from their experiences. After gathering and incorporating feedback from local stakeholders, the team refined the language before presenting the final version to City Council. WaterNow and WRA also created educational materials to raise awareness about the ordinance and promote L2L system installation.



Laundry-to-Landscape Graywater System

IMPACT

In September 2020, the City of Golden approved Ordinance 2143, becoming the first ordinance in Colorado to allow water from laundry machines and laundry room sinks to water non-edible outdoor plants, transforming wastewater into a valuable commodity. At a 5% adoption rate among single-family homeowners, the Ordinance 2143 would save approximately 514,000 gallons (1.6 acre-feet) annually.

KEY DRIVERS

The City of Golden's Sustainability Goals, approved in 2018, include responsible water use and drought planning. Responsible use aims for a 15% reduction in per capita water consumption by 2030, while drought planning addresses the necessity of preparing for a warmer, drier climate. In addition to the many water efficiency programs already implemented, the City was interested in exploring the use of graywater systems to harness alternative sources of water. This project intended to encourage the implementation of L2L graywater systems in residential homes to reduce peak potable water demands, as well as energy demands related to water and wastewater treatment.

HOW IT WORKS

Developing the Ordinance

The team began developing the ordinance by researching existing graywater programs and Colorado-specific regulations, including Graywater Regulation 86 and requirements from the Colorado Water Quality Control Commission. They also interviewed five water agencies in Colorado, Arizona, and California with similar programs to gain insights from their experiences. From here, the team drafted language that aligned with Colorado's regulations and Golden's objectives. The draft was refined through stakeholder engagement, such as Sustainability Advisory Board meetings, which also educated the public about the ordinance while informing the team of considerations unique to Golden's residents.



HOW IT WORKS (CONTINUED)

Adopting the Ordinance

The final version of the ordinance was presented to the City Council, which adopted it as Ordinance 2143 in September 2021. The ordinance allows the capture of graywater from laundry machines and laundry room sinks to irrigate non-edible outdoor plants on single-family residential properties. The system uses gravity-fed water from laundry rooms and requires no tanks, pumps, or filters; it needs little maintenance and typically costs about \$250. Specific graywater system design criteria are included in Section 15.70.080 of the ordinance. The system's materials, permitting fees, and maintenance were designed with customer affordability in mind.



HOW IT WORKS (CONTINUED)

Outreach

The team also conducted outreach and education about Ordinance 2143, including op-eds, information on multiple city webpages, multi-platform social media posts, inserts in water bills, and in-person events. Educational resources were posted on Golden's website. Residents were encouraged to apply to the pilot program and three applications were accepted.





**I'M PROUD OF GOLDEN FOR BECOMING ONE OF THE FIRST CITIES
IN THE STATE TO PASS A GRAYWATER ORDINANCE AS ANOTHER
TOOL IN OUR WATER CONSERVATION TOOLBOX.**

– Jim Dale, Golden City Council, Ward 3

THE PATH FORWARD

Due to high public support and approval for Ordinance 2143, Golden could further incentivize or even require graywater systems in future developments to help reduce water demand. To address perceptions that graywater reuse is difficult or costly to install and maintain, increased education and outreach are necessary to promote implementation.

THE PATH FORWARD (CONTINUED)

Ordinance 2143 also serves as a model for other Colorado communities interested in adopting graywater ordinances. Just four days after Golden approved Ordinance 2143, the City of Broomfield, located northeast of Golden, approved Ordinance 2158, which expanded on Golden's ordinance to include graywater reuse from bathroom sinks, bathtubs, showers, and laundry machines from single family and non-single family structures for subsurface irrigation and indoor toilet and urinal flushing.

KEY TAKEAWAYS

- (1) Gather input from both the public and officials involved in implementing the ordinance to build trust, tailor the ordinance to the community's unique needs, values, and challenges, and educate stakeholders on the program's implementation and overall success.
- (2) As best as possible, prioritize a simplified ordinance to ease the burden of implementation on community residents.
- (3) Integrating L2L systems into the residential permitting process can provide a more realistic contribution to water use reduction goals and create a channel for L2L application review.

SOURCES

City of Broomfield, *Ordinance No. 2158*, <https://mcclibraryfunctions.azurewebsites.us/api/ordinanceDownload/18013/1112689/pdf>, codified as Chapter 13-42, https://library.municode.com/co/broomfield/codes/municipal_code?nodeId=TIT13PUSE_CH13-42GRTRSYRE.

City of Golden, *2020 City of Golden Sustainability Strategic Plan*, <https://cms3.revize.com/revize/goldenco/Documents/Government/City%20leadership/Board%20&%20Commissions/Community%20Sustainability%20Advisory%20Board/2020SustainabilityStrategicPlan.pdf>.

City of Golden, *Comprehensive Plan (2017)*, https://www.cityofgolden.gov/Documents/Government/Initiatives_Plans/Master_Plans/Comprehensive_Plan.pdf.

City of Golden, *Drought Management Plan 2023*, https://www.cityofgolden.gov/2023%20Golden%20Drought%20Management%20Plan_FINAL_ADA.pdf.

City of Golden, *Ordinance No. 2143*, https://library.municode.com/co/golden/ordinances/municipal_code?nodeId=1048488, codified as Chapter 15.70 - Graywater Systems, Municode, https://library.municode.com/co/golden/codes/municipal_code?nodeId=TIT15BUCO_CH15.70GRSY.

City of Golden, *Water Conservation and Efficiency*, <https://www.guidinggolden.com/6541/widgets/19928/documents/12045>.

Jim Dale and others, *Graywater a Go for Golden*, Colorado Community Media (Oct. 20, 2020), <https://coloradocommunitymedia.com/2020/10/20/graywater-a-go-for-golden/>.

WaterNow Alliance, *Colorado's First-Ever Laundry-to-Landscape Graywater Ordinance Approved by City of Golden* (Sept. 14, 2020), <https://waternow.org/2020/09/14/colorado-first-laundry-landscape-ordinance-golden/>.

ADDITIONAL RESOURCES

CITY OF GOLDEN'S WATER CONSERVATION GOALS

A list of the City's initiatives, partners, and additional information on reducing water usage.

CITY OF GOLDEN OPERATIONS AND MAINTENANCE FORM

Required for L2L systems in Golden

CITY OF GOLDEN SUSTAINABILITY GOALS

MEMORANDUM ON THE CONTEXT SURROUNDING GOLDEN'S GRAYWATER PROGRAM

Explaining Golden's interest in adopting a graywater program, including project timelines and insight gained from interviews with water agencies with similar programs, as conducted by WaterNow

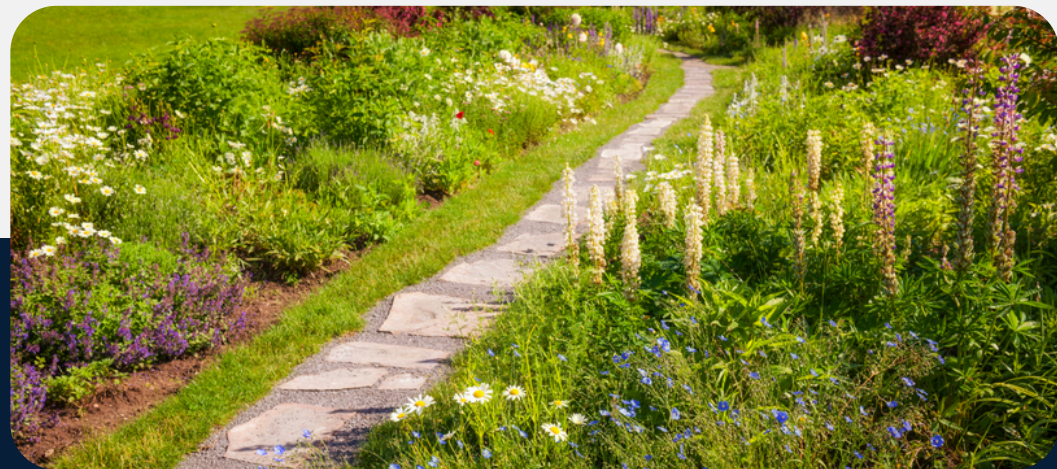
RESOURCE CENTRAL

A Boulder-based environmental nonprofit offering free and discounted water conservation programs for Golden Water customers

REGULATION 86 ON GRAYWATER

Information on the State of Colorado's graywater regulation from the Colorado Department of Public Health and Environment

RELATED PROJECTS



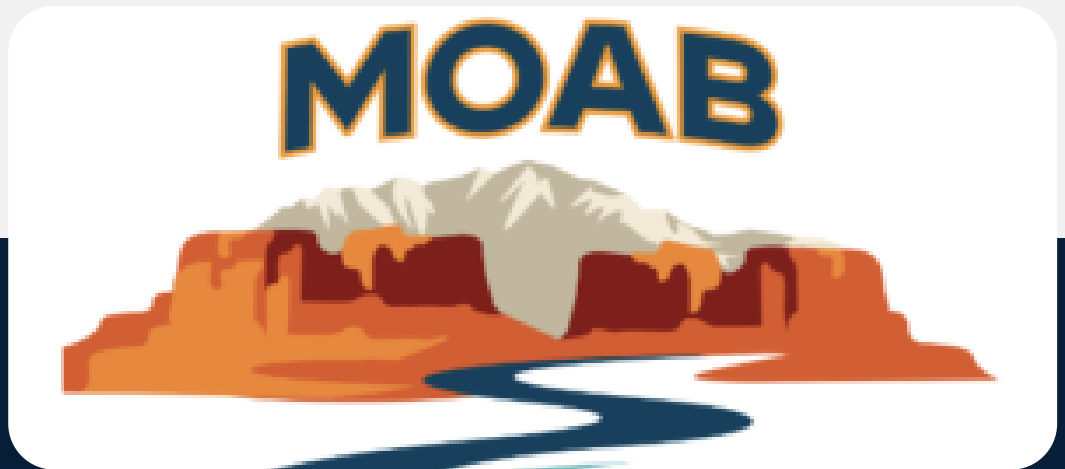
BROOMFIELD, CO

Creating a new landscape ordinance and code to reduce outdoor water demands



ERIE, CO

Water efficient landscape ordinance development



MOAB, UT

Water efficient landscape ordinance development for new developments

CONTACT

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