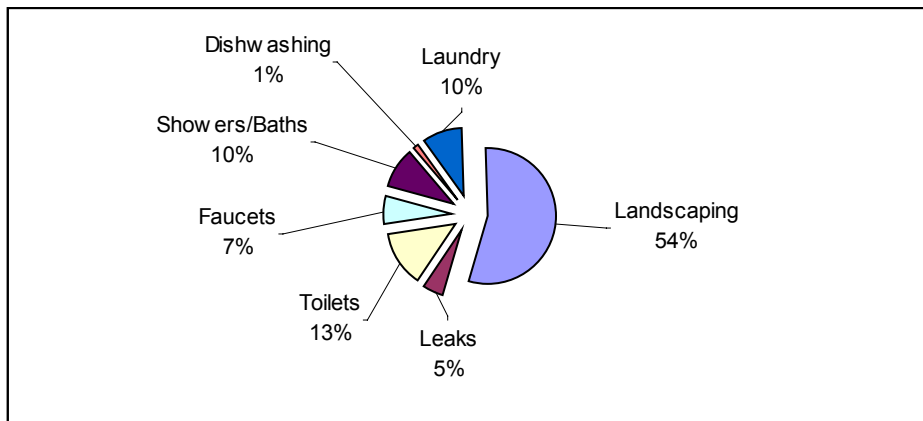


Code/Policy Review and Revisions to Address Water Conservation

Longmont is a semi-arid area with an average annual precipitation of 14 inches. In 2002, the city's precipitation was 8.66 inches (as of 11-30-02). The 2002 drought focused attention on water conservation, but in reality, conservation is essential in non-drought years as well. Water is a finite natural resource, and its wasteful use degrades the quality of life for everyone.

The purpose of this retreat topic is to explore pursuing a comprehensive review and revision of applicable City codes (focusing on Chapters 14, Public Services; 15, Land Development Code; and 16, Buildings and Construction) and policies to support water conservation in the community by implementing long-term, sustainable water conservation practices. Sustainable practices protect the environment by using a minimum of resources and creating a minimum of waste. In many communities, city councils and water utilities facing limited supplies, rising costs, and tough new water quality standards, are setting new conservation standards that require consumer compliance. In many places across America conservation is no longer an option, it's the law. Codifying water conservation now may reduce shortages in the future.

Household Water Use



Over 50% of household water consumption is used outdoors for irrigation. Water applied to landscaping is more discretionary than indoor water use, and provides the greatest opportunity to conserve water. The City adopted ordinances in 1996 to require ultra low-flow toilets and showerheads in all new construction. We have realized a per capita reduction in water use as a result of the ordinance. Staff will introduce rebates to encourage the purchase of ultra low flow toilets and clothes washers in January 2003. Accordingly, this discussion will focus primarily on outdoor water conservation measures. Well-planned, sustainable landscapes thrive without excessive irrigation and exist in balance with the surrounding environment. Many other front-range communities are evaluating, or have already implemented, policies to reduce outdoor water consumption. Staff proposes coordinating with other municipalities to develop consistent ordinances, and where policies are already implemented, surveying the effectiveness of the policies.

Discussion Points

1. What water conservation initiatives and/or philosophies are Council interested in pursuing at this time? A partial list of possibilities is listed in Appendix A. Are there other concepts Council is interested in evaluating?
2. What strategies should be used to involve the community in the proposed water conservation initiatives? Who should be involved in the process and what role should they play? Because of the technical nature of many of the proposed initiatives, staff recommends consulting with a variety of stakeholders, i.e., home builders association, landscapers, advisory boards, etc., to solicit their feedback and expertise.
3. Longmont Customer Satisfaction Survey results have consistently rated water conservation as higher importance/lower quality. What is Council's general direction on water conservation relative to water supply? Is it only related to water supply issues, or is it broader? What is Council's guidance on the development of metrics for measuring effectiveness of conservation tools—should they be based on water savings, monetary values, and/or quality of life considerations?
4. What additional information does Council need from staff before providing direction?

Attachments:

- Appendix A Partial List of Water Conservation Initiatives
- Appendix B Distribution of Water Use by Customer Classification
- Appendix C Per Capita Decline in Water Use

Appendix A

Partial List of Water Conservation Initiatives

Landscaping Requirements

Require Soil Amendment In All New or Renovated Landscaping

Amending soils before planting sod is one of the most important horticultural practices to conserve water and encourage plant growth. Longmont's clay soils have a tendency to pack, and can only hold so much water before the water runs to waste in streets and sidewalks. Adding organic materials loosens tightly packed clay particles to improve water retention, permeability, water infiltration, drainage, aeration and soil structure. A landscape installed without adequate soil preparation will waste water over its entire life.

Sod growers and the landscape industry consistently recommend soil amendment to their customers. However, they have advised City staff that until soil amendment is mandated, their customers will not absorb the additional expense. The City of Longmont Landscape Regulations currently require 3 cubic yards of organic material for 1,000 square feet of existing soil tilled to a minimum depth of 6 inches for all improvements on City property. Single family homes and commercial developments are not currently required to comply with this requirement. Exemptions may need to be made for certain native plant materials or sites previously in agricultural use with adequate soil composition. The Cities of Aurora and Greeley currently require soil amendment in all new landscapes regardless of use. Many other municipalities are considering the adoption of similar ordinances.

Require Developers To Offer Home buyers the Option of Traditional or Xeric Landscaping

Homebuilders in many of the new subdivisions in Longmont contractually provide front yard landscaping consisting of an irrigation system and predominantly Bluegrass. In the 2001 water quality survey, residents were asked if they would support the requirement that developers must offer home buyers the option of either traditional or xeric landscaping. Eighty-five percent (85%) of respondents answered yes. Such a requirement would also suggest that show home models would need to be landscaped in a mix of both styles.

Limit the Amount of Turf Area Allowed in Landscapes

Most turf materials in landscaping require substantial amounts of supplemental water. Turf in a low-water use landscape should be limited to areas where it provides a functional benefit. Walkways, decks or patios can be used in high-foot-traffic areas. Groundcovers or other low-water plants can be used where turf is difficult to establish and maintain such as in shade, in narrow strips or on steep slopes. The City of Aurora currently regulates the amount of cool season grass that can be installed according to lot size as a water conservation measure. The amount of warm season grass is not regulated. Denver has proposed an ordinance limiting new lawns to 20-50% of the total lot area.

Require Drip Irrigation in all Medians

Drip irrigation on all median landscaping would reduce over spray and runoff into the adjacent streets. Subsurface drip irrigation is a newer technology that has been successfully used in medians landscaped with turf. The City Parks staff feels that the jury is still out on

this newer subsurface technology. Median irrigation is highly visible and sets an example for the community.

Prohibit HOA Covenants From Excluding Water Wise Landscaping

Many homeowner associations have covenants in place that require water thirsty landscaping and/or prohibit residents from installing Xeriscape. Although homeowners may prefer to install low water use landscaping, the HOA's will not waive or modify landscaping requirements to allow water wise landscapes.

Require Rain Shut-off Valves on All Irrigation Systems

Installing a rain shut-off device on all irrigation systems is inexpensive and ensures that water is not being applied to landscapes during storm events. This is particularly applicable to large areas managed by off-site landscape companies, but also applies to homeowners who set their sprinkler systems once a season and forget them.

Financial Incentives

Develop Water Budgets for:

Arterial Landscaping

A large percentage of arterial landscaping in the City is maintained and irrigated by HOA's, but the water used is billed to the City. Staff proposes developing a water budget for each of these accounts based on the size of the water tap and the area to be irrigated. If the water budget were exceeded in any month, the HOA would be billed for the additional water. A significant percentage of water waste and lawn watering restriction violations reported in the 2002 drought were for HOA arterial landscaping.

City Parks and Golf Courses

City facilities are not currently charged for their water use. A water budget could be established for large irrigation users (parks and golf courses). If the water budget were exceeded in any month, the department would be billed for the additional water. This may have a budget impact for City departments. Parks currently installs a Bromefescue-Blue mix in all new parks that requires 40% less water than Bluegrass.

Homeowners

Homeowners could be given a water budget based on a variety of different criteria: prior year indoor water use, size of lot, number of people in household. An individual water budget is viewed as equitable to homeowners with different size lots and households. The City's billing system may not easily accommodate budget billing for residential customers.

Surcharges or Higher Rates for Second and Third Block Usage

Longmont currently has a three-block increasing water rate for residential customers. The first block (up to 10,000 gallons per month) captures most domestic water consumption, and the second and third blocks capture predominantly irrigation. If water supply mandated severe restrictions resulting in decreased revenues, the second and third block rates would need to be increased to maintain the utility's revenue stream. There is also the option of surcharging or increasing rates for usage falling into the second and third blocks to promote conservation. The additional revenue could be used to fund conservation programs. Water suppliers have found that during a drought there is a willingness to pay among many

customers, and that surcharges and artificially higher rates do not necessarily discourage water use.

Commercial Incentives Program

Some commercial organizations can identify water saving processes in their operations that are not justified from a cost-benefit to the business. If the City were to budget a designated amount for a partnering program, we could solicit applications from local businesses for funding to install water saving processes in their operations.

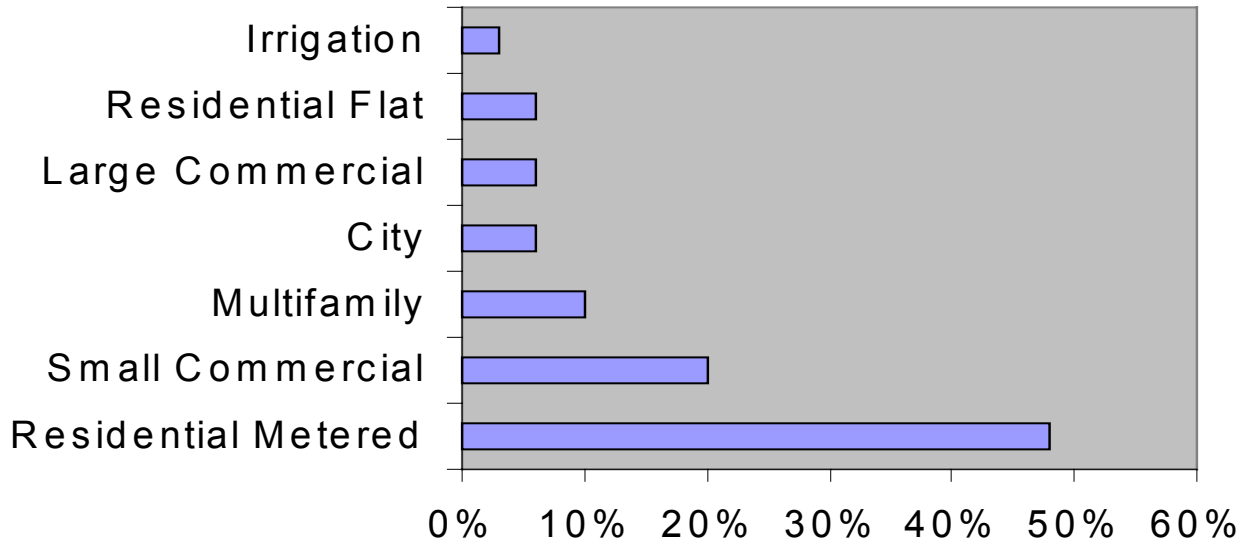
Water Meters

Accelerate Universal Metering Program

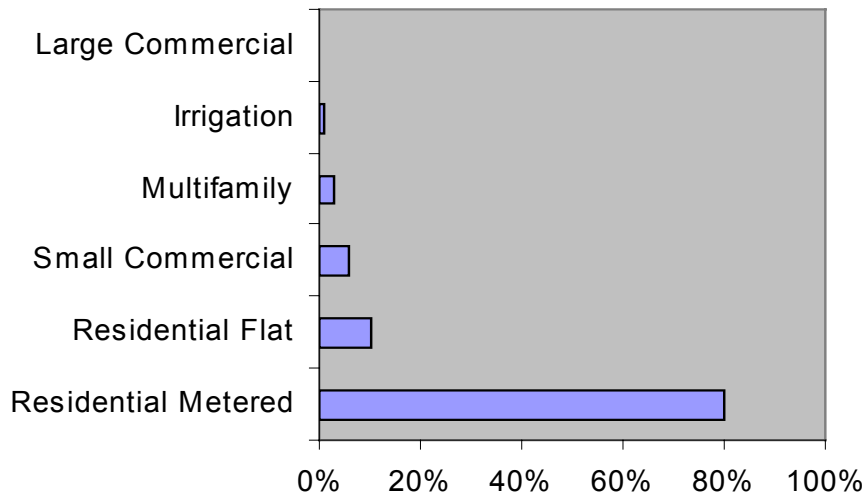
A CIP project is currently identified in the City's five-year CIP to fund the installation of approximately 2,000 water meters in 2006 and 2007 for a total cost of \$325,000. State legislation mandates universal metering by January 1, 2009. Statistics show that flat rate customers use approximately 20% more water than metered customers. If the timing of the universal metering program were accelerated, approximately 40 million gallons of water per year would be saved. Alternatively, staff could develop a rebate program as an incentive to accelerate meter conversion.

Appendix B

Total Water Use by Customer Classification



Percent of Customers by Customer Classification



Appendix C

PER CAPITA WATER USE				
Year	Treated Water (million gallons)	Water Service Population	Per Capita Usage	Precipitation (inches)
1991	4,314	52,965	223	15.38
1992	4,490	54,778	225	15.39
1993	4,520	56,812	218	14.10
1994	4,832	57,214	231	11.30
1995	4,251	58,028	201	20.45
1996	4,668	58,977	217	16.89
1997	4,576	60,837	206	18.48
1998	5,139	63,581	221	11.63
1999	4,706	66,119	195	19.09
2000	5,763	74,145	213	10.14
2001	5,650	76,967	201	13.29

