



# 2024 Water Efficiency Plan City of Longmont, Colorado



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# CITY OF LONGMONT WATER EFFICIENCY PLAN

*PREPARED FOR*  
THE CITY OF LONGMONT  
**DRAFT** OCTOBER 3, 2024



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### List of Abbreviations

AF	acre-feet
AWWA	American Water Works Association
C-BT	Colorado Big Thompson Project
CWCB	Colorado Water Conservation Board
gpcd	gallons per capita per day
gpf	gallons per flush
gpm	gallons per minute
HOA	homeowners association
IWA	International Water Association
MG	million gallons
mgd	million gallons per day
NFWTP	Nelson Flanders Water Treatment Plant
NGLA	Neighborhood Groups Leadership Associations
PACE	Partners for Clean Environment (Boulder County Program)
WGWTP	Wade Gaddis Water Treatment Plant
WEP	Water Efficiency Plan
WTP	water treatment plant

### Acknowledgements

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- Hope Bartlett, Water Conservation Specialist
- Ken Huson, Water Resources Manager
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- Chris Huffer, Assistant Director of Water and Waste Services
- Joe Michalski, Senior Civil Engineer
- John Gage, Engineering and Operations Administrator

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- Marcia Martin, Council Liaison



## Executive Summary

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Throughout its history the City of Longmont (Longmont or the City) has provided safe, reliable potable water to all its customers. Longmont has a set of 12 formal Guiding Water Principles that inform the operation and management of the water utility. Goal 7 specifically identifies water conservation as a core goal.

### ***City of Longmont Guiding Water Principles***

*Goal 7 - The City will develop and implement a water conservation policy that strives to achieve a sustainable use of its water resources.*

*The City will strive to achieve water conservation that results in water demands at build out of the Longmont Planning Area that are 10 percent lower than current projections. The City will pursue water development that does not rely on the dry up of agricultural lands.*

The mission statement for Longmont’s water efficiency program is:

*To preserve the natural environment in our watershed by committing to responsible, environmentally sound, and efficient use of our precious water resources and provide a reliable, high-quality water supply that protects public health.*

Efficient water use has been part of the City’s planning goals for almost three decades, starting with the City’s first Water Conservation Master Plan in 1996, the Water Conservation Master Plan Update in 2008, the 2012 Water Conservation Evaluation, the 2017 Water Efficiency Master Plan Update, and this 2024 Water Efficiency Plan Update (Plan). The Colorado Water Conservation Board (CWCB) requests water providers such as Longmont to complete and submit an updated water efficiency plan every seven years. This is also required by State Statute at C.R.S. Section 37-60-126.

### **Benefits of Water Efficiency for Longmont**

Water efficiency provides the following economic, social, and environmental benefits to Longmont:

- **Leadership and sustainability.** The City’s leadership is committed to maintaining a sustainable water supply portfolio that supports the community's needs. Proactive planning and a strong emphasis on water efficiency, backed by dedicated leadership, are crucial to ensuring the City's long-term sustainability.
- **Coordinated water stewardship.** Responsible stewardship of water is essential to promoting long-term sustainability in Colorado’s semi-arid, high desert climate in the face of a changing climate as spelled out in the State’s Colorado Water Plan. The City’s water efficiency program requires a multi-departmental coordinated approach to promoting water stewardship throughout the City government and community, ensuring the City is “doing its part” in sustaining healthy, vibrant, communities.



- **Climate change resiliency and reliability.** Longmont’s wise use of water coupled with promoting climate appropriate and drought resilient landscapes, promotes water supply reliability and resiliency to our changing climate and in the event of natural hazards.
- **Creating diverse healthy outdoor environments.** Longmont’s water efficiency plays an integral role in promoting a diversity of climate appropriate landscapes that provide ecological and watershed health benefits.
- **Reduction in carbon footprint.** Longmont’s reduction in potable water demand through water efficiency strategies reduces the amount of chemicals and energy necessary to treat water to drinking water standards.
- **Delay in expansion of future infrastructure.** Longmont’s reduction in potable water demand may also delay the need for expanding infrastructure including water treatment and delivery capacity. This provides long-term economic cost savings.
- **Preserve agriculture.** Longmont’s long-term reduction in water demands can reduce the amount of additional water the City needs to meet buildout demands.

### 2024 Water Efficiency Plan

The 2024 Water Efficiency Plan builds upon past plans and incorporates new ideas and information. This Plan was prepared by Peter Mayer, P.E., Principal of WaterDM and Courtney Black, P.E., Senior Water Resources Engineer with INTERA, under the supervision of Hope Bartlett, Water Conservation Specialist, and Ken Huson, Water Resources Manager for the City of Longmont.

This Water Efficiency Plan extends Longmont’s core conservation program activities into the future and expands the program, particularly to address outdoor water use on landscapes. The program described in this Plan addresses both indoor and outdoor water use across all customers in Longmont and includes discounted fixtures and appliances through Efficiency Works, non-residential water assessments, irrigation audits, Garden in A Box, turf conversion on municipal and residential properties, automated meter reading infrastructure, system water loss control efforts, and education and outreach. Longmont has twice participated in the Growing WaterSmart program which helps urbanizing communities integrate water and land use planning to better ensure their sustainability and resilience

The water savings goal of this Plan is to continue to gradually reduce per capita use resulting in water savings of more than 200 million gallons compared with 2022 usage.<sup>1</sup> This will be achieved by continuing to gradually reduce total per capita use, achieving a 3% reduction relative to 2022 total per capita use, by 2030. This is to be accomplished through the totality of

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<sup>1</sup> 2023 was unusually wet and cool and water use was markedly lower in Longmont. 2022 was more typical of recent demand and serves as the most appropriate baseline for measuring water efficiency impacts.

Longmont’s greater water efficiency efforts including specific program measures, water loss control, conservation-oriented water rates, local policies, and state and federal regulations.

This Plan provides context from the past and sets a course for future water efficiency across the service area in the coming years. Specific Plan goals are:

1. **Gradually reduce treated water use by 3% from 2024 – 2030.** The water savings outlined in this plan will be achieved by reducing total per capita use by 0.4% per year on average for the next seven years or 3% from 2024 - 2030 through the totality of Longmont’s greater water efficiency efforts including specific program measures, water loss control, land use policies, and state and federal regulations. This goal also focuses on achieving savings with the following actions:
  - a) **Reduce irrigated non-functional turf on City properties.** Steadily reduce and replace non-functional irrigated turf from City properties with water-wise landscaping.
  - b) **Continue to expand raw water irrigation on City properties.** Continue to strategically convert parks and other City properties from potable irrigation to non-potable irrigation as feasible.
2. **Integrate water efficiency across City departments.** Foster a culture where City leadership and staff understand the value of water and work across departments to collaborate, find holistic mechanisms in promoting water efficiency, and integrate water with land use planning. Eliminating potable irrigation on all City properties from 12 a.m. – 6 a.m. on Mondays during the irrigation season is a simple peak shaving and demand shifting measure that will help reduce the need to expand water treatment capacity in the future.
3. **Promote water efficiency equitably.** Preserve the natural environment in our watershed by committing to responsible, environmentally sound, and efficient use of our precious water resource while also ensuring that water efficiency practices meet the following equitable goals:
  - a) Help ensure all people have access to safe, clean, affordable drinking water and wastewater services.
  - b) Encourage the distribution of the economic, social and environmental benefits identified in this plan throughout the whole community.
  - c) Promote resiliency to climate risks such as flood, drought, and wildfires.
  - d) Provide for all members of the community to meaningfully participate in water efficiency related decision-making processes with access to useful and translated water efficiency information.

### Water Supply and Use

As of 2023, Longmont’s Municipal Service Area encompassed 31.35 square miles, included 106,754 people, and provided treated water service through 29,898 metered connections. In

the same year, Longmont's total treated water production was 16,026 acre-feet (AF) and the total metered demand was 14,551 AF. Gross per capita water use was 115 gallons per capita per day (gpcd), a 3.6% reduction from 10 years prior. The program described in this efficiency plan will help continue and extend this gradual reduction in per capita use.

### Water Efficiency in Longmont

Longmont implements all the foundational water efficiency measures described in the American Water Works Association (AWWA) G480-20 Water Conservation Program and Management Standard (2020)<sup>2</sup>, including full metering, monthly billing, a conservation-oriented water rate structure, ordinances and design standards focused on water efficiency, and an established water efficiency program. Table 8-1 lists the provisions in the G480-20 standard and explains how Longmont's program meets or exceeds these requirements.

The effectiveness of specific water efficiency programs can be difficult to quantify due to other factors that influence water use, such as variable weather, changes in customer behavior, and organic replacement of old fixtures with more efficient fixtures. In Longmont, the trend in demand is clear. Since 1996, gross per capita water use in Longmont has declined from 215 gpcd to 115 gpcd in 2023, a reduction of 46.5 percent. This significant, sustained reduction in per capita use is a strong indication of increasing water efficiency across the community.

The City's long-standing water conservation goal is to reduce customer and City raw water demands by approximately 10 percent through the planning horizon (assumed to be 2050), for an expected reduction of about 3,500 AF (1,141 million gallons [MG]). This goal was originally established in the *2004 Raw Water Master Plan* when the projected raw water demand at buildout was approximately 35,580 AF (11,594 MG). This goal is consistent with the *2017 Water Conservation Master Plan* and is consistent with the *City's Sustainability Plan* completed and adopted by City Council in November 2016.

Longmont has already exceeded its goal to reduce demands by 10% annually (from earlier projections) by buildout based on an analysis and comparison of demand going back to 2004 when the goal was established. Ten years ago, Longmont completed the *2013 Water Conservation Evaluation* which estimated annual treated water savings from conservation programs implemented by the City to date was approximately 2,400 AF (782 MG). This estimate of savings was conservative and did not account for additional raw water savings from efficient irrigation practices or from passive savings (such as natural replacement of appliances and fixtures, and increased efficiency of customers from education). Since 2013, total per capita use in Longmont has further decreased by 8%, from 150 gpcd to 115 gpcd. Considering today's population, this amounts to a water savings of 1,376 acre-feet (448 MG), bringing the total estimated savings to 3,776 AF (1,230 MG).

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<sup>2</sup> ANSI/AWWA G480-20 Water Conservation and Efficiency Program Operation and Management. Effective date: Feb. 1, 2021.

This 2024 Longmont Water Efficiency Plan focuses on continuing and extending this trend of long-term<sup>3</sup>, permanent, equitable water demand reductions.

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<sup>3</sup> Longmont's 2023/2024 Water Supply & Water Shortage Implementation Plan addresses short-term demand management that may be required during a drought or other supply shortage.

# 1. INTRODUCTION

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The City of Longmont (Longmont or City herein) is in Boulder and Weld counties, Colorado. Longmont is named for nearby Long’s Peak in Rocky Mountain National Park, the highest point in the Front Range.

## 1.1 PURPOSE

The City of Longmont recognizes the value of its water and the need to use this resource as wisely as possible. Longmont has a set of 12 formal Guiding Water Principles that inform the operation and management of the water utility. Longstanding Goal 7, first established in 1996, specifically identifies water conservation as a core goal.

### ***City of Longmont Guiding Water Principles***

*Goal 7 - The City will develop and implement a water conservation policy that strives to achieve a sustainable use of its water resources.*

*The City will strive to achieve water conservation that results in water demands at build out of the Longmont Planning Area that are 10 percent lower than current projections. The City will pursue water development that does not rely on the dry up of agricultural lands.*

The mission statement for Longmont’s water efficiency program is:

*To preserve the natural environment in our watershed by committing to responsible, environmentally sound, and efficient use of our precious water resources and provide a reliable, high-quality water supply that protects public health.*

Conserving water supports adequate water supplies for future generations, reduces the risk of water shortages, and reduces the need to dry up agricultural lands. It is the City’s policy to manage its water supply and distribution systems to minimize waste and encourage the efficient use of its water supply. Efficient water use has been part of the City planning goals for three decades, starting with the City’s first Water Conservation Master Plan from 1996, an updated plan in 2008, and an extensive update in 2017. This 2024 City of Longmont Water Efficiency Plan (WEP) builds upon and replaces the *2017 Water Conservation Master Plan*.

The purpose of the 2024 Water Efficiency Plan is to assess the overall characteristics of current and future City water use, summarize the current status of raw water supply and treatment capacity, and to use this information to frame the City’s water conservation program with respect to current and ongoing water supply needs and water demand management. In addition, the Plan provides a detailed assessment related to the identification and selection of future water efficiency measures and programs that the City will continue to implement. This Plan also meets the requirements of Colorado Revised Statute § 37-60-126 which requires covered entities to have a plan for water efficiency that has been approved by the Colorado Water Conservation Board.

The City is committed to responsible, environmentally sound, and efficient use of its precious natural resources. Although the City owns and maintains a robust water rights portfolio, it is constantly aware of the need to evaluate and refine its water supply and demand management efforts. The City and its water utility customers recognize the importance of efficient water use as an essential component of the community's culture—helping to maintain the local quality of life in a responsible, sustainable manner.

## **1.2 PLAN ORGANIZATION**

This Plan was prepared generally following the steps outlined in the Colorado Water Conservation Board (CWCB) Water Conservation Planning Guidance Document. The steps are as follows:

- Step 1—Profile of Existing Water Supply System
- Step 2—Profile of Water Demands and Historical Demand Management
- Step 3—Integrated Planning and Water Efficiency Benefits and Goals
- Step 4—Selection of Water Efficiency Activities
- Step 5—Implementation and Monitoring

## 2. PROFILE OF EXISTING WATER SYSTEM

### 2.1 SERVICE AREA CHARACTERISTICS

Longmont is in Boulder and Weld Counties, approximately 30 miles north of the Denver metro area. The St. Vrain Creek flows through the City and is a tributary to the South Platte River basin. The City's water service area follows the Longmont Area Comprehensive Plan planning areas for managing the treated water service in the Municipal Service Area and Longmont Planning Area (Figure 2-1). The Municipal Service Area is the area that the City considers appropriate for urban development and intends to annex and provide urban services; it represents the greatest level of public investment for installation and maintenance of capital improvements. The Longmont Planning Area is the next tier outside the Municipal Service Area. The City plans these areas in advance using a neighborhood planning area concept. Neighborhood planning areas are the basis planning unit; they include a mix of land uses that serves residents and workforce.

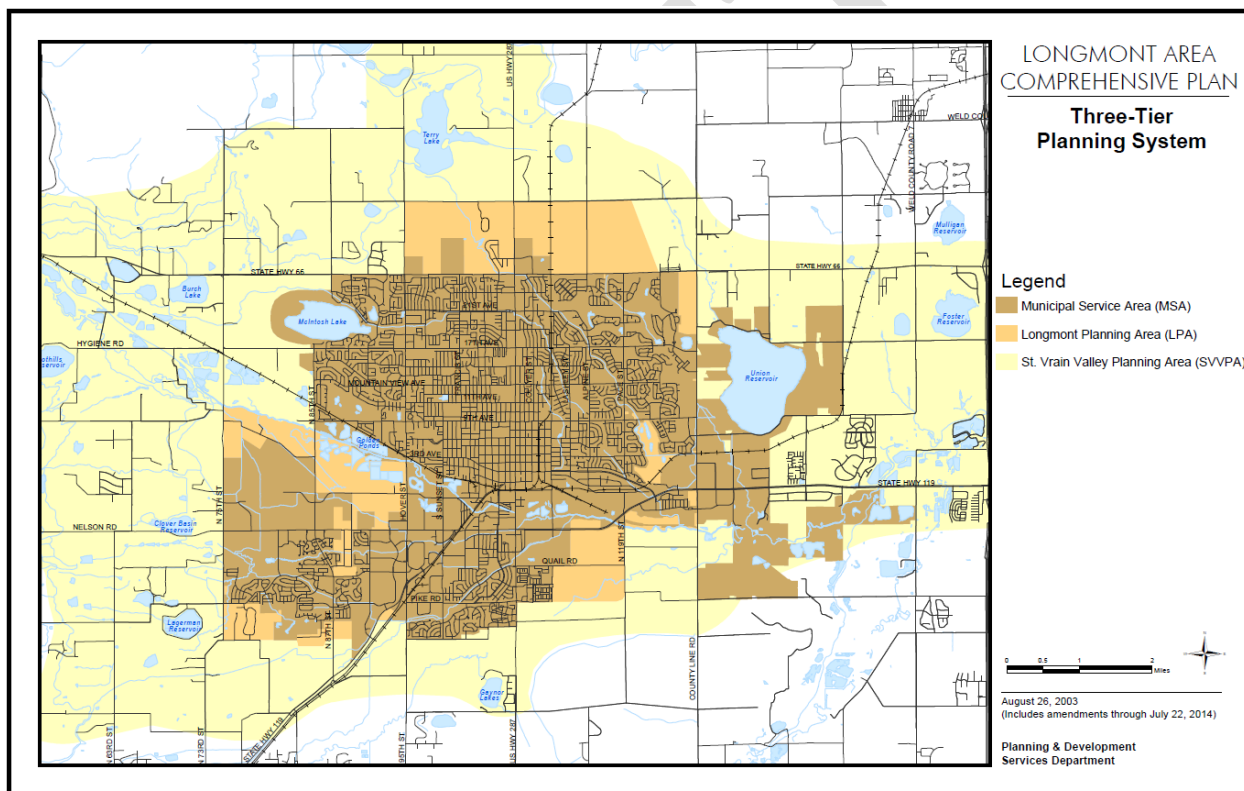
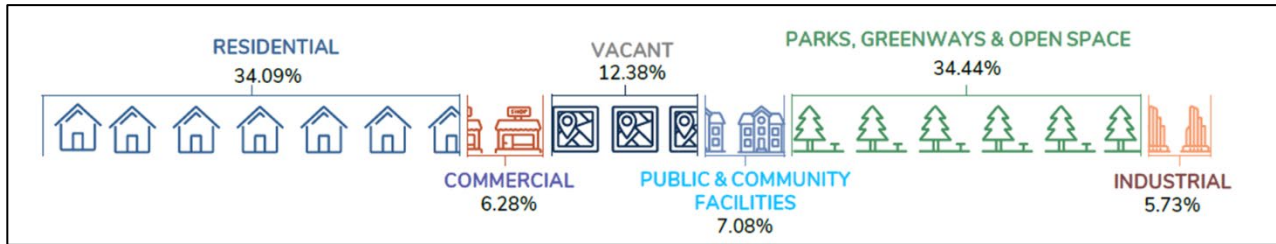


Figure 2-1: Longmont area planning map

For purposes of this plan, evaluation of the current and forecasted water demands represents all metered water use in the current Municipal Service Area (MSA) and existing services outside of this MSA, including water service to some residents in the Hygiene area and the Town of Lyons.

As of 2021, the City had a planning area of about 19,500 acres or 32 square miles, an increase of 1,137 acres (6.2%) since 2015 (*Longmont Community Profile 2021*). Most of this increase was in undeveloped open space. Figure 2-2 shows the land-use breakdown from the 2021 Community Profile report.





**Figure 2-2: 2021 land-use breakdown in the City of Longmont**

Longmont’s population has grown from 95,575 in 2015 to 106,754 in 2023, an increase of 11.7%. The City has been experiencing consistent growth for many years. Since 2015, the average rate of population growth has been approximately 1.6 percent per year. Water meter accounts grew approximately 1.2 percent per year in the same period as Longmont densifies more new multi-family and mixed-use accounts were added to the system.

**Table 2-1: Service population, City population, and active and metered water accounts for 2007 to 2023.**

Year	Service Population <sup>a</sup>	City Population	City Population Annual % Change	Total Service Connections (Inside and Outside)
2007	86,410	85,762	1.3%	26,289
2008	86,817	86,194	0.5%	25,999
2009	86,926	86,303	0.1%	26,513
2010	88,080	87,461	1.3%	26,636
2011	88,462	87,850	0.5%	26,740
2012	88,453	87,841	0%	26,933
2013	90,891	90,262	2.8%	26,843
2014	92,629	91,911	1.8%	27,007
2015	93,575	92,852	1.0%	27,223
2016	94,511	93,933	1.2%	27,711
2017	95,360	94,777	0.9%	28,079
2018	96,775	96,192	1.5%	28,223
2019	98,116	97,530	1.4%	29,012
2020	100,151	99,570	2.1%	29,367
2021	100,192	99,629	0.1%	29,544
2022	102,345	101,764	2.1%	29,705
2023	106,754	106,173	4.3%	29,972

<sup>a</sup> Population includes customers outside of the MSA and does not include the Town of Lyons since Lyons provides its own raw water supply.

## 2.2 RAW WATER SOURCES

Mountain watersheds are the City's current and future primary source of raw water for drinking water and raw water irrigation purposes. The City has established a robust raw water supply system with multiple alternate points of diversion. An overview of the City's raw water supply network is provided in Table 2-1.

The City has raw water diversion rights from both the St. Vrain Creek Basin and the Upper Colorado River Basin. The St. Vrain Creek Basin includes the North St. Vrain Creek, South St. Vrain Creek, and mainstem St. Vrain Creek. The headwaters of the North St. Vrain Creek are in Rocky Mountain National Park with Ralph Price Reservoir as the City's primary water storage facility. The headwaters of South St. Vrain Creek are near the Indian Peaks Wilderness Area. The north and south forks combine to form the mainstem St. Vrain Creek, near the town of Lyons and downstream of Ralph Price Reservoir. In 2022, 30% of Longmont's raw water supply for treated water came from the St. Vrain Creek watershed.<sup>4</sup>

The City also has ownership in the Colorado-Big Thompson (C-BT) project and Windy Gap trans-mountain diversion projects operated by the Northern Colorado Water Conservancy District (Northern). Water from the Colorado River headwaters is stored in several reservoirs west of the continental divide. C-BT water is conveyed through the Alva B. Adams Tunnel to the east slope, and then through several lakes and reservoirs to Carter Lake. From Carter Lake, the City receives C-BT water through the St. Vrain Supply Canal and Southern Water Supply Pipeline. In 2023, 62% percent of Longmont's raw water supply for treatment purposes was from C-BT water (*2023 Water Quality Report*).

Watershed basins that supply raw water and the infrastructure to deliver the water to the City's water treatment plants (WTPs), the Nelson-Flanders WTP (NFWTP) and Wade Gaddis WTP (WGWTP), are summarized in Table 2-2.

The Water Quality Report calculation does not include Longmont's significant raw water use, which represents a large component of its native water supply. Increasing raw water use for irrigation decreases reliance on C-BT. Longmont's Guiding Water Principles. Goal #3 addresses this directly:

*Statement of Goal #3: The City will acquire, develop and beneficially use a water supply that consists of water rights in the South Platte and Colorado River Basins.*

*Policy Statement: The City's water supply will continue to be composed approximately one-third from the Colorado-Big Thompson and Windy Gap Projects with the balance from Saint Vrain and Left Hand basin water rights."*

One of the strategies described in this Water Efficiency Plan is the ongoing and increased use of native raw water for irrigation on City properties.

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<sup>4</sup> 2022 Longmont Drinking Water Quality Report

**Table 2-2: Existing Raw Water Supply System Summary**

Source Water Basin	Infrastructure for Delivery to City of Longmont Water Treatment Plants	Supply to NFWTP	Supply to GWGTP
Upper Colorado <sup>1</sup>	<b>Carter Lake Connecting Pipeline (CLCP)<sup>2</sup></b> – Delivers C-BT and Windy Gap Project water via Southern Water Supply Pipeline and CLCP.	Yes	Yes
	<b>St. Vrain Supply Canal (SVSC) and Pipelines<sup>3</sup></b> – Delivers C-BT and Windy Gap Project from Carter Lake via canal, then through a short pipeline segment to NFWTP from the canal.	Yes	No <sup>4</sup>
North St. Vrain	<b>North Pipeline</b> – Delivers N. St. Vrain from Ralph Price Reservoir via diversion point from Longmont Reservoir.	Yes	No <sup>4</sup>
South St. Vrain	<b>South Pipeline<sup>4</sup></b> – Delivers S. St. Vrain via direct diversion from river to pipeline.	Yes	No
St. Vrain (downstream of the confluence of the North and South St. Vrain)	<b>Highland Ditch</b> –Delivers St. Vrain via direct diversion from river.	Yes	Yes <sup>5</sup>
St. Vrain	<b>Burch Lake</b> – Delivers St. Vrain water conveyed to Burch Lake via Palmerton Ditch.	No	Yes

<sup>1</sup> Northern Water operates and maintains the C-BT Project and Windy Gap Diversion and Firming projects. The City of Longmont owns allotment contracts in each project.

<sup>2</sup> The pipeline that delivers C-BT water to the WTPs comprises four projects: CLCP (1999), to pipeline from Highland Ditch to WGWT (1983), to pipeline along south side of Highway 66 (1974), to pipeline from Highway 66 to NFWTP (2005).

<sup>3</sup> SVSC is owned by Northern Water. The City has constructed two pipelines to deliver water from the SVSC to the NFWTP: Carter pipeline from the SVSC to Carter Pond (1973) and an extension of that pipeline upstream of Carter Pond to the NFWTP (2005).

<sup>4</sup> These raw water sources could be conveyed to WGWT from NFWTP by reversing the normal flow direction of the CLCP when it is not supplying C-BT water.

<sup>5</sup> This diversion is only used in emergency situations and can only convey water to WGWT when the CLCP is not supplying C-BT water.

## **2.3 WATER TREATMENT**

Longmont’s Nelson Flanders Water Treatment Plant (NFWTP) is a 40-million-gallons/day (mgd) plant that became operational in 2007. The original capacity of the NFWTP was 30 mgd. In 2013 it was re-rated to 40 mgd based on demonstration tests. Current peak demands in Longmont are 28 – 30 mgd. While expansion is imminent due to anticipated growth, it may not be needed for many years. One of the beneficial impacts of water efficiency in Longmont has been to delay the timeline of water treatment expansion. This Plan includes measures to shift demand away from peak periods which regularly occur on Mondays from 12 a.m. – 6 a.m., driven by automatic irrigation.

## **2.4 WATER DISTRIBUTION SYSTEM**

The City’s water distribution system includes four water storage tanks and five pump stations that supply a network of more than 440 miles of pipe ranging from 2 to 66 inches in diameter. The total amount of storage in the City’s existing water distribution system is 27 million gallons (MG). However, several of the pipelines and storage facilities in the City’s distribution system have reached the end of their expected life and need replacement. Two major projects identified in the City’s CIP are the Clover Basin Water Transmission Line,<sup>5</sup> and the Price Park Tank Replacement which will be completed in 2024. In addition, the Montgomery Tank is planned to be replaced in 2025-2028. The Clover Basin Water Transmission Line will increase capacity to the southwest portion of the City that is experiencing heavy residential growth. A new Price Park Tank was recently constructed to replace two existing underground tanks that had condition issues and to increase water pressure to this zone.

In addition to large CIP projects, the City rehabilitates water lines in the distribution system annually to improve water service, water quality, and decrease the frequency of water line breaks.

### **2.4.1 WATER METERS**

To date, the City has replaced 99% of meters to be updated to have remote reading capability. Currently, the City receives data from about 26,000 meters, with 116 analog meters remaining.

## **2.5 RAW WATER FOR IRRIGATION**

The City has significantly reduced its treated water demand by utilizing raw water for outdoor irrigation, leading to substantial savings in both treatment and energy costs, particularly when direct ditch rights are available nearby. Through an extensive network of canals and irrigation ditches, raw water is supplied to parks, golf courses, schools, and greenways for irrigation. Currently, this system provides raw water to approximately 27 parks, 2 golf courses, and 18 schools, covering 56% of parks, 66% of golf courses, and 60% of schools. The City's main recreation facility is also irrigated with raw water.

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<sup>5</sup> The timeline for this project has been extended. It may not be needed.

To further conserve treated water, the City is continuously exploring opportunities to expand raw water irrigation. Flow monitoring systems are in place at key intake points to measure raw water demand and ensure efficiency. By converting treated water irrigation to raw water, the City not only reduces overall treated water use but also reduces peak demand on the potable system, one of the goals of this efficiency plan.

Significantly, much of the raw water used for irrigation is return flow or by exchange, wastewater treatment plant effluent, enhancing the efficiency of the entire St. Vrain Creek Watershed.

Longmont plans to update its evaluation of bringing raw water irrigation to areas currently served by potable water in master planning efforts slated for 2025/2026.

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### 3. WATER DEMAND AND WATER EFFICIENCY

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This section provides an overview of Longmont’s historical water demand trends and the impact of the City’s ongoing water conservation program.

#### 3.1 HISTORICAL WATER DEMANDS

In this Plan, the description of water demand is consistent with the American Water Works Association (AWWA) and International Water Association (IWA) Water Balance approach used to conduct M36 water audits. Longmont has adopted this best practice and regularly tracks water demand in this consistent and useful way.

##### 3.1.1 CUSTOMER CLASSIFICATIONS

Potable water use is metered according to the following seven customer classifications: residential (single family and duplexes), multifamily, small commercial, large commercial-industrial, irrigation, Town of Lyons, and City. The first water meters on residential single-family homes were installed in 1975 and there are no unmetered residential connections. Multifamily dwellings had meters first installed in 1976 and are completely metered. Meters for large commercial and small commercial customers were first installed in 1983 and 1984, respectively, and are completely metered as well. Irrigation was separated into a new customer classification beginning in 2001 and primarily represents homeowners association (HOA) neighborhood irrigation systems, and separate irrigation taps for new small commercial establishments. Customer classification descriptions are summarized in Table 3-1 and represent accounts that generate revenue for the City (except the City classification which is not billed back to the City).

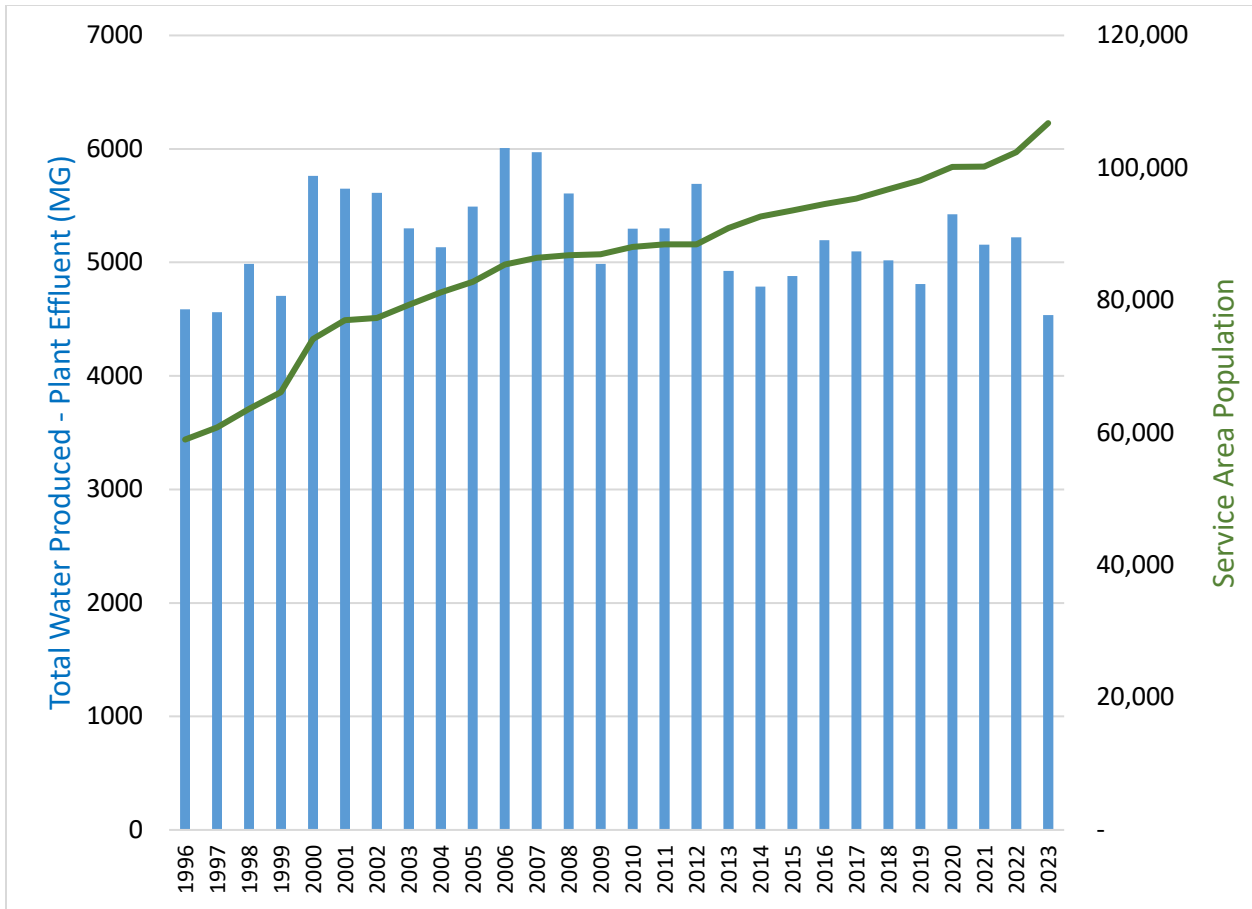
**Table 3-1: Customer classifications in Longmont**

<b>Category</b>	<b>Description</b>
Residential—single family and duplexes	Residential single-family homes and duplexes.
Multifamily	Three or more attached living units, includes mobile home parks. Newer developments may have multiple detached living units on one lot and are classified as multifamily. New multifamily complexes will have a multifamily tap to each building and a dedicated irrigation tap and may also have a separate tap to the clubhouse area. The buildings are classified as multifamily, irrigation tap as irrigation, and the clubhouse area as small commercial.
Small commercial	Commercial taps that provide water to the building, including hotels, assisted living, and nursing homes. Commercial establishments may also have an irrigation tap, which is classified as irrigation.
Large commercial and industrial	Negotiated services based on water use characteristics. There are currently no active accounts within this category.
Irrigation	Dedicated irrigation taps. A separate irrigation tap is required in all new multifamily complexes and for all commercial unless the landscaping is less than a certain square footage. Irrigation for HOA areas and pocket parks is also included in this category.
Town of Lyons	Longmont treats water for the Town of Lyons and delivers through a separate metered tap. This service is labeled as “Lyons” throughout this plan.
City (non-revenue)	City facilities such as libraries, memorial buildings, City buildings, fire stations, golf courses, greenways, arterials, and parks.

### 3.1.2 WATER USE

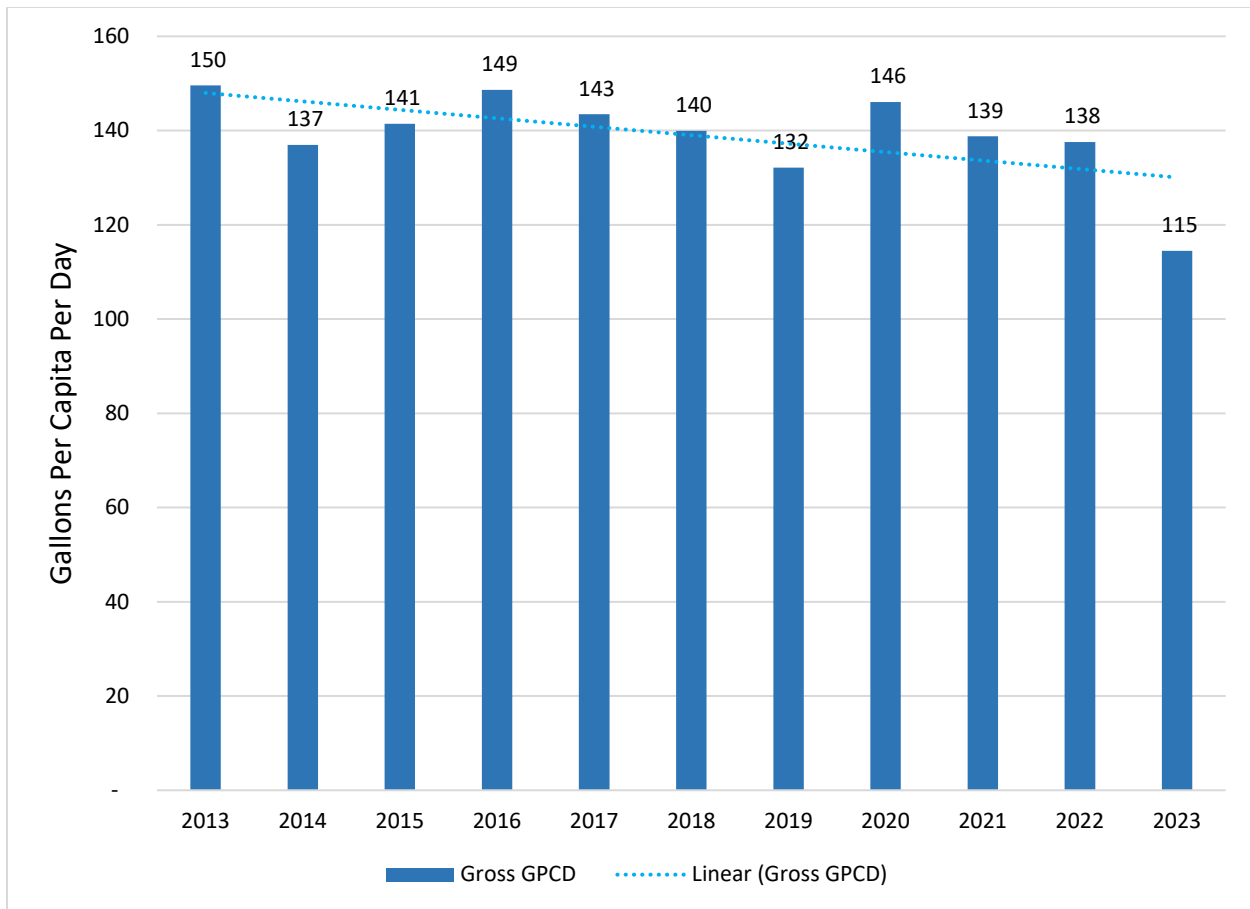
Total water production and service area population from 1996 – 2023 are shown in Figure 3-1. From 1996 to 2023, Longmont’s population has grown by 80% from 58,961 to 106,754, yet remarkably, total water use in Longmont was lower in 2023 than it was in 1996 or any other year. Longmont’s highest annual water use (6,006 MG) occurred eighteen years ago in 2006. Recently, the highest annual water use (5,425 MG) occurred during 2020, a year where demand was impacted by stay-at-home mandates from the COVID-19 pandemic. Water use in 2023 was particularly reduced because of the long, wet spring which delayed the start of the irrigation season until June. The trend towards increased customer water use efficiency in Longmont is clearly evident.





**Figure 3-1: Total water production and service area population, 1996 - 2023**

Gross or total per capita water use is based on the annual volume of water produced and the number of people served by that volume. Longmont’s per capita water use for the most recent 11 years (2013 – 2023) is shown in Figure 3-2 along with linear trend line. Per capita use was highest in 2013 and lowest in 2023 and there has been a gradual declining trend accelerated by the dramatic reduction in 2023 due to the wet spring and reduced outdoor use. Over the past ten years, the average gross per capita water use in Longmont was 138.0 gpcd.



**Figure 3-2: Gross water use per capita per day for Longmont service area (Longmont produced minus Lyons)**

Figure 3-3 shows the annual metered water use by customer category from 2007 – 2023 as a stacked bar with treated production as a line on top. Water use from the single-family residential sector is the largest component of Longmont’s demand followed by small commercial and then multifamily residential.

Figure 3-4 shows the same annual metered water use by customer category as a line graph so that the trends for each sector can be observed. The demand reductions and efficiencies have largely been accomplished by the residential sector which reduced usage from 8,563 AF in 2007 down to 6,129 AF in 2023, a reduction of 28.4% (2,434 AF). It should be noted that 2023 had an unusually wet spring and early summer which reduced demand substantially as shown. A pie chart showing the percent of metered use for each customer category is presented in Figure 3-5.

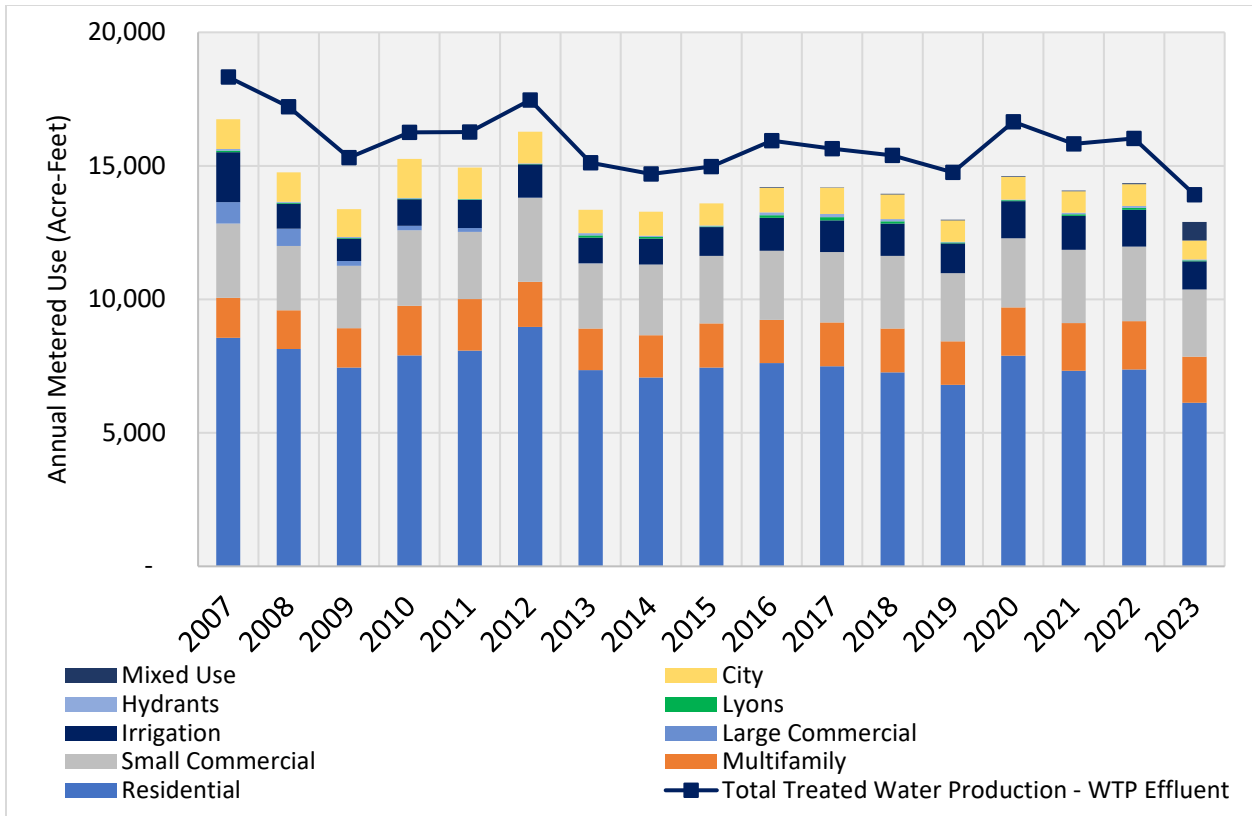


Figure 3-3: Annual metered water use by customer category-stacked bar, and total production

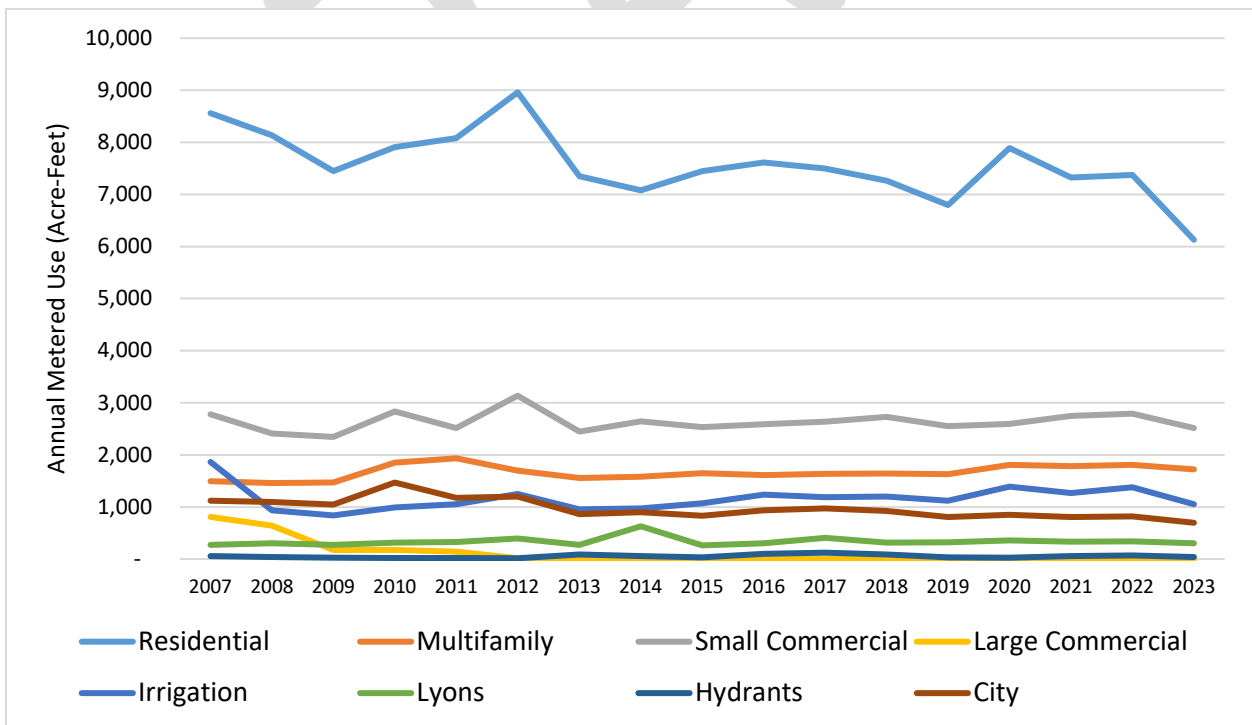
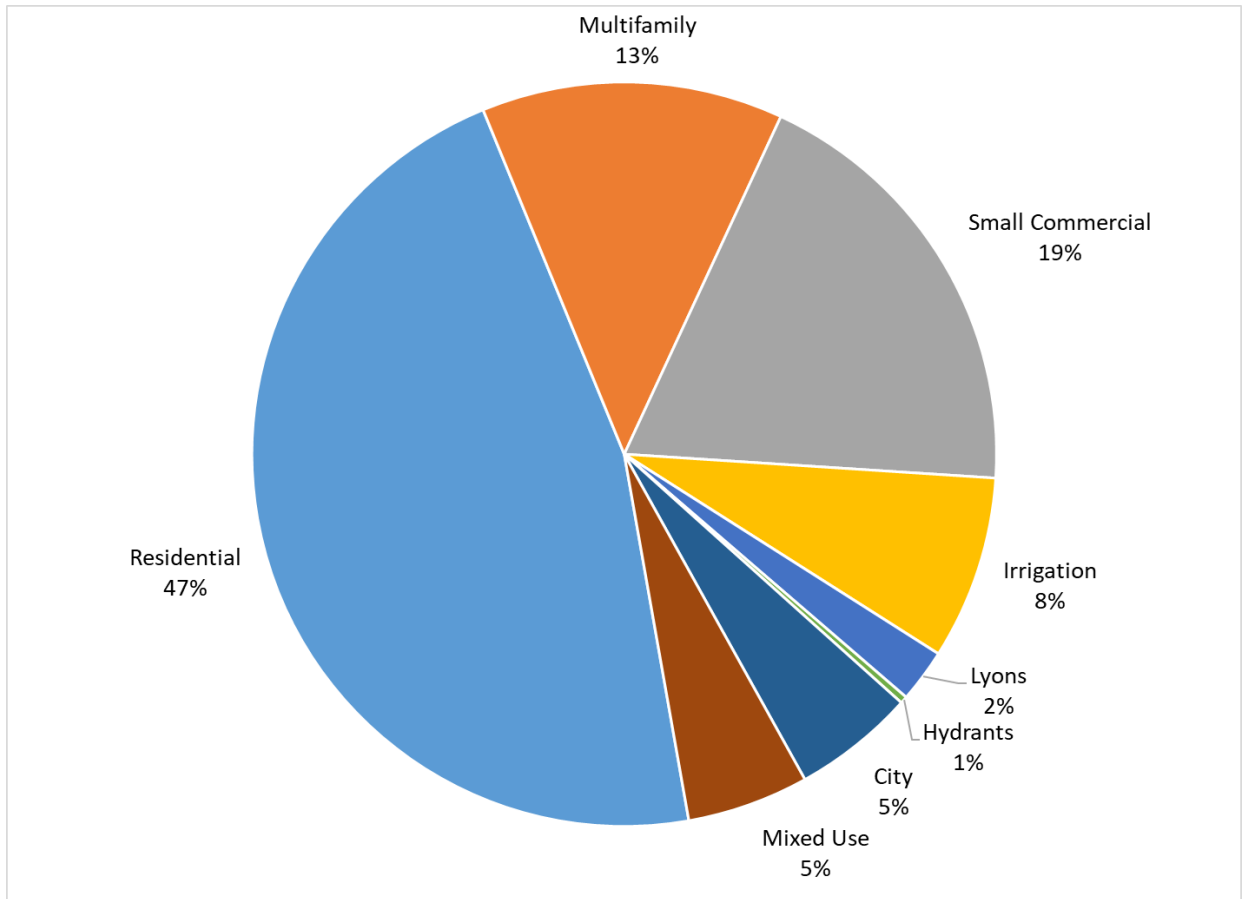


Figure 3-4: Annual metered use by customer category (AF)



**Figure 3-5: Metered customer water use in 2023**

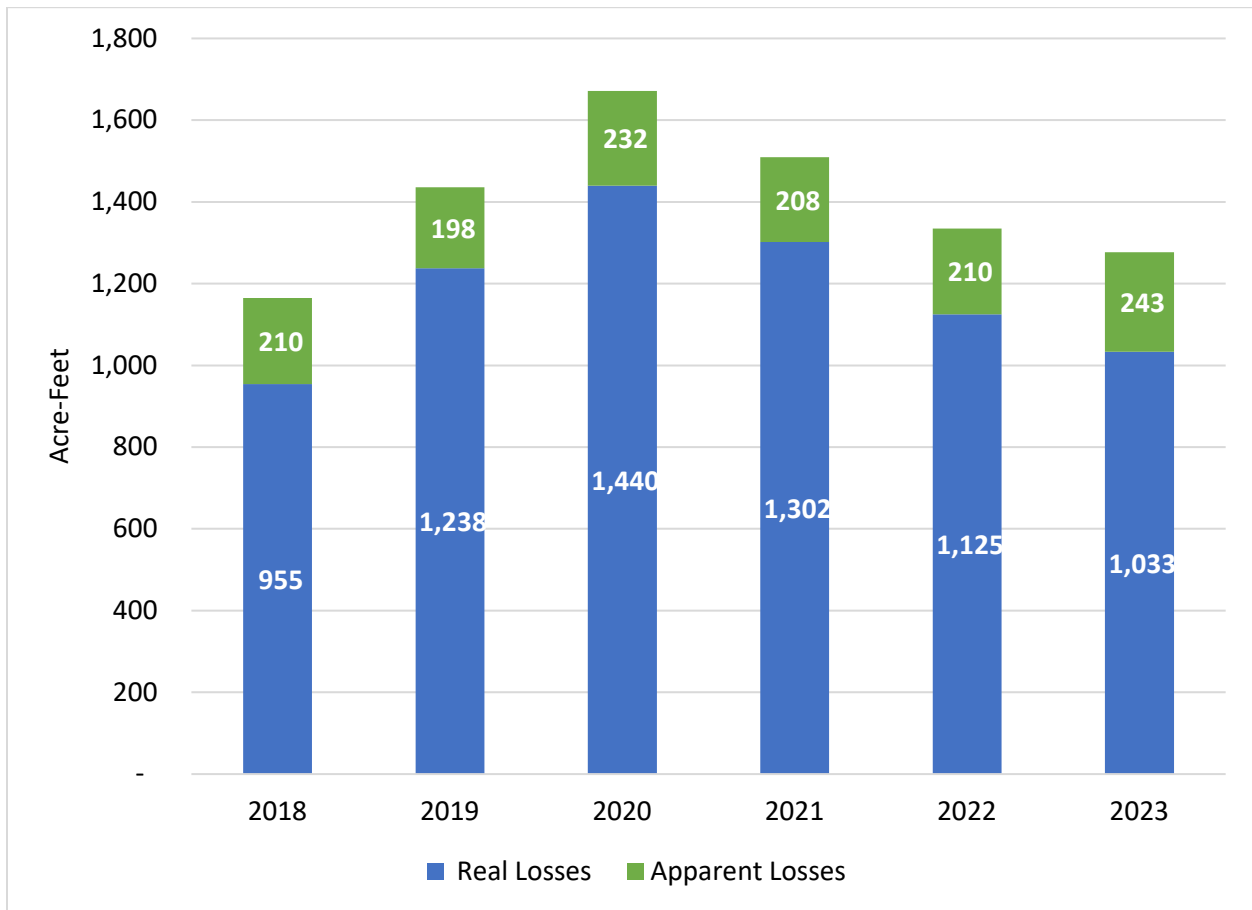
### 3.1.3 NON-REVENUE WATER

Non-revenue water includes water that is entering the distribution system but not generating revenues for the City. Longmont implements the best practice of producing an annual water audit using the AWWA M36 methodology. Under this method, Longmont separates non-revenue water into three main categories:

1. Authorized unbilled metered consumption—such as City billing classification and plant water used at the Wade Gaddis Water Treatment Plant.
2. Authorized unbilled unmetered consumption—such as firefighting, fire training, inspection and pressure testing, parks and forestry watering, sanitary sewer jetting, hydrant flushing, storm sewer jetting, street sweeping, and tank cleaning.
3. Water losses which include the following sub-categories:
  - a. Apparent losses—unauthorized uses, metering inaccuracies, and data handling errors
  - b. Real losses—main and service line leakage, and overflows

An annual water loss audit allows Longmont to track trends in non-revenue water to ensure that water loss is reduced to the extent it is economically efficient. Longmont’s non-revenue

water use trends are shown in Figure 3-6. Total loss and real losses have both trended down since 2020.



**Figure 3-6: Annual water loss accounting, 2018 – 2023**

There are approximately 75 miles of water transmission mains in Longmont’s system. Longmont implements pressure testing its transmission lines and replaces an average of 1 – 2 miles of water main per year. Longmont’s approach to water loss has improved substantially over the past 10 years with the introduction of the M36 water audit and increased understanding brought through the economic analysis it provides. Importantly, Longmont has taken the next step and completed water audit validation as specified in M36 for the 2022 and 2023 audits. The validation process establishes third party review of the audit and recommendations and is designed to improve the accuracy, repeatability, and annual tracking in the audit. This is one of the important improvements in Longmont’s water accountability over the past few years.

### 3.2 WATER COSTS AND PRICING

Metered residential, multi-family, small and large commercial, and irrigation customers in Longmont are charged a monthly service charge based on meter size plus a volume charge per 1,000 gallons of water used.

Longmont is undertaking a full review of the water rate structure and charges in 2024. The results of this analysis will be used to help inform future changes to the rates and rate structure.

#### 3.2.1 METERING AND BILLING

All customers in Longmont are metered and charged monthly based on their metered volume of use. Longmont measures usage in gallons and thousands of gallons. These are all considered a best practice per AWWA G480-20 Conservation Program Operation and Management Standard.

#### 3.2.2 SINGLE-FAMILY WATER RATES

In 2024, Longmont billed its single-family residential customers using a four-tier inclining block rate structure as shown in Table 3-2.

**Table 3-2: Single-family residential water rates (Effective January 1, 2024)**

Monthly Usage Block (gallons)	Cost per 1,000 gallons (inside City)	Cost per 1,000 gallons (outside City limits)
0 - 5,000	\$4.16	\$6.24
5,001 - 15,000	\$6.03	\$9.05
15,001 - 35,000	\$8.15	\$12.23
All over 35,000	\$11.23	\$16.85

Help with water bills is available for income-qualified residents through Longmont CAREs, which offers financial assistance and rebates in a number of services and areas including water.

#### 3.2.3 OTHER CUSTOMER CLASSES WATER RATES

Other customer classes in Longmont including multi-family residential, small commercial, mixed use, and the Town of Lyons are charged based on a uniform rate structure (one tier) as shown in Table 3.3. Customers outside of Longmont that are served by the water system are billed using the same structures, but with higher rates.

**Table 3-3: Multi-family, commercial, and irrigation water rates (Effective January 1, 2024)**

Customer Class	Cost per 1,000 gallons (inside City)	Cost per 1,000 gallons (outside City limits)
Multi-family	\$4.87	\$7.31
Small Commercial / Mixed Use	\$5.16	\$7.74
Irrigation	\$6.55	\$9.83
Lyons	NA	\$2.86

### 3.2.4 WASTEWATER RATES

In Longmont, each metered user of the publicly owned wastewater treatment system is charged a monthly service charge plus a volume charge for wastewater service as shown in Table 3-4. The volumetric charge for wastewater is higher than the block 1 and block 2 residential water rates. For many Longmont customers the wastewater component is the largest part of the water bill.

**Table 3-4: Wastewater rates – all metered customers**

<b>Wastewater Rates</b>	<b>Charge</b>
Metered Monthly Service Charge	\$11.50
Metered Volume Charge per 1,000 gallons	\$6.29

Longmont, like many places in Colorado and across the United States, has seen wastewater rates increase more rapidly than water rates. This is due to the increased costs for treating wastewater to the continually increasing permit limit requirements.

### 3.3 PAST AND CURRENT DEMAND MANAGEMENT ACTIVITIES AND IMPACT TO DEMANDS

Longmont completed its first formal Water Conservation Master Plan in 1996 which initiated a number of water conservation best practices that have helped increase water use efficiency across the community while prolonging the adequacy of its existing water resources.

Since 1996, Longmont has chosen to emphasize education and effective communications, working from the underlying belief, which continues today, is that if Longmont’s citizens understand the economics, methods, and positive effects of water efficiency, they will make informed decisions.

Since 1996, the City has expanded its water efficiency measures and programs. An update to the Water Conservation Master Plan was completed in 2008 and an in-depth evaluation of the effectiveness of efficiency programs was completed in January 2013 (Water Conservation Program Evaluation). Another Water Efficiency Master Plan Update was completed in 2017. The current water efficiency programs implemented by the City closely follow the recommended measures and programs from the 2017 plan.

In recent years, Longmont has produced a “Water Conservation Annual Report” which summarizes water use in the community and water conservation program activities implemented by the City. An example from 2023’s Water Conservation Annual Report is shown in Figure 3-7. Estimated annual savings in 2023 from program activities was 12.16 million gallons.



# 2023 WATER CONSERVATION ANNUAL REPORT

"To preserve the natural environment in our watershed by committing to responsible, environmentally sound, and efficient use of our precious water resources."

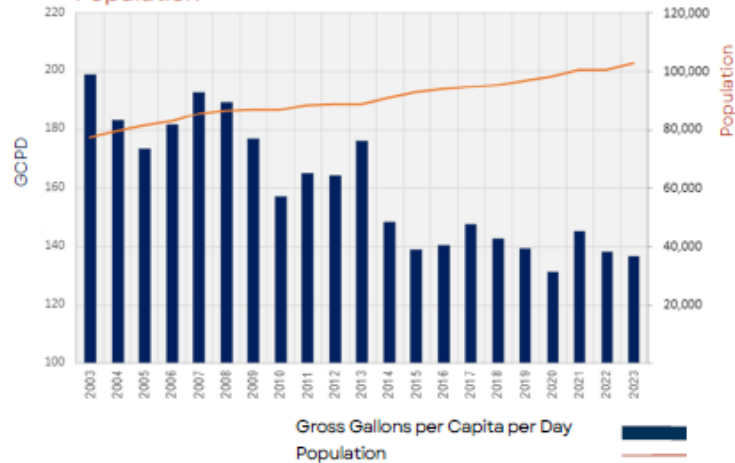
## WATER CONSERVATION AT A GLANCE

2023 Gross Gallons per Capita per Day was 114 gallons, down 43% from 2002.

2023 saw a 19% reduction in demand\*

\*Per the 2017 Water Efficiency Master Plan, Longmont's water conservation goal is a 10% reduction in water demand from the 2002 baseline.

Gross Gallons per Capita per Day (GCPD) & Population



## PROGRAMS AND SERVICES

RESOURCE CENTRAL:

4.2 MG



- Lawn Replacement Projects: 44
- Garden in a Box Discounts: 273
- Seminar Attendees: 251
- Slow the Flow Appointments: 166

NORTHERN WATER:

4.85MG



- Landscape Consultations: 10
- Irrigation Audits: 4
- CII Audits: 2
- Community Grants: 2

EFFICIENCY WORKS:

.81 MG



- EW Store Discounts: 6
- EWs Rebates: 198

GROWING WATER SMART:

2.3 MG



- Kensington Park Grass to Garden
- Leak Notifications
- LHA Toilets Upgrades

TOTAL ANNUAL SAVINGS:

12.16

MILLION GALLONS

Learn more about our Water Conservation programs at:  
[bit.ly/water-matters](https://bit.ly/water-matters)

Figure 3-7: 2023 Water Conservation Annual Report

### 3.4 WATER EFFICIENCY AND LAND USE PLANNING

In 2024, Longmont and its selected contractor Del Corazón Consulting completed a “Resilient Landscapes Policy Assessment” under a grant from the Sonoran Institute’s Growing Water Smart’s Technical Assistance program.

The goals of this project were to:

- Conduct a scan of City of Longmont’s plans and policies to assess codes and policies for water conservation, water efficient landscapes, and climate resilience.
- Identify the presence or absence of best practices.
- Identify any current policy gaps and conflicting or confusing policy requirements.
- Share best practices for climate resilient and water efficient landscapes, particularly for native plants, and public right of ways.
- Identify opportunities for strengthening water conservation and efficiency standards in land use code and landscape regulations.
- Inform City of Longmont staff and leadership of opportunities for future code and plan updates or where the strength or effectiveness of a policy could be improved to achieve desired outcomes or plan goals.

The policy scan revealed that the City of Longmont development regulations already include many components of water efficient landscape best practices. Some areas for improvement were noted. These include:

- The land use policies and development regulations are articulated across four interrelated policy documents that reduce user friendliness and increase potential for confusion.
- The content of the landscape code and the City standards Section 600 include some redundancies and repetitions across policy elements.
- The applicability of effective water efficient best practices is not required for all developments nor in all sites.
- Many effective water efficient landscape standards are voluntary or recommended rather than required.
- In some standards, the policy makes the installation of turf easier to do than water efficient landscapes.
- References to “lower water consuming grass” or drought tolerant grass terminology is used throughout the city’s policies without clearly a preferred grass type nor articulating a vision for a grass alternative or “Coloroscape” design aesthetic.
- Desired outcomes for stormwater management and LID lack clear guidance for effective implementation.

This report includes recommendations intended to support Longmont with (1) strengthening the water efficient best practices that are already present in the City’s policies, and (2) integrate missing components that will accelerate more widespread resilient landscape installation across the City. The report includes an analysis of the City’s landscape policy sections with recommendations for code language modifications as well as examples of policy language from other cities.<sup>6</sup>

The report concludes:

*“The City of Longmont has policy goals for more resilient and water efficient landscapes. However, the current policy relies too heavily on vague xeriscape principles that fail to result in these goals being achieved once a project’s landscape is installed. The city has an opportunity to take a leadership role, joining other cities across the Front Range who are responding to Colorado’s water supply challenges, adopting landscape regulations that promote climate adapted and water efficient landscapes. The likely adoption of a non-essential turf policy by the state legislature and continued funding of turf replacement programs serves as a catalyst for a policy update in 2024.”*

One of the recommendations of this water efficiency plan is for the City of Longmont Planning Department to adopt the changes recommended in the *Resilient Landscapes Policy Assessment*.

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<sup>6</sup> Del Corazón Consulting. 2024. Resilient Landscapes Policy Assessment.

## 4. WATER EFFICIENCY BENEFITS AND GOALS

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### 4.1 WATER EFFICIENCY AND WATER SUPPLY PLANNING

Water efficiency provides great benefits for municipalities, particularly in Colorado, where water supplies are limited, temperatures are increasing from climate change, and growth is expected to continue. Longmont recognizes the importance and impact that targeted demand management and efficient water use has in supporting a reliable water system.

Longmont is committed to responsible, environmentally sound, and efficient use of its precious natural resources. Although the City owns and maintains a robust water rights portfolio, it is constantly aware of the need to evaluate and refine its water supply and demand management efforts.

This 2024 Longmont Water Efficiency Plan focuses on long-term, permanent water demand reductions, while Longmont's 2023/2024 Water Supply & Water Shortage Implementation Plan (completed annually) addresses short-term demand management that may be required during a drought or other supply shortage.

### 4.2 WATER EFFICIENCY BENEFITS

Water efficiency provides the following economic, social, and environmental benefits to Longmont:

- **Leadership and sustainability.** The City's leadership is committed to maintaining a sustainable water supply portfolio that supports the community's needs. Proactive planning and a strong emphasis on water efficiency, backed by dedicated leadership, are crucial to ensuring the City's long-term sustainability.
- **Coordinated water stewardship.** Responsible stewardship of water is essential to promoting long-term sustainability in Colorado's semi-arid, high desert climate in the face of a changing climate as spelled out in the State's Colorado Water Plan. The City's water efficiency program requires a multi-departmental coordinated approach to promoting water stewardship throughout the City government and community, ensuring the City is "doing its part" in sustaining healthy, vibrant, communities.
- **Climate change resiliency and reliability.** Longmont's wise use of water coupled with promoting climate appropriate and drought resilient landscapes, promotes water supply reliability and resiliency to our changing climate and in the event of natural hazards.
- **Creating diverse healthy outdoor environments.** Longmont's water efficiency plays an integral role in promoting a diversity of climate appropriate landscapes that provide ecological and watershed health benefits.
- **Reduction in carbon footprint.** Longmont's reduction in potable water demand through water efficiency strategies reduces the amount of chemicals and energy necessary to treat water to drinking water standards.

- **Delay in expansion of future infrastructure.** Longmont’s reduction in potable water demand may also delay the need for expanding infrastructure including water treatment and delivery capacity. This provides long-term economic cost savings.
- **Preserve agriculture.** Longmont’s long-term reduction in water demands can reduce the amount of additional water the City needs to meet buildout demands.

### 4.3 WATER EFFICIENCY GOALS

The water savings goal of this plan is to continue to gradually reduce per capita use resulting in water savings of more than 200 million gallons compared with 2022 usage.<sup>7</sup> This will be achieved by continuing to gradually reduce total per capita use, achieving a 3% reduction by 2030, accomplished through the totality of Longmont’s greater water efficiency efforts including specific program measures, water loss control, conservation-oriented water rates, local policies, and state and federal regulations.

Attainable water efficiency goals provide standards that can be used to gauge the effectiveness of a program as well as clearly define the programs’ intentions. The goals listed below were developed by the consulting team and Longmont staff through an analysis of demand trends and the proposed program implementation levels. They provide quantitative water saving targets and qualitative parameters to help achieve the benefits noted above.

1. **Gradually reduce treated water use by 3% from 2024 – 2030.** The water savings outlined in this plan will be achieved by reducing total per capita use by 0.4% per year on average for the next seven years or 3% from 2024 - 2030 through the totality of Longmont’s greater water efficiency efforts including specific program measures, water loss control, land use policies, and state and federal regulations. This goal also focuses on achieving savings with the following actions:
  - a. **Reduce irrigated non-functional turf on City properties.** Steadily reduce and replace non-functional irrigated turf from City properties with water-wise landscaping.
  - b. **Continue to expand raw water irrigation on City properties.** Continue to strategically convert parks and other City properties from potable irrigation to non-potable irrigation as feasible.
2. **Integrate water efficiency across City departments.** Foster a culture where City leadership and staff understand the value of water and work across departments to collaborate, find holistic mechanisms in promoting water efficiency, and integrate water with land use planning. Eliminating potable irrigation on all City properties from midnight – 6 a.m. on Mondays during the irrigation season is a simple peak shaving and demand shifting measure that will help reduce the need to expand water treatment

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<sup>7</sup> 2023 was unusually wet and cool and water use was markedly lower in Longmont. 2022 was more typical of recent demand and serves as the most appropriate baseline for measuring water efficiency impacts.

capacity in the future. This voluntary policy measure impacting just a six hour window will also be extended to schools, HOA's, and commercial irrigation through education and by engaging landscape management companies. The goal will be to educate these properties to irrigate at other times besides Monday morning from midnight – 6 a.m.

3. **Promote water efficiency equitably.** Preserve the natural environment in our watershed by committing to responsible, environmentally sound, and efficient use of our precious water resource while also ensuring that water efficiency practices meet the following equitable goals:

- a. Help ensure all people have access to safe, clean, affordable drinking water and wastewater services.
- b. Encourage the distribution of the economic, social and environmental benefits identified in this plan throughout the whole community.
- c. Promote resiliency to climate risks such as flood, drought, and wildfires.

d. Provide for all members of the community to meaningfully participate in water efficiency related decision-making processes with access to useful and translated water efficiency information. The City of Longmont Water Efficiency Plan provides context from the past and sets a course for future water efficiency across the service area in the coming years.

## 5. SELECTION OF WATER EFFICIENCY ACTIVITIES

Longmont plans to implement a diverse menu of water efficiency activities to achieve the water efficiency goals and benefits. These activities are summarized in Table 5-1. The activities were selected by Longmont staff in consultation with WaterDM and INTERA based on the following criteria: technical feasibility, public interest, environmental impact, cost-effectiveness, ability to implement given budget and staff resources.

The measures selected for inclusion in this Plan are designed to help gradually increase efficiency over the coming years. Longmont leverages partnerships with organizations like Resource Central, PACE, Northern Water, and Efficiency Works to deliver a wide array of program offerings.

**Table 5-1: Ongoing, New and Updated Water Efficiency Activities and Targets**

Water Efficiency Activity	Activity Status	Annual Program Description
<b>Implementation and Planning</b>		
Water efficiency planning	Ongoing	Longmont’s water efficiency plan is updated every 7 years. Water efficiency concepts have been integrated into Longmont’s water supply planning for three decades.
Coordination with Sustainability Team	Ongoing	Quarterly meetings to discuss existing collaborative efforts and coordinate.
Water efficiency in City planning	New	Incorporate water efficiency in other City planning efforts.
Growing Water Smart coordination	Ongoing	The conservation team leads the coordination of the Growing Water Smart Leadership and City-Wide team to leverage resources and promote water efficiency.
Engagement with land use planning	New	Work with City planning staff to ensure water is included in the Comprehensive Plan and City code updates.
<b>Measurement and Data</b>		
Annual summary of water efficiency efforts	Ongoing	Annual summary of water efficiency program activities along with detailed records of activities and water demand statistics.
Water distribution system maintenance and repair	Ongoing	Water line replacement program, annual pressure testing, and SCADA flow metering.
Leak monitoring, alerts, and notification	Ongoing	Customer notification of metered continuous consumption that has occurred for over 14 days indicating possibility of a leak.



<b>Water Efficiency Activity</b>	<b>Activity Status</b>	<b>Annual Program Description</b>
Customer water use portal	New	A new customer portal has been launched with the option of customers signing up for leak notifications.
Monitoring of City meter connections	Ongoing	City meter connections greater than 3 inches in size are equipped with leak detection capability and are tested biannually to detect and address any leaks.
AWWA M36 water audit	Ongoing	Annual water loss audit and improvement program, modified to follow AWWA M36 Water Loss Audit guidelines. Continue annual verification of the water audit as specified in M36.
Metering	Ongoing	Customers: Implementation of AMR and leak alerts. System: Metering of system flushing. Metering on raw water system.
Water budgets for selected City properties	New	Create water budgets for selected City properties converted to low water use landscape. Assess water efficiency before and after conversion.
<b>Rates and Charges</b>		
Monthly billing with an inclining block rate structure	Ongoing	Monthly billing with a 4-tiered inclining block rate structure.
Conservation-oriented tap fees	Consider	Investigate concepts for a conservation-oriented tap fee structure.
<b>Codes and Regulations</b>		
Water Waste Ordinance	Ongoing	Available if needed during drought or water shortage. (Chapter 14.04.490). Review and update if needed.
Update of landscape code and irrigation design standards	Consider	Landscape design standards and code review for new landscapes. Results from 2024 Del Corazon analysis will be reviewed and revised landscape policies developed.
Irrigation schedule	Ongoing	Longmont code includes recommended watering scheduled which can be adjusted and become mandatory, if necessary, as part of the Water Supply & Water Shortage Implementation Plan.
Plumbing code	Ongoing	Chapter 14.04.500 is Longmont’s plumbing fixture code.
<b>Indoor Water Use Efficiency</b>		

<b>Water Efficiency Activity</b>	<b>Activity Status</b>	<b>Annual Program Description</b>
Discounted fixtures, appliances and rebates	Ongoing	Partnership with Efficiency Works to provide residential and commercial customers access to an online store for discounted shower heads and aerators and also access to rebates for clothes washers and toilets. Separate commercial fixture rebates are also offered.
Incentives for businesses	Ongoing	Non-residential and small business efficiency upgrades through Boulder County's Partners for Clean Environment (PACE).
Toilet giveaways for small businesses	Ongoing	Longmont's Sustainability Program provides toilet giveaways to small businesses through door-to-door inquiry on the age of business' existing toilet(s) and desire for a new toilet.
Indoor commercial audits with Northern Water	New	Non-residential customers receive a water efficiency audit from trained professional in partnership with Northern Water.
Water audits and improvements to indoor efficiency of City buildings	Consider	Strategically audit City buildings.
<b>Outdoor Water Use Efficiency</b>		
Garden in the Box	Ongoing	Pre-packed water-efficient gardens offered at a discount through partnership with Resource Central.
Lawn Replacement Program	Ongoing	Turf replacement available at a discount through partnership with Resource Central.
Slow the Flow Residential Sprinkler Evaluations	Ongoing	Residential sprinkler evaluations offered for free through a partnership with Resource Central.
Irrigation audits, consultations and grants	Ongoing	Irrigation audits, landscape consultations and grant funding for transformation projects offered through partnership with Northern Water.
Outdoor water efficiency discounts and rebates	Ongoing	Efficiency Works provides an online store for discounted soil moisture meters, efficient spray nozzles, lawn and garden hose timers, and rain gages. Efficiency Works also provides rebates for weather-based irrigation controllers, rotary nozzles and drip conversion kits.
Best practices and peak shaving at City parks and properties	New	Update irrigation scheduling for City parks and properties shifting the demand and reducing peak demand that generally occurs on Mondays.

<b>Water Efficiency Activity</b>	<b>Activity Status</b>	<b>Annual Program Description</b>
Turf conversions on municipal properties	New	Transform non-essential turf at City properties and use water budgets and meter data to measure impacts.
Model landscape plans	Consider	Advertise Northern Water's model landscape plans or implement Longmont specific water wise landscape templates for both residential and commercial spaces.
<b>Education and Outreach</b>		
Utility Bill Ad	Ongoing	
Social media posts	Ongoing	
Digital newsletter	Ongoing	The Week in Longmont
Sustainability newsletter	Ongoing	
Conservation website	Ongoing	Routinely maintain and update.
City newsletter	Ongoing	Maintain newsletter, brochure and magazine outreach.
WaterWise Webinars	Ongoing	Partnership with Resource Central.
Public speaking opportunities	Ongoing	Work with Community and Neighborhood Resources, local HOAs, schools, etc.
Annual Water Fair	New	400 - 500 citizens impacted in 2024.
Tabling at community events	Ongoing	Host a water conservation table at environmental themed events.
Demonstration and example landscapes	Consider	Identify and advertise demonstration and exemplary waterwise landscapes throughout the community.
<b>Raw and Reuse Water</b>		
Conversion from potable to raw water irrigation	Ongoing	Continue to expand use of raw water where feasible from a legal, operational, and cost perspective.
Conversion from flood to center pivot on open space/agriculture properties	Ongoing	Evaluate opportunities to convert raw water irrigation from flood irrigation to center-pivot irrigation which uses less water.
Recycling of backwash water	Ongoing	Recycle backwash water from the water treatment process.
Optimization of reuse water	Ongoing	Optimize use of reuse water where legally and physically possible.

Longmont’s water efficiency activities encompass the full range of water demands across the community including indoor and outdoor use for both residential and non-residential customers. The specific number of incentives varies from year to year based on interest.

The activities are organized based on the categories established in the 2024 *Best Practices Guidebook for Municipal Water Conservation in Colorado*.<sup>8</sup>

## **5.1 PLANNING AND IMPLEMENTATION**

### **Water efficiency planning**

Efficient water use has been part of the City’s planning goals for almost three decades, starting with the City’s first Water Conservation Master Plan from 1996, the Water Conservation Master Plan Update in 2008, the 2017 Water Efficiency Master Plan Update, and this 2024 WEP. CWCB requests water providers such as Longmont to complete and submit an updated water efficiency plan every seven years.

### **Coordination with Sustainability Team**

In Longmont, the water conservation program is distinct from City’s Sustainability Team. However, water is included as one of the “pillars” of the City’s Sustainability Plan. The two groups hold quarterly meetings to discuss existing collaborative efforts and identify future opportunities for collaboration.

Collaborative efforts have also included:

- Monthly collaborative cross-departmental meetings
- Sustainability and Water Conservation co- table at City events
- Sustainability highlights Water Conservation in a quarterly newsletter

During this planning period, the Water Conservation Team and the Sustainability Team will continue their existing efforts while actively seeking new opportunities to enhance collaboration.

### **Water efficiency in City planning**

The Water Conservation Team seeks to align with City planning efforts to ensure water efficiency is integrated with other municipal functions and plans. Such planning efforts include: Utility water supply and master plans, Envision Longmont; Main Street Corridor Plan; Sustainability Plan; Parks, Recreation, and Trails Master Plan; Open Space Plan; Wildlife Management Plan; and others as specified.

### **Growing Water Smart coordination**

The Growing Water Smart workshop brought multiple City departments together to think about the role of water in planning. The Water Conservation Team will lead the coordination of the Growing Water Smart Leadership Team to leverage resources and promote water efficiency. This will include participation in quarterly Growing Water Smart meetings where routine updates are provided on water efficiency activities.

### **Engagement with land use planning**

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<sup>8</sup> <https://coloradowaterwise.org/BestPractices>

The Water Conservation Team will work with City planning staff to ensure language from the City's Water Efficiency Plan is included in the City's Comprehensive Plan and water efficiency is included in applicable land use City code updates.

## **5.2 MEASUREMENT AND DATA**

### **Annual summary of water efficiency efforts**

The Water Conservaton Team annually prepares a report summarizing the water efficiency program activities. Detailed records are maintained and the results along with updated water demand statistics are presented in an attractive summary report (one or two pages). The summary report is distributed to City staff, Water Board and City Council. Longmont staff continually seeks opportunities for collaboration in promoting water efficiency and implementing the program.

### **Water distribution system maintenance and repair**

Longmont's water distribution system includes approximately 65 miles of cast iron water mains (pipes). The City has historically replaced 1 – 2 miles of pipe a year. Starting in 2025, the City plans to replace 3 to 4 miles per year and gradually increase the rate of replacement to 5 to 6 miles per year with the target of replacing all cast iron pipe within the next 20 years. Longmont conducts annual pressure testing on main transmission lines and performs SCADA flow metering throughout each zone in the City to identify potential leaks and distribution system failures.

### **Leak monitoring, alerts, and notification**

Modern water meters installed by the City enable monitoring for continuous leakage and abnormal water use. Longmont staff routinely run a report of accounts "flagged" for continuous consumption that has been occurring for over 14 days. Staff then send a letter notifying customers of the "flag" and provides them tips on how to find and repair leaks. Customers with continuous consumption of more than 10 gallons per hour (summer) and 5 gallons per hour (winter) for 14 days receive a phone call from Customer Service Representatives. This practice will continue until an online water use portal is available for customers, which will automate the leak alert process. Reducing customer side leakage is an important area for future water efficiency improvements in Longmont.

### **Customer water use portal**

99% of Longmont customers are equipped with advanced AMR meters that can more frequently monitor water use and alert to potential leaks and/or abnormal use. Longmont's customer water use portal launched in August 2024, and in the coming years, customers will be able to sign up for automatic leak notifications.

### **Monitoring of City meter connections**

City meter connections greater than 3 inches in size are equipped with leak detection capability and are tested biannually to detect and address any leaks. This is an important leak detection capability and service for large water customers in Longmont.

### **AWWA M36 water audit**

Since at least 2019, Longmont has conducted an annual water audit based on the procedures and principles set forward in the industry-standard AWWA Manual of Practice M36 methodology. The audit is completed using free Excel-based software and provides an excellent annual check-up on water use and water system health. Longmont has taken the important further step to have these audits reviewed and validated by an independent validator. Annual water loss auditing with validation represents a significant improvement in Longmont's water management that has been recently accomplished. In 2025, the CWCB will require utilities, like Longmont, to submit a completed M36 water audit annually.

### **Metering**

All potable water service connections in Longmont are metered. Water for flushing is also metered and the City maintains flow monitoring stations on raw water intake points from natural streams which is required by the Colorado Division of Water Resources.

### **Water budgets for selected City properties**

Longmont staff plans to monitor water use on municipal properties that have been converted from non-essential turf to a waterwise landscape and to create water budgets for these properties. Metered consumption will be compared to the water budgets established following the turf conversion process to assess irrigation efficiency before and after conversion at individual municipal properties. If successful, this project could be extended to all City properties including parks.

## **5.3 RATES AND CHARGES**

### **Monthly billing with an inclining block rate structure**

As described earlier, the City bills its customers monthly in gallons using a four-tier inclining block rate structure for water and volumetric billing for wastewater. These are considered best practices. Longmont's rates are evaluated every four years through an independent rate study, with the most recent update conducted in 2024.

### **Conservation-oriented tap fees**

Through the 2024 rate study, Longmont hopes to investigate concepts for a conservation-oriented tap fee structure that both incentivizes efficient water use and supports affordable housing.

## **5.4 CODES AND REGULATIONS**

### **Water waste ordinance**

Longmont has a water waste ordinance, Chapter 14.04.490, that inhibits the waste of water.

### **Update of landscape code and irrigation design standards**

Longmont's landscape and open space code (Chapter 14.04.040) and irrigation design standards (603) are being revised and updated as part of a comprehensive process that includes the 2024 Del Corazon landscape code revision report. See Section 3.4 for additional information.

## **Irrigation schedule**

Chapter 14.04.450 of Longmont's code includes a voluntary water efficient watering schedule that can be mandatory under drought conditions.

## **Plumbing code**

Chapter 14.04.500 is Longmont's plumbing fixture code. This code is strengthened by legislation mandating WaterSense rated toilets and fixtures in Colorado.

## **5.5 INDOOR WATER USE EFFICIENCY**

### **Discounted fixtures, appliances and rebates**

Longmont offers discounted fixtures and aerators and rebates through a partnership with the Platte River Power Authority's Efficiency Works partnership. Longmont partners with Efficiency Works<sup>9</sup> to provide residential and commercial customers access to an online store for discounted shower heads and aerators and may also obtain rebates for clothes washers and toilets. Separate commercial fixture rebates are also offered. In the future this service could be offered by a different organization or service provider.

### **Incentives for businesses**

The PACE program offers technical/advisory support for businesses entailing 1) free water assessments, 2) giveaways of aerators and pre-rinse spray valves and 3) rebates for dishwashers & ice machines. Longmont partners with PACE to offer these services.

### **Toilet giveaways for small businesses**

Longmont's Sustainability program provides toilet giveaways to small businesses through door-to-door inquiry on the age of business' existing toilet(s) and desire for a new toilet.

### **Indoor commercial audits**

Northern Water offers water audits for commercial water users including reviews of the past water use, walkthroughs of facilities, detailed reports addressing water saving recommendations and provisions of high-efficiency showerheads, faucet aerators, and pre-rinse spray valves, where applicable. Longmont helps to advertise and promote this program among customers.

### **Water audits and improvements to indoor efficiency of City buildings**

Longmont is considering conducting indoor audits of designated City buildings followed by indoor water efficiency improvements and education to the public on indoor efficiency.

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<sup>9</sup> A collaboration of common efficiency programs between Estes Park Power and Communications, Fort Collins Utilities, Longmont Power and Communications, Loveland Water and Power and Platte River Power Authority.

## 5.6 OUTDOOR WATER USE EFFICIENCY

### **Garden in the Box**

Resource Central, a non-profit organization in Boulder County, provides professionally designed low water garden kits for homeowners to purchase and install. The City provides a discount up to an annual cap for each Longmont customer that purchases a kit.

### **Lawn Replacement Program**

Resource Central provides a lawn removal service for homeowners that agree to replace the lawn with low water use landscape. Longmont provides a discount up to an annual cap for each customer that participates in the program.

### **Slow the Flow Residential Sprinkler Evaluations**

Longmont funds Resource Central to offer a limited number of free irrigation system assessments and customer watering scheduling support each year.

### **Irrigation audits, landscape consultations, and grants**

Wholesale water provider Northern Water offers advanced irrigation audits for Longmont-approved commercial and municipal properties. Northern also provides free landscape consultations to its commercial customers which cover water use, landscape management and design, irrigation system performance, landscape planning, and maintenance.

### **Outdoor water efficiency discounts and rebates**

Efficiency Works provides an online store for discounted soil moisture meters, efficient spray nozzles, lawn and garden hose timers, and rain gages. Efficiency Works also provides rebates for weather-based irrigation controllers, rotary nozzles and drip conversion kits. Longmont advertises these programs to its customers.

### **Best practices and peak shaving at City parks and properties**

Longmont has established guidelines for irrigation programming for community parks, neighborhood parks right of ways, greenways, dryland areas and drip systems. These guidelines will be updated to discourage irrigation during the period of 11:00 p.m. to 5 a.m., but where it is feasible, to avoid all irrigation on City properties between 12 a.m. – 6 a.m. on Mondays. From a system capacity and operational efficiency perspective this change will shift demand and shave the peak that Longmont regularly experiences every Monday during this irrigation season. This is a simple, sensible, low-cost approach to peak shaving which has the potential to help avoid expansion of water treatment and storage capacity.,

### **Turf conversions on municipal properties**

Longmont recently developed a turf conversion plan in collaboration with WaterNow Alliance. It provides guidelines necessary to implement phased non-essential turf conversions on City-owned property. This plan will be implemented to convert non-essential turf to water-wise landscape. These turf conversions projects will play an important role in promoting water-wise landscapes to Longmont's customer base and demonstrate City accountability to a sustainable future. To optimize conversions, available funds and new partnership opportunities will be



leveraged. Priority areas for turf conversion include arterials and right-of-way landscapes. Following these municipal conversions, Longmont will reassess and decide whether to pursue non-essential turf conversions for HOAs and eventually on for residential properties.

### **Model landscape plans**

Northern Water (and others) have developed model landscape plans appropriate for Longmont. These plans are available for free download and will be publicized.

## **5.7 EDUCATION AND OUTREACH**

Longmont's dynamic water efficiency program uses a variety of media/venues to distribute information. Longmont's Water Efficiency Program aligns with the [Statewide Water Education Action Plan](#) and aims to foster a culture of water stewardship, empower residents with knowledge and tools to conserve water, and contribute to the sustainable management of water resources in the community.

The following three metrics are used as guidance when developing communication strategies and activities.<sup>10</sup>

1. Longmont community members can identify the following Critical Water Concepts<sup>11</sup>
  - The physical and chemical properties of water are unique and constant.
  - Water is essential for life, our economy, and a key component of healthy ecosystems.
  - Water is a scarce resource, limited and variable.
  - Water cycles naturally through Colorado's watersheds, often intercepted and manipulated through an extensive infrastructure system built by people.
  - The quality and quantity of water, and the timing of its availability, are all directly impacted by human actions and natural events
  - Water is a public resource governed by water law.
2. Longmont community members can identify how water supports their quality of life.
3. Knowledge of and participation in conservation programs continues to grow.

Longmont water conservation staff works closely with Communications, Sustainability and other departments in expanding communications and coordinating efforts. A variety of communication channels have been successfully used in the past and will continue to be implemented to educate customers and City staff on efficient water use. Longmont's water conservation communications and channels are provided in Table 5.1 below.

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<sup>10</sup> These metrics and educational activities were developed from input provided by Longmont staff. Staff were asked to identify the type of efficiency messages/information that should be conveyed to the public, who the education program should target and how the messaging should be done.

<sup>11</sup>Source:[https://www.watereducationcolorado.org/wp-content/uploads/2020/05/Critical-Water-Concepts-for-Colorado\\_5\\_8\\_2020.pdf](https://www.watereducationcolorado.org/wp-content/uploads/2020/05/Critical-Water-Concepts-for-Colorado_5_8_2020.pdf)

**Table 5.2 Communication Channels**

<b>Communication Media</b>	<b>Partners</b>	<b>Details</b>
Annual utility bill ad	Marketing and Communications	Attached to the Utility Bill once a year
Social media	Marketing and Communications	Strive to produce one social media post per week to increase program engagement
Digital newsletter (This Week in Longmont)	Marketing and Communications	Sent weekly to email subscribers and to the Times Call
Sustainability newsletter	Sustainability	Newsletter is sent quarterly to subscribers
Conservation website	Marketing and Communications	Routinely updated
City Newsletter (City Line)	Marketing and Communications	Monthly magazine sent to all Utility Bill addresses.
WaterWise Webinars	Resource Central	Promote Resource Central's WaterWise webinars.
Public speaking opportunities	Community and Neighborhood Resources	Attend meetings and guest speaking opportunities as applicable.
Annual Water Fair	Other relevant City departments and community groups	Attended by more than 400 people in 2024 (Figure 5-1)
Tabling at community events		Provide program information at environmentally themed events
Demonstration and examples landscapes	Parks	Identify and advertise demonstration and exemplary waterwise landscapes throughout the community.



**Figure 5-1: Dancers perform at Longmont Water Fair 2024**

Longmont’s water conservation education program focuses on targeted City staff, government, and specific customers that are instrumental to promoting water efficiency. The education program is being expanded and will formally target the following:

- **City Council** - Annual update with City Council on the water efficiency program. This may occur when the Drought Plan is being reviewed.
- **City staff** - Continue existing staff raw water tour and conduct annual water efficiency related training with City staff.
- **Neighborhood Groups Leadership Association (NGLA) and Neighborhood Leadership Series (NLS)**- Collaborate with the Community and Neighborhood Resources team to provide learning opportunities and speaking engagements for local neighborhoods and community members
- **Businesses** - Longmont's Sustainable Business Program supports and recognizes businesses making substantial efforts to reduce their environmental impact, act socially responsible, and contribute to the economic vitality of Longmont. Water is included this program but needs to be strengthened to better represent business water efficiency efforts.

- **Development community** - Engage with developers to help them understand City goals and how to become more water wise and sustainable. This includes an existing preferred planting list and other means of communication.
- **HOAs and property management companies** - Create and disseminate targeted information to HOAs and property management companies.
- **Homeowners** - Create a new homeowner's packet that informs new homeowners of rebates, water use, etc.
- **Children** - Annual Water Fair with Activities and Education Kits

## 5.8 RAW AND REUSE WATER

### **Conversion from potable to raw water irrigation**

Currently, raw water is available to irrigate approximately 27 City and community parks, 2 golf courses, and 18 schools, representing 56 percent of parks, 66 percent of golf courses, and 60 percent of schools; totaling approximately 2,036 acres. The City continues to expand its use of raw water where feasible from a legal, operational, and cost perspective. The City will update evaluation of bringing raw water irrigation to areas currently served by potable water in its 2025 and 2026 master planning effort.

### **Conversion from flood to center pivot on open space/agriculture properties**

The City is evaluating opportunities to convert raw water irrigation from flood irrigation to center-pivot irrigation which uses less water. City open space properties are leased to tenant farmers and use raw water for irrigation. This program has been initiated, and the City plans to continue its implementation on a case-by-case basis.

### **Recycling of backwash water**

Longmont recycles its backwash water from its water treatment process.

### **Optimization of reuse water**

The City has a water rights portfolio that allows for reuse of certain water rights and Windy Gap shares. Currently, the City uses downstream exchanges of its treated wastewater effluent return flows to allow for increased surface water diversions at its water treatment plant and other raw water supply ditches, for exchanges to increase its raw water supply and to meet required return flow requirements that result from water rights change cases. The City optimizes use of its reuse water where legally and physically possible.

## 6. IMPLEMENTATION AND MONITORING PLAN

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### 6.1 IMPLEMENTATION PLAN

The Water Conservation Specialist will lead the implementation of this Plan, coordinating efforts across City departments and working closely with the Growing Water Smart Team to ensure effective execution. The implementation timeline begins in 2025 (Year 1) and spans seven years, concluding in 2032, when the next water efficiency plan is due to the CWCB.

The Implementation Plan, Table 6-1, provides the approximate timing for implementation of the water efficiency activities described in detail in Section 5, over the next seven years. The Water Conservation Specialist will review the status of implementation halfway through the seven-year implementation period and reprioritize the timing of water efficiency activities based on input from other Longmont staff.

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**Table 6-1: Water efficiency activity: seven-year Implementation Plan**

Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Actions Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
<b>Implementation and Planning</b>				
Water efficiency planning	n/a	Update every seven years.	n/a	Initiate development of water efficiency plan near end of planning period.
Coordination with the Sustainability Team	Sustainability	Quarterly meetings to discuss collaborative efforts which include: 1. Monthly collaborative cross-departmental meetings 2. Sustainability and Water Conservation co- table at City events 3. Sustainability highlights Water Conservation in a quarterly newsletter 4. Sustainability and Water share a “water spot” in the Longmont newsletter.	Identify additional efforts for collaboration and modify actions accordingly.	Identify additional efforts for collaboration and modify actions accordingly.
Water efficiency in City planning	Other City departments	Engage in planning efforts including: Envision Longmont; Main Street Corridor Plan; Sustainability Plan; Parks, Recreation, and Trails Master Plan; Open Space Plan; Wildlife	Identify additional planning efforts for coordination where appropriate.	Identify additional planning efforts for coordination where appropriate.

Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Actions Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
		Management Plan; and the Button Rock Management Plan.		
Growing Water Smart Coordination	City departments participating in Growing Water Smart	Lead the quarterly City-Wide Growing Water Smart meetings where routine updates are provided on water efficiency activities.	Leverage new opportunities.	Leverage new opportunities.
Engagement with land use planning	Planning	Seek opportunities for engagement with Planning particularly through Growing WaterSmart efforts.	n/a	Ensure language from the 2024 WEP is included in the Comprehensive Plan.
Measurement and Data				
Annual summary of water efficiency efforts	n/a	Continue to develop annual summary reports.	Develop a one-pager summarizing the water efficiency program activities on an annual basis and distribute to City staff and City Council.	Assess annual outreach efforts to staff and City Council and make improvements to outreach efforts as appropriate.
Water distribution system maintenance and repair	Utilities	Continue best practices involving line replacement, pressure testing, and SCADA flow metering.	n/a	n/a



Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Actions Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
Leak monitoring, alerts, and notification	Utilities and Finance	Routinely run a report of accounts “flagged” for continuous consumption that has been occurring for over 14 days and notifying customers.	Continue until an online water use portal is available for customers, which will automate the leak alert process.	Continue until an online water use portal is available for customers, which will automate the leak alert process.
Customer water use portal	Longmont Power and Communications, Utility Billing	Continue coordination with Longmont Power and Communications and Utility Billing.	Develop customer portals using metered use data to empower customer to monitor water use and receive leak alerts.	TBD.
Monitoring of City meter connections	Utilities	City meter connections greater than 3 inches are equipped with leak detection capability and are tested biannually to detect and address any leaks.	n/a	n/a
AWWA M36 water audit	Utilities, Water and Waste Engineering	Initiated AWWA M36 accounting following CWCB's Water Loss Initiative Class.	Conduct annual AWWA M36 water audits and third-party verification on Longmont's distribution system.	TBD
Metering	Utilities and Finance	Conduct metering of system flushing and metering on raw water system.	n/a	n/a



Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Actions Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
Water budgets for selected City properties	Planning, Parks, Sustainability, Community and Neighborhood Resources	Conduct turf conversions (See Outdoor Water Use Efficiency actions in Section 5.6).	Monitor water use and create water budgets for turf converted on municipal properties for educational purposes.	Compare monitoring data to water budgets established following the turf conversion process to assess irrigation efficiency at individual municipal properties. Consider the development of water budgets on all City property, including parks, and monitor water use relative to budgets.
<b>Rates and Charges</b>				
Monthly billing with an inclining block rate structure	Finance	Continue customer monthly billing with a conservation-oriented block rate structure. Rates are evaluated every four years, with a rate study currently being conducted in 2024.	Potentially implement recommendations from 2024 rate study. Conduct 2028 rate study.	Potentially implement recommendations from 2028 study.
Conservation-oriented tap fees	Utilities, Finance, Planning	n/a	n/a	Investigate potential of developing conservation-oriented tap fee structure that both incentivizes efficient water use and supports affordable housing.

Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Actions Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
<b>Codes and Regulations</b>				
Water waste ordinance	Planning	Water waste ordinance, Chapter 14.04.490, inhibits the waste of water.	Consider review of water waste ordinance.	n/a
Update of landscape code and irrigation design standards	Planning	A 2024 Del Corazon landscape code revision report provides recommendations for landscape code updates.	Consider updating applicable City code to include water efficiency.	n/a
Irrigation schedule	Planning	Chapter 14.04.450 of Longmont's code includes a voluntary water efficient watering schedule that can be mandatory under drought conditions	Consider review of irrigation schedule.	n/a
Plumbing code	Planning	Chapter 14.04.500 is Longmont's plumbing fixture code	n/a	n/a
<b>Indoor Water Use Efficiency</b>				
Discounted fixtures, appliances and rebates	Efficiency Works	Continue to partner with Efficiency Works and promote the program among residential and commercial customers.	Evaluate program and consider modifications and other options if they emerge.	TBD

Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Actions Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
Incentives for businesses	Boulder County	Continue to partner with PACE program and promote it among commercial customers.	Target 15 per year.	Reassess & consider new target(s) if applicable
Toilet giveaways for small businesses	Sustainability	Implemented by the sustainability department. Provide toilet giveaways to small businesses through door-to-door inquiry on the age of business' existing toilet(s) and desire for a new toilet.	Replace up to 10 toilets and urinals per year (tank and flush valve)	Implemented by Sustainability Dept.
Indoor commercial audits with Northern Water	Northern Water	Continue to partner with Northern Water and promote the program among commercial customers.	n/a	n/a
Water audits and improvements to indoor efficiency of City buildings	Utilities	n/a	Consider conducting indoor audits of designated City buildings followed by indoor water efficiency improvements and education to the public on indoor efficiency	TBD
<b>Outdoor Water Use Efficiency</b>				

Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Actions Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
Garden in the Box	Resource Central	Continue to partner with Resource Central, promoting Garden in Box and providing discounts.	Target 300 rebates per year.	Reassess and consider new targets.
Lawn Replacement Program	Resource Central	Continue to partner with Resource Central, promoting the Lawn Replacement Program and providing discounts.	Target 50 rebates per year.	Reassess and consider new targets.
Slow the Flow Residential Sprinkler Evaluations	Resource Central	Continue to offer residential sprinkler evaluations through Resource Central.	Target 150 audits per year.	Reassess and consider new targets.
Irrigation audits, landscape consultations and grants	Northern Water	Continue to partner with Northern Water and promote irrigation audits, landscape consultations, and grants among commercial customers.	Target 15 per year.	Reassess and consider new targets.
Outdoor water efficiency discounts and rebates	Efficiency Works	Continue to partner with Efficiency Works and promote the program among residential and commercial customers.	Evaluate program and consider modifications and other options if the emerge.	TBD
<b>Best practices and peak shaving at City</b>	City Parks	Continue to collaborate with City Parks on water efficient best practices.	Modify irrigation schedule on City parks to reduce peak demands on Monday.	n/a

Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Action Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
<b>parks and properties</b>				
Turf conversions on municipal properties	Planning	Longmont recently developed a turf conversion plan in collaboration with WaterNow Alliance.	Leverage partnerships and funding opportunities to implement the turf conversion plan focusing on arterials and right-of-way landscapes (municipal conversions).	Assess turf conversions performed and decide whether to pursue non-essential turf conversions on 1) HOAs and eventually on 2) residential properties.
Model landscape plans	Planning	Longmont has developed model landscape templates that developers and residents may view for design ideas.	Consider advertising the model landscape plans to residential customers and developers	If applicable, access utilization of landscape plans and make modifications to advertisement/plan, if appropriate
<b>Education and Outreach</b>				
See Table 5.2.				
<b>Raw and Reuse Water</b>				
Conversion from potable to raw water irrigation	Parks	Continue to expand use of raw water where feasible from a legal, operational, and cost perspective.	n/a	n/a
Conversion from flood to center pivot on open	Parks, Open Space and Trails	Evaluate opportunities to convert raw water irrigation from flood irrigation to center-pivot irrigation	n/a	n/a

Water Efficiency Activity	Partners	Target and Action Items During Designated Period		
		Historical and Current Ongoing Actions through Planning Period	Actions Specific to First Portion of Planning Period	Action Specific to Second Portion of Planning Period
			2025-2028	2028 - 2032
space/agricultural properties				
Recycling of backwash	Utilities	Continue to recycle backwash water during the water treatment process.	n/a	n/a
Optimization of reuse water	Utilities	Continue to maximize use of reuse water where legally possible and feasible.	n/a	n/a

## 6.2 MONITORING PLAN

Water efficiency planning is most effective when it is managed as an adaptive continuous process where routine monitoring and adjustments can be made to the implementation. Monitoring provides the necessary information decision-makers need to make adjustments that improve the water efficiency program under continuously evolving conditions. The collection and organization of data is instrumental in the success of this monitoring plan.

Table 6-2 lists data to be collected on an annual basis. Additionally, the following data will be collected on an annual basis:

- Daily, monthly, and annual totals of treated water production.
- Monthly and annual total treated metered water uses by billing customer category.
- Population served (This can be used to calculate per-capita water demands).
- Monthly and annual deliveries used for raw water irrigation.
- Annual estimates of water savings for water efficiency activities where savings can reasonably be measures and/or estimated.
- Development within the service area. This may include the annual change in service area residential population, number of new homes built, commercial properties developed, and acres of new irrigated lands on City parks and other open spaces.
- Feedback from the public. These may include comments at seminars or public meetings concerning water efficiency, e-mail/mail correspondence, etc. that provide valuable information on the public’s perception of the water efficiency measures/programs.

**Table 6-2: Water efficiency plan monitoring**

<b>Water Efficiency Activity</b>	<b>Data Collection Description</b>
<b>Planning and Implementation</b>	
Water efficiency planning	Annual monitoring discussed in this section. Update Plan every 7 years.
Coordination with Sustainability Team	Data collection opportunities will be identified as the coordination process is developed (e.g. population projections, planned development activities, etc.)
Water efficiency in City planning	
Growing Water Smart coordination	
Engagement with land use planning	
<b>Measurement and Data</b>	
Annual summary of water efficiency efforts	Summary shall highlight results of data collected through the monitoring process along with key activities of the public outreach process.
Water distribution system maintenance and repair	Type and location of repairs and maintenance activities.

<b>Water Efficiency Activity</b>	<b>Data Collection Description</b>
Leak monitoring, alerts, and notification	Number of notifications distributed and repairs,
Customer water use portal	Customer leak alerts,
Monitoring of City meter connections	Changes to metering, leaks identified through metering,
AWWA M36 water audit	Annual M36 water distribution system audit and verification,
Metering	System flushing: Record of system flushing performed; amount of water used for flushing. Raw water distribution system: Changes to metering, leaks identified through metering, new meters.
Water budgets for selected City properties	Water budgets for municipal turf conversions and accompanying metered water use.
<b>Rates and Charges</b>	
Monthly billing with an inclining block rate structure	Record of water rates over time.
Conservation-oriented tap fees	If applicable, study conducted and record of utilization of tap fees over time.
<b>Codes and Regulations</b>	
Water waste ordinance	Number of citations (if applicable).
Update of landscape code and irrigation design standards	n/a
Irrigation schedule	n/a
Plumbing code	n/a
<b>Indoor Water Use Efficiency</b>	
Discounted fixtures, appliances and rebates	Annual budget, number and type of fixtures and incentives, number of participants.
Incentives for businesses	Number of non-residential and small business efficiency upgrades.
Toilet giveaways for small businesses	Number of sponsored incentives for commercial fixtures.
Indoor commercial audits with Northern Water	Number of evaluations, who received, when received, estimate of impacted landscaping area, costs.
<b>Outdoor Water Use Efficiency</b>	
Garden in the Box	Number of gardens and costs.
Lawn Replacement Program	Number of turf replacements and costs.



<b>Water Efficiency Activity</b>	<b>Data Collection Description</b>
Slow the Flow Residential Sprinkler Evaluations	Number of evaluations, estimate of impacted landscaping area and costs.
Irrigation audits, consultations and grants	Number of evaluations, estimate of impacted landscaping area, and costs.
Outdoor water efficiency discounts and rebates	Annual budget, number and type of fixtures and incentives, and number of participants.
Best practices at City parks and properties	List of practices, lessons learned, and modifications made on annual basis
Turf conversions on municipal properties	Number of approved turf replacement. incentives, when replaced, square foot of turf removal, rebate applications, and costs.
Model landscape plans	Number of hits received on model landscape plans advertised on conservation website.
<b>Education and Outreach</b>	
Public outreach	Record content provided in annual report.
<b>Raw and Reuse Water</b>	
Conversion from potable to raw water irrigation	Documentation of activities.
Conversion from flood to center pivot on open space/agriculture properties	Documentation of activities.
Recycling of backwash water	Amount of recycled water on annual basis.
Optimization of reuse water	Activities conducted to optimize reuse.

## 7. ADOPTION OF NEW POLICY, PUBLIC REVIEW AND FORMAL APPROVAL

### 7.1 PUBLIC REVIEW

#### WILL BE COMPLETED WHEN REVIEW IS FINAL

Public participation and action is critical to the success of Longmont’s water efficiency efforts as many of the measures and programs rely on residents to utilize programs and modify water use behaviors. Longmont posted a draft copy of the 2024 WEP on its Engage Longmont website on \_\_\_\_\_, followed by a 60-day public review and comment period from \_\_\_\_\_ to \_\_\_\_\_.

A public review process of no less than sixty days after the date on which the draft Plan is made publicly available is required for all CWCB-approved plans per C.R.S. 37-60-126 (5).

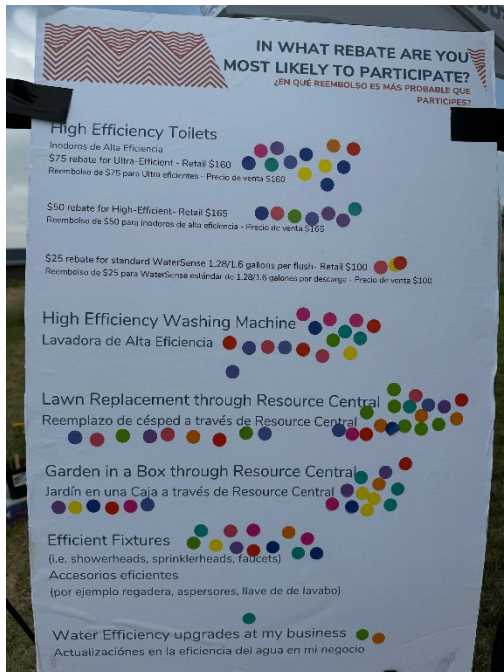
The public review process included outreach prior to the mandatory 60-day review period. At the 2024 Water Fair, residents provided feedback of conservation program and landscape transformation options.



One question (in English and Spanish) asked about water issues that are most important to Longmont residents. Responses included:

- Water quality
- Water conservation and prevention of overuse
- Adaptation to impacts of climate change
- Having enough water for everyone and the environment
- PFAS and microplastics
- Support for local fish and wildlife populations
- The cost of water
- More efficient water use in agriculture and cattle
- Enough water to survive

A second question asked about rebate incentives and which program a customer would most likely participate in. The responses are shown and tabulated below:



- Respondents were most interested a higher rebate for a more efficient toilet with 55% preferring a \$75 rebate for an ultra-efficient toilet and 32% preferring a \$50 rebate for a high-efficiency toilet.
- High efficiency washers received 16 votes.
- Lawn replacement through Resource Central received 27 votes.
- Garden in a box through Resource Central received 18 votes.
- Efficient showerheads and faucets received 13 votes.
- Business efficiency upgrades received 2 votes.

The third question asked residents about what the future Longmont landscapes should look like. Three choices were offered. The results were:

- Traditional turf – 8 votes (10%)
- Waterwise color - 61 votes (75%)
- Native grass – 12 votes (15%)

While not scientific, this feedback was utilized in ensuring the offerings in the 2024 WEP meet the needs and expectations of the Longmont community. This public outreach effort and the resulting public feedback garnered a much higher participation rate over former public outreach efforts that traditionally used open house formats.



## **7.2 LOCAL ADOPTION AND CWCB APPROVAL**

### **WILL BE COMPLETED WHEN REVIEW IS FINAL**

Longmont’s Water Board reviewed and provided input at their meeting on October 21, 2024. Longmont’s Sustainability Advisory Board reviewed and provided input at their meeting on November 20, 2024. On December 10, 2024, the Longmont City Council [REDACTED]. A copy of the Council Resolution adopting the 2024 Water Efficiency Plan Update is included at the end of this document.

## **7.3 PERIODIC REVIEW AND UPDATE**

Colorado House Bill 04-1365 requires all water providers with annual demands of 2,000 AF or more have an approved Water Conservation Plan on file with the State. In addition, the Bill stipulates that water providers review and update their plans no less than every seven years. Longmont plans to fully review and update the 2024 WEP in 2031 in order to have an updated plan on file by 2032.

As described above, water conservation data activities will be monitored and evaluated on an ongoing basis and an annual report will be compiled, complying with HB-1051 reporting requirements. These efforts will assist Longmont in making modifications to their water conservation activities, where necessary, to continue to improve their program. Additionally, changes in technology, state and federal laws, public perceptions, climatic conditions, and financial considerations, among others, may impact the City's water efficiency program. The 2024 Water Efficiency Plan Update is not meant to be a static document, but rather a guidance document to enable the City to meet its water savings goals. Modifications made to the program will be documented in the following year's annual conservation report.

## 8. COMPLIANCE WITH STATE PLANNING REQUIREMENTS

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### 8.1 STATUTORY REQUIREMENTS

C.R.S. Section 37-60-126 requires a covered entity to develop, adopt, make publicly available, and implement a water conservation plan that will encourage its domestic, commercial, industrial, and public facility customers to use water more efficiently. According to the statute, a “covered entity” is a “municipality, agency, utility, including any privately owned utility, or other publicly owned entity with a legal obligation to supply, distribute, or otherwise provide water at retail to domestic, commercial, industrial, or public facility customers, and that has a total annual demand for such customers of two thousand acre-feet or more”.

Key elements that must be fully evaluated through the plan development are listed below:

- 1) Water-saving measures and programs.
- 2) Role of conservation in entity’s supply planning.
- 3) Plan implementation, monitoring, review, and revision.
- 4) Future review of plan within seven years.
- 5) Estimated savings from previous conservation efforts as well as estimates from implementation of current plan and new plan.
- 6) Best practices for water and land use planning.
- 7) A 60-day minimum public comment period (or other time period based on local ordinance).

### 8.2 LONGMONT WATER EFFICIENCY PLAN COMPLIANCE

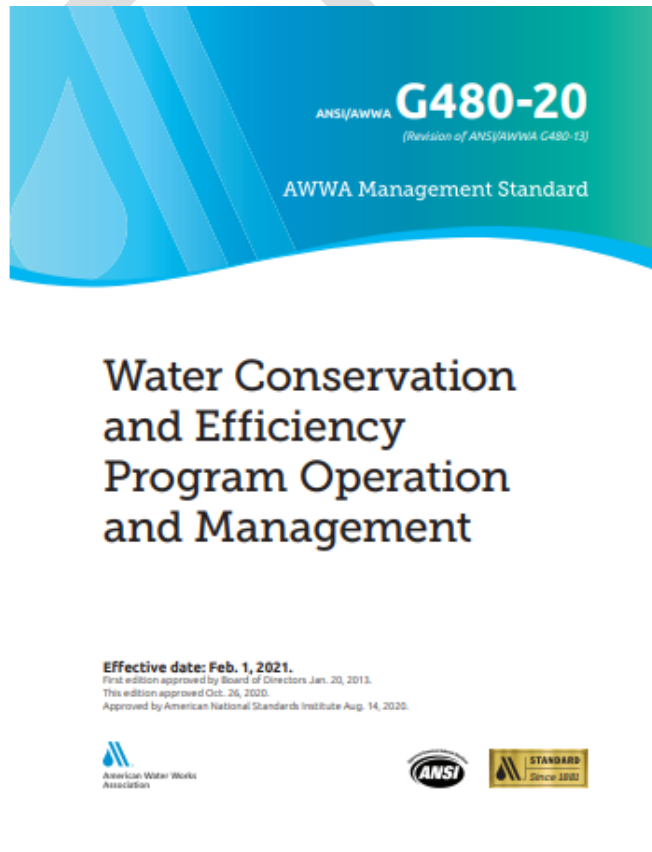
Longmont developed the 2024 Water Efficiency Plan Update in order to comply with C.R.S. Section 37-60-126. Each element of compliance is documented below.

- 1) Water-saving measures and programs.
  - I. Longmont implements a wide array of water saving measures described in this Plan including turf replacement, indoor fixtures, outdoor efficiency and more.
- 2) Role of conservation in entity’s supply planning.
  - I. Water efficiency planning is fully integrated into overall water supply planning in Longmont as evidenced by plans dating back to 1996.
- 3) Plan implementation, monitoring, review, and revision.
  - I. Longmont prepares an annual report summarizing water conservation and efficiency activities.
  - II. Adjustments to the water efficiency program are made annually as required.
- 4) Future review of plan within seven years.
  - I. Longmont has prepared water efficiency plan updates every 7 years, including this plan.
- 5) Estimated savings from previous conservation efforts as well as estimates from implementation of current plan and new plan.

- I. Per capita water use has steadily declined in Longmont since the first water conservation plan was implanted in 1996. Estimated water savings exceed the original goals set out for the program.
- 6) Best practices for water and land use planning.
  - I. Longmont has completed the Growing Water Smart workshop and is in the process of implementing water and land use planning measures.
- 7) A 60-day minimum public comment period (or other time period based on local ordinance).
  - I. Completed as described in Appendix A.

### 8.3 G480-20 WATER CONSERVATION STANDARD COMPLIANCE

Longmont implements all of the foundational water efficiency measures described in the AWWA G480-20 Water Conservation Program and Management Standard (2020)<sup>12</sup>, including full metering, monthly billing, a conservation-oriented water rate structure, ordinances and design standards focused on water efficiency, and an established water efficiency program. Table 8-1 lists the provisions in the G480-20 standard and explains how Longmont’s program meets or exceeds these requirements.<sup>13</sup>



<sup>12</sup> ANSI/AWWA G480-20 Water Conservation and Efficiency Program Operation and Management. Effective date: Feb. 1, 2021.

<sup>13</sup> For more than 10 years, Peter Mayer, P.E., Principal of WaterDM has served on the committee that develops the G480-20 standard.



**Table 8-1: City of Longmont ANSI/AWWA G480-20 Water Conservation Standard Compliance**

<b>G480 Item No.</b>	<b>Item</b>	<b>Meets Standard?</b>	<b>Comment</b>
<b>4.1</b>	<b>Regulatory Requirements</b>		
4.1.1	Meet/exceed utility regulatory requirements.	Yes	Full compliance with all relevant regulatory requirements for water quality and reporting.
<b>4.2</b>	<b>Top-Level Organizational Functions</b>		
4.2.1	Staff for conservation initiatives	Yes	1 FTE dedicated to water conservation and efficiency.
4.2.2	Water conservation and efficiency planning	Yes	Conservation plans approved by CWCB 1996, 2008, 2017, 2024.
4.2.3	Water conservation and efficiency in IRP	Yes	Even before 1996, Longmont has included water conservation and efficiency in long term planning.
4.2.4	Water shortage or drought plan	Yes	2024 Water Supply and Water Shortage Implementation Plan. Annual review and approval of plan and drought level.
4.2.5	Public information and education program	Yes	Newsletter, annual water fair, bill stuffers, web site, and much more.
4.2.6	Water waste ordinance	Yes	Yes, available for implementation during drought or supply emergency.
<b>4.3</b>	<b>Internal Utility Action and Requirements</b>		
4.3.1	Metering all sources and service connections.	Yes	
4.3.1.1	Universal customer metering	Yes	Meters are regularly serviced and tested for accuracy as per AWWA recommendations.
4.3.1.2	Source water metering	Yes	All sources are measured.
4.3.2	Conservation-oriented rate structures	Yes	

<b>G480 Item No.</b>	<b>Item</b>	<b>Meets Standard?</b>	<b>Comment</b>
4.3.2.1	Water	Yes	Inclining block rate structure
4.3.2.2	Wastewater/sewer	Yes	Volumetric billing
4.3.3	Billing Practices		
4.3.3.1	Monthly billing	Yes	
4.3.3.2	Volume clearly shown in gallons	Yes	
4.3.3.3	Estimated reads kept to a minimum	Yes	
4.3.4	Landscape efficiency programs	Yes	
4.3.4.1	Design, installation, and maintenance practices	Yes	Efficiency Works, Garden in a Box, turf conversion plan, Northern Water landscape support.
4.3.4.2	Irrigation scheduling	Yes	City parks and properties carefully managed. Scheduling support available for residents including smart controllers.
4.3.4.3	Landscape water budgets	Yes	For City properties. Concept used to understand outdoor use.
4.3.4.4	Landscape transformation	Yes	Garden in a Box, turf conversion, raw water conversions,
4.3.5	Water loss control program	Yes	
4.3.5.1	Utility water audit	Yes	Annual audit completed
4.3.5.2	Water audit validation	Yes	In process. A goal of this plan is to incorporate audit validation.
4.3.5.3	Public availability	Yes	Longmont will report audit to CWCB annually as required.
<b>4.4</b>	<b>External Policies</b>		
4.4.1	Water efficiency in building codes and standards	Yes	Colorado is a WaterSense state.
4.4.2	Land use and water efficiency planning	Yes	Del Corazon report. In progress landscape code update.



## 9. CITY COUNCIL RESOLUTION

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WILL BE COMPLETED UPON CITY COUNCIL APPROVAL

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