CITY COUNCIL COMMUNICATION

MEETING DATE: July 23, 2024 **ITEM NUMBER:** 12.**{{item.number}}**

SECOND READING: **{{customfields.ResoOrdNumber}}**

TYPE OF ITEM: General Business

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SUBJECT/AGENDA TITLE:
2024 Water Rate Study – Capital Program and Asset Management

EXECUTIVE SUMMARY:
Staff presented an introduction to Water Rate Studies on May 28, 2024. This presentation continues the discussion on the financial needs of the utility with a focus on asset management and proposed capital projects. These proposed capital expenditures, together with the operating expenses discussed on May 28th, comprise the revenue requirements that will be allocated to customer classes through a cost-of-service analysis. The Water Utility proposes a Capital Improvement Plan each year as part of the budget process. A portion of the proposed capital plan may be targeted at expanding utility systems to meet future needs, while other projects focus on the maintenance of existing Infrastructure.

The proposed CIP includes work at the Nelson Flanders Water Treatment Plant to provide redundant systems reducing the risks of a single water treatment plan, Montgomery Tank replacement as well as an increase in the number of miles of water distribution pipe replaced each year. The expansion of treatment capacity at Nelson Flanders is now contemplated in the four to five-year range to allow for flexibility in funding. Projects have also been identified at Ralph Price Reservoir over the next five years as the systems are reaching 60 years old.

Staff will perform the rate analysis based on the cost of service and bring additional rate information in August and September for Council's consideration.

COUNCIL OPTIONS:
Information only

RECOMMENDED OPTIONS:
N/A

CITY COUNCIL COMMUNICATION

FISCAL IMPACT & FUND SOURCE FOR RECOMMENDED ACTION:
N/A

BACKGROUND AND ISSUE ANALYSIS:
The City of Longmont enjoys the benefits of safe and reliable drinking water with some of the most affordable rates on the Front Range. Safe drinking water for our community is a product of high-quality source waters, robust treatment, and resilient distribution systems. The water system is operated and maintained in its entirety by the City of Longmont and is funded predominantly by monthly water rates.

In June, Business Enablement, in conjunction with Water and Waste Services introduced the rate-setting process to Council. The three major costs for the Water Fund include operations, capital improvements, and debt service. The operating costs of the utility have increased over time, generally following inflation rates, and represent approximately 58% of annual expenditures in the Water Fund. Capital improvements account for approximately 29% of the annual expenditures with the remainder covering debt service. The main drivers associated with capital improvements include the need to expand treatment and delivery capacity, increasing the reliability and resiliency of the water systems, and continued replacements of aging assets.

Current Capital Projects

Over the past five years, the Water Utility has been able to complete several large projects to the benefit of the entire city. The Price Park Tank Replacement project also identified in the capital plan as WTR183, is nearing completion and will be in service before the end of 2024. This project provides additional storage capacity as well as flexibility and resiliency for operating the water distribution system. The total cost of the project, when completed, will be $23.8 million.

Additionally, the water line replacement project (WTR066) has renewed over five miles of water line for $10.8 million since 2020. The replacement of aging water lines has improved water service and reduced the risk of main line breaks in many areas of town. Water line replacements in and around Coffman Street were coordinated with the overall street and corridor improvements to secure the longevity of the entire project and minimize disruptions to businesses and residents.

Another large project that is not directly reflected in the capital plan is the Windy Gap project referred to in the five-year CIP as WTR172. The City has secured 7,500 acre-feet of storage as part of the total Chimney Hollow Reservoir capacity of 90,000 acre-feet. The total construction cost is estimated at $565 million of which Longmont's participation level is $47 million. The total cost of the Windy Gap Firming Project to the city, including payments made

throughout the design and permitting process, is projected to be $70 million. This project, along with the city's other storage rights, provides the firm capacity for the city to provide water through an anticipated ten-year period of drought.

Proposed Capital Projects

All of Longmont's water is treated at the Nelson-Flanders Water Treatment Plant (NFWTP). The Wade Gaddis Water Treatment Plant (WGWTP) has aged beyond its lifecycle. It is maintained in an emergency standby status in the event of a significant unplanned event that prevents Nelson Flanders from supplying the full water demand requirement. The WGWTP has not been actively used for several years and, in short, has reached the end of its useful life. NFWTP has a rated capacity of 40 million gallons per day (MGD), and the average summer peak demand has been between 30 to 32 MGD with the highest peak of 35 MGD occurring in 2011. As Longmont's population grows, the total water demand will increase to a point where the treatment capacity of 15 MGD that was previously available to be supplied by the WGWTP would be required on a regular basis. Although that is not expected to occur in the next five years, the planning horizon for expanding the NFWTP begins now. Water and Waste Services is currently undertaking an update to the 2019 Water Demand Evaluation to determine future treatment requirements. A preliminary review of the data indicates that while the population has continued to grow, water use per capita has decreased over the last two decades. The water conservation efforts of the city have curtailed a large increase in water use, which has delayed the requirement to expand treatment capacity providing flexibility to address more pressing needs.

In 2020, the public approved the issuance of $80 million in bonds for water projects. The city issued $48 million in 2021 for a host of projects, including the expansion of Nelson Flanders, with the intent to decommission Wade Gaddis. Through the design process, cost estimates exceeded the original conceptual budget. Staff evaluated the project priorities and presented a revised CIP schedule to Council in November 2023, which included:

1. 2024 Redundancy improvements internal to Nelson Flanders - $3 to $5 million
2. 2025/2026 Nelson Flanders site work including an additional forebay and Highland Ditch improvements - $15 to $20 million
3. 2025/2026 replacement of the Montgomery Tank $35 to $40 million

Based upon the Water Demand Evaluation, there is flexibility to delay the ultimate expansion of the treatment facility out to 2029. It is important to note that the expansion at NFWTP is necessary in the near term to address reliability concerns related to Wade Gaddis' asset condition even though the water demand has provided timing flexibility for the expansion project. The remaining $32 million of bonding approved in 2020 will need to be sold for the NFWTP site work, and an additional bond of approximately $65 million will be needed to complete the 15 MGD near-term expansion of Nelson Flanders.

The replacement of water lines throughout the city is budgeted annually through the Water Line Rehabilitation and Improvements which is referred to in the five-year CIP as WTR066. A replacement schedule is produced based on the age and condition of pipes, as well as break history. Though the specific water line segments replaced each year varies, the program as a whole is ongoing and will increase in the future as pipes installed during development boom cycles age. In the past, replacements have been accomplished at a rate of approximately one mile per year. With a total of 460 miles of treated water lines within the city of which approximately 60 miles are cast iron pipe that has reached its anticipated useful life, there is a need to increase the rate of replacement. Older cast iron pipe poses a risk of increased breaks and longer possible outage times. With the goal of removing all cast iron pipe within 20 years, the 2025-2029 CIP proposes to increase the replacement of cast iron pipe to a rate of approximately four miles per year.

Water storage tanks are another major asset for the city. The Montgomery Tank is a 6-million-gallon steel tank that was originally constructed in 1968 and is reaching its useful life. WTR191 (Montgomery Tank Replacement) is currently in design and anticipated to start construction in 2026. This project is funded by the 2020 water bonds and is part of the reprioritization of the Nelson Flanders expansion project.

The proposed five-year Capital Improvement Plan will be presented to Council in the near future. The following table outlines the expected projects and related costs.

Water Rate-funded Capital Plan

Funded

Project #	Description	2025	2026	2027	2028	2029
PBF001	Municipal Buildings Roof Improvements	0	0	0	0	228,010
PBF080	Municipal Buildings Boiler Replacement	102,323	55,752	94,536	7,575	7,878
PBF082	Municipal Buildings HVAC Replacement	27,441	0	0	0	11,161
PBF119	Municipal Buildings Flooring Replacement	0	4,500	0	0	0
PBF192	Operations & Maintenance Building/Site Improvement	201,500	2,186,650	0	0	0
PRO200	Public Education and Interpretive Signage	19,000	0	19,000	0	19,000
WTR066	Water Distribution Rehabilitation and Improvements	8,986,790	7,551,500	6,785,080	8,022,170	12,011,540

WTR155	Water Treatment Plant Improvements	100,000	100,000	100,000	150,000	150,000
WTR164	Water Utility Monitoring and Control System	66,000	158,400	2,706,000	858,000	1,551,000
WTR173	Raw Water Irrigation & Park Pond Improvements	400,000	2,000,000	2,000,000	0	0
WTR181	Raw Water Transmission Rehab & Improvements	282,500	1,363,500	404,000	959,500	0
WTR182	Raw Water Flow Monitoring & Automation	30,000	510,000	510,000	30,000	0
WTR188	Regional Potable Water Interconnections	0	0	0	0	1,400,000
WTR194	Ralph Price Reservoir Improvements	250,000	303,000	403,000	2,063,000	5,000,000
WTR198	Meter and AMR Replacement	1,125,000	1,200,000	1,275,000	1,350,000	1,425,000
	Total:	**11,590,554**	**15,433,302**	**14,296,616**	**13,440,245**	**21,803,589**

Fee-funded Capital Plan

Funded

Project #	Description	2025	2026	2027	2028	2029
DRN039	Resilient St Vrain Project	28,000	108,000	0	0	0
PRO211	Prairie Dog Barrier Replacements	212,100	0	0	0	0
PRO212	Water Efficiency Projects for Ag Open Space Prop	0	100,218	0	0	0
WTR137	Union Reservoir Land Acquisition Program	50,000	50,000	50,000	50,000	50,000
WTR179	Water System Oversizing	50,500	50,500	50,500	50,500	50,500
WTR188	Regional Potable Water Interconnections	0	0	0	0	600,000
WTR196	Southern Water Supply Project Pipeline II	0	0	0	0	500,000
	Total:	**340,600**	**308,718**	**100,500**	**100,500**	**1,200,500**

Overall, the Water and Waste Department strives to provide excellent water service to the citizens of Longmont in a cost-effective and proactive manner. The city's water conservation efforts have provided flexibility to prioritize the effective use of the funds collected through rates and fees to meet the ongoing operational and capital needs.

CITY COUNCIL COMMUNICATION

ATTACHMENTS:
None