



Water Utilities (Water Treatment & Distribution) 10-Year Capital Infrastructure Needs Assessment

March 2026 (Revised on April 2026)

1. Service Overview

The Water Treatment and Supply service is a highly regulated and essential function that ensures the provision of safe, high-quality drinking water to over 1.4 million residents in Calgary and the surrounding region. This service operates continuously, supported by an integrated system of treatment plants, pipelines, pumping stations, and skilled personnel who work around the clock to safeguard public health. Through strategic investments, proactive maintenance, and innovative practices, the service delivers reliable and aesthetically pleasing water while protecting source water and planning for future demand in the context of population growth and finite resources. In alignment with industry trends across North America, the service prioritizes climate change adaptation, source water quality protection, renewal of aging infrastructure, and the adoption of advanced digital technologies to ensure long-term sustainability and resilience.

2. Strategic Alignment

The proposed capital investments are directly influenced by several Council-approved and corporate strategies, priorities and objectives, that directly influence and support the overarching goals of The City of Calgary. These investments are designed to enhance the quality of life for Calgarians, improve operational efficiency and foster sustainable growth.

- **Municipal Development Plan:** Ensures water infrastructure keeps pace with city growth by expanding services to new areas, upgrading existing systems, and promoting reliability, safety, and resilience. Key policies focus on integrated water management, conservation, and sustainable servicing to support redevelopment and future development across Calgary.
- **Calgary Drought Resilience Plan (2023):** Focuses on reducing water demand and improving resilience through investments in water loss reduction and advanced metering infrastructure.
- **Water Efficiency Plan:** Aims to enhance efficiency and resilience by reducing demand, upgrading infrastructure, and improving leak detection, with updates underway to set new priorities.
- **Water Security Plan:** Safeguards water resources by managing long-term risks, installing advanced meters, and implementing measures to reduce water loss and demand.
- **Source Water Protection Plan:** Proactively protects public health and source watersheds while addressing environmental stewardship and impacts of land use changes.
- **2023-2026 Climate Strategy:** Integrates climate adaptation into water management by improving efficiency, conservation, and infrastructure resilience.
- **The Water Long-Range Plan (WLRP):** Establishes design criteria and a roadmap for future water supply, treatment, and transmission infrastructure to meet demand and guide capital investments.

- **OneWater Strategic Plan:** Develops a long-term integrated strategy for water, wastewater, and stormwater to optimize investments, improve environmental outcomes, and enhance reliability.

3. Service Risks

The Water Treatment and Supply Service faces significant challenges that could impact reliability, availability, and quality of service as Calgary continues to grow. These risks require proactive management and strategic investment to ensure safe, reliable, and sustainable water delivery for customers.

Reliability and Availability Risks

- **Infrastructure nearing capacity:** Rapid population growth is placing pressure on existing infrastructure, creating a high risk of insufficient capacity and/or system redundancy, which could lead to water restrictions and reduced service levels. To mitigate this, major investments are planned in expansions to the water transmission system to support both growth and redundancy, a new water treatment plant, and water loss reduction measures to maintain service reliability for a growing city and region.
- **Aging infrastructure:** As infrastructure ages, the likelihood of failures and service disruptions increases. This risk is being addressed through significant upgrades to mains, pumping stations, and treatment facilities, alongside enhanced asset management and preventative maintenance programs.

Quality Risks

- **Drinking water quality:** Contamination or degradation of drinking water due to infrastructure issues, environmental factors, or operational failures poses a serious risk to public health, regulatory compliance, and customer trust. Investments in the drinking water system will strengthen safeguards and ensure safe, high-quality water delivery.
- **Source water variability:** Changes in source water quality or contamination can lead to water scarcity, health risks, and higher treatment costs, ultimately reducing service quality. To address this moderate risk, measures are being implemented to protect source waters and maintain long-term sustainability.

4. Service Objectives

Water Treatment and Supply's service objectives and in turn capital investments respond to the strategic direction outlined in Section 2 and the service risks identified in Section 3. The service is committed to delivering high-quality drinking water that is reliable and sustainable now and for future generations.

Water Treatment and Supply's service objectives include:

- **Ensuring a dependable, resilient and well-maintained water system** by investing in the renewal and long-term stewardship of critical infrastructure. Water Services assesses the condition and criticality of transmission mains, distribution mains and service lines to guide investments that maintain safe and consistent performance. Critical mains receive regular reassessments and continuous monitoring, while mid-tier assets are maintained to "fair" or better. Lower criticality assets, such as individual service lines, are managed through a risk-based approach and repaired as needed. Ongoing development of the Strategic Asset Management Plan (SAMP) and Tactical Asset Management Plans (TAMPs) will refine asset condition targets and guide future service levels. By aligning investments with asset criticality and condition, the utility supports a dependable water system for a growing city.

RELIABILITY / AVAILABILITY

- **Maintain reliable service:** Maintain dependable service by investing in treatment and distribution systems, strengthening asset management practices and advancing distribution main replacement and water loss reduction programs.
- **Increase treatment and transmission capacity:** Expand treatment and transmission capacity to keep pace with regional growth through optimization upgrades at existing plants, major transmission system investments, planning for a new water treatment plant and measures to reduce water loss.

QUALITY

- **Achieve full regulatory compliance:** Maintain 100% compliance with provincial and federal drinking water regulations through resilient infrastructure, rigorous maintenance standards and ongoing improvements to ensure safe, high quality water for customers.

5. Previously Approved and Capital Infrastructure Needs

Table 1: Previously Approved and Capital Infrastructure Needs (\$ millions)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2035	Total
Previously Approved	102	74	87	118	127	188	855	361	111	1	-	-	1,913
Capital Infrastructure Needs	-	-	-	-	-	-	-	290	359	552	928	3,096	5,226

A listing of previously approved investments has been provided in **Appendix A** for 2026+. A listing of capital investment needs has been provided as **Appendix B**. Note that programs have been broken down into projects where possible.

Figure 1: Summary of Proposed Capital Infrastructure Needs by Investment Driver

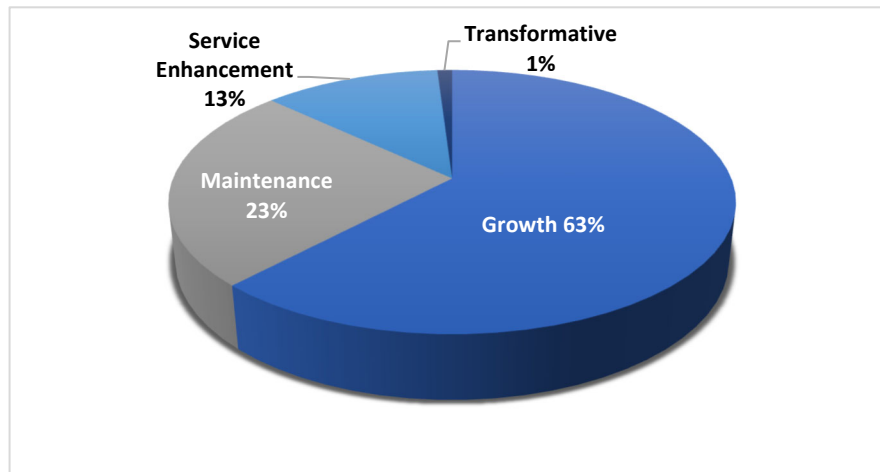


Table 2: Summary of Operating Cost of Capital for Capital Infrastructure Needs by Year

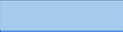


	2027 (\$)	2028 (\$)	2029 (\$)	2030 (\$)	2031-2035 (\$)	Total 2026-2035 (\$)
Total	To be determined					

Operating impacts of capital investments will be assessed as a part of the phase where finalized prioritization, financial affordability and delivery strategies are considered to further refine the proposed capital investment list. It is anticipated that increases in investment levels for existing Annual Investment Programs as well as new projects will result in one-time and/or base operating budget needs.

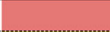

Appendix A: Previously Approved

The values presented reflect planned investments in the last year of the approved 4-year business cycle, as well as pre-approved budget for the 2027-2030 business cycle. These values have been rounded to the nearest million for presentation purposes. Variations between the planned investments and approved budget in a given year will be reconciled as part of the annual budget adjustment process to align budget needs and updated cash flows and timing.

Legend (% of capital \$ per opportunity item)

1% ~ 10%	
11% ~ 25%	
25% +	

Critical Assets in Poor / Very Poor Condition

Severe Consequence of Failure	
High Consequence of Failure	

Appendix A: Previously Approved (\$Millions)	Total											
	2026-2035+	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	
Maintenance - Primary Driver												
Bears paw Raw Meter Relocation	0											
Bears paw Water Treatment Plant	5											
Bears paw Water Treatment Plant Operational Improvement	4											
Bears paw Water Treatment Plant Power Utility Planning	0											
Catholic Protection	10											
Catholic Protection	6											
Copper-Lead Service Replacement	4											
Feedermain Catholic Protection	0											
Control Systems & Electrical Upgrade	3											
Control Systems & Electrical Upgrade	0											
Meter Test Control System Upgrade	2											
Transmission Capital Maintenance	1											
Equipment	9											
Mechanical Equipment & Electrical Upgrades	2											
OGIS MAS 8 Upgrades	0											
Stormwater Tools & Equipment	0											
Technology Equipment Lifecycle and Upgrades	2											
Tools and Equipment Asset Data Management (Maximo)	2											
Tools and Equipment Drinking Water Distribution	0											
Tools and Equipment Operational Services	0											
Tools and Equipment Water Sanitary Centre	0											
Water Quality and Regulatory Assurance Labs Capital Equipment	1											
Feeder mains	439											
Bears paw South Feedermain Improvements Stage D Repairs	33											
Bears paw South Feedermain Short and Long Repair	406											
Feedermain Replacements	1											
Glenmore Water Treatment Plant	3											
Glenmore Dechlorination System Upgrade	0											
Glenmore Filter Plant Corrosion Repairs and Upgrades	0											
Glenmore Water Treatment Plant Chemical Boiler Upgrades	0											
Glenmore Water Treatment Plant Operational Improvement	3											
Leak Detection	1											
Feedermain Leak Detection	1											
Proactive Leak Detection Contract	0											
Mains	35											
17 Ave Watermain Rehabilitation and Upgrade	0											
Dartmouth Water Main Upgrade	2											
Main Replacement City Internal Crews	1											
Main Replacement Outside Contractor	25											
Main Replacement Special Projects	3											
Watermain Research	4											
Meters	18											
Advanced Meter Infrastructure	17											
Interim Flow Meter Installation - East Calgary Regional Water Line	1											
Mountain View Pump Station Condition Assessment	1											
Reservoir Condition Assessment	0											
Water Centre Building Upgrades	5											
Valves	4											
Hydrant Main Valve Maintenance	3											
Water Distribution Network Valve Replacement Program	1											
Water Treatment Plant - Capital Maintenance	10											
Bears paw Water Treatment Plant Capital Maintenance	8											
Glenmore Water Treatment Plant Capital Maintenance	2											

Service Enhancement - Primary Driver

Bears paw Water Treatment Plant	8
Bears paw Cell Phone Coverage Improvement	0
Bears paw Standby Generators Replacement	4
Bears paw Water Treatment Plant Bulk Hypo Storage	0
Bears paw Water Treatment Plant RAW 2 Pump Station Upgrades	4
Building Upgrades	3
Expansion and Growth Operations Workplace Centre	3
Spring Gardens Building D Renovations	0
Control Systems & Electrical	19
Control Systems & Electrical	0
Electrical Upgrade for Glenmore Water Treatment Plant	10
Glenmore & Bears paw Control Systems Improvement	7
Glenmore & Bears paw DeltaV Control Systems Modernization	1
Equipment	4
Capital Technology Project Analysis	0
OGIS ArcGIS Survey123	0
Software Lifecycle and Upgrade	2
Tools & Equipment - Engineering Drawings	0
Tools & Equipment - Flood Emergency Reference Manual	0
Tools & Equipment - Pollution Prevention	0
Tools & Equipment - Workforce Planning	0
Tools & Equipment - Asset Data Management (OGIS)	2
Glenmore Water Treatment Plant	2
Glenmore Dam Safety Regulatory	1
Glenmore Power Utility Plan	0
Glenmore Water Treatment Plant - High Lift Pump Station & Clearwell	1
Dead End Mains	2
Meters	29
Advanced Meter Infrastructure	28
District Metering and System Monitoring	0
Tsuu'tina Anderson Water Meter Chamber	0
Hydrant Installations	1
Water Distribution Network Monitoring	2
Water Infrastructure Access Road Construction	4
Public Art	2
Eagle Ridge Pump Station - Station 019	0
RAW II Ice Boom	1
Valves	8
Feedermain Relief Valves	0
Large Valve Replacement	5
Valve Installations	2
Valve Replacement /Installations	2
Fluoride Reintroduction	0

Growth - Primary Driver

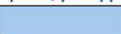


Downtown Upgrades	4									
Equipment - Utility Safety Partners Data Management	0									
Feeder mains	64									
Belvedere Feedermain Phase 1 & 2	0									
Belvedere Feedermain Phase 3	31									
Country Hills Boulevard Crosstie Feedermain	29									
Haskayne Feedermain	0									
Lower Sarcee Feedermain	0									
Northridge Feedermain Phase One	0									
Northridge Feedermain Phase Two	1									
Northridge Feedermain West Leg Design	2									
Ogden Feedermain Phase 2	0									
Providence 146th Ave Feedermain Westview Reservoir	0									
Westview Crestmont Feedermain Phases 1-3	1									
Glenmore Water Treatment Plant	10									
Glenmore Water Treatment Plant Raw Water Pump Station Capacity Upgrade	7									
Glenmore Water Treatment Plant Filter Recommissioning	3									
Mains	6									
33 Ave SW Watermain Upgrade	0									
Brentwood Water Main Upgrade	0									
Gladstone 4 Ave NW Watermain Upgrade	1									
Inglewood Water Main Upgrade	1									
Main Extensions	4									
Meters	5									
Airdrie 600mm Water Meter Chamber Relocate	5									
Chestermere 17th Ave Water Meter Chamber	0									
New Water Treatment Plant Expansion	6									
North Calgary Water Servicing	505									
North Calgary Water Servicing - Linear	264									
North Calgary Water Servicing - Facilities	241									
Pump Stations	1									
210 Avenue SW Pump Station	1									
Providence Westview Pump Station 056	0									
Raw Water Intake	33									
Reservoirs	2									
Northridge Reservoir	0									
Providence Westview Reservoir Storage Cell 1	1									
South Calgary Water Servicing Feedermain	1									
Water Redevelopment Program	4									
Water Treatment Plant	44									
New Water Treatment Plant	43									
Water Treatment Optimization & Capacity Upgrades	1									
Westview Reservoir Land Acquisition	1									
Transformative - Primary Driver										
Prairie Economic Gateway Feedermain A	6									
Total - Water Treatment & Supply	1,318	802	356	160	-	-	-	-	-	-

Appendix B: Capital Infrastructure Needs

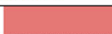

The values presented reflect identified capital needs and have been rounded to the nearest million for presentation purposes. These capital needs have not received approved budget and will be considered for future business cycles.

The majority of the 10-year capital investments are foundational in nature reflecting the essential funding required to sustain current service levels, meet regulatory and safety obligations, and manage core operational risks. These investments establish the baseline level of service and define the essential capital required to maintain system reliability over time. All values are presented in 2025 dollars, with estimates prepared as of January 2026.

Legend (% of capital \$ per opportunity item)

1% ~ 10%	
11% ~ 25%	
25% +	

Critical Assets in Poor / Very Poor Condition

Severe Consequence of Failure	
High Consequence of Failure	

Appendix B: Capital Infrastructure Needs
(\$millions)

Total
2027-2035+

2027 2028 2029 2030 2031 2032 2033 2034 2035+

Maintenance - Primary Driver

	Total	2027	2028	2029	2030	2031	2032	2033	2034	2035+
Advanced Meter Infrastructure	231									
Bears paw Water Treatment Plant	104									
Bears paw Power Utility - Raw III Option 1/2	7									
Bears paw Power Utility - Standby Generators	9									
Bears paw Power Utility - Feeders	5									
Bears paw Power Utility - Plan	18									
Bears paw Power Utility - Upgrades	1									
Bears paw Water Treatment Plant Operational Improvement	65									
Buildings	16									
Expansion and Growth Operations Workplace Centre	7									
Water Centre Building Upgrades	9									
Cathodic Protection	123									
Cathodic Protection	32									
Copper-Lead Service Replacement	90									
Feedermain Cathodic Protection	2									
Control Systems & Electrical	37									
Bears paw Arc Flash Studies for Electrical Safety	1									
Transmission Capital Maintenance	36									
Equipment	52									
Mechanical Equipment & Electrical Upgrades	24									
Technology Equipment Lifecycle and Upgrades	10									
Tools and Equipment Drinking Water Distribution	5									
Tools and Equipment Repair and Maintenance	4									
Tools and Equipment Wastewater Stormwater Collection	1									
Tools and Equipment Water Sanitary	3									
Water Quality and Regulatory Assurance Labs & Capital Equipment	5									
Feedermain Replacements	140									
Glenmore Water Treatment Plant	60									
Glenmore Water Treatment Plant - Chemical Boiler Upgrade	6									
Glenmore Water Treatment Plant - Operational Improvement	54									
Leak Detection	9									
Feedermain Leak Detection	5									
Proactive Leak Detection Contract	5									
Mains	345									
Main Replacement City Internal Crews	9									
Main Replacement Outside Contractor	295									
Main Replacement Special Projects	10									
Watermain Research	32									
Pump Stations - Refurbishment	60									
Reservoir Condition Assessment	2									
Valves	18									
Hydrant Main Valve Maintenance	9									
Water Distribution Network Replacement Program	9									
Water Treatment Plant - Capital Maintenance	131									
Bears paw Water Treatment Plant Capital Maintenance	77									
Glenmore Water Treatment Plant Capital Maintenance	54									

Service Enhancement - Primary Driver

Bearspaw Water Treatment Plant - Standby Generators Replacement	7	
Building Upgrades - Bearspaw Treatment Plant Admin Space Upgrades	3	
Control Systems & Electrical	73	
Control Systems & Electrical	2	
Electrical Upgrade for Glenmore Water Treatment Plant	25	
Glenmore & Bearspaw Control Systems Improvement	30	
Glenmore & Bearspaw DeltaV Control Systems Modernization	12	
Transmission SCADA Comms Modernization	5	
Equipment	54	
AI Initiatives and New Emerging Tech	16	
Billing Improvements	6	
Software Lifecycle and Upgrade	26	
Tools and Equipment Asset Data Management (Maximo)	4	
Tools and Equipment Asset Data Management (OGIS)	2	
Glenmore Water Treatment Plant	156	
Glenmore Dam Safety Regulatory	1	
Glenmore Water Treatment Plant - High Lift Pump Station & Clearwell	155	
Dead End Mains	17	
District Metering and System Monitoring	3	
Hydrants - Installations	10	
North Calgary Water Servicing Energy Recovery Station	6	
Pump Stations - Energy Audit	1	
Raw Water Intake	1	
Bearspaw Raw Meter Relocation	1	
Raw II Ice Boom	0	
South Calgary Water Servicing Energy Recovery Station	6	
Valves	124	
Distribution Valve Replacement	18	
Feedermain Relief Valve Upgrades	5	
Large WTR Valve Replacement	36	
Lead Service Replacement Contract	2	
Valve Installations	63	
Water Distribution Network Monitoring	23	
Water Infrastructure Access Road Construction	5	

Growth - Primary Driver

Airdrie 600mm Water Meter Chamber Relocate	0										
Downtown Upgrades	3										
Feeder mains	203										
Belvedere Feedermain Phase 3	30										
Country Hills Boulevard Crosstie Feedermain	39										
Northridge Feedermain Phase 2	20										
Ogden Feedermain Phase 2	14										
Providence Westview Feedermain Ph 1 (STN056-STN049)	26										
Providence Westview Feedermain Ph 1 (162 AV SW & TUC Alignment)	10										
Starlight Feedermain Phase 2 154 AV SW between 37 and 54 ST SW	12										
Starlight Feedermain Phase 3 South of 162 AV SW	13										
Top Hill Feedermain Design	23										
West View Crestmont Feedermain Phases 1 - 3	17										
Glenmore Water Treatment Plant	16										
Filter Recommissioning	11										
Raw Water Pump Station Capacity Upgrade	5										
Main Extensions	18										
New Water Treatment Plant Expansion	2,227										
Pump Stations	43										
Providence Westview Pump Station Station 056	3										
Starlight Pump Station 049	34										
Valley Ridge Pump Station 041	6										
Raw Water Intake	434										
Raw 1 and Raw 2 Water Intake	190										
Raw 3 Water Intake	244										
Reservoirs	13										
Northridge Reservoir	2										
Providence Westview Reservoir Storage Cell 1	12										
South Calgary Water Servicing Feedermain	355										
Starlight Reservoir Land Acquisition	2										
Water Redevelopment Program	36										
Transformative - Primary Driver											
Prairie Economic Gateway Feedermain A	63										
Total Capital Infrastructure Needs - Water Treatment & Supply	5,226	-	290	359	552	928	806	597	607	560	525