

Climate & Environmental Management

Led by: Director of Climate & Environment

Service Description

Climate & Environmental Management provides leadership, strategies, programs, and support to plan for and manage climate and environmental issues, risks, opportunities and trends associated with the delivery of public services. Climate action aims to reduce the impacts of severe climate events on infrastructure, people and nature, reduce greenhouse gas (GHG) emissions, and improve energy management. Environmental sustainability aims to protect and reduce our impact on land, air and water resources to ensure quality of life, human and ecological health. We identify, assess and manage contamination risks of city-owned land to protect human health and the natural environment.

Service Updates

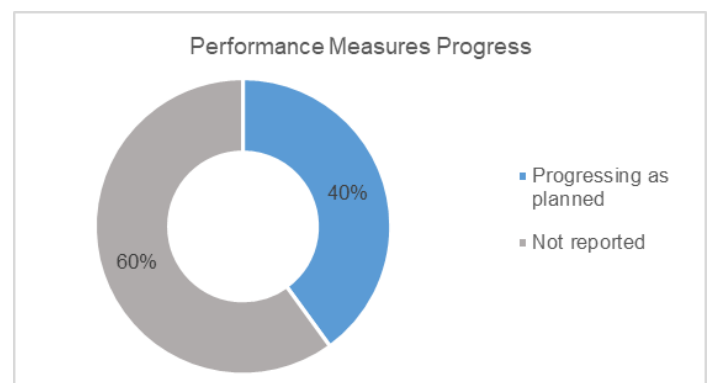
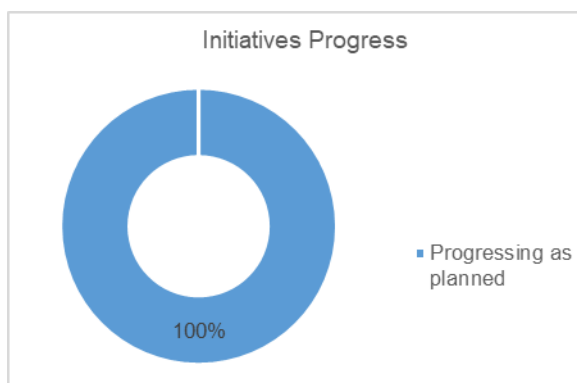
Key service results

The City continues to establish the foundations needed for accelerated climate action and environmental protection across over 40 strategies, plans and programs. In the first half of 2024, The City focused on expanding programs to: improve awareness of climate & environment services; protect natural areas and support climate action through City Building, and test new and innovative approaches to improving energy efficiency and climate resilience.

Significant milestones achieved in early 2024 included the integration of climate and environment considerations into major city planning strategies (including the Calgary Plan and Parks Plan); outreach related to drought resilience and climate awareness (including the climate outreach and education toolkit); and completion of the Food Resilience Plan and the Home Energy Label Program pilot.

The City continued to lead the way with energy efficient, sustainable, and climate-resilient city-owned infrastructure. The Sustainable Building Policy & Guidance Document was updated to align with the Calgary Climate Strategy, while new projects in low-carbon energy generation demonstrated The City's commitment to reducing greenhouse gas emissions.

Progress summary



Risk(s) impacting the progress

Inconsistent Climate & Environment data availability, integration and quality at The City
Municipal Climate & Environment focus/strategies alignment with other orders of government
Increased risk of drought in Calgary and surrounding areas



Measuring Our Performance

Legend

Actuals

Expected Future Performance

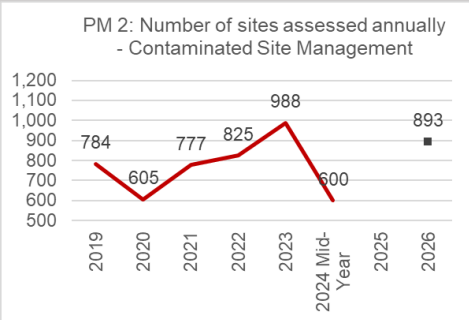
Progressing as planned

Not progressing as planned

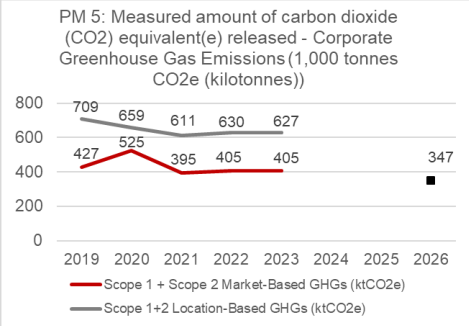
Performance Measures

Story behind the numbers

Status

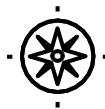


Mid-year 2024, 600 sites have been assessed for contamination. This is consistent with the number of sites assessed for contamination mid year 2023.



Market-based corporate greenhouse gas (GHG) emissions have been below 2005 baseline levels since 2012, when The City began procuring Renewable Energy Certificates (RECs) to offset electricity consumption. 2023 Market-based Corporate GHG emissions are 42 per cent lower than 2005 levels. Several projects were initiated to reduce GHGs (updated Sustainable Building Policy, Business Unit GHG Reduction Plans & the Centralized Climate Fund). In 2024, The City completed a second-party review of its GHG emissions inventory and updated its methodology and emissions factors with the most recent National Inventory Report to enhance reporting accuracy. This review resulted in updates to the 2005 baseline value, historically reported emissions values and the 2026 target, which resulted in changes to this metric.





Progress on Service Delivery

PROGRESS STATUS



Completed



Progressing as planned



Not progressing as planned



Not started








FUNDING TYPE



















Capital



Operating

Initiative 1		Impact Area: City-wide	Funding Type: 
Increase protection and conservation of Environmentally Significant Areas (ESA) in greenfield development by developing standard protocols for ESA identification in ecological inventories and biophysical impact assessments, by retaining identified ESAs using Environmental Reserve or other planning tools as part of Land Use Amendment/Outline Plan approvals and by updating ESA and Environmental Reserve policies and guidelines.			
UPDATE 	<p>Input on ESA protection and restoration was provided for the Parks Plan (formerly the Open Space Plan), and guiding policies and strategies have been developed for inclusion in the Calgary Plan and City Building work to provide a foundation of natural infrastructure protection through city planning.</p> <p>A working group has been established to review city policies related to ESAs, environmental reserve lands and conservation reserve lands set aside during community planning and development approvals.</p>		
Initiative 2		Impact Area: City-wide	Funding Type: 
Protect the environment and public health and safety by providing corporate-level leadership and support to City services on identifying, assessing and managing contaminated lands. A proactive approach to identifying potential contamination concerns on City land assets and lands contemplated for development ensures that appropriate due diligence is performed and responsible management of environmental risk occurs.			
UPDATE 	<p>We continue to see an increase in requests across The City to assess projects for potential contamination due to an increased volume of development applications and land transactions which has continued in 2024. Greenline and Event Centre are two examples of major capital projects with significant contaminated soils and groundwater complexity.</p> <p>We are being proactive by checking for potential contamination on City lands where development is contemplated and performing due diligence to ensure environmental risks are responsibly managed</p>		
Initiative 3		Impact Area: City-wide	Funding Type: 
Combine local and regional, structural and non-structural flood mitigation measures to optimize economic, social and environmental resilience to river floods. City-led, supported or advocated initiatives include: new upstream dams and reservoir operations; local flood barriers and infrastructure floodproofing; thoughtful flood hazard zone land use regulation and regulatory refinement; public engagement/education; enhanced flood forecasting; response planning and emergency response.			
UPDATE 	<p>River valley and flood-hazard area policy was integrated into the Calgary Plan and will be part of the next round of City Building Program engagement.</p> <p>The City continues work with the Government of Alberta on completion and operations planning for Springbank Reservoir (SR1) including providing technical information on river hydrology. Implementation of the Memorial Drive flood barrier progressed, construction set to intensify in Q3.</p> <p>Groundwater studies underway refine groundwater risk zone definition and associated potential building and development groundwater floodproofing regulations.</p>		
Initiative 4		Impact Area: City-wide	Funding Type: 

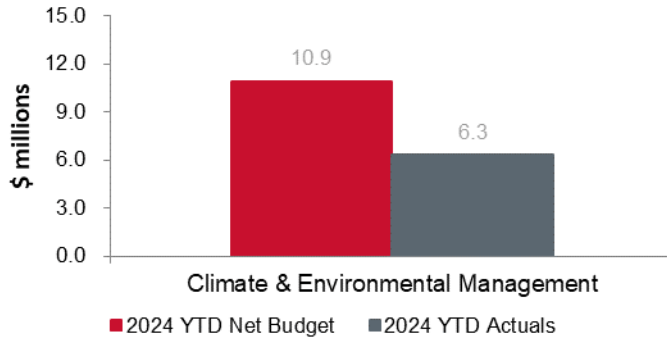
Drive drought resilience in Calgary through a corporate-wide stance and significant collaboration involving Water Treatment & Distribution Service Line by planning for local and regional water demand, water allocation and/or licensing, water treatment and distribution infrastructure and/or operations and emergency response. Shifting regional climate, utility and environmental equity and the provincial moratorium on new licenses from the Bow Basin make this initiative complex, timely & important.		
UPDATE 	Engagement and communication in building drought resilience includes work with the irrigation industry and consistent messages in campaigns like “Fix a Leak” “Every Drop Counts” and “Yardsmart”. Also, the Green Calgary Rain Barrel Program experienced high demand this year with over 2500 sold. A cross-corporate approach to drought resilience prepared Calgarians to adapt, showing resilience work can address unplanned events. Notably, water shortage response processes developed for drought preparedness facilitated the application of water efficiency approaches in the Feedermain emergency.	
Initiative 5	Impact Area: City-wide	Funding Type: 
Guide effective corporate-wide environmental and climate management and performance through policy, frameworks, strategic plans, standards, procedures and tools. Includes assurance activities including audits, risk registers, compliance tracking and performance reporting on behalf of the corporation.		
UPDATE 	As part of The City’s Climate Reporting Framework, in April, The City provided two climate reports to Council: the 2023 Climate-Related Financial Disclosure as part of the unaudited section of the Annual Financial Report, and the 2023 Year-End Progress Update with climate as a key results area. An internal Corporate and external public-facing Climate & Environment Dashboard were developed as interactive tools to track, report and assess The City’s progress towards Calgary’s climate and environmental goals.	
Initiative 6	Impact Area: City-wide	Funding Type: 
Develop, implement and manage outreach and education initiatives and partnerships aligned with environmental and climate outcomes of the community and the corporation. Key objectives include to educate and build awareness, as well as collaborate and partner to amplify efforts. Services are provided with equity considerations.		
UPDATE 	Ongoing climate outreach and education programming included the Jack Leslie Youth Environment Grants, City-wide participation in Earth Hour events and over 55 climate education programs and learning opportunities delivered to public and youth groups. GHG emissions reduction actions were showcased through our sponsorship of the Alberta Solar Show and the Eco-Solar Home Tour. Launching the Electric Mobility Awareness and Education campaign with electric vehicle/mobility programming. Development of the employee and Council education program and climate outreach and education toolkit.	
Initiative 7	Impact Area: City-wide	Funding Type: 
Integrate climate and environment considerations into planning and approvals continuum. Review and update existing planning and design policies, guidelines, regulations and processes to include net zero, climate resilience or environmental targets, recommendations and/or requirements; incentivize innovation and quality improvements for new developments to further climate or environment; research and analysis to support appropriate city growth targets and types.		
UPDATE 	Planning Actions for Climate Toolkit launched in May as a resource to planners, consultants and developers to improve the emissions reduction and resilience of communities and buildings Green Buildings Priority Stream aligned Pathways 1&2 with new building code, while new Pathways (8&9) were added for Built Green. Five projects representing 256 housing units and 861 m2 of commercial space entered the program Climate and environment considerations are being incorporated into the City Building Program to provide statutory development targets, priorities and objectives to guide city planning	
Initiative 8	Impact Area: City-wide	Funding Type: 

Improve climate resilience of Calgary's people, communities, food systems, buildings, infrastructure and natural assets. Use engagement, data analysis and policy to address climate risk/vulnerability of Calgary communities; advance emergency preparedness and business/service continuity planning for climate-driven events; develop relationships (industry, builders, civic partners), incentives, operational improvements, assessment tools to support climate-resilient built and natural infrastructure.		
UPDATE 	Reducing Climate Vulnerability in Calgary Communities grant program distributed \$100,000 in grants and partnerships to equity-focused community organizations as seed funding for grassroots community climate resilience projects. The Food Resilience Plan was developed in early 2024 will help address the challenges related to food access and associated impacts on all Calgarians during emergency events and everyday life. A climate risk assessment framework and guidance document published in early 2024 will support both City and external partners to build more climate-resilient infrastructure.	
Initiative 9	Impact Area: City-wide	Funding Type: 
Support Calgary's transition to a net-zero City. Improve energy efficiency and reduce emissions from new and existing buildings and transportation systems through training and capacity building, financing, incentives and regulatory / policy improvements.		
UPDATE 	The fourth intake for Clean Energy Improvement Program saw 150 pre-qualified applications in Q2 2024, a fifth intake is pending availability of funding. To date the program has seen 2,106 GJ/year in energy savings and 282 tonnes CO2e/year in GHG emission reductions. The Home Upgrades Program, supporting affordability for low-income Calgarians, is fully subscribed, with 51 homes upgraded for energy efficiency and 54 more homes scheduled or in progress. Energy Equity Program through research and engagement built a strategic framework. It is currently in the program planning and design phase.	
Initiative 10	Impact Area: City-wide	Funding Type: 
Lead by example by improving the energy efficiency and reducing emissions from City-owned and operated assets and services, including buildings, vehicles, facilities, land, and City operations. Support the transition of City fleet to low-carbon alternatives; manage greenhouse gas emissions from waste; include climate considerations in new capital projects; explore offsets to drive further energy efficiency projects and improvements.		
UPDATE 	21 City of Calgary projects include energy and climate resilient design features: Calgary Soccer Centre Redevelopment, Sunalta Community Hub, Ramsay Rink Solar and Public Building District Energy Connection. A 115 kilowatt (kW) solar photovoltaic system was constructed on the Calgary Parking Authority Impound Lot Parkade. A new 4.6 MW gas turbine and 0.6 MW steam turbine expand the Bonnybrook Wastewater Treatment Plant's Power Generation and Heating facility. The Sustainable Building Policy & Guidance Document was updated to align with Calgary Climate Strategy-Pathways to 2050.	
Initiative 11	Impact Area: City-wide	Funding Type:  
Ensure our policies and services support The City's commitment to building and maintaining a respectful, inclusive, and equitable workplace that is representative of the community we serve.		
UPDATE 	Planning & Development Services' People Committee delivers on "Our People" departmental goal. Business Units (BUs) completed Corporate Employee Survey Action Plans in Q1&Q2, addressing respect, inclusion & equity. BUs are assessing current state and will engage employees on equity, diversity, inclusion & belonging workplan development. Second "Seasons for Reconciliation" series was launched in January. Work continues on the Indigenous Cultural Heat Map project. April and May leader connect sessions focused on talent acquisition & safety for leaders, focusing on inclusion & belonging	



Service Updates on Financial Performance

**Net Operating Budget and Actuals
as of June 30, 2024**



Operating Budget Updates - 2024 YTD net operating budget vs actuals:

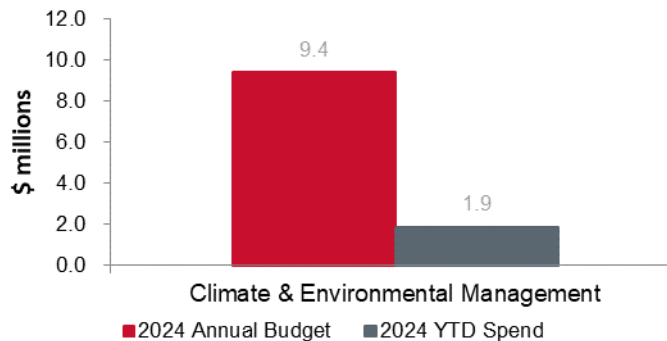
Climate and Environmental Management has favourable variance of \$4.6 million. This is primarily attributed to \$4.1 million in favourable one time projects. This includes projects aligned to initiative 9, Transition to net-zero, and Initiative 10, Reducing City emissions all of which are part of The City continuing to lead the way with efficient, sustainable, and climate-resilient city-owned infrastructure and in doing so navigates the complexity of aligning Municipal Climate & Environmental Focus/strategies to other orders of government, which is a highlighted risk.

One time budgets are largely committed to programs which have launched in 2024 and will continue throughout 2025 and 2026.

Some of the more significant programs include:

- Retrofit Existing Buildings to Net Zero Standard
- New Buildings to Net Zero Standard
- Zero Emissions Vehicles
- Climate Initiative Fund

**Capital Budget and Spend as of June 30,
2024**



Capital Budget Updates - 2024 total capital budget vs 2024 YTD spend:

Climate and Environmental Management has spent 19.7 per cent of the 2024 approved capital budget.

In 2024, the capital expenditures have been used to establish the foundations needed for accelerated climate action and environmental protection across over 40 strategies and test new and innovative approaches to improving energy efficiency.

The integration of climate and environment considerations into major city planning strategies by using climate and environmental data which will now be more accessible through the Corporate Climate & Environment Dashboards noted in initiative 5, corporate guidance. This work also addresses the highlighted risk of corporate climate and environmental data availability, integration and quality.

The Centralized Climate Fund is a program providing funds to existing projects in order to incorporate climate risk reductions measures and/or greenhouse gas emissions reduction measures into new or retrofit capital projects. The Public Building District Energy Connection project is nearing completion, to be on stream in the summer 2024, this makes up the main component of YTD expenditure. This will continue to address initiative 10, reducing City emissions. This project is one of many committed through the Centralized Climate Fund. Capital expenditure will increase through the second half of 2024 as awarded projects are completed.