

2023 Stormwater Management Strategy Update

RECOMMENDATION(S):

The Community Development Committee recommend that Council:

1. Adopt the 2023 Stormwater Management Strategy, to replace the 2005 Stormwater Management Strategy; and
2. Direct that the 2023 Stormwater Management Strategy be integrated into the new Calgary Plan.

HIGHLIGHTS

- Managing rain and snow melt (stormwater) ensures public safety, reduces damage to property and keeps our rivers and creeks healthy. Stormwater management is a shared responsibility between Calgarians, watershed management organizations, development and property management industries and others, as we maintain, build and plan for 2 million people in Calgary's future.
- The 2023 Stormwater Management Strategy (the Strategy, Attachment 2) sets the long-term direction for proactive, collaborative stormwater management promoting healthy, resilient communities and waterbodies.
- **What does this mean to Calgarians?** Managing stormwater provides value and increases quality of life for Calgarians. The Strategy provides a vision, aligned with goals and targets to measure progress. It will optimize the benefits of stormwater management investment to support growth, protect watersheds and drinking water, and build resilience to flooding from severe rainfall, now and into the future.
- **Why does this matter?** Calgary is a big city on a small river. It has grown since 2005 and Calgarians' expectations have moved beyond basic drainage service. More runoff and decreasing water quality are a challenge as the city intensifies and our climate shifts. Today, stormwater is valued as a resource, and successful stormwater management not only prevents overloading natural systems with excess runoff and pollution but contributes to sustainable, aesthetic, economic and resilient communities.
- Stormwater infrastructure is interwoven in our urban fabric. It is intrinsic to land use planning and development. Through engagement with Calgarians and Industry, solutions to alleviate the technical and financial challenges from approaches taken to date are being explored for greenfield, infill and re-development.
- The Strategy focuses action and decision-making into four cornerstones over the next two business cycles: established areas; asset management; low impact development; and target setting.
- Stormwater service rates for 2023-26 have been approved and increases are not being recommended currently based on the updated Strategy; budget and resource requirements will be monitored as implementation progresses.
- The 2023 Strategy replaces the 2005 Stormwater Strategy (UE2005-35). Background and Previous Council Direction is included as Attachment 1.

DISCUSSION

Since 2005, Calgary has grown and changed while customer expectations and stormwater management considerations have evolved. The 2023 Strategy provides an updated path

2023 Stormwater Management Strategy Update

forward, refining the way we manage stormwater to not only protect our watersheds, but also make our city more safe, affordable, sustainable and economically competitive.

Compared to the 2005 Strategy, the 2023 Strategy builds on key components including:

1. Consideration of all waterbodies in Calgary rather than prior focus on the Bow River;
2. Intentional focus on balancing tensions and better alignment with city building, placemaking, climate adaptation, and resilience priorities; beyond functional drainage;
3. Seeking practical use of innovative design tools and best practices, including green infrastructure and low impact development; since their initial introduction in 2005; and
4. Incorporating learnings and new considerations as stormwater management evolves, including asset management, maintenance practices, odour and nutrient control.

The 2023 Strategy shares a vision that The City of Calgary promotes healthy, resilient communities and waterbodies through proactive and collaborative stormwater management within an evolving context, which encompasses factors such as urbanization, climate change, flood risk, regulatory and expectation changes, inequitable service, and development.

Calgary has grown to over 1.3 million people on an area around 800 square kilometers. Development has led to natural, permeable landscapes being replaced with more impermeable, hard surfaces, contributing to higher stormwater runoff volumes. This can result in urban flooding, river and stream erosion and pollution. A changing climate is projected to bring more high intensity storms, drier, longer summers, earlier melting of snowpack, rain on snow and increased severity of streambank erosion. Without a refined approach to stormwater management, the health of waterways may decline, and stormwater systems and rivers may increasingly become overwhelmed, putting people, property, watersheds and future development at risk.

Stormwater management is essential to enable land-use planning and development. Established communities tend to be most at risk due to redevelopment and climate change. Having aging, undersized infrastructure or lacking in modern drainage features like wet ponds or deliberate overland grading, they can more easily be overwhelmed by runoff. The development industry and The City continue to make infrastructure investments to reduce the vulnerability of residents and businesses. Cost efficiency, optimized for social, economic and environmental outcomes, is a key principle of the Strategy for City operations, customers and the development industry. The Strategy emphasizes the importance of integrating its goals and strategic actions into direction, requirements and approval processes. It puts forward four interrelated goals:

- Creating safe and vibrant neighbourhoods while striving for equitable service;
- Shared responsibilities for being a good steward of communities and environment;
- Promoting healthy and resilient watersheds; and
- Providing infrastructure and service that maximize customer value.

Administration engaged City staff, the development industry, watershed groups and Calgarians in creating the updated 2023 Strategy. Engagement continues as strategy development transitions to implementation. The Strategic Actions in the Strategy respond to engagement learning's, focused into four Cornerstones (Figure 1) with implementation starting in the 2023-26 business cycle.

**Planning and Development Services Report
to
Community Development Committee
2023 June 28**

**ISC: UNRESTRICTED
CD2023-0735
Page 3 of 4**

2023 Stormwater Management Strategy Update

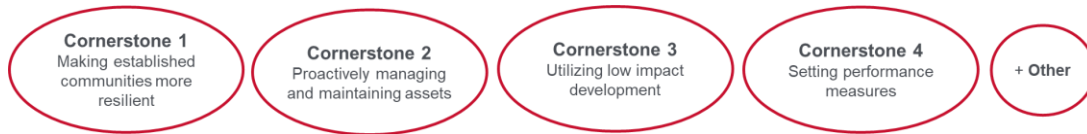


Figure 1. Cornerstones - 2023 Stormwater Strategy

EXTERNAL ENGAGEMENT AND COMMUNICATION

- | | |
|---|---|
| <input checked="" type="checkbox"/> Public engagement was undertaken | <input checked="" type="checkbox"/> Dialogue with interested parties was undertaken |
| <input checked="" type="checkbox"/> Public/interested parties were informed | <input type="checkbox"/> Public communication or engagement was not required |

Phase 1 (2018 - 2019) saw more than 80 participants analyze the challenges and opportunities facing Calgary, which informed the development of the Strategy into the future. Phase 2 (2019 - 2020) worked with interested parties to identify potential actions. What we heard through the engagement was reflected in the Strategy itself. This info is helping identify innovative and collective solutions. Public input through other related City initiatives also informed the development of the Strategy.

Letters of support for the Strategy form Attachment 3, including that from BILD. Administration continues dialogue with the development industry as strategy transitions to implementation. Further info is available at: [Stormwater management \(calgary.ca\)](https://www.calgary.ca/stormwater).

IMPLICATIONS

Social

One of the Strategy's goals is creating safe and vibrant neighbourhoods while striving for equitable stormwater service for all Calgarians. Stormwater ponds, wetlands and green infrastructure have placemaking benefits in recreation and interpretive education. When viewed as a resource, stormwater can be harnessed for social wellbeing and supports efforts to address climate change from impacts such as urban heat island effects, or flooding. Sustaining communities with flood risk including those with diverse and at-risk populations supports equity. Cornerstone 1 focuses on supporting infill and redevelopment in established areas, reflecting Council's objective of 50 per cent growth in established communities

Environmental

Stormwater management protects the health of waterways through land use planning, including water quality for a safe, reliable drinking water supply. The Strategy avoids a one-size fits all approach, aiming instead to define level of service, standards, development requirements and investment priorities that address the unique environment, drainage patterns and needs of each watershed / sub-watershed while providing a level playing field. It outlines actions to protect waterbodies, while offering multiple benefits in carbon sequestration, biodiversity, habitat, etc.

Economic

Currently, all customers pay a flat monthly rate for stormwater management services. Opportunities exist to explore encouraging all customers to adjust their behaviour to reduce impacts on the stormwater system and the watershed. The City receives levies from the

**Planning and Development Services Report
to
Community Development Committee
2023 June 28**

**ISC: UNRESTRICTED
CD2023-0735
Page 4 of 4**

2023 Stormwater Management Strategy Update

development industry to fund upfront infrastructure projects to accommodate growth and developers fund on-site stormwater infrastructure. The City will continue to work with industry to explore alternative funding opportunities and infrastructure improvements. Initial capital and lifecycle cost efficiency, optimized for social, economic, environmental outcomes, is a key principle of the Strategy for City operations, customers and the development industry.

Service and Financial Implications

No anticipated financial impact

The 2023-26 cycle maintains the current cost of stormwater management to rate payers at \$15.63/month on their utility bill. The stormwater service line currently receives ~\$80M in annual revenue through the stormwater management charge and other revenues. Budget, resource requirements and spending will be monitored as implementation progresses.

RISK

If the 2023 Strategy is not approved, The City will continue to operate under the guidance of the 2005 Strategy. This may:

- Compromise The City's stormwater management modernizing efforts and miss opportunities to align with other Council priorities;
- Inhibit long term growth and development if the limited carrying capacity of watersheds is not carefully considered and managed; and
- Prolong industry and staff frustrations, due to lack of alignment, direction and action

ATTACHMENT(S)

1. Previous Council Direction, Background
2. 2023 Stormwater Management Strategy
3. Letters of Support (various)
4. Presentation to Committee

Department Circulation

General Manager/Director	Department	Approve/Consult/Inform
Carolyn Bowen, Director	PDS – Climate and Environment	Approve
Nancy MacKay, Director	OS – Water Services	Approve
Stuart Dalglish, GM	PDS – GMO	Approve
Josh White, Director	PDS – City and Regional Planning	Inform
Debra Hamilton, Director	PDS – Community Planning	Inform
Graham Duckworth, Director	IS – Utilities Delivery	Inform
Michael Thompson, GM	IS – GMO	Inform
Doug Morgan, GM	OS – GMO	Inform