

Source Water Protection Policy

RECOMMENDATION(S):

That the Standing Policy Committee on Utilities and Corporate Services recommend that Council:

- 1) Approve the Source Water Protection Policy; and
- 2) Direct Administration to determine how the Source Water Protection Policy and associated plans can be integrated into city and regional planning and development policy.

HIGHLIGHTS

- The Source Water Protection Policy (the Policy) will provide clear, strategic direction to the Corporation and guidance for the consistent application of source water and riparian area protection in city planning processes and decision making.
- What does this mean to Calgarians? Safe, clean drinking water, healthy rivers and riparian areas are important values to the quality of life of Calgarians. The new Policy ensures that source water and riparian protection are accounted for in decisions at The City of Calgary (The City).
- Why does this matter? Protecting drinking water at its source in the Bow and Elbow River watersheds and maintaining healthy waterways within Calgary is critical for ensuring high quality drinking water for customers in Calgary and the region and downstream communities.
- Every land use decision is also a water management decision. No land use decisions can be made without understanding the risks to source water quality.
- Protecting high quality water at its source can lead to significant cost savings for The City. As the quality of a water source degrades, more expensive treatment processes must be implemented to achieve drinking water quality guidelines. Source water and riparian protection strategies mitigate risks to water quality.
- Council directed Administration to report on the Source Water Protection Plan and Policy by Q2 2020 (UCS2019-1539), deferred to Q3 2020 due to the COVID-19 pandemic.
- Strategic Alignment to Council's Citizen Priorities: One of the five One Calgary Council Directives is focused on achieving future water security, a sustainable water supply, and integrating watershed management into our land use policies, plans and decisions. The proposed policy also aligns with the *Municipal Development Plan*, *Climate Resilience Strategy*, *Resilient Calgary Strategy* and *BiodiverCity Strategy*, and *One Calgary One Water: Calgary's Water Security Framework*.
- Background and Previous Council Direction is included as Attachment 1.

DISCUSSION

The purpose of the Policy (Attachment 2) is to provide clear, strategic direction to Administration and outline Council's position regarding the protection of watershed health and resilience, and safeguarding drinking water quality. The Policy also provides guidance for the consistent

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application of source water and riparian area protection in city planning processes and decision making. The Source Water Protection Plan (2018) and the Riparian Action Program (2017) are two key implementation plans under the new Policy and are respectively included as Attachment 3 and Attachment 4.

As part of One Calgary, Council adopted a Directive focused on achieving future water security and integrated watershed management. Council approval of this Policy supports that Directive.

Key elements of the Policy include:

- a clear statement of The City's position on source water protection in regional planning matters;
- proactive stewardship and management of regional source watersheds and riparian areas within Calgary;
- integration and alignment of land use and watershed planning within City plans and administrative processes, as well as a clear statement of The City's position on source water protection in regional planning matters;
- restoration and protection of waterways and riparian areas that contribute to clean drinking water, flood and drought resilience, and biodiversity within Calgary; and
- management of current and future risks related to drinking water quality.

Connecting watershed protection and land use planning

When implementing actions in the two plans related to land use planning and development, a shared direction, responsibility and collaborative approach is required across the Corporation. A Council approved policy will provide unifying direction for embedding watershed protection into land use decisions early in the planning process.

Every land use decision is also a water management decision. No land use decisions can be made without understanding the risks to source water. For example, when land is developed or intensification increases, the flow and quality of water that drains from that landscape will change. When watershed outcomes are considered later in the planning and development process, this can result in delays and the perception that water management requirements are a barrier to development. This lack of alignment can lead to confusion on some planning and development applications, eroding public and business trust.

Council adoption of the Policy will support integration of watershed plans and development policies within the Next Generation Planning System (NextGen), resulting in improved alignment of watershed and land use decisions.

Improving regional planning outcomes

Integrating watershed outcomes into regional planning is also critical for maintaining the region's high-quality drinking water. This includes working with the Calgary Metropolitan Region Board and ensuring watershed concerns are included within inter-municipal development circulations. For example, The City has worked extensively with Rocky View County on the development of the Source Water Protection Plan and created the Bearspaw Tri-Lateral Task Force to promote a shared responsibility for source water protection within the watershed. However, challenges and policy gaps remain. The City continues to see development applications throughout the region that do not include source water protection or stormwater management requirements, potentially posing significant risks to Calgary's drinking water supply. Council adoption of the

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Policy will support a unified voice at The City for the inclusion of watershed outcomes in statutory plans and development applications throughout the region.

STAKEHOLDER ENGAGEMENT AND COMMUNICATION (EXTERNAL)

- ☐ Public Engagement was undertaken
- ☐ Public Communication or Engagement was not required
- ☒ Public/Stakeholders were informed
- ☐ Stakeholder dialogue/relations were undertaken

Communications on the development of the Policy were initiated in March 2020. Key stakeholder groups were informed of the Policy via one-on-one conversations and meetings (March – August 2020), as well as a webinar for external stakeholders (July 2020). Information sessions provided stakeholders with an opportunity to learn about the Policy and discuss on Policy implications. External stakeholders included: Building Industry Land Development (BILD), Alberta Environment and Parks, Alberta Agriculture and Forestry, Calgary Metropolitan Region Board, Bow River Basin Council, other watershed partnership groups and various environmental non-government organizations. Letters of Support for the Policy are included as Attachment 5.

IMPLICATIONS

Social

The Bow and Elbow rivers provide opportunities for recreation, education and natural beauty. Sustainable management of water is critical to long term city-building and the sustainment of healthy watersheds for the region now and in the future. A proactive approach to protecting source water and riparian health helps protect public health and safety and can help reduce risk to property from flooding.

First Nations' engagement was undertaken during the development of the Source Water Protection Plan to better understand indigenous cultural values related to our watershed and to build deeper relationships between The City and First Nations. This is consistent with the spirit and intent of The City's Indigenous Policy. During Source Water Protection Plan implementation, The City will implement actions that provide mutual benefits to both Calgarians and indigenous peoples.

Environmental

The quality of Calgary's water supply depends on the condition of the land upstream that collects and drains water via the Bow and Elbow Rivers to The City's water treatment plants. Maintaining the health of the rivers within Calgary also protects water for downstream users and aquatic ecosystems. Healthy riparian areas filter contaminants and nutrients, trap and store sediment, and store and recharge groundwater.

Proactive protection of water quality at its source will help ensure that the watershed remains resilient to current and future stressors, including climate change. For example, widespread, high intensity wildfires are a key risk for Calgary's source watershed, which are likely to become more frequent due to climate change. To reduce the risk of wildfire impacting water quality, management strategies have been identified to improve emergency management communications, build resiliency of the water treatment infrastructure to wildfires, and work

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collaboratively with regional partners on proactive landscape wildfire risk management.

Economic

Investing in source water and riparian protection is considered best practice from a municipal finance perspective. In addition to protecting public and environmental health, protecting source water quality allows The City to avoid (or at the very least delay) expensive water treatment upgrades. The costs of upgrading both the Glenmore and Bearspaw water treatment plants with more advanced treatment processes could reach \$350 million, and an additional \$5.5 million/year for annual operating costs. A policy aimed at protecting source water prior to reaching The City's water treatment plants is more cost effective than building and operating more advanced treatment facilities. This will help maintain affordable rates for customers.

Healthy riparian areas also help filter pollutants from urban run-off, and stabilize stream banks, which prevent erosion especially during flood events. Functioning riparian areas provide free ecosystem services that reduce the need for costly restoration and additional infrastructure over time.

Service and Financial Implications

Existing Operating funding – base: No additional operating or capital budget is anticipated during this business cycle.

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RISK

Sustainable management of water resources is one of Calgary's most significant resilience challenges. Risks to source water and riparian areas include climate change, upstream wildfires and land use impacts to water quality. Proactive protection of watersheds and riparian areas will help manage and mitigate cumulative risks for a more secure water future.

Watershed requirements provided at later stages of the planning and development process can pose timing and financial risks to applicants and potentially result in inconsistent land use decisions. This can lead to frustration and confusion, as well as the perception that watershed outcomes are a barrier to development. The Policy provides overarching direction to ensure source water and riparian protection are considered in city-building throughout the NextGen planning process.

Watershed management crosses many jurisdictional boundaries within the Calgary region, and consistent consideration of watershed outcomes in inter-municipal and regional planning and development is critical. The Policy provides an opportunity to demonstrate regional leadership and promote watershed outcomes in regional land use and development decisions.

ATTACHMENT(S)

1. Attachment 1 – Previous Council Direction, Background
2. Attachment 2 – Source Water Protection Policy
3. Attachment 3 – Source Water Protection Plan
4. Attachment 4 – Riparian Action Program

**Utilities & Environmental Protection Report to
SPC on Utilities and Corporate Services
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5. Attachment 5 – Source Water Protection Policy Letters of Support

Department Circulation

General Manager (Name)	Department	Approve/Consult/Inform (Pick-one)
Chris Arthurs	General Manager	Approve
Katie Black	Community Services	Approve
Stuart Dalglish	Planning and Development	Approve
Dan Limacher	Utilities and Environmental Protection	Approve
Doug Morgan	Transportation	Approve
Michael Thompson	Greenline	Approve