

Utilities & Environmental Protection Report to
Intergovernmental Affairs Committee
2018 June 27

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IGA2018-0828
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The City of Calgary Regional Water Licence Update

EXECUTIVE SUMMARY

The City is dedicated to implementing the Government of Alberta's *Water for Life Strategy* through an integrated watershed management approach that ensures reliable and resilient water servicing for Calgary and regional customers. The City provides drinking water through our existing water licences and wastewater treatment for nearly one in three Albertans.

This report is intended to provide information and create a common understanding of The City of Calgary's (The City's) water licence capacity and to inform a discussion on the role of Calgary's licence allocation in regional servicing.

The City of Calgary has three water licences – one on the Elbow River and two on the Bow River. The goals of these water licences are to meet immediate and short-term water supply needs for The City and regional customers, secure a long term and resilient water supply for The City, support regional growth, and contribute to The City's resilience to drought and climate change. In 2006, the Province closed the South Saskatchewan River Basin to new surface water licences. This means all water users in the Basin are operating within a constrained water supply system.

A recent assessment of Calgary's total water licence capacity identified that Calgary has sufficient volume for roughly the time horizon of Calgary's Municipal Development Plan, 60 or 70 years away from now. However, the diversion limit outlined in Calgary's licence only enables The City to provide peak day demand (the amount of water used on the highest consumption day of the year) until approximately 2036, less than 20 years from now.

To address the challenges of finite water supply, The City, with the Province and regional stakeholders, should develop a long-term water supply strategy to ensure the sustainable provision of water to the region. This strategy will need to consider the role of water licence allocations and other water security and supply options.

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ADMINISTRATION RECOMMENDATION:

That the Intergovernmental Affairs Committee recommend that Council:

1. Receive this report for information;
2. Provide support through representation on Calgary Municipal Region Board (CMRB) for the development of a regional water supply plan that aligns with the servicing and growth plans;
3. Direct Administration to report back to the Intergovernmental Affairs Committee on the Drought Risk and Vulnerability Assessment; and
4. Direct that the report attachments, presentation and verbal discussions remain confidential subject to Sections 23 and 24 of the *Freedom of Information and Protection of Privacy Act*.

RECOMMENDATION OF THE INTERGOVERNMENTAL AFFAIRS COMMITTEE, DATED 2018 JUNE 27:

That Council:

1. Provide support through representation on Calgary Municipal Region Board (CMRB) for the development of a regional water supply plan that aligns with the servicing and growth plans; and
2. Direct Administration to report back to the Intergovernmental Affairs Committee on the Drought Risk and Vulnerability Assessment.

Excerpt of the Minutes of the Intergovernmental Affairs Committee, held 2018 June 27

“Attachments 1 and 2 contained in Report IGA2018-0828, were released as public documents, by general consent.”

PREVIOUS COUNCIL DIRECTION / POLICY

2014 October 27 in-camera report (C2014-0790), Council directed Administration to reserve, in principle, up to 27,200 ML of water from The City of Calgary’s Water Licence capacity to provide water services to Airdrie, Strathmore and Chestermere for 20 years in accordance with their new Master Servicing Agreements from 2015 to 2035, subject to confirmation and Council approval every four-year business cycle.

2017 February 2 in-camera (IGA2017-0089), Administration provided IGA Committee a Regional Servicing Update presentation on recent developments and discussions around providing water to Okotoks.

2018 February 15 (IGA2018-0089), Council rescinded the *Policy for Utility Extensions Beyond the City’s boundaries* – UEP004 and adopted the revised proposed Policy on Regional Water, Wastewater and Stormwater Servicing (CP2018-01).

BACKGROUND

The City of Calgary has a portfolio of water licences that were issued to The City for its own municipal needs. Since 1961, Calgary has entered into long-term water supply agreements to

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extend water supply and share water allocated under its water licences as part of regional servicing agreements.

In 2006, the Province closed the South Saskatchewan River Basin to new surface water licences. The City's water licence allocation has remained unchanged since 2006 despite an increase in population and additional regional requests for water servicing. This requires The City to carefully manage existing licences and plan for future water supply to support Calgary's growth. To mitigate growth risks, The City invested in demand management strategies and programs like the 2005 Water Efficiency Plan, which has resulted in river withdrawals being maintained at 2003 levels. As a result, The City has not yet had to use its full water licence allocation.

In 2014, Council approved in-principle the provision of supplemental water servicing to Okotoks, subject to consultation with the Province. The Province has since informed The City that a portion of Calgary's water licences must be transferred or amended to provide water servicing to new regional customers. Alternatively, Okotoks can acquire its own licence.

With the CMRB in place and the development of regional growth and servicing plans underway, there is an increased expectation that The City will provide water services to the region through its existing water licences. Both the Province and The City agree that municipalities in the Calgary Metropolitan region do not have sufficient water assurance for current and future needs. While The City is prepared to play a role in providing regional water servicing, the role of Calgary's water licence allocation needs to be carefully considered.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

To inform discussions with the Province, Administration has shared with the Province that Calgary's total annual licence allocation (all the water in Calgary's licences) aligns with the horizon of Calgary's Municipal Development Plan (Attachment 1). Further, based on current information, The City's water licence capacity will be reached, under peak day demands, by 2036 (Attachment 2). This means that in less than 20 years time, the peak day demand will exceed Calgary's existing instantaneous diversion limits, or the amount of water The City can withdraw from the river each day.

Over the next year, Administration will be assessing drought risks and strategies. This may result in recommendations to further manage peak day demand and refine water conservation goals and targets for all customers. The assessment will also provide further information on The City's long-term water supply needs and licence capacity. In addition, Administration will be assessing three additional water licence risks over the next year:

1. operational risk of not accessing the full Raw 1 licence at the Bearspaw Reservoir;
2. timing and diversion risk due to summer seasonal drought; and
3. water licence priority risk.

To mitigate operational risks, negotiations with TransAlta Utilities and the Province to increase the instantaneous diversion rate must occur. This will enable The City to increase the amount of water it can divert from the Bearspaw Reservoir. To address Risks 2 and 3, Administration will be working on a formal Drought Risk and Vulnerability Assessment to develop drought mitigation and response strategies. Work will be initiated this summer and is anticipated to be completed by the end of 2019.

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These risks underscore the need for Administration to work with the Province, the CMRB and regional stakeholders to create a shared understanding that The City's water licence capacity will be reached, under peak day demands, by 2036.

There is a need to understand if the Bow River watershed will be able to provide sufficient water for the growth aspirations of the region and how that will be managed. The City will request that a regional long-term water supply strategy be developed in collaboration with the Province to ensure the sustainable provision of water to the region. This will need to consider the role of water licence allocations and other water security and supply options.

Stakeholder Engagement, Research and Communication

Specific discussions regarding The City's water licence capacity have been underway with the Province, existing regional customers and the Town of Okotoks within the context of Master Servicing Agreements. The City, including both elected officials and Administration, participates on CMRB committees.

The City of Calgary will work with the Province, CMRB and regional municipalities to determine appropriate mechanisms, policies and options for ensuring there is a sufficient and secure water supply to support regional growth and economic prosperity.

Strategic Alignment

This work aligns to Action Plan (2015-2018) Strategic Action H4 – Work with our regional partners and the Government of Alberta on an integrated approach to the watershed.

Social, Environmental, Economic (External)

This work supports the Province's *Water for Life Strategy* which has three main goals: healthy aquatic ecosystems, reliable, quality water supplies for a sustainable economy and safe, secure drinking water. To support the *Water for Life Strategy*, The City of Calgary takes an integrated watershed management approach that ensures reliable and resilient water servicing for Calgary and regional customers.

Financial Capacity

Current and Future Operating Budget:

There are no operating budget impacts for The City associated with this report.

Current and Future Capital Budget:

There are no immediate implications to The City's capital budget associated with this report.

Risk Assessment

This report provides information on risks associated with The City's water supply with respect to water licence capacity, delivering water to the region, and timing and diversion risks due to seasonal drought.

Administration will continue to assess and manage all water supply risks.

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REASON(S) FOR RECOMMENDATION(S):

To protect The City's water licences for Calgary's future growth, The City needs to establish a shared understanding with the Province, the CMRB, and regional stakeholders of The City's water licence situation and impress the need for a long-term regional water supply strategy in alignment with regional growth and servicing plans.

ATTACHMENT(S)

1. Attachment 1 – City of Calgary Water Efficiency
2. Attachment 2 – City of Calgary Water Licence Capacity