

**Utilities & Environmental Protection Report to
SPC on Utilities and Corporate Services
2019 June 19**

**ISC: UNRESTRICTED
UCS2019-0808**

Update on the Nose Creek Watershed Water Management Plan

EXECUTIVE SUMMARY

The purpose of this report is to provide an overview of the updated Nose Creek Watershed Water Management Plan (the Plan) (Attachment 1) and recommend to Council the approval of the Plan as a guidance and planning tool.

The original Plan (2007) and this update were completed through the collaborative efforts of the Nose Creek Watershed Partnership (the Partnership); members include: The City of Calgary, The City of Airdrie, Rocky View County and The Calgary Airport Authority. The Plan update was managed by the Partnership and included consultation with Alberta Environment & Parks (AEP), the development industry, agricultural industry and environmental non-government organizations (NGO's).

The updated Plan (2018) clarifies the goals and objectives of the Partnership, recognizes implementation challenges, addresses knowledge gaps and includes greater flexibility for member municipalities on implementation. A key implementation challenge of the Plan remains achieving the 2013 16 mm runoff volume control target (as set out in the 2007 Plan). The 2007 Plan outlined an approach where volume control targets would become more stringent over time as the Partnership and local jurisdictions had better ability (based on understanding, refined building practice and changing legislation) to manage stormwater runoff. Given that new communities typically take several years to progress through the development process, applications approved early in the 2007 Plan's implementation are only now reaching the stage where details as to how the target will be practically achieved are being evaluated. In addition, Provincial guidance and policy related to stormwater reuse systems have not yet been fully developed to address the associated potential public health risks.

The updated Plan identifies the following key priorities for the next five years:

- Develop a hydrologic/hydraulic and water quality modelling tool for the Nose Creek watershed.
- Implement a co-ordinated and long-term, standardized water monitoring program to support the modeling tool and improve water condition reporting.
- Monitor erosion in West Nose Creek and Nose Creek.
- Report on watershed condition.

The updated Plan provides the flexibility for the Partnership and The City to continue working with the development industry on achieving the environmental goals outlined in the Plan (riparian protection, water quality etc.) while we undertake modelling and studies to inform and address some of the implementation challenges.

The City of Airdrie completed their approval processes in Q1 2019, Rocky View County is anticipated to consider the Plan in Q3, 2019 and The Airport Authority is anticipated to consider the Plan in Q3, 2019.

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ADMINISTRATION RECOMMENDATION:

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

1. Approve the *2018 Nose Creek Watershed Water Management Plan* (Attachment 1) as a guidance document and planning tool; and
2. Direct Administration to report back to SPC on Utilities and Corporate Services with a progress update on Plan implementation no later than 2020 Q3.

PREVIOUS COUNCIL DIRECTION / POLICY

On 2007 July 16, Council Approved the recommendation from the SPC on Utilities and Environment to approve the Nose Creek Watershed Water Management Plan as a guidance document and planning tool.

BACKGROUND

The Partnership is an inter-municipal watershed stewardship group that is authorized by the Government of Alberta. Its members include representatives from The City of Calgary, Rocky View County, The Calgary Airport Authority and The City of Airdrie. The Partnership has additional technical support from the Bow River Basin Council. The main objectives of the Plan are to protect riparian areas and manage stormwater to improve water quality in the Nose Creek watershed.

The authority for the Partnership to develop a water management plan is found in the Provincial *Water Act* through a provision known as the *Framework for Water Management Planning*. A key component of the *Framework* is the *Strategy for the Protection of the Aquatic Environment* in terms of water quantity, water quality, habitat and aquatic species.

In 2007, the Partnership finalized the original Plan, which provides guidance for watershed management and sets strategic direction for the Partnership. This document was approved as a guidance document and planning tool by Council in 2007. The Plan was also approved by AEP, which enforces the implementation of the *Plan* as it relates to the *Environmental Protection and Enhancement Act* and the *Water Act*.

In 2016, the Partnership initiated a 10-year review of the Plan, which was completed in 2018. Specific areas of review included developing recommendations to manage stormwater as part of greenfield development and redevelopment, monitoring and evaluating the performance of stormwater management, and updating riparian protection strategies.

The 2018 update to the Plan is a good first step towards balancing the goals of watershed management and the need for urban development. Ongoing work through the Partnership with key stakeholders including The Building Industry and Land Development Association (Calgary) (BILD) and Commercial Real Estate Development Association (NAIOP) will continue (Attachment 2).

Being a member of the Partnership has been valuable to The City and direction from the Plan has influenced The City's progression of stormwater management. Calgary remains the greatest

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beneficiary of the work of the Partnership being located downstream of Rocky View County and The City of Airdrie.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

In September 2018, after nearly three years of analyses, stakeholder engagement and collaboration with AEP, the Partnership completed the final draft of the update of the Plan. Key recommendations include:

- Delay the implementation of the 2017 runoff volume control targets to allow additional technical analysis to occur, which will help the Partnership achieve the environmental goals outlined in the Plan.
- Preserve ephemeral and intermittent watercourses (those that are only periodically present or not continuous) to help mitigate stormwater impacts.
- Update the Restricted Activity Period for West Nose Creek to accommodate brown trout spawning to preserve biodiversity within the watershed.

The Partnership and Plan identify the following key priorities for the next five years:

- Develop a hydrologic/hydraulic and water quality modelling tool for the Nose Creek watershed.
- Implement a co-ordinated and long-term, standardized water monitoring program to support the modeling tool and improve water condition reporting.
- Monitor erosion in West Nose Creek and Nose Creek.
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The Partnership will continue to work toward implementation of the Plan including technical analysis and studies to better understand the impacts of stormwater runoff in the Nose Creek Watershed. Specifically, the Partnership will use the results of the proposed hydrologic / hydraulic modeling project to evaluate stormwater targets to inform the implementation of best management practices for stormwater quality and quantity in greenfield and redevelopment contexts.

Stakeholder Engagement, Research and Communication

The Partnership conducted three formal phases of engagement with stakeholders (Attachment 2). City staff were invited to Partnership engagement sessions, as well as to internal engagement events hosted by Water Resources. BILD Calgary Region, NAIOP and other development industry representatives provided input at various stages of the process. The Partnership and The City will continue to work with the development industry to explore opportunities to expand the toolbox available to achieve the environmental goals set out in the Plan (Attachment 3). BILD and NAIOP provided a joint letter to The City outlining their position on this approach (Attachment 4).

Strategic Alignment

The update of the Plan is aligned to the One Calgary 2019 – 2022 Service Plan and Budgets, including:

- A Healthy Green City

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- Directive (H1): Addressing climate change in a way that engages Calgarians – building environmental resilience within the Nose Creek Watershed.
- Directive (H3): Integrated watershed management – to protect public health and the environment, strengthening resiliency to climate.
- A Well-Run City
 - Directive (W4): Recognizing missed opportunity for innovation in service delivery and planning because of an existing culture of risk avoidance. The Partnership remains a model for integrated watershed management in Alberta.

This work is also aligned to the South Saskatchewan Regional Plan and will be an input for the Calgary Metropolitan Region Board.

Social, Environmental, Economic (External)

The Plan provides broad guidance for water management and sets out clear, strategic direction that will result in consistent, specific actions to protect riparian function and improve water quality in the watershed. It is expected that the updated Plan will continue to guide all levels of government, individuals, landowners and non-profit organizations when making land and water management decisions in the Nose Creek watershed. The updated Plan provides implementation flexibility, while strategically aligning the values and principles of the broader Partnership.

Financial Capacity

Current and Future Operating and Capital Budget:

The Nose Creek Partnership operates through contributions from members and grants. The City's contributions were incorporated in the One Calgary workplan and budget.

Risk Assessment

The Plan plays a role in ensuring that a consistent stormwater management approach is being taken by the Partnership for the Nose Creek watershed. This approach provides water quality benefits to Nose Creek and West Nose Creek. The risks of not supporting the updated Plan include: damage to The City's reputation as a regional partner, environmental steward and provincial leader in watershed management and a reduced ability to manage overland floods along Nose Creek and West Nose Creek.

If the updated Plan is not approved by member municipalities, then The City and AEP would continue to regulate using the 2007 version of the Plan, which does not provide the desired flexibility to address implementation challenges. This doesn't provide the flexibility or allow the time to undertake the hydrologic / hydraulic modeling and other research needed to inform and address implementation challenges (e.g. stormwater runoff volume targets).

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REASON(S) FOR RECOMMENDATION(S): The recommendation provides direction to Administration and the Nose Creek Watershed Partnership on municipal priorities. The updated Plan also provides the desired flexibility to address the implementation challenges raised by the development industry, while offering support to proposed work plans and action items.

ATTACHMENT(S)

1. Attachment 1 - 2018 Update Nose Creek Watershed Water Management Plan
2. Attachment 2 - Nose Creek Watershed Partnership Engagement Summary
3. Attachment 3 - City of Calgary Approach to Runoff Volume Control Implementation
4. Attachment 4 - Stakeholder Letter