

Cooperative Stormwater Management Initiative (CSMI): Master Stormwater Agreement

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. Working with the Province and regional partners, The City aims to protect the water supply, use water wisely, keep rivers healthy and build resiliency to flooding. The City delivers on this commitment through three lines of service: drinking water treatment and supply, wastewater collection and treatment, and stormwater management.

To accommodate long-term growth, The City of Calgary and surrounding municipalities require a stormwater drainage solution for future development of lands within, and east of Calgary. The City has participated in the Cooperative Stormwater Management Initiative (CSMI) as one of six regional members since 2012. The CSMI is a regional approach to stormwater servicing for areas, including Belvedere lands, with plans to build a new stormwater canal system parallel to the current Western Irrigation District (WID) irrigation canals. Concurrently, The City has also been evaluating a City-only alternative, which could provide stormwater servicing for the Belvedere lands via Forest Lawn Creek.

To date, work with CSMI has centered on determining the most appropriate engineering solution and governance structure for the initiative. In 2017, the CSMI members negotiated a governance agreement - the Master Storm Water Agreement (MSA), proposing rights and obligations of partners with respect to funding, development and operation principles.

In 2017, the Province mandated regional planning and collaboration through the Calgary Metropolitan Region Board (CMRB). The CMRB will be required to develop a Metropolitan Region Servicing Plan by 2021 that will address water, wastewater and stormwater servicing.

In the fall of 2017, the CSMI partnership received approval for a \$7.6 million grant for design and first stage construction costs from the Alberta Community Resiliency Program (ACRP) conditional upon all six members entering into a governance agreement – the MSA. Five partners have signed, with The City of Calgary still outstanding. To execute the grant, Alberta Environment and Parks (AEP) requires the MSA to be signed by 2018 February 28.

This report recommends Council direct Administration to sign the CSMI MSA by 2018 February 28 to maintain partnership status with the CSMI. Given current information, advantages to The City outweigh the disadvantages. Potential liabilities and risks have been mitigated through conditions The City had included in the MSA, and there are several opportunities or “off ramps” to leave the partnership if deemed advantageous or necessary.

ADMINISTRATION RECOMMENDATIONS:

That the Intergovernmental Affairs Committee recommend that Council:

1. Direct Administration to sign the Cooperative Stormwater Management Initiative (CSMI) Master Storm Water Agreement no later than 2018 February 28, and
2. Direct this report to the 2018 February 26th Regular Council Meeting.

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PREVIOUS COUNCIL DIRECTION / POLICY

On 2012 October 17, the Standing Policy Committee (SPC) on Utilities and Corporate Services received the Shepard Regional Drainage Plan (SRDP) (Phase 1) for information (UCS2012-0676). Following the discontinuance of the SRDP, Water Resources has participated in the CSMI. An in-camera verbal update was provided to City Council in 2015 June. In 2016, in-camera verbal updates were provided to IGA.

BACKGROUND

Discussions for a regional stormwater solution started in 2008 as part of the SRDP which encompassed lands along the eastern portion of Calgary (including Belvedere and a portion of residual lands east of Stoney Trail), Rocky View County (RVC) and Chestermere (Attachment 1). Typically, The City manages drainage within its own municipal boundary, however, the Shepard lands present a unique challenge due to topography, and the fact that there is no natural drainage course to the Bow River.

The SRDP was discontinued by stakeholders in 2013 due to feasibility challenges and high costs (\$230 million over 50 years). Two potential alternative drainage options have subsequently been identified:

1. Forest Lawn Creek (FLC) is a City-only solution intended to direct all Belvedere stormwater runoff flows to the FLC system to the west (Attachment 2).
2. CSMI is a regional solution to drain development areas, including Belvedere and a portion of residual lands east of Stoney Trail into a new stormwater canal system largely on WID land parallel to the existing irrigation canals (Attachment 3).

Preliminary assessments have been completed on both the FLC and CSMI options. Feasibility studies and cost estimates are expected to be complete in 2019.

An alternative City-only solution – Forest Lawn Creek (FLC)

Concurrent to participating in CSMI, The City has been assessing the feasibility of an alternative drainage solution within the City. The Belvedere Area Structure Plan (ASP) was approved in 2013 and called for the creation of a Master Drainage Plan (MDP) that identified stormwater servicing for the plan area. The feasibility and impacts of servicing the plan area via the Forest Lawn Creek and Shepard stormwater system are being evaluated. Administration is also studying potential impacts to wetlands to further quantify the associated mitigation and compensation costs.

The Cooperative Stormwater Management Initiative (CSMI)

Since 2012, The City has been participating as a member of the CSMI, with Rocky View County, City of Chestermere, Town of Strathmore, Wheatland County and the WID. The Municipal members of CSMI are pursuing a regional drainage solution in partnership with the WID. The WID, also a member, will own, manage and operate the resulting system on behalf of, and under the direction of the CSMI Board.

Early work with CSMI centered on engineering feasibility and governance structure for the initiative. An engineering feasibility study and water balance analysis was completed in 2014 and 2015. The water balance assessment was used to calculate proportional costs to each

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municipal partner based on their proposed development area and runoff volume contributions. Calgary's pro share is 9 per cent of the total.

Five governance models were evaluated and the cooperative model was agreed upon by all CSMI members. A cooperative allows each CSMI partner to appoint one Director each with one vote. The primary governance role for the Cooperative would be to administer a 25 year CSMI Stormwater Management Plan and authorize system operations and maintenance as well as operating and capital budget expenditures.

In the fall of 2017, the CSMI partnership received approval for a \$7.6 million grant from the ACRP conditional upon all six partners entering into a governance agreement – the MSA, and the grant being executed by the Province by 2018 March 31. To meet this timeline, the MSA will need to be signed by 2018 February 28.

Work by the CSMI membership in 2017 has centered on negotiating the MSA, which sets out the rights and obligations of partners with respect to funding, development and operation principles. A summary of the MSA can be found in Attachment 4. So far, five of the six CSMI members have signed the MSA, with The City of Calgary still outstanding.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

Signing the MSA is required for The City to continue as a member in the CSMI partnership. The MSA also sets the foundation for three Subsequent Agreements (Development Agreement, Management Agreement and User Agreement; see Attachment 4) which must be signed by all partners within one year of signing the MSA, unless the timeline is unanimously extended by all six members. The MSA will become void if all the Subsequent Agreements are not signed by all partners.

Additionally, the MSA outlines conditions for termination of membership, pro share costs, dispute resolution mechanisms, ownership principles and timelines. Water Resources, Law and Intergovernmental and Corporate Strategy (ICS) reviewed the MSA to identify risks and potential liabilities (see Risk Assessment section of this report) and mitigations were negotiated into the final MSA.

If The City proceeds with CSMI, work in 2018 will involve negotiating the three sub-agreements, renegotiating the Western Headworks Stormwater Management Agreement (WHsMA) with the WID (a City of Calgary Condition Precedent in the MSA), and completing detailed engineering assessment and construction cost estimates. Construction would potentially start in 2019 or 2020.

Signing the MSA by the deadline of 2018 February 28 will ensure The City receives a share of the Provincial funding. Since regional stormwater servicing will be addressed by the CMRB through the Metropolitan Region Servicing Plan, this Cooperative allows The City to maintain regional partnerships, relationships, and facilitate well-planned drainage on the east side of Calgary.

Signing the MSA does not formally commit the City to the project; there are several "off ramps" should The City wish to leave CSMI. For example, not signing any one of the Subsequent Agreements. Signing also does not preclude The City from completing the FLC evaluation and potentially developing the FLC option instead of, or in combination with, the CSMI option.

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Stakeholder Engagement, Research and Communication

An update to CSMI was provided to the Corporate-wide Regional Leaders Forum and Integrated Growth Committee (DIGC) where no major concerns were identified and signing onto the next phase of CSMI received general support.

Strategic Alignment

Regional stormwater servicing demonstrates The City's commitment and obligation to being a regional partner as part of the new CMRB and aligns to The City's proposed regional water, wastewater and stormwater servicing policy. This work also aligns and contributes to several Strategic Action areas in Council's Priorities for 2015-2018 including "A city of inspiring neighbourhoods" and "A healthy and green city".

Social, Environmental, Economic (External)

Participation in the CSMI reinforces regional collaboration that will occur through the CMRB. The Cooperative provides a mechanism to collectively balance environmental impacts with increasing demand for urban, industrial and commercial land development in the region. The CSMI approach ensures sustainable stormwater management by leveraging partner resources to address regional environmental issues while allowing economic growth. The CSMI will improve collective accountability for water quality by ensuring any adverse downstream impacts to receiving waterbodies is avoided or minimized and mitigated. CSMI may also provide opportunities to develop regional wetlands and reduce future needs for costly and land-intensive evaporation ponds.

Financial Capacity

The operational and capital costs are estimates based on preliminary feasibility and design. Refined costs will be determined in 2018 as part of detailed engineering design work. Actual costs and The City's cost share will be based on final designs, buildout, and measured use of the system. All City capital costs will be recoverable from landowners within the city that will benefit from the stormwater drainage system. Overall, signing the MSA will effectively commit the City to \$322,940 in operational and capital funds for 2018.

Current and Future Operating Budget:

Annual operating costs for the Cooperative cover all non-capital costs including office costs and staff, accounting and legal costs, board costs, as well as water quality and quantity monitoring (operational and regulatory) once the system is operational. The City's portion of operating costs for 2018 are estimated at \$83,000 with subsequent annual operating costs for The City estimated at between \$60,000 and \$90,000.

Current and Future Capital Budget:

The estimate for the total capital cost of the project is \$85 million over a 25 year build out period. The City's portion is estimated at \$7 million with the inclusion of a portion of the \$7.6 million Provincial ACRP grant the CSMI partnership received. The Grant will be shared by all the members and will cover 70% of the design cost and early stage construction costs. The Municipal partners will be collectively responsible for 30% of these costs or \$2.4 million.

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In addition to the CSMI capital improvements, a regional collector system is required to convey flows from the Belvedere area to the CSMI point of entry. Additional capital funds will be required for this regional collector system, however, the collector will be required for both the FLC and CSMI options.

Table 1 outlines the budget estimates including the ACRP grant, but does not include a Federal New Building Canada Fund (NBCF) grant, which is pending approval; if approved, the capital cost to The City for 2018-2020 would be reduced. Capital costs for 2019-2022 will be incorporated in the Water Infrastructure Investment Plan (WIIP).

Table 1. CSMI Total Capital Cost Estimate and City of Calgary Cost Share

CSMI CAPITAL FUNDING	2018	2019-2020	2021-2042	Total Capital Cost (2018-2042)
Total CSMI Capital Cost	\$2,660,000	\$8,150,000	\$74,070,000	\$84,880,000
City of Calgary Capital Cost Share	\$239,940	\$165,510	\$6,549,750	\$6,955,200

Specific timing of Stage 2-5 capital costs (2021-2042) will be determined and outlined in the Subsequent Agreements and based on actual build out timing and each Municipalities' need to use the system. Municipalities requiring the system prior to the CSMI build timeline will have the option to pay the development costs and recover proportional costs from the other members once they need the system and have recovered or set aside appropriate funds.

Risk Assessment

The City of Calgary has conducted an extensive evaluation of potential risks associated with CSMI and the signing of the MSA, resulting in the following key risks and mitigations:

Technical Risks

- Technical feasibility of the CSMI solution has only been preliminarily studied and will be evaluated further in 2018 during an engineering assessment and design. If engineering proves to be problematic, there are mechanisms in place in the MSA for The City to leave the partnership even if the other members decide to continue.
- Potential impacts to Weed Lake and other watercourses have only been preliminarily confirmed and will be further evaluated in 2018 as part of regulatory requirements. A monitoring program will also be implemented once the system becomes operational to monitor water quality and volumes.

Partner/Stakeholder Risks

- The other partners on the CSMI Board may carry a vote that unfairly disadvantages The City. The City has built a dispute mechanism (arbitration) into the MSA that can be invoked by a Municipality or Municipalities should a board vote be viewed as disadvantaging that member. The Cooperative governance structure allows for one board member with one vote for each member of the Cooperative.

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- CSMI agreements are ratified before the CMRB growth plans are in place. The MSA, at the request of Calgary, recognizes the governance of CMRB regarding development planning.
- Not signing the MSA may jeopardize regional relationships. The City will continue to manage regional relationships as positively as possible.
- The timing of the agreement and regional stormwater infrastructure may not align with The City's priorities and growth strategy. The work associated with CSMI will inform The City's strategy for east Belvedere.

Regulatory Risks

- CSMI may negatively impact or jeopardize Calgary's ability to meet the conditions of the WHSMA. Calgary's Condition Precedent in the MSA requires the WID and AEP to enter renegotiation of the WHSMA.

Financial Risks

- Detailed costs will be estimated as part of the detailed engineering design for CSMI, and timing will be determined in Subsequent Agreements to be negotiated in 2018 as a condition of the MSA.

REASONS FOR RECOMMENDATION:

1. CSMI is a regional solution that will be completed by the CSMI partnership with or without The City; staying involved allows The City to maintain regional relationships, influence and lay the foundation for well-planned drainage on the east side of the metropolitan area. This should result in better input to the CMRB Growth Plan and Servicing Plan and potentially mitigate long-term risk to the City from poor drainage planning and implementation east of The City.
2. Signing the MSA keeps The City at the CSMI table and both drainage options available until the FLC evaluation is completed, and costs for both options are finalized.
3. CSMI provides an opportunity to renegotiate the WHSMA as a Condition Precedent of the MSA.
4. The CSMI will improve regional accountability for water quality by ensuring any adverse downstream impacts to receiving waterbodies is avoided or minimized and mitigated. It also may provide opportunities to develop regional wetlands and reduce future need for costly and land-intensive evaporation ponds.
5. The cost commitment by signing the MSA and continue working with CSMI is relatively small (\$322,940 in 2018), but allows The City to share in the ACRP grant funding and potentially NBCF grant funds (\$700 thousand-\$1 million). Not signing now and entering the partnership at later date, will have increased costs and negative regional relationship implications for The City.
6. Signing the MSA does not commit The City to the project. However, signing and an investment of funds in 2018 could signal and create the expectation that The City is moving forward with development planning and servicing.

ATTACHMENTS

1. Map of Belvedere and Residual Lands East of Stoney Trail
2. Map of Forest Lawn Creek Route/Area
3. Map of CSMI Area
4. CSMI Master Storm Water Agreement Summary