
Flood Control Strategy Update – Cumberland Park

ISSUE

In December 2018, City Council approved the implementation of the nine-year \$54 million Flood Control Strategy (FCS) to mitigate flooding in 10 priority areas that have historically experienced frequent flooding. The purpose of this report is to provide an update on the strategy, including the results of the Feasibility Assessment for the project to mitigate flooding near Cumberland Park, and to request approval to proceed with the project. This report also provides an update on the future projects planned within the FCS.

RECOMMENDATION

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

1. That the detailed design and construction of a dry storm pond in Cumberland Park proceed in 2025 to mitigate flooding near the intersection of Cumberland Avenue South and Main Street; and
2. That the 1st Avenue North - 46th Street East location be approved as Project 7 within the Flood Control Strategy.

BACKGROUND

The FCS is based on the principles of reducing flood impacts for the maximum number of properties within the available budget while maintaining the existing quality and service levels for both passive and active recreation opportunities in parks where the projects are constructed. The FCS framework that was approved in 2018 includes the following four phases:

- Phase One: High-level assessment and location approval (completed in 2018).
- Phase Two: Feasibility assessment of each project. City Council to approve projects prior to proceeding to Phase Three.
- Phase Three: Detailed design and public engagement.
- Phase Four: Construction.

The status of the first four FCS projects is provided in the table below:

Project	Status	Details
W.W. Ashley Park Dry Pond	Complete	Open to the public
Churchill Park Dry Pond	Complete	Open to the public
Weaver Park Dry Pond	Substantially Complete	Landscape establishment in progress and will open to the public in the Fall 2024
Brevoort Park South Underground Storm Water Storage	Construction	Construction will occur in 2024 with the park reopening to the public in the Fall 2025

Photos of the dry pond at Weaver Park at the substantial completion milestone (November 2023) are shown in Appendix 1.

The Feasibility Assessment completed for the fifth FCS project at Cumberland Park to mitigate flooding at the intersection of Cumberland Avenue South and Main Street, shows the project is technically feasible and will reduce the flood risk for at least 35 properties during a 1-in-10-year design rain event. The details of the Feasibility Assessment are provided in Appendix 2.

DISCUSSION/ANALYSIS

The proposed fifth FCS project is the construction of a dry storm pond at Cumberland Park that will reduce the flood risk in an area with a history of frequent flooding and expected future flooding due to climate change. In 2018, the Cumberland Avenue South and Main Street intersection and surrounding area was rated fifth highest among the top 30 known high-risk flood locations within Saskatoon, based on the probability of flooding and the number of properties expected to flood during intense rain events.

In 2018, City Council approved the following projects to be included in the FCS, known as projects 6 through 9.

6. Cumberland Avenue South and 14th Street East (joint University of Saskatchewan Dry Pond Project)
7. miyo-wâhkôhtowin Road and McCully Crescent (Kensington Wet Pond)
8. Avenue W South and 21st Street West (Cahill Park)
9. 3rd Avenue North and 24th Street East (storm sewer to the river)

In the May 2023 [Flood Control Strategy Update – Brevoort Park South](#) report, the Administration provided an update on future projects to be included in the FCS. This was done in response to the June 2022 rain event where locations in the top 30 known high-flood risk locations, but not included in the FCS, reported flood conditions. The update included a modelling and cost-benefit exercise that confirmed projects 6, 8, and 9 remain as priorities to be included in the FCS. Based on updated modelling data, the Administration recommended the consideration to change Project 7 location from miyo-wâhkôhtowin Road-McCully Crescent location to the East Place-Louise Street location. This recommendation was to be confirmed in the 2024 FCS Update.

Since the May 2023 FCS update report, the Administration has completed a secondary study regarding future flood mitigation projects to include in the second Disaster Mitigation and Adaptation Fund (DMAF) application for five more projects to be constructed between 2028 and 2032. Through this study, which included further modelling and cost-benefit calculations, it was determined that the highest priority flood location outside of the eight confirmed FCS projects is the 1st Avenue North - 46th Street East location (as opposed to miyo-wâhkôhtowin Road and McCully Crescent (Kensington Wet Pond)). The 1st Avenue North – 46th Street East project would include installation of a new storm sewer pipe connecting the intersection to the nearby wet storm pond at RCAF Memorial Park. The Administration is recommending this location be identified and completed as Project 7 of the FCS. The East Place - Louise Street flood mitigation project would then be scheduled to be constructed in 2028, pending approval of the second DMAF funding application to continue the FCS. The revised FCS project schedule and future flood mitigation project priority ranking is proposed in Appendix 3.

FINANCIAL IMPLICATIONS

In 2019, the Government of Canada approved 40% cost sharing of the \$54.1 million estimated FCS eligible expenses up to a maximum of \$21.6 million through the DMAF. City Council approved Storm Water Utility funding of \$32.5 million (60%) through previously approved increases to the Storm Water Utility management charge.

Through construction of Projects 1, 2, and 3, the City of Saskatoon (City) is approximately \$8.8 million under budget compared to the 2018 DMAF/City agreement cost estimates. Project 4 estimated costs have increased by \$4.6 million due to utilizing underground storage infrastructure compared to a traditional dry pond to maintain recreation service levels, post construction.

The Feasibility Assessment cost estimate for the Cumberland Park dry pond project is \$3.4 million, of which, \$2.0 million (60%) will be funded through the Storm Water Utility, while \$1.4 million (40%) will be funded through the DMAF. The table below shows the 2018 FCS agreement estimates compared to the current actual and estimated costs. Based on the updated costs, it is estimated the FCS will be \$2.1 million over budget by the end of 2027 due to recent increased construction costs and inflation since the agreement was approved in 2018. The total cost includes 10% (\$3.1 million) contingency for the remaining (2024-2027) project construction. Funding for the City's portion of the FCS is available through Capital Project P.01619.07 Storm Sewer Trunk and Collection Flood Control Strategy. The strategy overages would be addressed through capital reserve allocations within the Storm Water Utility if required.

Project Information			2018 DMAF Agreement			2024 Cost Actuals & Estimates		
No.	Location	Const. Year	Total Eligible Costs	GOC Eligible Costs	COS Eligible Costs	Total Eligible Costs	GOC Eligible Costs	COS Eligible Costs
1	W.W. Ashley Park	2021	\$5.7M	\$2.3M	\$3.4M	\$3.5M	\$1.4M	\$2.1M
2	Churchill Park	2022	\$10.4M	\$4.2M	\$6.2M	\$5.6M	\$2.2M	\$3.4M
3	Weaver Park	2023	\$7.7M	\$3.1M	\$4.6M	\$5.9M	\$2.4M	\$3.5M
4	Brevoort Park South	2024	\$7.8M	\$3.1M	\$4.7M	\$12.4M	\$4.9M	\$7.5M
5	Cumberland Park	2025	\$3.2M	\$1.3M	\$1.9M	\$3.4M	\$1.4M	\$2.0M
6	USask	2025	\$3.2M	\$1.3M	\$1.9M	\$6.0M	\$2.4M	\$3.6M
7	46 th Street	2027	\$4.4M	\$1.7M	\$2.7M	\$5.9M	\$2.3M	\$3.6M
8	Cahill Park	2026	\$3.3M	\$1.3M	\$2.0M	\$6.9M	\$2.8M	\$4.1M
9	24 th Street	2026	\$8.4M	\$3.3M	\$5.1M	\$6.6M	\$2.6M	\$4.0M
Totals:			\$54.1M	\$21.6M	\$32.5M	\$56.2M	\$22.5M	\$33.7M

OTHER IMPLICATIONS

The Parks Department and Recreation and Community Development Department have emphasized the high community value of quality recreation and green infrastructure at Cumberland Park. The dry pond Feasibility Assessment design plan layout, shown in Appendix 2, is the preferred layout to maintain recreation while maximizing the protection of the existing tree canopy at Cumberland Park. The required multi-purpose

sport field dimensions will be included in the dry pond for pre-existing recreation service levels to be maintained after construction with the dry pond designed to drain within 24 hours after a rain event. Existing neighbourhood use of the park will need to be relocated during construction in 2025 and likely 2026, depending on the health of the new sod for the dry pond and park. The dry pond will be designed to maximize tree protection of the existing trees in the park, and if tree removal is required, Bylaw No. 9957, The Tree Protection Bylaw, 2024 will be followed.

A Crime Prevention Through Environmental Design (CPTED) evaluation will be completed during the detailed design of the dry pond to identify opportunities for the park design to minimize crime while being accessible and inviting for the desired neighbourhood usage.

Residents near Cumberland Park and other stakeholders were notified of the proposed project through a letter in February 2024, including details of a project information presentation that was provided to the Varsity View/Grosvenor Park and Holliston Community Associations in March and April 2024. These stakeholders were also notified of this report with instructions how to write to or speak to Council in April 2024.

NEXT STEPS

The next steps include the following:

- Public engagement with nearby residents and park users, including sports groups, SOS Trees, and neighbourhood community associations. Engagement activities will be promoted through the Engage webpage, flyers, surveys, an online video, and an event (June 2024 to January 2025).
- Detailed design, costing, and construction planning for the Cumberland Park project (June 2024 to January 2025).
- Construction tender and award (January 2025 to February 2025).
- Construction (February 2025 to November 2025).
- Complete the required DMAF agreement amendments for Location 7 with the Government of Canada.

APPENDICES

1. Weaver Park Dry Pond Substantial Completion Photos
2. Cumberland Park Dry Pond Feasibility Assessment
3. FCS Project Schedule and 2024 Modelling Analysis Summary

Report Approval

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