

**Meeting Date:** July 10, 2024

**Subject:** Flood Mitigation Update – Q1 2024

**Approvals:** Kelly Hansen

Director

Henry Hunter

Chief Administrative Officer

### **Recommendation(s):**

THAT the Q1 2024 Flood Mitigation Update be accepted as information

### **Summary | Background:**

This report continues to utilize the Flood Mitigation Framework (the “Framework”) that was introduced on May 23, 2023, and provides an update on the progress of Flood Mitigation as well as financial reporting.

#### **Background:**

The Framework was developed to enhance transparent financial reporting, create measurable completion milestones, and create a shared understanding of the projects and activities associated with flood mitigation. The Framework is accompanied by a cross-departmental working group that shares decision-making and supports multiple projects moving forward concurrently. The Framework’s stages are:

Stage 1: Original 2014 Flood Mitigation Program

Stage 2: Post-2020 Flood Modifications and Expansion

Stage 3: Mitigation Integrity Review

#### **Program Update by Stage:**

##### ***Stage 1: Original 2014 Flood Mitigation Program***

Since the last update on April 9, 2024, progress on Stage 1 projects continued with active construction on Reaches 5, 10-1 and 11. These Stage 1 projects remain on schedule, as identified within the Framework.

##### ***Reach 5***

As of this reporting period, the contractor has completed the installation of the Z bracing, and the installation of the pile caps is ongoing. Additionally, the installation



of live staking (bioengineering measure) as a form of erosion control is in progress and the top-up of areas in the berm that have settled is taking place. It is anticipated that substantial completion for the project will be the end of the 2024 construction season.

**Reach 6**

A detailed presentation on proposed design options is scheduled to be presented to Council on July 9, 2024, for decision of the final design. Tender for construction is anticipated for 2025 with construction planned to begin in 2026.

**Reach 10-1**

Project is 93% complete with outstanding deficiencies expected to be completed by the end of the 2024 construction season.

**Reach 10-2**

The design scope for Reach 10-2 is currently being finalized with tender planned for late 2024/early 2025, and construction to occur thereafter.

Mitigation is complete for Reaches 7, 8 and 11.

**Stage 2 - Post-2020 Flood Modifications and Expansion**

**Seasonal Mitigation**

As permanent flood mitigation continues to progress, the requirement for seasonal mitigation decreases. Overall costs have trended downwards over the last 3 years, as shown in the following chart:

Activity	2021	2022	2023	2024
Above Ground Protection Measures	\$ 5,109,813	\$ 2,400,294	\$ 2,297,121	\$ 911,171
Miscellaneous Costs	\$ 185,531	\$ 68,469	\$ -	\$ -
Underground Systems Protection	\$ 6,037,722	\$ 4,058,797	\$ 3,178,867	\$ 539,844
<b>Grand Total</b>	<b>\$ 11,333,066</b>	<b>\$ 6,527,560</b>	<b>\$ 5,475,988</b>	<b>\$ 1,451,015</b>

*Note: Costs provided are current as of March 31, 2024*

**Interim Mitigation**

The interim clay berms that run alongside portions of Clearwater Drive will remain in place until construction starts on Reach 6. This berm continues to be monitored



and inspected on an annual basis to ensure that the protection level of 250.0m is achieved.

### ***TaigaNova North***

Construction has now begun on TaigaNova North, anticipated completion date is the end of the 2025 construction season.

### ***Underground Enhancements***

The contract for underground enhancements is on schedule to be executed in Q3 2024. The contract includes enhancements to Reaches 1-4 Storm Outfalls (the Athabasca Bridge Storm Outfall and the King Street Bridge Storm Outfall) and the Sanitary System enhancement at Borealis Park. Construction is expected to begin in the coming weeks with completion anticipated to be by the end of the 2025 construction season.

Reach 3 enhancements were added to the Underground work scope, which will include an earth berm and an elevation increase to the Father Mercredi Street parking lot. Raising the intersection at Hardin Street and Clearwater Drive will be combined with other work activities planned for this area and will be tendered separately.

### ***Hangingstone Expansion Area***

Hangingstone Expansion Area was prioritized after the June 2023 high water event. Design work is to begin in 2024 with construction anticipated to begin in 2026.

### ***TaigaNova South***

TaigaNova South is in the pre-design phase. Design is anticipated to be finalized in 2024 and construction anticipated to begin in 2025.

### ***Reaches 1-4 & 9 Enhancements***

Work on the Reaches 1-2 and 9 designs has not yet begun.

Reach 3 Enhancements has been combined with Underground Enhancements, with work anticipated to begin in 2024.

Reach 4 Enhancements is in the design phase and is anticipated to be finalized in late 2024/early 2025.



**Stage 3 - Mitigation Integrity Review**

Budget for design was approved during the budgeting process in December 2023 for work to begin on the Reach 8 Bank Stabilization project. Preliminary preparation has also begun for an assessment of the Saline Creek Parkway Traffic Bridge.

**Budget | Financial Considerations:**

The financial reporting for costs related to flood mitigation activities will continue to be presented by reach and/or project area on a regular basis. A financial overview broken down by stage, along with a breakdown of annual total spend since 2014, are found below.

All financial reporting in this report is current as of March 31, 2024.

Financial Overview by Stage

Stage	Activity	Previously Reported Costs to Dec 31, 2023	Current Costs to Mar 31, 2024	Change in Total Costs (Dec 31 – Mar 31)
Stage 1	Design	\$ 3,673,547	\$ 3,821,782	\$ 148,235
Stage 1	Construction	\$ 85,337,764	\$ 85,796,626	\$ 458,861
Stage 2	Seasonal Flood Protection	\$ 23,437,733	\$ 24,888,748	\$ 1,451,015
Stage 2	Interim Flood Protection	\$ 2,696,765	\$ 2,696,765	-
Stage 2	Permanent Flood Protection	\$ 2,331,839	\$ 2,348,782	\$ 16,943
Stage 3	Mitigation Integrity Review	-	-	-
Total		\$ 117,477,648	\$ 119,552,703	\$ 2,075,054



Financial Overview by Annual Spend 2014-2024

Year	Total Spend
2014	\$ 1,999,936
2015	\$ 1,191,950
2016	\$ 150,090
2017	\$ 8,796,858
2018	\$ 10,397,826
2019	\$ 4,298,095
2020	\$ 2,441,110
2021	\$ 21,251,587
2022	\$ 33,768,888
2023	\$ 33,181,307
2024	\$ 2,075,054

**Strategic Plan Alignment | Impact:**

The approved 2022-2025 Strategic Plan includes the Downtown Visualization value noting that the downtown has struggled over time with indecisions, rapid changes in decision, and natural disasters. The milestones and actions associated with this value includes the conclusion of flood mitigation investments. This report provides an update on flood mitigation as of Q1 2024.

**Rationale for Recommendation(s):**

On May 23, 2023, Administration introduced the Flood Mitigation Framework, which was a commitment to regularly update on the progress of Flood Mitigation as well as financial reporting.

**Attachment(s):**

1. Flood Mitigation Update – Q1 2024 PowerPoint Presentation

