

NO: R118

COUNCIL DATE: June 13, 2022

REGULAR COUNCIL

TO: **Mayor & Council** DATE: **June 9, 2022**

FROM: **General Manager, Engineering** FILE: **6020-001**
General Manager, Parks, Recreation & Culture XC: **5225-23**

SUBJECT: **Surrey Disaster Mitigation Adaptation Fund 2022 Mid-Year Update**

RECOMMENDATION

The Engineering Department and the Parks, Recreation & Culture Department recommend that Council receive this report for information.

INTENT

The purpose of this report is to provide a mid-year update to Council on the City's Disaster Mitigation and Adaptation Fund ("DMAF") program.

BACKGROUND

To help Surrey's coastal communities become more resilient in a changing climate, the City followed a comprehensive process to develop the Surrey Coastal Flood Adaptation Strategy ("CFAS"). This multi-year undertaking identified the current and anticipated future impacts of climate change on Surrey's coastal communities (Mud Bay, Crescent Beach, Semiahmoo Bay).

In 2019, the City was successful in an application to Infrastructure Canada for DMAF and received a Federal funding commitment for \$76.6 million to implement large-scale infrastructure and innovative nature-based solutions to address pressing concerns, and preparing for impacts associated with a changing climate. The Federal Contribution Agreement was executed on August 15, 2019 and ends March 31, 2028.

DISCUSSION

The DMAF program is now in its fourth year and has significantly advanced eight CFAS Actions prioritized for completion. DMAF consists of 13 key infrastructure projects with some smaller supporting projects, all of which are tied to the Federal funding and must be completed by March 2028.

DMAF Program Status

The 13 projects that form the DMAF Program advance a number of the CFAS Area Specific Actions. The City, along with partner organizations, have made considerable progress since the Contribution Agreement for DMAF was executed in 2019. The status of each project is depicted in Appendix “I”. The overall timeline for the DMAF Program is highly ambitious with three of the 13 projects complete, and construction underway for five of the remaining 10 projects. Table 1 summarizes design and construction status, and reimbursement expenditures from the Federal Government.

Table 1: Updated Project Status

Project	Design Status	Construction Stage	Eligible Expenditures Incurred to April 27, 2022	Remaining Commitment To Date
1. Colebrook Dyke				
• Series 100	100%	Underway	\$0.1M	\$1.2M
• Series 200	100%	Underway	\$2.0M	\$3.6M
• Series 300	100%	Complete	\$0.1M	\$0
2. Colebrook Pump Station	90%	2023	<\$0.1M	\$0.3M
3. Serpentine Sea Dam	70%	2023-2025	\$0.4M	\$0.6M (Design Fee)
4. 152 Street Upgrades				
• King George Blvd Raising	100%	2022	\$0.2M	\$1.6M
• 152 St – Phase 1	70%	2022	\$0.4M	\$0.1M
• 152 St – Phase 2	70%	2023	<\$0.1M	\$0.0M
• 152 St Nicomekl Bridge	50%		<\$0.1M	\$0.8M (Design Fee)
5. Nicomekl Riverfront Park	20%	2023-2026	\$0.1M	\$1.1M
6. King George Blvd Bridge & Nicomekl River Sea Dam				
• King George Bridge	100%	2022	\$3.0M	\$20.5M
• Nicomekl Sea Dam Replacement	10%	2025-2027	<\$0.1M	\$0.0M
7. Crescent Beach Storm Sewer				
• Phase 3A (Sullivan St south)	100%	Underway	\$0.3M	\$5.1M
• Phase 3B (Sullivan St north and area)	100%	2023	\$0.1M	\$0.0M
• Phase 4 (South of Sullivan St)	10%	2024 - 2026	\$0.1M	\$0.3M
8. Nicomekl & Serpentine Dyking				
• Nicomekl (multiple phases)	100%	2023	\$0.1M	\$0.7M
• Serpentine (multiple phases)	70%	2022-2026	\$3.0 M	\$0.0M
• Floodboxes	100%	2021-2026	\$<0.1M	\$0.0M
9. Serpentine SRY Rail Link Bridge and Surrey Dyking Crossing	100%	Complete	\$2.8M	\$0.0M
10. Burrows Drainage Pump Station	100%	Complete	\$3.0M	\$0.0M

Project	Design Status	Construction Stage	Eligible Expenditures Incurred to April 27, 2022	Remaining Commitment To Date
11. Stewart Farm Sanitary Pump Station	100%	Complete	\$0.5M	\$0.0M
12. Campbell River Pedestrian & Emergency Access Bridge	0% - TBD by SFN	TBD by SFN	<\$0.1M	<\$0.1M
13. i. Foreshore Enhancements				
• Boundary Bay Dyke (Delta)	100%	Complete	\$0.75M	\$0.0M
• Pilot phases (Surrey & Delta)	90%	2022	<0.1M	<\$0.1M
• Mud Bay Coastal Climate Adaptation Project (Surrey)	70%	2022	<0.1M	<\$0.1M
• Coastal Instrumentation	100%	2022	0.1M	\$0.0M
Program Level Contracts	n/a	n/a	\$0.8M	\$0.2M
Sub-total			\$18.2M	36.2M
Total Financial Commitment			\$54.4M	

City staff are in frequent contact with staff at Infrastructure Canada about the program status and are working together to ensure the program remains on schedule for completion by March 31, 2028. The City’s DMAF Program is estimated at \$187 million in Eligible Expenditures. Based on actual eligible expenditures incurred up to April 27, 2022, summarized in Table 1, the City has contractually committed to \$54.4 million, equating to 29% of the total program budget of \$187 million.

Community Employment Benefits

The federal government developed the Community Employment Benefits (“CEB”) initiative in 2018 to support sustained economic growth, building stronger, more inclusive communities, and creating meaningful jobs for more Canadians. DMAF funding includes a requirement to target, measure and report on CEB.

The following CEB target groups and enterprises have been selected by Council to target, measure and report on for DMAF projects:

- Apprentices;
- Indigenous Peoples;
- Woman;
- Person with a disability;
- Veterans;
- Youth;
- Recent Immigrants; and
- LGBTQ+.

Two contractor pre-qualification processes have been undertaken that included evaluation of each firm’s ability to deliver community employment benefits and several construction tenders have been issued and successfully awarded. Through the DMAF projects, staff have projected that at least 374,000 hours of employment will be provided for the eight benefit groups listed above.

Since 2019, 63,042 total employment hours have been created through the DMAF projects, of which 32% of the employment hours were provided to target groups which exceeded the minimum target range of 20-30% that was endorsed by Council under Corporate Report No. R171; 2019.

Additionally, Council set a target of 50% of the contract value to be awarded to small and medium sized enterprises. To date, the contract commitments to small and medium businesses are slightly below 50% and staff will continue to monitor this target and anticipate that as more contracts are awarded this number will increase prior to the next report out. The 2021 annual report on Community Employment Benefits is included in Appendix "II".

Biannual Progress Reporting and Oversight Committee

An Oversight Committee has been established with representatives from the City of Surrey and Infrastructure Canada, which meets bi-annually. A collaborative approach has been established through these meetings. City staff also meet with Infrastructure Canada representatives regularly to monitor progress on the City's public communication requirements and the Duty to Consult with Indigenous governments, as per the terms of the contribution agreement.

DMAF Cost-Sharing and Partnerships

Funding Agreements

DMAF involves multiple partnerships and stakeholders. The City enters into agreements with each organization that will incur costs or organizations who are responsible for delivering components of DMAF projects. To date, staff have executed agreements with the City of Delta, Southern Railway, the Greater Vancouver Water District and the Ministry of Transportation and Infrastructure.

The final Recipient agreement to be executed is with Semiahmoo First Nation ("SFN"). The agreement has been drafted and discussions are ongoing, pending SFN securing the remaining funding to deliver the Campbell River Bridge project.

Partnerships

Several Indigenous nations, as well as Provincial and Federal agencies, are active in providing input into the Foreshore Enhancements (DMAF project #13 in table 1) and participating in a Boundary Bay Living Dike Roundtable. City staff, along with multiple other governmental and academic partners, are participating in the following research initiatives:

- *Coastal Adaptation: Living with Water.* Funded by Pacific Institute for Climate Solutions and led by University of British Columbia. The objective of this project is to develop new planning, design and decision-making tools to help communities and the ecosystems adapt to the impacts of sea level rise and coastal flooding. Staff attended a portion of an annual workshop this year including providing a site tour of the City's Mud Bay Park.

- *Nature-Based Infrastructure for Coastal Resilience and Risk Reduction.* Funded by Defence Research and Development Canada and led by National Research Council Canada. This project addresses key factors and data gaps limiting the uptake of nature-based infrastructure for coastal flood and erosion risk reduction. City staff attended a site workshop on the Boundary Bay Dyke with researchers. Full scale and partial scale physical modelling of the Mud Bay Foreshore Enhancements project is underway in Ottawa to inform the City's final design. Final reporting is anticipated in March of 2023.
- *Insurance for Nature-based Infrastructure Projects:* The City is in discussions with Infrastructure Canada and insurance industry to develop an innovative solution related to the Mud Bay Foreshore Enhancements Project. Discussion involve grant funding of up to \$1M to support the City's implementation of the Mud Bay Foreshore Enhancements Project.

Memorandum of Understanding

Implementation of the Foreshore Enhancements (DMAF project 13) requires Provincial authorization for the portion of works located within the Boundary Bay Wildlife Management Area. A portion of the works also fall within the City of Delta, Surrey's partner on this project. These interjurisdictional arrangements have been formalized in a Memorandum of Understanding between the parties. The final project design will be presented to the Province for final approval later this year.

Next Steps

Staff will continue to provide Council with updates either mid-year or year-end on the implementation of CFAS and DMAF. Additional Corporate Reports will be provided to Council as construction and consulting contracts are awarded throughout the year as part of delivering the DMAF program.

FUNDING

Funding for implementation of DMAF projects remains in accordance with the Contribution Agreement, which provides for up to 41.5% of eligible costs to be reimbursed by the Federal Government. Some individual projects also have funding provided by the Province. The remaining assets are multi-year projects and financial claims will continue to be made periodically to Infrastructure Canada, as expenditures are incurred.

To ensure the City remains eligible for the grant funding received, the overall program must be completed by March 31, 2028, including satisfying the program requirements set out in the Contribution Agreement.

The work continues to be conducted in phases, and necessary funding for the phases of work between 2022 and 2026 is available for the City's portion of the DMAF Project within the Approved 5-Year Financial Plan.

SUSTAINABILITY CONSIDERATIONS

The implementation of CFAS supports the objectives of the City's Sustainability Charter 2.0. In particular, the CFAS relates to the Sustainability Charter 2.0 themes of Infrastructure, Built Environment and Neighbourhoods, Ecosystems, and Public Safety. Specifically, CFAS and the DMAF projects support the following Desired Outcomes ("DO") and Strategic Directions ("SD"):

- All Infrastructure DO3: Infrastructure systems are designed to protect human health, preserve environmental integrity, and be adaptable to climate change impacts;
- Energy and Climate SD7: Address long term sea level rise and related climate impacts in Surrey's lowlands and affected communities;
- Emergency Preparedness and Prevention DO8: The community's critical infrastructure and systems are designed to withstand climate change impacts and natural events and disasters, and include emergency response and reconstruction plans;
- Emergency Preparedness and Prevention SD6: Promote development types and locations that will be minimally impacted by natural disasters; and
- Green Infrastructure DO12: Surrey protects ecosystem services and manages natural assets in order to create resiliency to adapt and thrive in a changing climate.

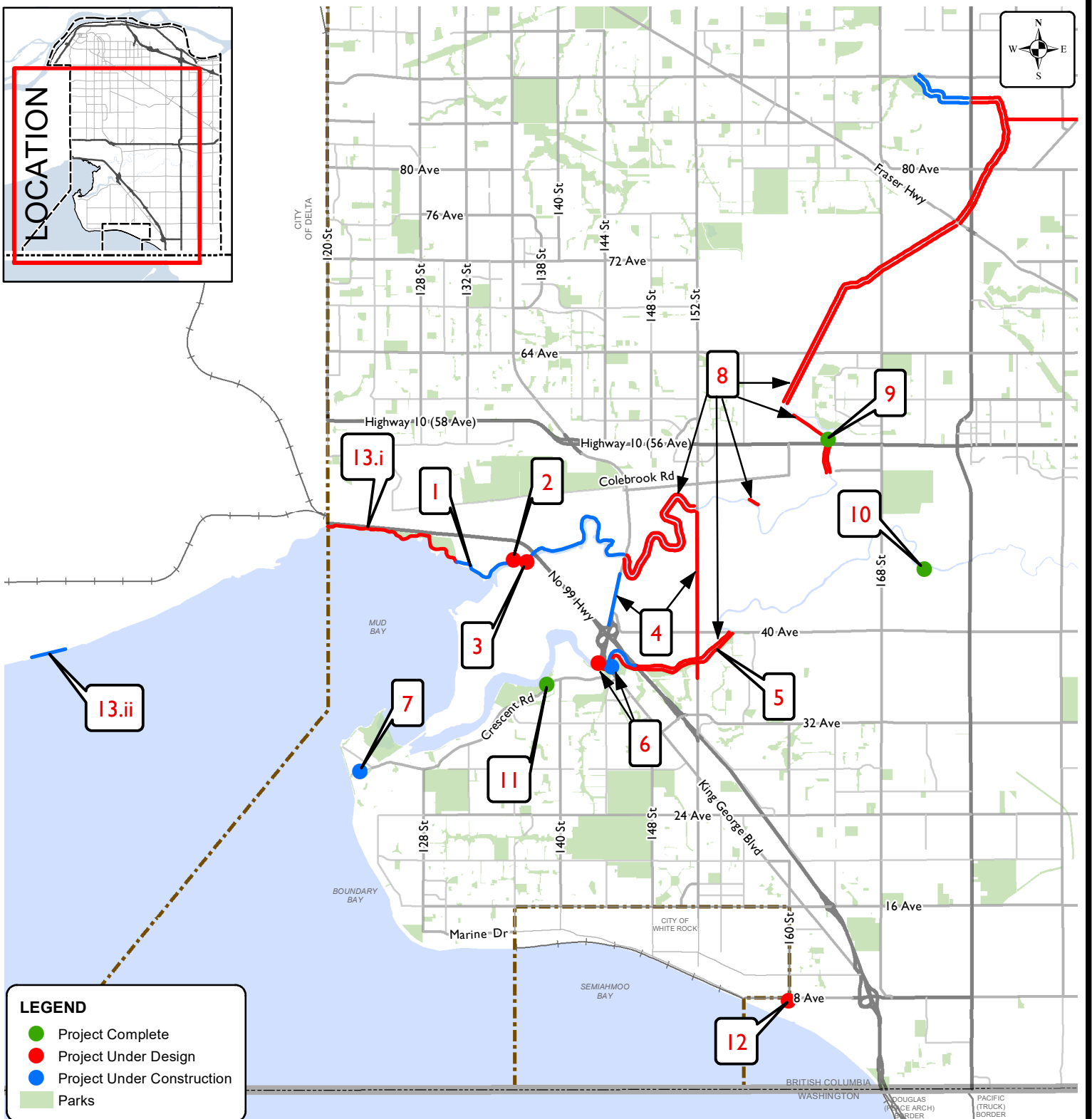
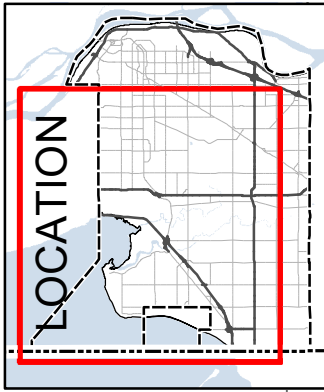
CONCLUSION

The City's DMAF program is funded in part by the Government of Canada. The DMAF program consist of 13 individual infrastructure improvements with the purpose of reducing vulnerability of the lowlands and infrastructure to coastal flooding and sea level rise. As generally described in this report, the City's DMAF program has committed 29% of the funds available, is achieving the City's Community Employment Benefits targets and is on-track to complete the 13 infrastructure projects by March 31, 2028, as required by the Contribution Agreement.

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Appendix "I" - DMAF Program Status Map
Appendix "II" - DMAF Community Employment Benefits



Produced by GIS Section: 03-Jun-2022, P205803

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2022 Mid-Year DMAF Program Status

ENGINEERING
DEPARTMENT

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, Legal descriptions and encumbrances must be confirmed at the Land Title Office.

APPENDIX "II"

Community Employment Benefit (Fall report only)

(DMAF projects must report annually on Community Employment Benefits provided to at least 3 federal target groups. Please complete the table below)

1) Target Groups Identified for the project for employment opportunities <i>(Indicate which federal target groups apply by selecting "Yes")</i>		Project Target <i>(For federal target groups identified, provide the targeted number of project hours for each group, for the entire project)</i>	Result <i>(Provide the cumulative total number of project hours for each group, and the relative percentage – hours worked by target population divided by total project hours*)</i>
Apprentices	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		188.5 Hours 0.3%
Indigenous peoples	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		1,255 Hours 2.0%
Women	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	46,750 Hours 12.5 %	5,585 Hours 8.9%
Persons with disabilities	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		14 Hours 0.0%
Veterans	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		0 Hours 0.0%
Youth	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	26,180 Hours 7%	12,897 Hours 20.5%
Recent immigrants	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1,870 Hours 0.5%	124.25 Hours 0.2%
2) Target Types of Enterprises for procurement opportunities <i>(Indicate which types of Enterprise apply by selecting "Yes")</i>		Project Target <i>(For enterprises types identified, provide the targeted value of contracts for the entire project)</i>	Total, cumulative value of contract(s) <i>(Provide the cumulative total value of contracts awarded to target enterprises)</i>
Small enterprises	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$79,251,466.10	\$4,621,518.24
Medium enterprises	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$14,248,533.90	\$804,721.26
Social enterprises	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	\$	34,231.25

***Cumulative total project hours worked: 63,043 hours**

Is the project on track to meet the project targets for the three federal target groups benefiting from the project?

- Yes
 No

Please explain (this narrative could identify both key successes as well as challenges encountered by the project in attempting to meet the project targets):

-The main challenge to-date has been in receiving timely reporting from the firms under contract. We are implementing a requirement to submit community employment benefit reporting as a condition to the City issuing payment.

-Target group hours are on track to meet project targets.

-Target types of enterprises are slightly below where we expected and are likely skewed due to the largest contract spend to-date going to a large enterprise that due to the type of work had limited sub-contracting. We expect future contracts to large enterprises to sub-contract at least 50% of the work to small and medium enterprises. We anticipate this to balance out as more construction contracts are awarded throughout the DMAF Project.