

MINISTRY OF EMERGENCY MANAGEMENT AND CLIMATE READINESS MEETING BACKGROUNDER

PREPARED FOR: Bowinn Ma, Minister of Emergency Management and Climate Readiness

MEETING: MBM meeting with Mayor Siemen

DATE: Pre-brief: January 3, 2023 1:45pm
Meeting: January 3, 2023 2:00pm

ATTENDEES: Pre-brief - DM Tara Richards, ADM Jennifer McGuire, EL Julia Iwama
Meeting – Minister Ma, Mayor Siemens, Peter Sparanese, City Manager

ISSUE: Sumas Prairie Flood Mitigation – update on 4G MOU and proposed Sumas Pump station

BACKGROUND:

- The City of Abbotsford's (the City) Recovery plan includes over 65 project requests; over 25 have been withdrawn as they do not qualify for Disaster Financial Assistance, over 25 remain under review, and the balance have been approved. Over \$2.537M in eligible DFA claims have been approved for recovery and repairs. Most recent approvals:
 - Project MP-022, the final claim for Clayburn Village detention tank project was completed, the community was reimbursed \$20,057.40.
 - Project SP-001, an interim claim for No. 4 and Parallel road watermain break was completed, the community was reimbursed for \$611,114.06. Additional claims for this project are anticipated.
- In addition to the City's Recovery plan and after an initial public engagement on 4 different flood mitigation options, the City announced a preferred mitigation option on June 13th and subsequently sent a letter on June 27th to the Premier sharing that decision, aspects of the preferred option and a request to advance funding for a new Sumas River pump station.
- The City has identified 7 components of a comprehensive preferred structural flood protection (mitigation) plan. Overall cost is estimated at \$2.5B to implement the preferred plan. (see appendix 1) The costs for mitigation are in addition to DFA.
- The new Sumas River pump station is viewed by the City as a critical need to address the flood box deficiencies that caused the back-up of the Sumas River in November 2021, eventually overtopping the dike and causing subsequent flooding. The immediate funding request from the City also includes Barrowtown Pump Station improvements and Sumas dike upgrades to a combined total of ~\$800 million, including contingencies.

- In considering a new Sumas River Pump station, Provincial staff need more information to understand the costs, benefits and considerations that went into arriving as the most suitable option. Minister Farnworth responded to the City's funding request in a July 28th letter that emphasized the importance of engaging First Nations in the process and for their support of any proposed option. The City is currently working with Kerr Wood Leidal Associates Ltd. (KWL) to develop more details and has been actively engaging with First Nations in development of a collaborative flood management plan.
- December 20, 2022 a draft KWL Sumas Prairie Flood Protection report was shared with the province; Abbotsford deferred to share with the broader 4G working group (which includes local First Nation partners) as the City was dedicating attention to the upcoming atmospheric river events. The City committed to share the draft report with the 4G working group prior to a scheduled January 11, 2023 face to face meeting to review the report. Semá:th acknowledged the delay of receipt of the report. Provincial concern is that if the report is not provided by the City by January 4th, Semá:th may not have sufficient time to fully review the 213 page report prior to the January 11th meeting. The review of this report is important to inform the provincial decision-making process about support for and funding contribution to a new Sumas River pump station.
- The membership and roles of the 4G MOU working group and interested participants is nearing a final list. (see Appendix 2) Provincial ministries (FOR, EMCR), the City, and Semá:th have continued to meet on a biweekly basis since October to work through views on scope and timelines for the 4G MOU and the proposed Sumas pump station.
- The Province, the City and Semá:th have individually reached out to the Federal Government to join the table with no response. A joint letter from the Province, City and Semá:th maybe considered a next step early in 2023.

INDIGENOUS PEOPLES CONSIDERATIONS:

- First Nations have expressed concern about their ability to engage without suitable capacity funding. Semá:th presented to the Province a 5 Year Workplan and Budget for capacity funding to participate in Flood Strategy Planning and Recovery: This includes: \$1.27M over 5 years to engage with the City in the Flood Mitigation Planning and \$0.64M over 5 years to engage in the Transboundary Nooksack Planning Initiative.

s.12

- Semá:th has continued to raise concerns about challenges the nation faces in being able and prepared to fully engage in Sumas Prairie flood mitigation planning activities.

OTHER MINISTRIES IMPACTED/CONSULTED:

- Ministry of Forests, Ministry of Transportation and Infrastructure, Ministry of Agriculture and Food, and Federal Government.

PREPARED BY:

Jennifer McGuire, ADM
Disaster Recovery Division

REVIEWED BY:

	Initials	Date
DM	TR	Dec 30, 2022
ADM	JLM	Dec 29, 2022

APPENDICES:

Appendix 1: City of Abbotsford's Preferred Structural Flood Protection Program

Appendix 2: Sumas Prairie/Semá:th Xhotsa Flood Mitigation 4G MOU - DRAFT Membership

Appendix 1:

City of Abbotsford's Preferred Structural Flood Protection Program

Component/Element	Total Cost
A. Border to IR 6	s.16; s.17
A.1 West Floodway Dike	
A.2 East Floodway Dike	
A.3 South Floodplain Improvements	
B. IR 6 Area	
B.1 Raise or Protect IR Lands	
B.2 Retreat Right Bank Dike	
B.3 Middle Floodplain Improvements	
C. Highway 1 Area	
C.1 Increase Conveyance at Highway 1	
C.2 Increase Conveyance at South Parallel Road	
C.3 Modify/Relocate Cole Road Rest Area	
D. Highway 1 to Barrowtown	
D.1 Left Bank Dike	
D.2 Retreat Right Bank Dike	
D.3 Lower Floodplain Improvements	
E. Barrowtown	
E.1 Upgrade Barrowtown Pump Station	
E.2 Upgrade Barrowtown Dam	
E.3 New Sumas River Pump Station	
E.4 Power Supply	
F. Vedder	
F.1 Vedder Dike	
G. Sumas Prairie East	
G.1 Arnold Creek Flood Overflow Route	
G.2 Sumas River Flood Overflow Route	
G.3 Lake Bottom Designated Flood Storage Area	
Potential Total Program Cost (excluding Component C)	\$2.5B

Appendix 2:

Sumas Prairie/Semá:th Xhotsa Flood Mitigation 4G MOU - DRAFT Membership

Group	Role	Level* (M, A, S)	Invite or Notify	Confirm (Y/N)
City of Abbotsford	Planning lead and decision maker (municipal assets/infrastructure)	M	Lead	Y
Semá:th	Planning co-lead and decision maker (Reserve, First Nation rights)	M	Lead	Y
Leq'a:mel	Decision maker (Reserve, First Nation rights)	M	Invite	IP
Matsqui	To Be Confirmed	M?	Invite	IP
EMBC	Policy advisor and project sponsor	M	Sponsor	Y
FOR	Policy advisor and project sponsor	M	Sponsor	Y
TRANS	Decision maker (Hwy 1 Improvements)	M	Invite	Y
Indigenous Services Canada	Decision maker (Reserve)	M	Y Sponsor	IP
City of Chilliwack	Chilliwack/Yarrow and Chilliwack/Fraser River (municipal assets/infrastructure)	A	Invite	
STSA, EPS, LFFA	Support to First Nations MOU Members/Associates.	S	Notify	
Infrastructure Canada	Federal Funding Program development/decisions (future)	A	Invite	
Provincial Ministries	Includes Ministries of Ag and Food, Municipal Affairs, Environment	A	Invite	
Env CC Canada and DFO	Potential future decision makers, ecosystem and fisheries advisors	S	Notify	
Agricultural Land Commission	Potential decision maker on changes to ALR lands.	A	Invite	
Critical Infrastructure Owners/Managers	Dependent on potential changes to flood protection (TMX, BC Hydro, Railways)	S	Notify	

- * M = Member with full participation at all levels within the MOU, at their discretion
A = Associate with participation at one or more levels below the Leadership Committee
S = Support to Member and Associates, typically at the Working Group Level and by invitation

MINISTRY OF EMERGENCY MANAGEMENT AND CLIMATE READINESS DECISION BRIEFING NOTE

PREPARED FOR:

- **Tara Richards**, Deputy Minister, Ministry of Emergency Management and Climate Readiness
- **Mary Sue Maloughney**, Assoc. Deputy Minister, Ministry of Emergency Management and Climate Readiness
- **Kevin Jardine**, Deputy Minister, Ministry of Environment and Climate Change Strategy
- **Lori Halls**, Deputy Minister, Ministry of Water, Land & Resource Stewardship

ISSUE: Disaster and Climate Risk Reduction Tool – Platform Recommendations

BACKGROUND:

- Minister Ma's mandate outlines the province's need to continue to learn lessons from past emergencies, build capacity and resilience in the face of current challenges, and prepare in a way that mitigates the risk of future emergencies.
- The Ministry of Emergency Management and Climate Readiness (EMCR) will lead and coordinate ongoing cross-government work to use the best data and information available to learn from, respond to, and prepare for emergencies.
- As an important step in this collation of resources, and as part of the Premier's 100-day plan, EMCR is leading and accountable for the creation of a one-stop-platform, to help guide the public and communities on government's disaster and climate readiness strategies and supports.
- This online tool will demonstrate clear provincial disaster risk reduction and climate readiness leadership to the public, Indigenous Nations, local authorities and other partners.
- GDX is engaged in the development of the online tool and provide content design, digital expertise and standards related to branding, mobile, accessibility and plain language to support program outcomes during Phase 1 of this work. Phase 1 ends with the platform's launch, in mid-February 2023.
- While the platform's functions will evolve over time, the initial launch will involve a centralized platform of existing guidance documents, support tools, and other resources.
- The 100-day project will be both a disaster and climate risk reduction tool for public and community use, and a "container" for future growth; post-announcement engagement with communities will help drive what the project team fills the container with. Subsequent budget authorizations will be needed.

- While the launch in February 2023 will be just the beginning of what this platform will become, it will be beneficial to the disaster and climate risk reduction work of communities from the initial release.

DISCUSSION:

The project team needs a decision from the leadership table on the preferred content management software for the disaster and climate risk reduction online service.

While exploring options, the team took under consideration what approach would best support the ability to achieve a minimal viable product (MVP) that meets the 100-day commitment, executive expectations, and the ability to future-proof subsequent development for EMCR. This includes how to best incorporate and leverage existing content and technologies.

INDIGENOUS PEOPLES CONSIDERATIONS:

- s.16
- s.16
- The First Nation Emergency Services' Society has begun responding to this request from communities through the development of Lightship, funded by EMCR, which uses an ArcGIS platform. Engagement is planned in March 2023 on Lightship, and any data and information available from the province through the ENV's Indigenous Climate Resilience Forum. Engagement with FNLC and FNESS on this data and information portal is planned for early January 2023.
- Emergency events in British Columbia have disproportionately impacted First Nations communities. Systems of assistance reflect the governance of colonization and have been identified by First Nations leadership as not culturally safe, appropriate, or informed by First Nations community desires. First Nations Community Chiefs, the First Nation Leadership Council, the First Nations Health Authority, and the First Nations Emergency Service Society have all expressed the desire to work with EMCR and ISC to better consider both the needs and the cultural perspectives of individual members and communities.

- After the 100-day announcement, widespread engagement and enhancement of the platform will take place in partnership with First Nations communities.

The project's governance table will be presented with a future decision point around the content management strategy and information architecture for the new platform, which will identify options for how to align, link and/or migrate content from existing government websites (including CleanBC and ArcGIS BC Resilience Hub (ArcGIS) prototype) to the new site, within the time constraints of Phase 1.

OPTIONS:

Option 1 (Recommended) for Phase 1: WordPress platform as the main host page/platform, with additional content residing on CMS Lite and ArcGIS for data and mapping.

With this approach, the intent is to re-home pertinent content onto WordPress platform. In Phase 1, "pertinent content" may be limited to that which is targeted for use by the general public, rather than practitioners. All mapping and GIS components remain on the ArcGIS prototype.

WordPress is the underlying platform supporting the CleanBC web presence, and this is the preferred look and feel for a complimentary EMCR site. Furthermore, CleanBC previously undertook considerable engagement and refinement.

PROS

- Aligns with CleanBC, which is viewed by the project team as a companion site and has gone through extensive user feedback and government standards review with GDX. CleanBC also contains pertinent content leveraged in current state.
- GDX has provided an assessment on the work and resources, both financial and human, needed to achieve this desired online service by mid-February and feel it is achievable.
- Current web content development resources are skilled on this platform and are available to meet the deadline; as such, provides EMCR ability to hire staff to service the site long-term, or contract GDX to support maintenance.
- GIS mapping remains on ArcGIS. GeoBC Geospatial resources have knowledge and are in place to support GIS mapping components.
- Still allows for future integration of mapping tools, as evidenced with the EmergencyInfoBC and BC Wildfire platforms.
- Provides the best vehicle for the evolution of the site following engagement, including mobile use.
- Follows all B.C. Government web, mobile, branding and accessibility standards.

CONS

- Need to re-home all pertinent word content onto the new site structure for Phase 1 under tight timelines.

- Note: should the re-homing of pertinent non data and mapping content from the existing ARCGIS prototype be unable to be completed within the timeframe of Phase 1, or result in significant loss of functionality (i.e., visuals), then large sections of the existing ARCGIS Hub may be rebranded to remain in place.
- The varied types of resources, and their software needs, will necessitate the end user to traverse multiple platforms. That said, this build style is not out of the norm for the BC Government.

Option 2: ArcGIS GIS Hub as the main platform, integrated with WordPress/CMS Lite as required.

With this approach, the intent is to predominantly build off the ArcGIS platform.

ArcGIS is a vendor web-mapping system that enables a wealth of detailed mapping information, while being able to present content. The current ArcGIS prototype has been under development by GeoBC (in partnership with ENV, EMBC and MUNI) for the last two years, though is not yet entirely adopted nor public. It is being developed and “hard coded” internally by the team of geospatial professionals. These staff are not formally trained in service or content design, and the site currently does not meet government standards in several areas.

PROS

- Significant work has been completed to build and populate the ArcGIS prototype over the past two years. This includes a large amount of programmatic and pertinent content.
- Mapping programs are developed by GeoBC and other program areas through GIS and must and will remain on this platform (although map use is also compatible with WordPress and CMS Lite).
- s.16

CONS

- It is unknown if platform and existing content meet web, mobile, branding and accessibility standards. Review could be quite substantive, risk to Phase 1 timeline.
- Prototype has not undergone any design, user feedback or accessibility review and may require considerable editing on the “word” content.
- Seen as problematic to “skill up” government web resources and train staff to meet minimum viable product timelines.
- ArcGIS platform is not seen as a long-term option for this project for the content management. Given this is the intent of this project is to evolve the content and service, it is not recommended to launch on a platform that will be difficult to

service given limited capabilities and knowledge of this platform for the vast majority of government web staff.

OTHER MINISTRIES IMPACTED/CONSULTED:

- Ministry of Environment and Climate Change Strategy
- Ministry of Water, Land & Resource Stewardship
- Ministry of Citizens' Services

OPTION _ APPROVED

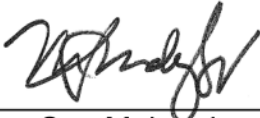
NOT APPROVED

DATE



Tara Richards, DM, EMCR

December 30, 2022



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December 29, 2022

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