



Calgary River Valleys champions and engages the public in the protection, appreciation and stewardship of Calgary's rivers, creeks, wetlands and watershed resources.

We are the voice of our rivers.

March 27, 2020

Attention: **Calgary Municipal Land Corporation
City of Calgary**
Sent via Email to: Engagement@CalgaryMLC.ca

Re: **City of Calgary Event Centre**

From: **CalgaryRiverValleys2@outlook.com**

Calgary River Valleys and its members appreciate the opportunity to provide input on the plans for the City of Calgary Event Centre. Members of our organization have reviewed the proposal and we ask for your consideration of the following information.

Flood Resilience

Given that the Event Centre site is within the 1 in 50 to 1 in 100 year overland flow floodplain of the Elbow River on current flood maps (see attached City of Calgary flood map), it is our recommendation that the building should be built to be flood resilient well beyond the 1 in 100 year flood level. Some of our members suggest a much higher standard for flood resilience for this site, such as a 1 in 500 or a 1 in 1000 year flood event. Reasons for this recommendation are as follows:

1. We and other watershed stewardship groups in Calgary have been advised by City of Calgary Water Resources staff that climate change modelling has shown that within the next 50 to 70 years, the Calgary region may receive 100% more precipitation annually than it does now, and in fewer but more concentrated events,
2. Given the anticipated impacts of climate change, and given taxpayers are likely to be responsible for necessary repairs to the facility if it were to be impacted by a flood like the Saddledome was in 2013, we believe the Event Centre should be built to a standard of resilience that will protect this asset from flood inundation much more than a 1 in 100 standard would,
3. One of the conclusions of the Government of Canada study entitled Canada's Changing Climate Report 2019, is that within the next 50 to 70 years, *"the type of extreme rainfall*



that led to the southern Alberta flooding event will become much more common in the future,”

4. The City of Calgary’s own flood risk mapping indicates the risk for the Event Centre location to be flooded within 25 years is between 2.5% and 40% (see flood map),
5. “Flood proofing” efforts should therefore be made to a far higher standard than ever, especially for publicly funded, owned and utilized infrastructure,
6. The Event Centre will be designed to accommodate many thousands of people, with good access by transit and other means of transportation, and as such it is a relatively unique resource, which will be quite centrally located within the City. As a result, the building and site may be required in future to serve during an emergency as a command / staging centre or as refuge housing for any kind of serious emergency, as we have seen these kinds of centres serve in other cities in response to a flood, major fire, tornado, or health crisis epidemic. As a result, it would be prudent to ensure the design of the building can facilitate the emergency needs for thousands of Calgarians, and be built to exceed the normal standards of flood resilience,
7. It should be noted that if this type of facility were funded in any way by the Government of Alberta, and given it could potentially be used for emergency medical or housing uses in future, the Provincial guidelines (see attached) would require this facility to be built to be flood-resilient to a 1 in 1000 flood level.

Low Impact Development

Our members believe this new Event Centre represents an opportunity to plan this facility to incorporate Low Impact Development principles and best practices. These would include building and site design to address elements such as:

1. stormwater management best practices,
2. green roofs,
3. rain gardens,
4. shadow impacts,
5. wind issues,
6. noise impacts,
7. lighting impacts, and
8. appropriate native species of trees, shrubs, and other plantings.

Community Outdoor Space

We agree it is desirable to incorporate public open space into the site. While we don't disagree that some of that open space could include a dog walking area, we suggest the City conduct a study to determine if having a dog park in this area would reduce the impacts from dog walking on the nearby Elbow River valley. If having a dog walking area in this location would reduce the number of dogs walking in the river valley area, the existing dog parks should be correspondingly reduced or removed from riverside and riparian areas, in order to better protect the existing natural flood resilience and biodiversity in the river corridor, for both plants and wildlife in and beside the river.

Calgary River Valleys would be pleased to participate in such studies and to provide advisory input to the City's plans and development of the outdoor space for this project.

On-Site Public Amenities

Given that the Event Centre will be a major destination site, and there's an expectation that pedestrian, cycling, and similar modes of movement will lead to the site, our members recommend that the site plan provide for services for pathway users such as:

1. public washrooms,
2. hand-washing stations,
3. drinking fountains,
4. advisory services such as City Parks information kiosks,
5. and possibly other related services such as non-profits that promote a healthy lifestyle (for example, Calgary Outdoor Council, Nature Calgary, Child Friendly Calgary, and similar organizations).

Educational Opportunity

We suggest the City of Calgary incorporate into the Event Centre site some prominent educational signage about the building, that it is built in the Elbow River floodplain, and that it is designed and built in such a way as to be resistant to floods of a certain level. The flood-resistant features of the building can be highlighted as a way to educate Calgarians and visitors to the site, which would be in alignment with other City of Calgary strategies & policies.

One example of such signage on existing City buildings is at the Calgary Water Centre, which has multiple signs inside and outside the building that serve to educate the employees and building users about the features of the building that make it energy efficient, allow it to reduce water usage, etc.

Calgary River Valleys would be pleased to provide advisory input on the opportunities for education for the Event Centre project as it moves forward.

We look forward to the future development of this project, and additional opportunities to provide our input.

During these times of pandemic emergency, our staff are generally working from home, but if you need to reach us, you can contact our Program Manager, Anne Naumann, via email at CalgaryRiverValleys2@outlook.com, or you can phone me directly at 403-990-5583.

Sincerely,

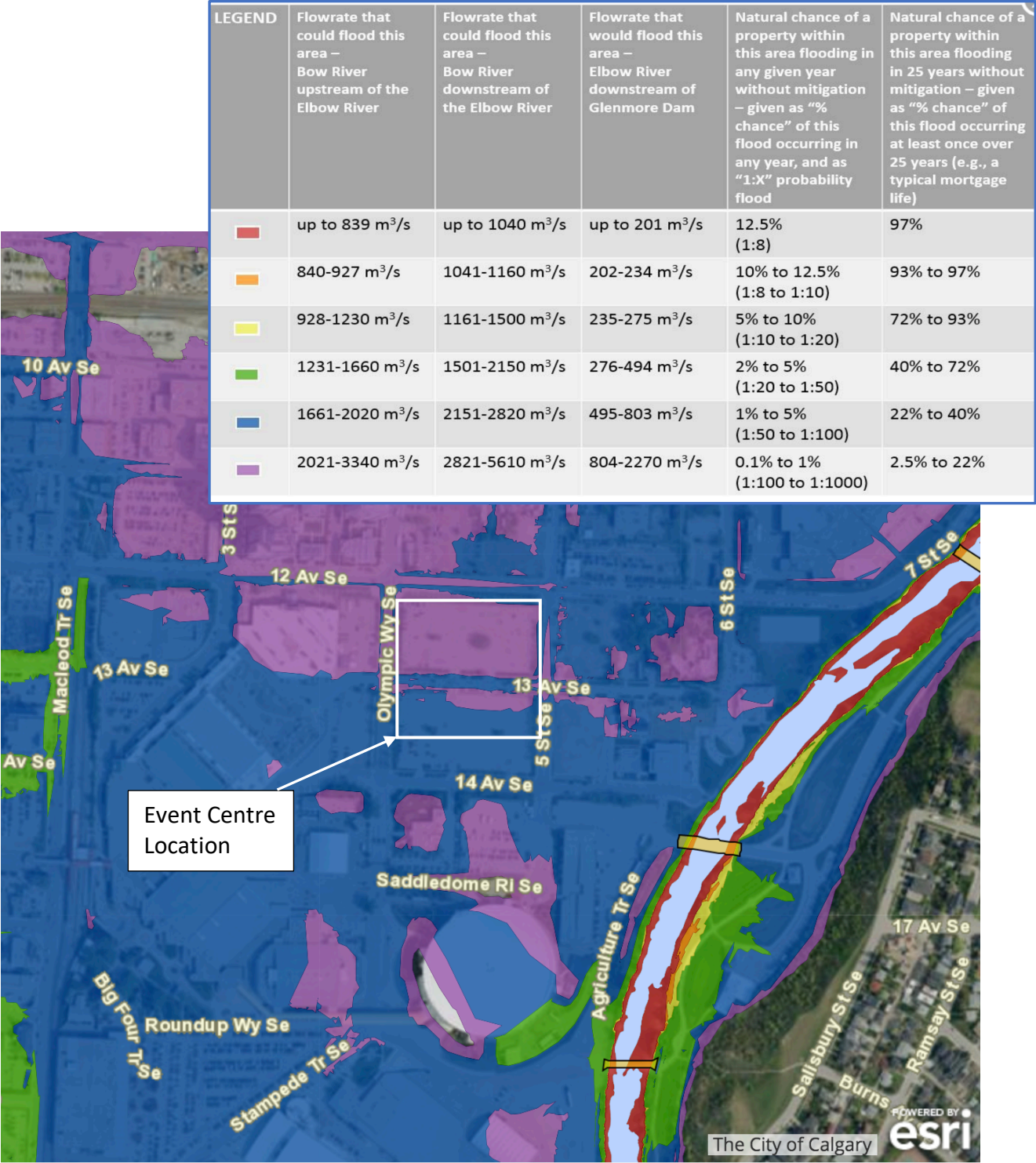
Bill Morrison, President
Calgary River Valleys

Att 1: Event Centre Area Flood Map

Att 2: Flood Risk Management Guidelines For Location of New Facilities Funded by Alberta Infrastructure – June 2017

cc: CRV Circulation
Calgary City Council & Mayor Nenshi
Francois Bouchart, City of Calgary Director of Water Resources

Event Centre Area Flood Map



The colours indicate, as per the Legend above, that the risk for the Event Centre location to be flooded within 25 years is between 2.5% and 40%

Flood Risk Management Guidelines For Location of New Facilities Funded by Alberta Infrastructure – June 2017

TABLE A – FACILITY CLASSIFICATION AND PREFERRED DESIGN FLOOD ELEVATION LEVELS FOR ALBERTA INFRASTRUCTURE OWNED AND FUNDED NEW FACILITIES *

Decreasing consequence assuming adequate warning ↓	Lifeline facilities	CLASS	IMPORTANCE OF AVOIDING MAJOR DAMAGE DURING A FLOOD EMERGENCY	DESIGN FLOOD LEVEL	EXAMPLES OF FACILITIES	COMMENTS
		1	Critical to the ability to save and avoid loss of human life.	1:1000	Legislative buildings Communication centres	Including computing centres
		2	Critical to the ability to rescue and treat the injured and to prevent secondary hazards.	1:1000	Hospitals and medical facilities Extended care facilities	Including ancillary facilities such as power plants, service and maintenance facilities
		3	Critical urban linkages important to the maintenance of public order and welfare.	1:500	Courthouses Provincial Buildings	Serve as government centres for communication in event of emergency
		4	Critical to the ongoing housing of substantial populations.	1:500	Schools Post-secondary educational facilities Seniors Residences High-rise buildings Correctional facilities Rehabilitation treatment centres	Schools and post-secondary educational facilities may be required to serve as emergency relief centres.
		5	Critical to the orderly return to long term social and economic welfare.	1:500	Airports	Critical for access for supplies and support.
	Other facilities	6	Important to the ability to avoid endangering human life and environment.	1:1000	Hazardous waste disposal and treatment facilities High risk research facilities	
		7	Important to retention of documented historical data and artifacts.	1:1000	Museums, archives, cultural centres	
		8	Important to provide threshold level of protection.	1:100	Offices Retail facilities Warehouse Service & maintenance Parking Other	Other than those associated with facilities in the higher Design Flood Level categories See comments under Site Selection for short-term use facilities.

* Water and Wastewater Facilities are not included in Table A. Contact Alberta Environment and Parks for guidelines, related to the location of Water and Wastewater Facilities.

Alberta Infrastructure – June 2017