

2019 November 19<sup>th</sup>

917 4A Street NW  
Calgary, AB T2N 1P8

**RE: Flood Mitigation - Sunnyside Berm Condition and Required Height**

I am a Sunnyside resident living one block north of Memorial Drive and five houses up from 7<sup>th</sup> Avenue NW at an elevation equivalent to current berm height. In 2013, given an hour to evacuate, I, and all my neighbours, were flooded in 2013. I walk the berm into the downtown.

Here we are, six- and one-half years since the 21<sup>st</sup> June 2013 flood event from the Bow River.

I saw the initial flood warning in 2005 when Memorial Drive was flooded. That event only halted traffic on Memorial Drive for a short while. I wrongly presumed those responsible would take actions to prevent an even worse flood. That warning, an initial engineering study to the City of Calgary in 1985 and further warnings was not acted upon by City, Province, nor Nationally.

In 2013, being warned on the evening of Thursday 20<sup>th</sup> June to evacuate, my property basement was flooded through the sewer system. Even though the Sunnyside flood waters were close to my basement walls, penetration came not overland, but through the city managed sewer system.

I have participated in the HSCA efforts toward understanding and developing strategies to mitigate further flooding in Sunnyside.

To date, action on the sewer pump station, storm water pump stations, and a planned commencement on the upper plateau storm water line are all good efforts to rectify faulty designs based on limited or poor assumptions. Now, after Sunnyside sustaining numerous upper plateau floods in 2013, action is ongoing. I do hope that current budget cuts do not halt progress!

However, the elephant in the room is a government responsibility to Sunnyside citizens to ensure the Bow River Berm is of sufficient height and effectively robust to withstand a flood such as that in 2013 as well as a possible (and some say probable) greater flood in the near future due to climate change.

This elephant, however, has been allowed to wander around gathering engineering studies, used to justify an upstream Bow River dam, pay off a TransAlta through the City agreement to do what they ethically should have done to mitigate the 2013 flood, and so on.

Just as the animals at the zoo were provided with an immediate increase to their flood protection within two years of the flood, just as the downtown was protected, so too should the tax paying citizens of Sunnyside be protected.

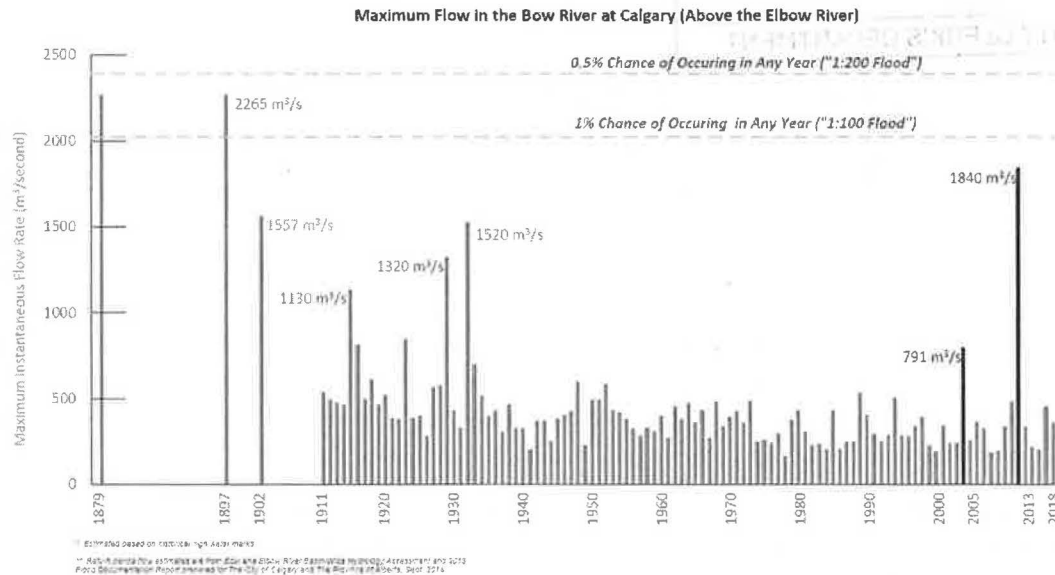
The historical map shows a 1 in 200 event occurred prior to the 1900's when measurements commenced. Who knows what flows went down the Bow in pre-measurement history?

The current berm was constructed in short order after flooding in the early 1930's. Are we going to see this type of weather again? Climate alarmists believe that to be the case.

The utilitarian purpose of the berm is to prevent the Bow River from flooding the citizens of Sunnyside during a high flow event. Why has this been ignored?

**The UTILITARIAN PURPOSE OF THE SUNNYSIDE BERM AND HEIGHT IS TO PROTECT SUNNYSIDE CITIZENS AND allow access to the downtown core for all CALGARIANS!**

An inadequate berm height limits maximum flow rates along the Bow River during a future high flow event (or sequential events) which might prevent adequate peak shaving at the Ghost Dam.



Two attached photos show that the goal of providing at the very least a utilitarian consistency for flood mitigation has been lost by the City of Calgary.

- a. 2019 Sunnyside Berm – Walk along the berm near work being done on Pump Station #2 (the force main). Observe the condition of the berm facing the Bow River (and the unkept island). Admittedly, failure was not seen at this portion of the berm, however, the slope is near vertical, while the slope on the Memorial Drive is not so. Walk further west, or east, and observe the slope is no longer vertical, and where visible to the south shore has riprap protection.
- b. 2019 Sunnyside Berm Low Point at Peace Bridge – Please observe the low point in the Sunnyside berm at storm sewer outlet B49. The berm, prior to installation of the multimillion Peace Bridge used to be higher at this point. Overflow at this location ran along Memorial Drive in 2013. Why was the berm lowered at this location??? Why is it still lower 6-1/2 years later???

I could have included more photos to demonstrate that the City has lost focus on the purpose of the Sunnyside Berm. One of which is the ramp at the pedestrian bridge with a porous drainage system well below the height of the original berm.

Everything else other than the **UTILITARIAN PURPOSE** is window dressing. Nice to look at, nice to have, nice to ride bikes and scooters on, nice to walk on, etc.

The north shore landing at the Peace Bridge (1:200 effectiveness) should be used as the design height of the berm along the length through Sunnyside. Anything less might result in a near future flood, and all the experts scrambling for excuses.

Build a utilitarian berm immediately, and then deliver the nice to have items subsequently.

In earnest,

Richard BOLT

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