

Media Release

LOWER MAINLAND FLOOD ACTION PLAN AHEAD

May 30, 2016
For immediate release

Vancouver — New studies out today show there's a growing risk of a large-magnitude flood in B.C.'s Lower Mainland, and that if a major Fraser River or coastal flood were to occur between now and 2100, it would trigger losses estimated at \$20 to 30 billion — and become the most costly natural disaster in Canadian history.

The analysis was commissioned by the Fraser Basin Council in managing Phase 1 of the Lower Mainland Flood Management Strategy (LMFMS) on behalf of 43 government and private sector partners. Work of the past two years has included an analysis of Lower Mainland flood scenarios, a regional assessment of flood vulnerabilities, and a review of current flood protection works and practices. Phase 2 is set to begin and will focus on developing a regional flood action plan by 2018, including a cost-sharing proposal for flood protection.

The Fraser Basin Council said that Lower Mainland flood risks are projected to worsen over the next 85 years, both in terms of flood frequency and size, because of sea level rise and other projected impacts of climate change. The Council welcomed a \$1 million contribution from the Province of B.C. to support Phase 2 development of the flood action plan.

"We now have a crisper picture of the evolving flood risk faced by the Lower Mainland and the chilling economic cost of inaction," said Colin Hansen, chair of the council. "It's time to kick into high gear, have all partners determine the best flood protection for the region, and roll out an action plan. We're pleased that the Province of B.C. is showing strong leadership to support this work."

The regional vulnerability assessment estimated flood-related losses related to residential, commercial, industrial and public/institutional buildings, infrastructure, agriculture and interruptions in cargo shipping at Vancouver's port. The assessment was based on four sample flood scenarios: two coastal flood scenarios (Present Day and 2100) and two Fraser River flood scenarios (Present Day and 2100). All four scenarios are estimated to have a return period of 1 in 500 years (or a 0.2% chance of occurring in any given year). This is equivalent to the 1894 Fraser River flood of record.

Any one of the four flood scenarios is expected to be three to five times more costly than the 2013 Alberta floods and to place severe strain on the regional, provincial and national economies. In brief:

- Present-day Lower Mainland flood scenarios would result in losses estimated at:
 - \$19.3 billion (coastal flood)
 - \$22.9 billion (Fraser River).
- Year 2100 Lower Mainland flood scenarios would result in losses estimated at:
 - \$24.7 billion (coastal flood)
 - \$32.7 billion (Fraser River flood).

These are rough loss estimates, based on a range of assumptions. One assumption is that each of the flood protection dikes in the region would fail during a major flood and that flood waters would spread unimpeded; in fact, it is possible that some dikes will breach during a major flood, while others will not.

The Phase 1 summary report notes that Lower Mainland dikes were constructed in the 1970s and 1980s according to the standard of the day, which has since been recognized as not protecting against the Fraser River flood of record (the design flood). The dikes were also not designed to address climate change effects on flood risk. A recent assessment carried out in phase 1 of the LMFMS by the Provincial Inspector of Dikes shows that 71% of the assessed Lower Mainland dikes are vulnerable to failure from overtopping during a major Fraser River or coastal flood scenario. Only 4% of assessed dike segments meet current provincial standards for dike crest height, which includes 0.6 m of freeboard above the water surface elevation of the design flood event. Some dikes also have other vulnerabilities related to geotechnical stability during floods and earthquakes, erosion protection, or administrative practices, such as secured rights of way and inspection practices.

“There’s a pressing need for climate change adaptation in how we plan communities, and the diking system is no exception.” said Hansen. “We have to approach flood protection to address the new reality.” In recent consultations by the Fraser Basin Council, B.C. local governments have stressed the importance of a multi-year funding program to support flood management, including rehabilitation of the region’s dikes.

More Details @ www.floodstrategy.ca

All reports, maps and other material related to Phase 1 studies are available on the FBC website at www.floodstrategy.ca:

- FBC Media Release and Backgrounder (May 30, 2016)
- Phase 1 Summary Report
- Coastal and Fraser River Flood Scenarios Maps (showing flood extents)
- Sample Subregional Maps (showing location of some essential facilities in communities)
- Full Phase 1 Reports for Projects 1, 2 and 3

Also see Province of British Columbia media release of May 30, 2016: Province invests \$1 million in development of Lower Mainland flood action plan. Visit: www.news.gov.bc.ca.

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Quotes:

Naomi Yamamoto, Minister of State for Emergency Preparedness:

“Flood management is of primary concern to the Province, which is why the 2016 B.C. Budget allocated \$50-million to flood related projects in communities all across B.C. – including the Fraser Valley. This new funding furthers the B.C. commitment that has topped \$145 million invested since 2008 with the federal government and local governments. The report by the Fraser Basin Council reflects the real risk, and B.C. is responding with real, tangible measures, including a \$1 million funding investment toward the council’s second phase of identifying solutions to meet the identified challenges.”

Steve Thomson, Minister of Forests, Lands and Natural Resources Operations:

“The Province is working collaboratively with the Fraser Basin Council to mitigate and minimize flood risks and consequences on the Lower Mainland. Public safety is a priority in B.C., and flood management is a shared responsibility between all levels of government, First Nations, citizens, and the private sector.”

Jason Lum, Chair of Flood Control & River Management Committee, Lower Mainland Local Government Association:

“All Lower Mainland municipalities are working hard on local flood protection priorities, and we’ll all do our part to keep communities safe from a catastrophic flood. I’m happy to see such wide, proactive collaboration through the Lower Mainland Flood Management Strategy to better quantify flood risks and set priorities. Today’s investment by the Province of B.C. is pivotal to the development of a region-wide action plan.”