

FLOODS – AN EMERGING ECONOMIC THREAT REQUIRING ACTION

British Columbia has several thousand kilometres of coastline along which communities are located. Likewise, Fraser River and other rivers flow through BC that are vulnerable to flooding. Floods from rivers and oceans could destroy or affect residential, commercial, industrial and agricultural properties as well as affect transportation means (roads, highways, bridges) and cause widespread disruption to day to day living requiring significant expenditure to restore areas back to pre-flood conditions. The damage to the economy and businesses due to floods are significant, in the hundreds of million dollars. Flood protection structures, measures such as dikes and associated infrastructure (pump stations, flood boxes, rip rap and relief wells) throughout BC need to be upgraded to combat the threat of sea level rise of up to 1 m by 2100. Significant timebound expenditure is needed to upgrade flood protection infrastructure throughout BC.¹

Background

Climate change as a result of global warming leading to melting ice caps in the north and south poles is causing sea level rise. The BC Ministry of Environment and Climate Change Strategy has directed cities to prepare for a 1m rise in sea levels by 2100. Extreme weather events causing significant rainfall/snowfall are being seen in BC communities. This can cause significant flooding of rivers flowing through BC. Flooding poses catastrophic risks to BC's economic vitality, safety, environment, property owners and communities.

Although, cities have been directed to prepare for sea level rise, there remains the need for significant dollars (running into billions) to upgrade dikes and associated infrastructure over the coming years to prepare adequately for such flooding events especially the 1m rise of the sea level in the next 80 years. There is a 0.5% chance of an extreme flood today while there is a 50% chance of an extreme flood by 2100 AD. Complete restoration of coastal communities and infrastructure following a major flood event could take several years, needless to say, causing severe disruption to the economy resulting in losses of several hundreds of million dollars. To help prevent damage and losses, dikes across BC have to be upgraded in a timely manner and in a priority sequence.

As part of its long-term flood adaptation strategy, the City of Surrey has embarked upon a full review of existing dike infrastructure throughout the City limits and has identified priority areas around rivers (Nickomekl, Serpentine) and the coastline (boundary bay) requiring significant investment for upgrades over the next several years for which both provincial and federal funding will be required in addition to city funding.²

It is understood that dike inventory maps, designs etc. have been prepared by the Provincial Government and that funding for upgrades from both the federal and provincial government have arrived in pockets over the years since at least 2014. However, as stated previously, additional significant and strategic funding and planning is required to study flooding patterns of rivers, understand

¹ 2019, Surrey Coastal Flood Adaptation Strategy – Presentation to the Surrey Board of Trade Environment Team by the City of Surrey Environment and Drainage Manager <https://businessinsurrey.com/wp-content/uploads/2019/02/CFAS-Surrey-BOT-Feb-14-2019-compressed.pdf>

² Serpentine and Nikomekl Lowlands – City of Surrey <https://www.surrey.ca/city-services/3654.aspx>

climate change implications with respect to sea level rise especially time sensitivities, as well as improve and upgrade flood protection measures throughout BC.³

Overall, we found the B.C. government is not adequately managing the risks posed by climate change. It is very likely that B.C. will not meet its 2020 emissions reduction target of 33% below 2007 levels, and models suggest the province is not on track to meet the 2050 target.⁴ Government has work underway to adapt to climate change, but more needs to be done. Actions are taking place at the ministry level— notably to build a strong foundation of knowledge and develop tools—but adaptation needs to be better integrated into policies and decision-making processes.⁵ Key climate-driven risk areas, like flooding and wildfires, require additional attention. We found that government may not be able to manage flood risks, given that roles and responsibilities are spread across many agencies and levels of government, and these organizations may not have adequate staffing or technical capacity. Government’s current activities to prevent wildfires are not sufficient, as a substantial number of hectares of forest require fuel treatments. Treatments have not been occurring in a coordinated manner, nor have they been targeting areas of highest risk. Adaptation is not just a provincial government issue. Local governments are on the front lines, but we heard that they are challenged to effectively take action. This includes a lack of financial support, reliable data and knowledge, and policies at the provincial level. As well, the provincial government has not yet significantly involved First Nations in provincial action.

THE CHAMBER RECOMMENDS

That the Provincial Government:

Partner with BC municipalities to provide guaranteed provincial funding through a strategic plan over time to ensure upgrades to flood mitigation infrastructure.

Submitted by the Surrey Board of Trade

³ Flood protection structures in BC <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/drought-flooding-dikes-dams/integrated-flood-hazard-management/dike-management/flood-protection-structures>

⁴ <http://www.bcrea.bc.ca/government-relations/flood-protection>

⁵2018, https://www.bcauditor.com/sites/default/files/publications/reports/Climate_Change_FINAL_0.pdf