



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: November 25, 2022

From: Milton Chan, P.Eng.
Director, Engineering

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01

Re: BC Flood Strategy Intentions Paper

Staff Recommendation

That the following be endorsed as the City's position on regional flood protection management and be included in the City's comments to the Province on the BC Flood Strategy Intentions Paper:

- a. That flood protection continue to be evaluated and managed at the local government level, currently through the Diking Authority model, with additional support from senior levels of government;
- b. That dedicated funding for flood protection be established at the Provincial and Federal level, to be used by Diking Authorities, which include local governments, for flood management projects;
- c. That the Province require Diking Authorities, which include local governments, to develop and maintain flood risk management plans and strategies for their respective areas so that regional objectives are met; and
- d. That a co-ordinated and fully resourced process be established at the Provincial level to provide a single point of contact for Diking Authorities to seek Provincial and Federal approvals for flood protection projects.

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REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
N/A		
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO

Staff Report

Origin

The Province of British Columbia has proposed a Flood Strategy to manage flood safety risks in BC by providing guidelines to enhance flood resilience, which will inform future implementation. The strategy proposes to shift the provincial focus to a more proactive, holistic, and integrated approach to flood management. The Province is currently in the process of collecting feedback from local governments, First Nations, non-government organizations, and businesses, among other stakeholders through an Intentions Paper developed for this strategy.

The Intentions Paper is an update to the Discussion Paper that was circulated by the Province in 2021 to collect stakeholder feedback on the BC Flood Strategy. At the time, the Province had requested that the Discussion Paper remain confidential, therefore, a confidential memorandum titled, 'BC Flood Strategy', dated July 21, 2021, from the Manager, Engineering Planning, was provided to update Council of the initiative. This initiative is now public.

This report provides an overview of the Intentions Paper and City of Richmond staff engagement and recommendations.

This report supports the following strategies within Council's Strategic Plan 2018-2022:

Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

1.2 Future-proof and maintain city infrastructure to keep the community safe.

1.3 Ensure Richmond is prepared for emergencies, both human-made and natural disasters.

Strategy #5 Sound Financial Management:

Accountable, transparent, and responsible financial management that supports the needs of the community into the future.

5.4 Work cooperatively and respectfully with all levels of government and stakeholders while advocating for the best interests of Richmond.

Analysis

Background

Richmond's perimeter dike was originally upgraded and maintained by the Province after the major flood event of 1948, which brought about the implementation of the Dike Maintenance Act. The ownership of the dike and the responsibility to maintain it remained with the Province until the early 2000's. The legislative changes made in 2004 significantly altered the provincial role with regards to flood protection and management, and the responsibility to fund, build, maintain, and operate the flood protection infrastructure was shifted to the local governments with limited financial assistance from senior government through competitive grant programs.

Under the Dike Maintenance Act, general supervision over dikes lies with the office of the Provincial Inspector of Dikes. The Inspector of Dikes provides technical recommendations and permitting related to dike construction. Local governments are defined as Diking Authorities and are responsible for local flood protection planning, management, construction, maintenance and operations.

Under the existing governance structure, the City of Richmond has established one of the most advanced flood protection programs in the region. City Council endorsed the Drainage and Diking Utility, now referred to as the Flood Protection Utility, to fund flood protection projects which has progressively increased in capital funding levels throughout the years. Additionally, as outlined in the staff report titled, “Accelerated Flood Protection Program Update”, dated March 4, 2022, from the Director, Engineering, a target annual revenue level of \$30 million by 2031 was endorsed for the Flood Protection Utility, in order to support a 50 year implementation period, improving the City’s diking infrastructure well in advance of the current anticipated climate change impacts.

Richmond is actively upgrading its flood protection infrastructure through in alignment with the Food Protection Management Strategy and the Dike Master Plan. The City has also been very successful in addressing and resolving land use issues, related to dike upgrades and maintenance, at a local level.

BC Flood Strategy

The Ministry of Forests, supported by Emergency Management BC, is currently leading the development of a BC Flood Strategy in collaboration with stakeholders with an aim to reduce flood risks while enhancing the Province’s resilience to more frequent extreme flood events in the future. The Province identified the need for a modern BC Flood Strategy to address their ongoing flood management challenges, increase partnerships with First Nations and local governments, and improve public safety.

Stakeholder and public engagement is now underway. Future steps include BC Flood Resilience Planning and Implementation, which are expected to ensue from 2023 to 2030.

Intentions Paper

The Intentions Paper is a high level proposed strategic framework that includes a vision, outcomes, and principles for flood resilience in BC. Through it, the Province highlights the need for collective leadership in innovative and collaborative flood risk management and emergency response. The framework sets four strategic program areas and associated potential actions for future implementation. Its goal is to engage the various stakeholders and gather their feedback on the proposed strategy.

The Vision identified in the Intentions Paper is as follows:

“Together, we are leaders in innovative, holistic flood risk management, enhancing BC’s flood resilience for the 21st century”

It focuses on the following as they relate to flood management:

- Enhanced public safety – building communities to allow “safe flooding”;
- Economic stability – proactive flood resilience investments to avoid greater future costs associated with flood damage and recovery; and
- Environmental sustainability – protecting natural and green infrastructure to support ecosystems and wildlife habitat.

The Intentions Paper highlights four priority programs listed below which are in alignment with the Sendai Framework for Disaster Risk Reduction 2015-2030 endorsed by the United Nations:

1. Understanding Flood Risks;
2. Strengthening Flood Risk Governance;
3. Enhancing Flood Preparedness, Response and Recovery; and
4. Investing for Flood Resilience.

Further details on the program areas and their associated action items is provided in Attachment 1.

Stakeholder Engagement

In September 2022, the Province invited stakeholders, including the City of Richmond, to participate and provide feedback at any of the six engagement workshops (three in-person and three virtual) held from October to December. Staff attended one of the virtual workshops in October 2022 to participate in the discussion with the Province, other local governments, First Nations, and other stakeholders. Staff will also attend the virtual workshop being held in December 2022. Additionally, staff will provide their comments and input through an online survey by January 6, 2023.

Staff Recommendations

The City continues to hold its position on regional flood protection management, which was endorsed by Council at the January 27, 2020 Council Meeting, including the following:

- That flood protection continue to be evaluated and managed at the local government level, currently through the Diking Authority model, with additional support from senior levels of government;
- That dedicated funding for flood protection be established at the Provincial and Federal level, to be used by Diking Authorities, which include local governments, for flood management projects; and
- That the Province require Diking Authorities, which include local governments, to develop and maintain flood risk management plans and strategies for their respective areas so that regional objectives are met.

As the evolution of climate change science has advanced since the 1980s, the federal and provincial environmental regulations have been updated to prioritize key environmental initiatives including habitat compensation. While an important step to preventing the loss of habitat, these updates have generally increased the complexity of permitting requirements for applicants, added to the confusion of provincial and federal authority and have resulted in extensive wait times to secure environmental permits.

In addition to the aforementioned recommendations, staff recommend that a co-ordinated and fully resourced process be established at the Provincial level to provide a single point of contact for Diking Authorities to seek expedited Provincial and Federal approvals for flood protection projects. Some of the objectives of this process include consolidating environmental requirements, developing guidelines, sorting out conflicts, addressing First Nation concerns, and providing a framework for intergovernmental cooperation on flood protection projects.

In the past, some of this co-ordination was done through the Fraser Estuary Management Program (FREMP), which was an intergovernmental partnership among federal, provincial, and regional governments and port authorities to coordinate planning and decision-making in the Fraser River estuary. When FREMP folded in 2013 due to budget cuts, it resulted in the current process where project approvals require separate applications to different agencies. Approving agencies and permits required for recent dike upgrade projects include the following:

- Provincial Ministry of Forests – Water Sustainability Act Permit
- Provincial Inspector of Dikes – Dike Maintenance Act Approval
- Federal Department of Fisheries and Oceans – Authorizations Concerning Fish and Fish Habitat Protection Regulations

In addition to formal approvals, co-ordination with agencies such as the Steveston Harbour Authority, Port of Vancouver, external utilities, and First Nations are also required.

Establishing a new co-ordinated process would allow the City and other Diking Authorities to streamline the application process by interacting with one agency, contrary to the current process of coordinating with each regulatory entity individually, providing consistency and resulting in better compliance with the regulatory requirements. It would also provide a forum for the approving agencies to discuss and harmonize their regulatory requirements. An example of this is Transport Canada's proposed provisions to the federally managed Airport Zoning Regulations that include restricting potential wildlife hazards. This proposal could impact the City's ability to create bird friendly environmental mitigation measures over a significant portion of Richmond.

As climate change impacts and risks become more imminent, it is essential that the Province take an active role in flood management and mitigation. Flood protection and dike upgrade projects are complex in nature and can take years to plan and implement. To get ahead of the projected flood risks, it is essential that the action occurs now. There is an immediate need for dedicated funding streams to support the flood protection initiatives of the Diking Authorities. Staff recommend that the Province follow the City's example to take action in advance of the anticipated climate change impacts and expedite the implementation of the BC Flood Strategy, once complete.

The BC Flood Strategy is one of the most significant provincial undertakings related to flood protection since the legislative shift in the early 2000's. It will guide the Province's flood protection and management initiatives for the next decade, which will have an impact on all local municipalities, including the City of Richmond. The proposed strategy is in alignment with the City's Flood Protection Management Strategy and the City staff will continue to coordinate with the Province and provide input as the development of the strategy advances.

Financial Impact

None.

Conclusion

The Province is developing the BC Flood Strategy in collaboration with First Nations, local governments, and other stakeholders to enhance BC's flood resilience. The Intentions Paper provides the Province's strategic framework for the strategy and has been developed to gather stakeholder feedback to advance the BC Flood Strategy. Staff are actively participating in the engagement workshops organized by the Province to be able to provide their input and to ensure that the strategy aligns well with the City's long-term flood protection outlook.

The next step for the Province is to compile the feedback gathered through the various stakeholder engagement events to inform the BC Flood Strategy. Staff will provide an update to Council as any significant changes or advancements are made on this front.



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Att. 1: BC Flood Strategy—Priority Program Areas

BC Flood Strategy—Priority Program Areas

Program Area 1: Understanding Flood Risks

Action 1.1: Work with other levels of government to advance flood maps to better inform flood construction levels and development decisions

Coordinating a provincial flood mapping program (including First Nations) to apply consistent standards and quality control processes. This will inform decisions on infrastructure investment and emergency management.

Action 1.2: Conduct a province-wide flood risk assessment

Creating an assessment based on available province-wide data would fill a gap in understanding and provide a more consistent provincial picture of flood risk.

Action 1.3: Strengthen dike regulatory programs

Developing a publicly accessible, central repository of up-to-date dike information will support:

- Regulatory and compliance
- Emergency planning, response and recovery
- Risk assessments
- Increased awareness

Action 1.4: Increase public and business awareness of flood risks

Ensuring that flood risk information is transparent, easily accessible and understandable will increase public safety and empower informed decision making.

Action 1.5: Support applied research and training

Complementing applied research, training and education with Indigenous ways of knowing will support increased awareness and capacity in flood resilience.

Program Area 2: Strengthening Flood Risk Governance

Action 2.1: Improve First Nations' involvement in flood resilience decision-making

Strengthening disaster risk governance is a crucial part of reconciliation between Indigenous peoples and other governments and needs to prioritise Indigenous self-determination and the interests of First Nations.

Action 2.2: Review and modernise provincial legislation, regulations, and policies to address flood risks

Modernising legislation requires careful work to better address the growing risks, liabilities, and changing public values.

Action 2.3: Review and modernise provincial technical guidance

Ongoing improvements to technical guidance and standards are critical to enabling innovative and resilient flood infrastructure planning, design, and construction practices.

Program Area 3: Enhancing Flood Preparedness, Response, and Recovery

Action 3.1: Enhance flood forecasting capabilities and early warning systems

Continuous improvements in flood modelling and forecasting services across B.C. ensures accurate, up to date flood advisories for the public and emergency responders to enable flood resilience.

Action 3.2: Enhance flood preparedness by developing and exercising flood emergency response plans at multiple scales

Business continuity planning (planning, testing, and validating plans) enables critical services to remain functional despite a disaster or disruption and enhances overall preparedness.

Action 3.3: Enhance emergency response activities

Ensuring an immediate and well-coordinated emergency response requires local governments, First Nations, and the Province to co-develop strategies for future resilience.

Action 3.4: Enhance pre-disaster recovery planning and post-disaster recovery, including “Build Back Better”

Defining community-based flood recovery blueprints before a flood disaster occurs is critical to improve the balance between reactive and proactive approaches.

Program Area 4: Investing for Flood Resilience

Action 4.1: Enhance investments in flood avoidance

Designing future funding programs to support flood avoidance concepts, pilots, and approaches to enhance resilience while promoting environmental stewardship and deterring new flood exposure.

Action 4.2: Enhance investments in flood accommodation

Enhancing investment programs to reflect modern priorities including measures around tsunamis, communities with no means to relocate, flood proofing, and flood insurance coverage.

Action 4.3: Enhance investments in flood protection

Enhancing investments to reflect modern priorities include seeking co-benefits for flood protection, emphasising green infrastructure, ensuring archaeological resources and sites of Indigenous cultural significance are identified and protected, to name a few.

Action 4.4: Enhance investment in community-led retreat

Purposeful and proactive movement of people and infrastructure out of known high-risk floodplains requires collaboration between all levels of government, affected communities, and First Nations.