

CITY OF RICHMOND FLOOD PROTECTION



INFRASTRUCTURE



The City of Richmond is situated 1.0 m above sea level. Our flood protection system provides protection from ocean storm surges, freshet and sea level rise. The system is comprised of:

- 49 km of dikes**
 - Dikes are inspected three times a year and the dike crest is surveyed annually on a 5-year cycle.
- 39 drainage pump stations**
 - Total capacity of the City's drainage pump stations has increased by 23% since 2005.
- 585 km of drainage pipe**
 - Drainage pipes are maintained on a 7-year cycle and inspected annually.
- 61 km of box culverts**
 - Box culverts are inspected on a 7-year cycle.
- 165 km of watercourses**
 - Watercourses are maintained on a 7-year cycle to remove vegetation and sediment and to maintain capacity in the drainage and irrigation network.
- 24 flood protection sensors**
 - Flood protection sensors provide drainage, rainfall and river level information that is remotely monitored by staff.

PLANNING



The City's drainage system is designed to accommodate a **one in 10-year return period rainfall event**.



Richmond's robust diking network is built to withstand a **one in 500-year return period flooding event**.



Current climate change science estimates that sea level will rise approximately **1.0 m by the year 2100** and 0.2 m of land loss/subsidence is forecasted over that same time period.



The City's **Flood Protection Management Strategy and Dike Master Plans** are our guiding framework for continual upgrades and improvements to address climate change induced sea level rise.

FINANCIALS

The drainage and diking utility was established by Council in 2002 and currently generates over \$13 million annually to maintain and upgrade Richmond's flood protection infrastructure.

As a result of proactive flood protection planning efforts, the City has been successful in securing **over \$40 million** in senior government grants since 2010 that helped fund **over \$70 million** in dike upgrades, pump station improvements and master planning updates.

- 2010 - **\$3.9 million** grant for pump station upgrades
- 2014 - **\$2.04 million** grant for pump station upgrades
- 2016 - **\$16.6 million** grant for pump station and dike upgrades
- 2017 - **\$500,000** grant for master planning
- 2017 - **\$150,000** grant for master planning
- 2017 - **\$1,215,000** grant for master planning
- 2019 - **\$1 million** grant for pump station upgrades
- 2019 - **\$13.8 million** grant for pump station and dike upgrades
- 2020 - **\$750,000** grant for dike upgrades
- 2020 - **\$150,000** grant for master planning



RESOURCES

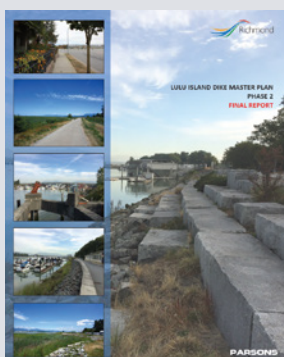
Learn more about City of Richmond's flood protection system by accessing the following plans:



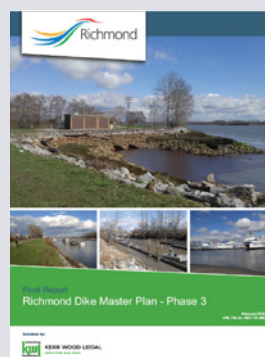
Flood Protection Management Strategy



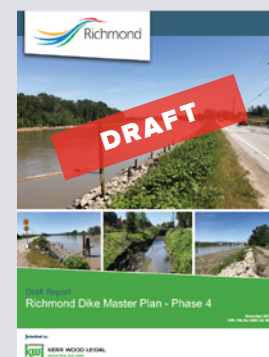
Dike Master Plan Phase 1



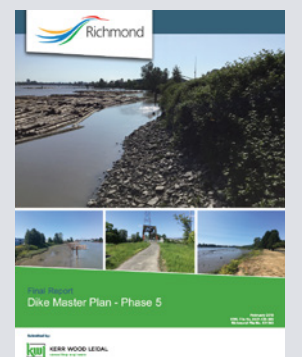
Dike Master Plan Phase 2



Dike Master Plan Phase 3



Dike Master Plan Phase 4 DRAFT (no link at this time)



Dike Master Plan Phase 5