

3.2 Build adaptable and resilient infrastructure stock that can address future pressures including climate change and demographic shifts

HIGHLIGHTS:

- The OCC is calling on the newly elected government to build adaptable and resilient infrastructure that is “future-proof” with respect to the pressures of climate change and population growth.
- The provincial government should support local governments as they update building codes, retrofit existing infrastructure, invest in new assets, or develop new policies and procedures to protect themselves against future challenges.

The future of Ontario’s infrastructure stock is being threatened by two phenomena: climate change and population growth. Scientists project that by 2050, the average annual temperature in Ontario will increase by 2.5°C to 3.7°C.¹ Ontario’s population is projected to grow 30 percent over the next 25 years, from an estimated 14 million in 2016 to more than 18.2 million in 2041.²

As Ontario embarks on a new era of infrastructure spending, the need to build and retrofit assets to be “future-proof” is paramount. Investment in infrastructure that is adaptive and resilient is vital to mitigate the economic and social impacts of climate change-related events and population growth and intensification. There is fiscal value to be found in this investment, too: every dollar invested in climate change adaptation today will yield anywhere from \$9 to \$38 in avoided damages in the future.³

The Ontario government should support communities across the province to develop their own adaptation methods, such as updating building codes and standards to reflect the potential impacts of climate change and future population growth. Communities

across the province should also look towards developing adaptation methods based on local conditions, such as retrofitting local stormwater infrastructure and shoring up stress breakwalls.

Climate change considerations should be included into the asset management plans as a component of long-term planning and durability assessment for each infrastructure asset. Creating adaptable infrastructure involves several different approaches, often in combination, ranging from structural changes to non-structural or “soft” measures including regular maintenance of pipes and reducing storm water runoff. These measures can be undertaken at different stages of the infrastructure life cycle as it is planned, rehabilitated or replaced.

Building adaptable and resilient infrastructure stock will ensure that the province is well equipped to address climate and demographic changes in the future. The Province should prioritize infrastructure investments that are responsive to future, not merely current, needs.

1 World Meteorological Association, *WMO Statement on the State of the Global Climate in 2016*, https://library.wmo.int/opac/doc_num.php?explnum_id=3414

2 Ministry of Finance, *Ontario’s Population Projection Update 2016-2041*, Spring 2017, <https://www.fin.gov.on.ca/en/economy/demographics/projections/>

3 CivicAction, Deloitte., *Infrastructure for Today & Tomorrow: Ensuring We Get it Right*, 2016, http://www.civicaction.ca/wp-content/uploads/2016/09/Ensuring-We-Get-It-Right_PDF.pdf