

**Written Submission for the Pre-Budget
Consultations in Advance of the 2021 Budget**

By:



LIST OF RECOMMENDATIONS

Emergency Management and Disaster Mitigation

- **Recommendation 1:** Expand the Disaster Mitigation and Adaptation Fund (DMAF) to support communities of all sizes by eliminating the \$20 million minimum project eligibility threshold.
- **Recommendation 2:** Dedicate federal funding and accelerate the timeline for updating Canada's flood hazard maps to show all potential sources of overland flood (fluvial, pluvial, and coastal).

Sustainable and Climate Resilient Infrastructure

- **Recommendation 3:** Encourage investment in public infrastructure projects that have been planned and executed using sustainability rating systems such as Envision.
- **Recommendation 4:** Continue direct funding to local communities through an increase to the federal Gas Tax Fund.
- **Recommendation 5:** Expand federal funding programs to include operations and maintenance activities.
- **Recommendation 6:** Create a permanent federal funding mechanism to support and enhance the cost-effectiveness and sustainability of modern water and wastewater systems in communities of all sizes.
- **Recommendation 7:** Dedicate federal funding to assist public works agencies in addressing the persistence of lead in service lines and plumbing fixtures.

Safe and Accessible Transportation

- **Recommendation 8:** Create a permanent federal funding mechanism to support and enhance the cost-effectiveness and accessibility of modern multi-modal transportation systems in communities of all sizes.
- **Recommendation 9:** Create a federal funding mechanism to assist public works agencies in meeting the infrastructure needs of Connected/Automated Vehicles (CAVs).
- **Recommendation 10:** Ensure that communities of all sizes have access to federal funding for grade crossing safety improvements to reduce trespassing and ensure pedestrian safety.

INTRODUCTION

CPWA was founded in 1986 as the voice of the Canadian public works community from coast to coast to coast. CPWA's nearly 2,300 members across Canada join members of the American Public Works Association across the United States to represent over 30,000 public works professionals in North America who work on both sides of the border to innovate and assure excellence in the public works profession.

RECOMMENDATIONS

Emergency Management and Disaster Mitigation

Public works agencies operate and maintain critical infrastructure services that are vital to communities, such as transportation networks, energy and water supplies, sewage and refuse disposal systems, and public facilities.

Budget 2017 earmarked \$2 billion over 10 years to establish the [Disaster Mitigation and Adaptation Fund \(DMAF\)](#), supporting large-scale infrastructure projects to help communities better manage the risks of disasters triggered by natural hazards. ***But the minimum of \$20 million in eligible expenditures makes it difficult for small communities to apply.***

- **Recommendation 1:** Expand the Disaster Mitigation and Adaptation Fund (DMAF) to support communities of all sizes by eliminating the \$20 million minimum project eligibility threshold.

According to Public Safety Canada, floods are the costliest natural disasters in Canada in terms of property damage. But according to a 2019 Insurance Board of Canada report, [A Primer on Severe Weather and Overland Flood Insurance in Canada](#), flood hazard maps are either unavailable or outdated in many areas of Canada. Budget 2019 proposed \$151.23 million over five years and \$9.28 million per year ongoing, to improve emergency management, including enhancing understanding of the risks posed by floods, wildfires, and earthquakes. ***Given that public works agencies rely on flood hazard maps to plan and manage their infrastructure investments, it is critical that these resources effectively communicate all current flood hazards.***

- **Recommendation 2:** Dedicate federal funding and accelerate the timeline for updating Canada's flood hazard maps to show all potential sources of overland flood (fluvial, pluvial, and coastal).

Sustainable and Climate Resilient Infrastructure

The principles of sustainable development are fundamental to how civil engineers and the public can more successfully address critical societal needs, environmental pressures and climate change impacts, and the return on investment in infrastructure. Sustainability rating tools, like Envision, developed by the Institute for Sustainable Infrastructure (ISI), provide a holistic framework for evaluating and rating the community, environmental and economic benefits of all types of infrastructure projects. ***Directing public funds towards public infrastructure projects that are planned and executed using sustainability rating systems such as Envision is key to ensuring safe, healthy communities.***

- **Recommendation 3:** Encourage investment in public infrastructure projects that have been planned and executed using sustainability rating systems such as Envision.

According to Infrastructure Canada, [municipal governments own 59.8% of public infrastructure](#). But according to the Canadian Union of Public Employees, [local governments only collect about 12 cents of every tax dollar paid in Canada](#). Local governments rely on the federal [Gas Tax Fund \(GTF\)](#) to plan capital infrastructure investments more quickly and effectively than application-based funding programs. The Government of Canada's one-time doubling of the GTF announced in Budget 2019 recognized the challenges facing local governments as they manage aging public infrastructure in an era of increased and severe weather events. ***But the GTF cannot be used for operations and public works agencies often do not have adequate resources for the operations and maintenance activities that keep existing infrastructure in good working condition.***

- **Recommendation 4:** Continue direct funding to local communities through an increase to the federal Gas Tax Fund.
- **Recommendation 5:** Expand federal funding programs to include operations and maintenance activities.

According to [Canada's Core Public Infrastructure Survey: Potable water and stormwater assets, 2016](#), municipal governments own over three-quarters of every type of potable water asset but less than half reported having an asset management plan. In addition, over one-third of potable water asset owners issued a drinking water advisory in 2016. According to Environment and Climate Change Canada, [most boil water advisories are issued because equipment and processes used to treat, store or distribute drinking water break down, require maintenance, or have been affected by environmental conditions](#). This includes issues such as broken water mains, planned system maintenance, power failures or equipment problems.

Budget 2016 included \$2 billion through Infrastructure Canada's [Clean Water and Wastewater Fund](#) (CWWF) to provide communities with more reliable water and wastewater systems, and \$1.8 billion over five years for clean and safe drinking water in Indigenous communities. Budget 2017 included \$21.9 billion for green infrastructure and Budget 2018 included an additional \$172.6 million over three years to support repairs to high-risk water systems on reserve.

But according to the Canadian Union of Public Employees, [an estimated \\$20 billion is needed to bring existing infrastructure in line with federal wastewater treatment guidelines, and approximately \\$50 billion will be needed to replace or upgrade aging water and wastewater infrastructure](#). Municipalities Newfoundland and Labrador (MNL) [estimated in 2019 that between \\$600 and \\$700 million dollars would be needed to comply with wastewater regulations in Newfoundland and Labrador alone](#).

Climate change will place further pressure on water and wastewater systems. ***According to a 2020 report by the Federation of Canadian Municipalities (FCM) and Insurance Bureau of Canada (IBC), [Canada's Future: The Cost of Climate Adaptation at the Local Level](#), avoiding the worst impacts of climate change at the municipal level will cost an estimated \$5.3 billion annually.*** Drought will result in a loss of potable water amid increased demand, permafrost degradation will lead to the rupture of water lines and storage infrastructure, sea level rise will result in saltwater intrusion, and increases in rainfall and storm surge will lead to the failure of drainage systems and greater impact on wastewater and stormwater infrastructure. The report also notes that some studies have shown that for every dollar invested in mitigation measures, \$6 is saved in future

damages.

With climate change, there is renewed focus on wastewater infrastructure including addressing phosphorus, flushables, effluent discharge limits, water quality and operations and maintenance. This focus and enhanced level of service will require significant investment in wastewater and stormwater systems and facilities.

- **Recommendation 6:** Create a permanent federal funding mechanism to support and enhance the cost-effectiveness and sustainability of modern water and wastewater systems in communities of all sizes.

[In 2019, Health Canada updated drinking water guidelines to protect Canadians from exposure to lead.](#) The new [Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Lead](#) reduced the maximum acceptable concentration of lead in a sample of water taken at the tap from 0.01 mg/L, set in 1992, to 0.005 mg/L. The responsibility of public works agencies extends from the municipal treatment plant to the system of water mains and service lines in the public right-of-way that deliver drinking water to residents and businesses up to a private property line, but not to the service lines on private property or the plumbing fixtures and pipes inside those properties. ***Public works agencies often do not have comprehensive records of where lead pipes are located or resources to cover the excavation and construction costs of replacement. While they may coordinate and provide incentives to property owners, property owners are not obligated to replace lead service lines or plumbing fixtures on their property yet public works agencies and municipal utilities are accountable for the quality of the water tested at the tap.***

- **Recommendation 7:** Dedicate federal funding to assist public works agencies in addressing the persistence of lead in service lines and plumbing fixtures.

Safe and Accessible Transportation

According to [Canada's Core Public Infrastructure Survey: Public transit assets, 2016](#), more than 92 per cent of Canada's public transit assets are owned by municipal governments and less than one-quarter of owners had an asset management plan for their public transit assets. Budget 2016 included \$3.4 billion over three years through Infrastructure Canada's [Public Transit Infrastructure Fund](#) (PTIF) to upgrade and improve public transit systems. Budget 2017 committed an additional \$25.3 billion over ten years to public transit. ***But operating expenses are not eligible, rehabilitation projects are capped nationally at 15% of total public transit funding, and communities without existing transit authorities are ineligible for this funding. Municipal transit systems, in addition to the capital costs of maintenance and expansion, must subsidize operating costs not covered by farebox revenue. The COVID-19 pandemic has exacerbated the strain on public transit systems as ridership has plunged. It is critical that transportation funding programs support urban, regional, and rural mobility needs, including paratransit and shuttle services, and that operations and maintenance needs are also considered.***

- **Recommendation 8:** Create a permanent federal funding mechanism to support and enhance the cost-effectiveness and accessibility of modern multi-modal transportation systems in communities of all sizes.

With the advent of new technologies, such as connected and automated vehicles (CAVs), and evolving practices, such as ridesharing and the use of personal electric transportation, transportation systems must adapt. In 2017, Transport Canada launched [Advanced Connectivity and Automation in the Transportation System \(ACATS\)](#) to help Canada implement the wider use of connected and automated vehicles. The ACATS program funded projects focused on smart roadway infrastructure and how automated and connected vehicles will influence infrastructure design and planning. ***But many public works agencies struggle to maintain the transportation infrastructure that supports the vehicles of today – and they rely on revenue from an existing model of parking management and traffic enforcement, which will be impacted by the transition to CAVs, to support transportation capacity and operations improvements. CAVs will also drive changes in the design and construction of municipal infrastructure, such as pavement marking materials and smart traffic signals, that will require further investment.***

- **Recommendation 9:** Create a federal funding mechanism to assist public works agencies in meeting the infrastructure needs of Connected/Automated Vehicles (CAVs).

The 2018 Railway Safety Act Review, [Enhancing Rail Safety in Canada: Working Together for Safer Communities](#), noted that ‘proximity issues are the biggest cause of death and serious injuries in rail transportation’ and that ‘progress was plagued by a number of factors, including insufficient collaboration among provincial/territorial and municipal governments and railways regarding land use and trespassing near rail operations.’ ***In addition to the need for collaboration, public works agencies may need assistance in funding grade crossing safety improvements, including crossing openings, closures, and grade separations, to reduce trespassing and ensure pedestrian safety.***

- **Recommendation 10:** Ensure that communities of all sizes have access to federal funding for grade crossing safety improvements to reduce trespassing and ensure pedestrian safety.