Written Submission for the Pre-Budget Consultations in Advance of the 2022 Budget

By:

LIST OF RECOMMENDATIONS

Emergency Management and Disaster Mitigation

- **Recommendation 1:** Establish and support a dedicated Canadian Public Safety Broadband Network (PSBN) to provide communications interoperability to first responders and public safety personnel and ensure that public works agencies have access.
- **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:** Encourage infrastructure investment strategies that recognize the value, and include the management and sustainability, of natural assets.
- **Recommendation 5:** Continue direct funding to local communities through an increase to the federal Gas Tax Fund.
- **Recommendation 6:** Expand federal funding programs to include operations and maintenance activities.

Water Resilience

- **Recommendation 7:** 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 8:** Establish and fund a coordinating body, such as the proposed Canada Water Agency, to act in a cross-functional leadership role, focusing on outcomes and leading the development of water policies and guidelines that benefit all Canadians.
- **Recommendation 9:** Dedicate federal funding to assist public works agencies in addressing the persistence of lead in service lines and plumbing fixtures.

INTRODUCTION

The Canadian Public Works Association (CPWA), or Association Canadienne des Travaux Publics (ACTP), was founded in 1986 to enhance the services of the American Public Works Association (APWA) to the Canadian public works community. Since that time, CPWA has become "the voice of public works in Canada." Collectively APWA represents 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. Public works agencies are also responsible for many aspects of emergency planning and disaster response, including assessing damage to buildings and infrastructure; clearing and disposing of debris; removing snow in blizzard conditions ahead of police and fire services; securing critical facilities and restoring lifeline services; managing traffic and coordinating municipal vehicles, equipment and manpower; and ensuring a safe public water supply.

Communication is increasingly recognized as a critical component of operating public infrastructure and public works agencies must be able to depend on reliable interoperable emergency communications systems that connect them during preparedness, response and recovery operations to other first responders, including law enforcement, fire, emergency medical professionals, and other public works agencies. Communications interoperability is particularly critical when emergency responders provide mutual aid to other communities.

Efforts to establish a public safety broadband network (PSBN) in Canada are underway and it is important that public works be part of this effort. A Temporary National Coordination Office (TNCO) was established in 2018 with the support of Federal, Provincial and Territorial (FPT) Ministers responsible for emergency management to develop recommendations for the potential development of a PSBN across the country. The TNCO published a Progress Report on a National Public Safety Broadband Network in 2019 and a policy paper to FPT ministers responsible for emergency management is forthcoming.

In the United States, nationwide wireless broadband network FirstNet was launched in 2018 through a public-private partnership between the U.S. federal government and AT&T. APWA is a member of FirstNet's Public Safety Advisory Committee (PSAC), whose mission is to assist FirstNet in carrying out its duties and responsibilities and consists of members representing all disciplines of public safety.

- **Recommendation 1:** Establish and support a dedicated Canadian Public Safety Broadband Network (PSBN) to provide communications interoperability to first responders and public safety personnel and ensure that public works agencies have access.

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.

Some public works agencies are also factoring into their capital and operations plans the value of natural assets that provide core municipal services, such as wetlands that improve water quality and provide protection from storm surges and vegetated spaces that stabilize soil and absorb stormwater. According to a 2018 report published by the Insurance Bureau of Canada (IBC) and several partners, Combatting Canada's Rising Flood Costs: Natural infrastructure is an underutilized option, conservation and restoration of natural infrastructure can be a cost-effective way to mitigate material financial losses that would otherwise result from flooding. ***Unlike engineered assets that have a defined lifespan, after which they must be repaired or replaced, natural assets may provide services in perpetuity. But they must be protected and recognized for their value, which may increase as the climate changes.***

- **Recommendation 4:** Encourage infrastructure investment strategies that recognize the value, and include the management and sustainability, of natural assets.

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 5:** Continue direct funding to local communities through an increase to the federal Gas Tax Fund.
- **Recommendation 6:** Expand federal funding programs to include operations and maintenance activities.

Water Resilience

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.

Climate change impacts are placing 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.

- **Recommendation 7:** 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.

Within the federal government, over 20 departments and agencies have unique responsibilities for fresh water, with Environment and Climate Change Canada often acting as a lead department. Many public works agencies supply drinking water and follow the Guidelines for Canadian Drinking Water Quality established by Health Canada in collaboration with the Federal-Provincial-Territorial Committee on Drinking Water. As well, many public works agencies treat wastewater and are subject to Environment and Climate Change Canada's Wastewater Systems Effluent Regulations, which impose minimum standards for municipal effluent quality nationwide and include requirements for reporting. As owners and operators of critical water infrastructure, public works agencies also look to Public Safety Canada's critical infrastructure and cyber security programs and resources. Further, public works agencies may be eligible for funding for water and wastewater infrastructure projects through the Green stream of Infrastructure Canada's Investing in Canada Plan, the Disaster Mitigation and Adaptation Fund (DMAF), and Public Safety Canada's National Disaster Mitigation Program (NDMP).

Coordination of water policy and regulations at the federal level could improve compliance and result in significant benefits for all orders of government. A coordinating body, such as the proposed Canada Water Agency, could play a cross-functional leadership role, focusing on outcomes and leading the development of policies and guidelines that benefit all Canadians. This federal coordinator, functioning as a single point-of-contact, could work with provincial and territorial governments to avoid the easing of regulatory guidelines on projects for economic or political reasons.

- **Recommendation 8:** Establish and fund a coordinating body, such as the proposed Canada Water Agency, to act in a cross-functional leadership role, focusing on outcomes and leading the development of water policies and guidelines that benefit all Canadians.

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