



Pre-Budget Submission

to the

House of Commons Standing Committee on Finance

by the

Canadian Public Works Association

August 2018

EXECUTIVE SUMMARY

CPWA was founded in 1986 as the national voice of the Canadian public works community from coast to coast to coast. CPWA's nearly 2,300 members across Canada join APWA's members 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. Our public works professionals from both the public and private sectors plan and manage the roads and bridges, drinking water systems, wastewater treatment facilities, city parks and buildings, traffic signals and lighting systems, stormwater, snow removal, sanitation and mass public transit services representing the backbone of Canadian communities.

CPWA members are also an essential part of First Responders teams when natural disasters hit cities and towns across the country, an increasingly important role as Canada experiences more frequent extreme weather events.

Our recommendations call for, among other things, dependable and predictable funding for the following four cornerstones of sound infrastructure investments that will improve individual and commercial productivity by providing sustainable, safe and healthy places to live, work, play and invest:

- Emergency Management and Disaster Mitigation
- Asset Management
- Autonomous and Connected Vehicle municipal infrastructure policy
- Water Management and First Nations communities

As stewards of Canada's community infrastructure assets, CPWA is pleased to make these recommendations to the House of Commons Standing Committee on Finance during the Committee's pre-budget consultations and will be available for additional consultation.

INTRODUCTION

The Canadian Public Works Association (“CPWA”) is pleased to present its views to the House of Commons Standing Committee on Finance (“Committee”) in response to the Committee’s request for input from Canadians.

WHO WE ARE

CPWA was founded in 1986 as the national voice of the Canadian public works community from coast to coast to coast. CPWA's nearly 2,300 members across Canada join APWA's members 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.

Our public works professionals from both the public and private sectors plan and manage the roads and bridges, water and wastewater treatment facilities, traffic signals and lighting systems, parks and city buildings, snow removal, sanitation and mass public transit services representing the backbone of Canadian communities that are sustainable, safe and healthy places to live, work, play and invest.

CPWA members are also an essential part of First Responders teams when natural disasters hit cities and towns across the country, an increasingly important role as Canada experiences more frequent extreme weather events.

CPWA provides a forum for public works professionals to exchange information, develop ideas and share skills, knowledge and technologies on issues that are unique to Canada. Over 2,250 Canadian members participate in eight Canadian Chapters, covering all ten provinces and three territories.

RECOMMENDATIONS

The Government of Canada is currently underway in making major investments in public infrastructure over the next decade, with a particular focus on public transit, green infrastructure and social infrastructure. It is imperative that Canada’s new infrastructure investments are built to endure and are managed effectively. Our recommendations focus on: a) emergency management and disaster mitigation; (b) asset management; (c) autonomous and connected vehicle municipal infrastructure policy; and, (d) water management and First Nations.

1. Emergency Management and Disaster Mitigation

CPWA Supports:

- ✓ Dependable, predictable funding for long-term emergency management and disaster mitigation.
- ✓ A collective approach to emergency management, including the adoption of standards and best practices that take into account public works, in order to enhance the capabilities of Canada's emergency management community.
- ✓ Participation of public works agencies and professionals in all-hazards education and training exercises.

- ✓ Development and coordination of timely information and tools to inform the actions of decision-makers.

When Canada’s public infrastructure and facilities are threatened by hazards, whether natural or manmade, public works joins other First Responders in emergency management—prepared and equipped to safeguard lives and reduce or repair Canada’s damaged critical infrastructure. Interagency coordination, support and cooperation are vital to the success of any emergency management operation.

Public works professionals are responsible for many aspects of disaster response, including assessing damage to buildings and infrastructure; clearing, removing and disposing of debris; restoring lifeline services to their communities; managing traffic and transportation for responders, victims and the public; managing and coordinating municipal vehicles, equipment and manpower; and restoring the infrastructure well after the initial event. Public works is also integral to emergency planning, security of critical facilities, and ensuring a safe public water supply.

Although some First Responders may be more visible than others during emergency response operations, no single discipline functions totally independent of the others. All first responders must work in a coordinated fashion. For example, fire departments suppress fires, but public works ensures that there is water to put out the fires. Additionally, public works often maintains fire department buildings, vehicles and communications.

2. Asset Management

CPWA Supports:

- ✓ Dependable, predictable funding for the management of public infrastructure assets.
- ✓ Additional funding for training and technical support for small and mid-size communities that are challenged to adopt asset management programs so they are able to build the data collection capacity that leads to better management of public infrastructure assets.

The single-most important issue to consider and plan for when significant sums are invested in public infrastructure is proper asset management. Extending the useful life of major infrastructure assets by insisting upon proper asset management tools and measures respects the prudent expenditure of public funds and keeps community infrastructure safer longer.

We were pleased that Budget 2016 announced a \$50 million capacity-building fund to support asset management best practices across Canada, delivered through the Federation of Canadian Municipalities. The CPWA believes additional funds will be required, particularly to support small and mid-size communities, and therefore recommends future dependable and predictable funding for asset management.

3. Autonomous and Connected Vehicle Municipal Infrastructure Policy

CPWA Supports:

- ✓ The creation of a fund which has an aim to get municipalities ready for increasing numbers of autonomous and connected vehicles through connected infrastructure

innovation and improvements. This fund would encourage municipalities to invest in infrastructure which will be beneficial to autonomous transportation and solutions for innovation in communities.

- ✓ More research and approved testing facilities for autonomous and connected vehicles in Canada so municipalities are ready for change in transportation systems.

In Canada, provincial and territorial governments regulate the use of roads which includes authorizing autonomous vehicles on roads. The federal government regulates vehicles and vehicle safety.

Ontario is the only jurisdiction in Canada that allows testing of automated vehicles in Canada. This pilot program was announced in 2015 and since January of 2016 seven permits have been issued for on-road testing and demonstrations. Ontario invested \$2.95 million into the Ontario Centres of Excellence Connected Vehicle/Automated Vehicle Program with a goal of connecting academic institutions with businesses.

In July of 2017, Transport Canada announced \$50 million for the development of regulations for unmanned aerial vehicles and connected and automated vehicles. Transport Canada announced a program called [“Advanced Connectivity and Automation in the Transportation System \(ACATS\)”](#) – it is a program with an aim to help Canada implement the wider use of connected and automated vehicles on our roads. To do so, the program supports:

- research, studies and technology evaluations
- the development of codes, standards and guidance materials
- capacity-building and knowledge-sharing activities

Underpinning the effective planning for vehicles of the future is a high functioning communications system in communities across Canada. The creation of a new fund for municipalities is essential to get ready for transportation systems of the future.

4. Water Management and First Nations Communities

CPWA Supports:

- ✓ Dependable, predictable funding for water infrastructure in all parts of Canada
- ✓ Funding for training and technical support for small and mid-size communities that are challenged regarding operation & maintenance of facilities and adopting asset management programs so they are able to undertake the integrated planning that leads to better management of water infrastructure assets
- ✓ Continued investments in First Nations communities across Canada through funding for adequate water and wastewater infrastructure in northern, rural and Indigenous communities
- ✓ Development of green infrastructure to effectively and efficiently manage stormwater and as a flood mitigation strategy.
- ✓ A watershed approach to water quality, which encourages regional, geographic and climate specific solutions to environmental problems as well as attention to regionally and locally-determined pollutants, both point sources (sewage treatment plants) and nonpoint sources (agriculture and urban runoff).

Reliable water infrastructure is essential to healthy and livable communities, and demands an integrated approach to managing drinking water, wastewater and storm water. Water infrastructure is also critical to effectively and safely responding to emergencies such as fires.

Though water systems are required to maintain a high level of water quality in order to ensure public health, many are burdened by aging infrastructure; depletion of source water supplies; contamination of source water supplies by pollutants and nutrients from industrial, urban and agricultural sources; the introduction of unused pharmaceuticals into solid waste and sewage systems, where they can pollute waterways or leach into groundwater; and decreasing groundwater recharge due to the impervious surfaces and expansion of urban development and landfills.

Severe weather – specifically droughts and high-volume rain events – also put stress on water systems. Droughts require water systems to reduce water consumption in order to protect water supplies, while also maintaining operations with reduced user fees. Heavy rainfall and snowmelt present another set of challenges. Combined sewer systems, which collect rainwater runoff, domestic sewage, and industrial wastewater in a single-pipe system, were designed to convey sewage and wastewater to treatment facilities during dry weather. These systems are still in place in many older communities, but present operational challenges during high-volume precipitation events that exceed the capacity of treatment facilities.

Green infrastructure is a way to manage wet weather impacts by reducing and treating stormwater at its source – rather than relying on conventional ‘gray infrastructure’ (pipes, pumps, and other engineered solutions) to move and treat it. In natural, undeveloped areas, rainfall – rather than becoming stormwater to be managed by gray infrastructure – is absorbed into soil and naturally filtered as it recharges groundwater supplies. Green infrastructure mimics this natural process by using vegetation, soils, and other elements to manage water in urban environments, while also protecting water supplies and providing habitat and flood protection.

Integrated planning takes all these factors into account, enabling local governments to develop a comprehensive strategy for water programs that coordinates, prioritizes and sequences investments. But many communities, particularly small and mid-size communities, do not have the resources to undertake long-term integrated planning. They already struggle to obtain project approval, meet regulatory requirements and attract competitive bids for their projects and would benefit from asset management programs that support planning, prioritizing and sequencing their infrastructure investments.

The Government of Canada is to be commended for the investment in First Nations water systems. Budget 2016, 2017, and 2018 invested a total of more than \$5.8 billion to improve and build infrastructure, ensure proper facility operation and end long term drinking water advisories across First Nations territories. The CPWA encourages the Government of Canada to accelerate these investments and work with the public and private sectors to enhance water quality outcomes in First Nations communities over the long term. Further investment into the training and technical assistance of local water operators would prevent future or reoccurring advisories. **CONCLUSION**

The Government of Canada has, with its provincial/territorial and municipal partners, embarked on an ambitious and much-needed program to invest considerable sums in public infrastructure. The CPWA believes it is imperative that these significant infrastructure investments are built to endure and are managed effectively. In order to achieve these objectives, while at the same time improving individual and commercial productivity by providing sustainable, safe and healthy places to live, work, play and invest, we recommend that attention be focused on:

- Emergency Management and Disaster Mitigation
- Asset Management
- Autonomous and Connected Vehicle municipal infrastructure policy
- Water Management and First Nations communities