



Pre-Budget Submission

to the

House of Commons Standing Committee on Finance

by the

Canadian Public Works Association

August 2017

EXECUTIVE SUMMARY

CPWA was founded in 1986 as the national voice of the Canadian public works community from coast to coast to coast. Working in tandem with the American Public Works Association (APWA), CPWA represents nearly 30,000 public works professionals in North America working 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
- Sustainable and Climate Resilient Infrastructure
- Water Management and Green Infrastructure

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. This year the Committee focuses on two key economic indicators: productivity and competitiveness. The CPWA believes the Committee’s pre-budget consultations are an important forum in which to engage in public policy debates affecting the lives and livelihood of Canadians and that we have responsibility to participate and contribute.

WHO WE ARE

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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 has committed to 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) sustainable and climate resilient infrastructure; and, (d) water management and green infrastructure.

1. Emergency Management and Disaster Mitigation

CPWA Supports:

- ✓ Dependable, predictable funding for long-term emergency management and disaster mitigation.
- ✓ Dependable, predictable funding for resilient infrastructure and climate change adaptation.

- ✓ 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. Fire departments suppress fires, but public works provides the water, often maintains fire department vehicles and communications, and obtains many fire department supplies. Public works may also supply technical expertise and special heavy equipment. In turn, public works often relies on other agencies and the private sector to assist in training its personnel for emergency duties.

2. Asset Management

CPWA Supports:

- ✓ Dependable, predictable funding for the management of public infrastructure assets.
- ✓ 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. Sustainable and Climate Resilient Infrastructure

CPWA Supports:

- ✓ Dependable, predictable funding for resilient infrastructure and climate change adaptation.
- ✓ The use of sustainability rating systems such as Envision® which provides municipalities with a holistic framework for evaluating and rating the community, environmental and economic benefits of all types and sizes of infrastructure projects.
- ✓ Re-establishing an advisory group to the federal government such as the former National Round Table on Sustainable Infrastructure (NRTSI).

There is a strong and compelling indication that civil engineering infrastructure projects are falling behind the societal and functional expectations of what is needed both for today and into the future and that public infrastructure is increasingly vulnerable to a changing climate. Failing infrastructure disrupts essential services, results in economic loss, and can lead to loss of life. The principles of sustainable development are considered to be 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.

These concerns led three major U.S.-based associations – the American Public Works Association, the American Council of Engineering Companies, and the American Society of Civil Engineers – to launch a not-for-profit organization dedicated to sustainable infrastructure, the Institute for Sustainable Infrastructure (ISI). Working jointly with the Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design, ISI developed the sustainability rating tool Envision® – a holistic framework for evaluating and rating the community, environmental and economic benefits of all types of infrastructure projects. Envision® also recognizes infrastructure projects that use transformational, collaborative approaches to assess sustainability indicators over the course of a project’s life cycle.

Directing public funds towards public infrastructure projects that have been planned and executed in accordance with sustainability principles is a key to ensuring safe, healthy communities provide citizens with a high quality of life.

4. Water Management and Green Infrastructure

CPWA Supports:

- ✓ Dependable, predictable funding for water infrastructure.
- ✓ 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).

- ✓ Safe and effective disposal of outdated and unused pharmaceutical waste and the need for discarded pharmaceutical stewardship programs in order to protect water quality.
- ✓ Funding for adequate water and wastewater infrastructure in northern, rural and Indigenous communities and an end to long-term boil water advisories.

Reliable water infrastructure is essential to healthy and livable communities, and demands an integrated approach to managing drinking water, wastewater and stormwater. 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.

When large amounts of stormwater enter the system, stormwater and wastewater combine and discharge directly to nearby streams, rivers, and other water bodies. Sanitary sewers (or separate sanitary sewers), only collect wastewater and do not provide drainage for large amounts of runoff from precipitation events. However, sanitary sewers can develop cracks, blockages, equipment failures and broken pipes during wet weather, which can cause sanitary sewer overflows and other operational problems for 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.

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
- Sustainable and Climate Resilient Infrastructure
- Water Management and Green Infrastructure