



NASSCO

POLICY RECOMMENDATIONS

BUILDING RESILIENT INFRASTRUCTURE FROM THE GROUND UP



2026



**In 2022, 13% of Canada's
485,368 kilometres of
underground pipe were in poor
or very poor condition, with a
replacement value of more than
\$72 billion dollars.**



Underground Infrastructure in Canada

Canada's underground infrastructure network is vital to keeping our communities safe and our population healthy. Largely, the public takes water and wastewater networks for granted. They are only recognized when water does not flow from the tap, waste does not flush down the toilet, or roadways are not passable due to pipe failures.

Statistics Canada's Core Public Infrastructure Survey found that in 2022, public underground infrastructure in Canada consisted of:

- 3,977 wastewater treatment plants and lagoon systems;
- 3,325 water treatment facilities; and
- 485,368 kilometres of underground pipes.

Who Does The Work?

When underground pipes fail or degrade significantly, there are upstream effects for households and businesses. At present, while municipalities often rely on asset management plans that consider the expected lifecycle of pipes, there is minimal ongoing investigation or assessment of those pipes until a system, or a portion of a system, fails. The lack of adequate professional assessment can also lead to the replacement of pipes that still have many more years of potential service. In both cases, the lack of a consistent, due diligent and defensible approach in assessing and rehabilitating underground pipes can unnecessarily increase costs or pose safety risks to the public.

To mitigate these issues, NASSCO provides training to municipal officials and contractors through its Pipeline Assessment Certification Program (PACPT™), Lateral Assessment Certification Program (LACP™), Manhole Assessment Certification Program (MACPT™), and Building Sewer and Drain Inspection (BSDI™) course. With more than 55,000 certified individuals trained to date, these designations are a trusted source for proper and, more importantly, consistent approaches to the assessment condition coding of pipelines, laterals and manholes.

Once assessed by a certified PACP, LACP, or MACP professional, the owners of underground infrastructures (often municipalities) may create comprehensive databases to properly identify, baseline, plan, prioritize, manage and renovate their assets based on an internationally recognized condition evaluation standard.

Canada needs more consistent, comprehensive, and risk-based assessments of underground infrastructure systems to help municipalities manage aging assets and plan for population growth. Effective asset management supports informed investment decisions, reduces lifecycle costs, and improves the resilience of critical infrastructure in the face of climate-related risks. Reliable condition assessment data also helps municipalities identify capacity constraints and better plan for growth and redevelopment. NASSCO-certified professionals can play an important role in providing the data needed to support these decisions.

A dark blue rectangular graphic with a white play button icon on the right. The text "NASSCO's Recommended Solutions" is written in white, bold, sans-serif font. The background of the graphic features a subtle geometric pattern of overlapping triangles.

**NASSCO's
Recommended
Solutions**

Recommendation #1

Establish a \$500 Million Municipal Asset Management Fund

Canada's largest municipalities have greater resources to perform asset management. While they have more infrastructure to consider, they tend to have more resources for hiring and training professionals directly or to retain expertise. Economies of scale are a real challenge for smaller municipalities, especially in rural and remote parts of the country.

Many municipalities across Canada continue to rely on age and expected service life as important inputs in infrastructure renewal planning, particularly where detailed condition information is unavailable. While this approach provides a useful starting point, it can result in the replacement of assets that remain in acceptable condition while deteriorated assets may go unidentified until more significant issues emerge. Condition assessment programs, including PACP-based inspections, provide municipalities with asset-specific information that supports more informed capital planning and investment decisions. For example, the Town of Newmarket, Ontario used PACP inspections to better understand the condition of sanitary sewer assets that had been identified for renewal. The assessment determined that only 1.8km of the 22km sewer network required immediate repair or replacement, significantly reducing backlogged capital requirements by \$28m thus allowing investments to be prioritized based on actual asset condition. NASSCO-certified inspection and assessment methodologies support a consistent, data-driven approach to pipeline management, rehabilitation, and replacement planning.

Communities of all sizes and geographies will benefit from improved asset management and better maintenance of underground infrastructure assets. Larger municipalities with larger populations, more businesses and a wider tax base are more likely to have strong asset management plans in place.

Though these large municipalities also continue to need funding, smaller and more rural communities are in greater need of support to develop plans that will help them grow.

Ensuring equal access to underground infrastructure asset inspection is an important consideration, particularly in support of rural economic development. Launching a funding program that supports municipal asset management plans, particularly for underground infrastructure, will demonstrate the value of consistent, standardized approaches to pipeline and lateral inspection and remediation. These investments will save all levels of government money on unnecessary replacement and repairs and will target necessary repairs and replacement more effectively. Improved asset management will reduce overall construction costs, reduce the impacts of climate-related extreme weather events, and accelerate infrastructure development.

► **NASSCO Inc. recommends that the federal government provide funding for municipal asset management plans, and planning for public utilities, sewer systems and other underground piping. This investment should be in the form of a \$500 million dedicated fund, allocated as follows:**

- **\$150 million for municipalities with populations exceeding 100,000 people**
- **\$350 million for municipalities with populations under 100,000 people.**

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Recommendation #2

Require Certified Condition Assessment and Trenchless Remediation for Underground Infrastructure

The federal government aims to reduce the deficit while investing more in capital. The best way to provide improvements while limiting expenses in underground infrastructure is to require the adoption of certified condition assessment of potable water, wastewater, and storm water assets.

Condition assessments are essential to underground assets. An aging pipe that is in good condition does not need to be replaced, but even pipes that are just a few years old can be damaged or compromised. In Quebec, condition assessment using NASSCO's Pipeline Assessment Certification Program (PACP™) is required to be performed before municipalities can access funding to replace or repair underground pipes.

The City of Winnipeg has invested in certified condition assessments for underground pipes at a cost of \$15 million. From that certified condition assessment, over \$500 million in savings were realized from the assessment, which showed that millions of metres of pipe slated to be replaced could benefit from trenchless technologies such as trenchless point repairs, relining, or stabilization. That represents a 33-to-1 return on investment for the City of Winnipeg.

By reducing surface disruption, trenchless remediation generates less construction noise than traditional digging methods. This makes overnight work more feasible, reduces disruption for residents and businesses, and accelerates project timelines. This is particularly valuable in dense urban environments, where traditional digging can significantly increase noise pollution. Trenchless technologies are significantly more cost effective than digging up and replacing deteriorated pipe. Additionally, they are less disruptive to communities since lawns, roads, parking lots and other community properties are minimally excavated.

There are environmental benefits, as well. By using the deteriorated pipe as a host pipe for the new trenchless pipe-within-a-pipe, the need to haul the old pipe off to a landfill and potentially release hazardous materials is avoided.

► **NASSCO Inc. recommends that the federal government require the use of certified pipe inspections and trenchless remediation of all underground water, wastewater, and stormwater infrastructure projects funded by the federal government.**

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Recommendation #3

Establish a “Centre of Excellence” for Underground Infrastructure

Canada would benefit from stronger coordination of knowledge and expertise related to underground infrastructure. While significant expertise exists across the country, it is distributed among municipalities, utilities, contractors, consultants, professional associations, academic institutions, researchers, and infrastructure owners.

There is currently no single national forum dedicated to coordinating activities, sharing best practices, and advancing knowledge across the underground infrastructure sector.

Numerous professions from engineers, contractors, operators, to municipal asset management practitioners have a shared interest in the performance, condition and renewal of underground infrastructure systems. Industry associations and research organizations contribute valuable work within their respective mandates, but opportunities remain to improve collaboration and knowledge transfer across jurisdictions and disciplines.

The Canadian Water Network previously provided a national platform for collaboration on water-related research and practice, including drinking water, wastewater, stormwater management, and environmental impacts. Since the conclusion of that model and the evolution of the Networks of Centres of Excellence program, Canada has lacked a dedicated organization focused specifically on coordinating knowledge related to underground infrastructure.

Establishing a Centre within Housing, Infrastructure and Communities Canada could help address this gap by supporting research, disseminating best practices, fostering collaboration, and improving access to technical expertise for infrastructure owners and asset managers across Canada.

- ▶ **NASSCO Inc. recommends that the federal government establish a new Centre of Excellence embedded within the Housing, Infrastructure and Communities Canada department to enhance coordination and provide resources for asset owners—including private enterprises and municipal governments—to support improvements to asset management and maintenance of underground assets across the country.**

About NASSCO Inc.

NASSCO Inc. is the leading source of education, technical resources and advocacy for the underground infrastructure industry. Formed in 1976 as a 501(c)(6) trade association, NASSCO Inc. continues to lead the charge in providing quality education for pipeline condition assessment and inspection. Its dynamic member-driven committees contribute unbiased technical resources through specification guidelines and other resources. Most importantly, however, NASSCO continues to serve as the advocate for underground infrastructure funding and the continued acceptance and growth of trenchless (or “no-dig”) technologies.

NASSCO's diverse Canadian membership base consists of contractors, suppliers, public agencies, utility owners, engineers, and everyone committed to setting standards that ensure the health of underground infrastructure. NASSCO is a not-for-profit organization that ultimately exists to keep our communities safe.

Turn to NASSCO for Knowledge and Support

As the underground infrastructure industry's leading 501 (c) (6) trade association, NASSCO and its member companies are the most knowledgeable source of information regarding education, technical resources, and advocacy of trenchless – or “no dig” – technology.

Please visit **NASSCO.org** to:

- Learn more about the financial and environmental benefits of trenchless technology
- Understand the importance of inspection as part of asset management programs
- View videos, recorded webinars, and more to understand wastewater systems



Interested in visiting a job site in your region to see trenchless technology in action? Complete the Contact Form at **NASSCO.org** and we will pair you up with a NASSCO member company.



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To learn more please visit NASSCO.org.