



Benefits of the Federal Gas Tax Fund | 2014-2016

Executive Summary

The federal Gas Tax Fund is a permanent, predictable and stable source of funding for municipal infrastructure. AMO administers the Fund to 443 municipalities in Ontario, all except the City of Toronto.

Between April 2014 and December 2016, municipal governments completed over 2,000 projects with the support of the federal Gas Tax Fund. Completed projects were worth a combined \$2.7 billion; over \$1.3 billion was financed by the Fund.

Infrastructure projects supported by the federal Gas Tax Fund delivered economic, environmental and community benefits across Ontario. Over 9,000 lane-km of local roads were rehabilitated or reconstructed – enough to drive from Kenora to Cornwall and back twice. LED streetlight installations and building upgrades saved enough energy to power over 2,400 houses for a year. Investments in recreation facilities encouraged an additional 1,200 residents to get active in fitness programs.

Capacity-building projects supported by the Fund helped drive advancements in asset management across the province. Almost all municipalities now have an asset management plan, and municipalities expanded their asset management plans substantially between 2014 and 2016, more than doubling the variety of assets covered. Comprehensive asset management plans are crucial to identify, plan, and manage investment requirements.

Asset management plans indicate that municipalities are using the federal Gas Tax Fund to replace aging infrastructure – tackling an infrastructure backlog in the billions. Municipal investment in infrastructure has also continued at full strength since the Fund was introduced in 2005.

The predictability of the federal Gas Tax Fund for every municipal government provides the confidence that each needs to plan for the future. Communities are using the Fund to build up reserves and to finance long-term debt incurred for large projects. Strategic use of both tools is essential to managing municipal infrastructure sustainably. Through the federal Gas Tax Fund, municipalities are effectively leveraging federal investments in municipal infrastructure, and delivering local solutions to broader challenges, including national objectives.

March 2018

Contents

Executive Summary	1
Introduction	4
The federal Gas Tax Fund.....	4
Benefits of the federal Gas Tax Fund.....	4
The scope of this report.....	5
Summary of the Investment	6
Municipalities completed over 2,000 projects	6
Investments mirrored local priorities	7
Municipalities increasingly invested in new categories.....	7
Economic, Environmental and Community Benefits	8
Benefits were quantified with output and outcome indicators	8
Broadband connectivity projects expanded Internet access	9
Brownfield redevelopment projects created safe spaces to live and play.....	9
Community energy system investments cut energy consumption.....	10
Cultural infrastructure investments encouraged community engagement	11
Disaster mitigation projects protected our communities.....	12
Drinking water system investments delivered safer water.....	13
Local road and bridge projects kept local economies moving	14
Public transit projects connected our communities.....	16
Recreational infrastructure investments encouraged exercise	17
Solid waste system investments kept our communities clean	18
Sport infrastructure projects promoted fitness	19
Tourism infrastructure projects attracted visitors to our communities.....	20
Wastewater system investments kept things flowing	21

Progress in Municipal Asset Management	22
The Fund is driving advances in municipal asset management.....	22
Capacity-building investments enhanced asset management systems	24
The Infrastructure Investment Gap	25
A gap separates investment needs from investment capacity	25
The Fund is narrowing the gap	26
Long-Term Municipal Planning	28
The Fund facilitates long-term planning.....	28
Municipalities are gradually building reserves.....	28
Some municipalities use the Fund to pay off long-term debt.....	29
Communications and Outreach	30
Sharing our story and measuring its impact	30
Videos illustrate local investments.....	30
Projects are mapped online	31
Information is shared on social media.....	31
News releases and media events highlight local projects	32
Appendix	33
Notes on the Text.....	33
Methods	39
Outputs Produced by Infrastructure Investments.....	41
Outcomes Delivered by Infrastructure Investments	43

Introduction

The federal Gas Tax Fund

The federal Gas Tax Fund is a permanent, predictable and stable source of funding for municipal infrastructure. The Fund transferred \$6.1 billion in federal funding to Canadian municipalities between 2014 and 2016; Ontario's share was over \$2.2 billion.

Ontario's share is distributed to municipalities on a per capita basis. Municipalities may invest their allocations as they see fit to address local priorities – provided that the investment is used to construct, enhance or renew eligible infrastructure or improve long-term planning and asset management practices. The Ontario model recognizes that municipalities are a duly elected, accountable and transparent order of government.

Local investments advance national objectives by boosting productivity and economic growth, promoting a cleaner environment and strengthening communities. Eligible investment categories are listed below.

Productivity and Economic Growth	Clean Environment	Strong Cities and Communities
Broadband Connectivity	Brownfield Redevelopment	Capacity Building
Local and Regional Airports	Community Energy Systems	Culture
Local Roads and Bridges	Drinking Water	Disaster Mitigation
Public Transit	Solid Waste	Recreation
Short-Line Rail	Wastewater	Sport
Short-Sea Shipping		Tourism

Benefits of the federal Gas Tax Fund

The federal Gas Tax Fund benefits families and businesses across Ontario. Smooth, safe roads connect people and economies, new bike lanes open opportunities for exercise and active transportation, energy-efficient upgrades reduce greenhouse gas emissions and improve air quality, and expanded public transit networks connect commuters to jobs across the community.

The benefits of the federal Gas Tax Fund extend beyond the impact of individual projects. The Fund provides a steady stream of funding that facilitates long-term planning and narrows the infrastructure gap, encourages effective asset management, and builds federal-municipal partnerships by promoting collaboration and coordination.

The scope of this report

This report summarizes benefits of the federal Gas Tax Fund generated between April 1, 2014 and December 31, 2016.¹ The pages that follow will show how the Fund is:

- **Generating economic, environmental and community benefits** – by supporting investment in infrastructure servicing local priorities;
- **Driving progress in asset management** – by funding the development and continual improvement of municipal asset management systems;
- **Narrowing the infrastructure gap** – by incrementally contributing to the pool of funds available to maintain a state of good repair across the province;
- **Facilitating long-term municipal planning** – by providing a reliable revenue stream that municipalities can depend on when budgeting for the future; and
- **Helping municipal governments connect with residents** – by allocating resources to assist with communications and outreach.

Supplementary information – including methods, definitions and in-depth analyses – is available in the Appendix to this report.



Township of Enniskillen, Tile Yard Road Reconstruction



Top: City of Hamilton, New Low Floor Transit Buses
Bottom: City of St Thomas, Replacement of Pinafore Park Comfort Station

Summary of the Investment

Municipalities completed over 2,000 projects

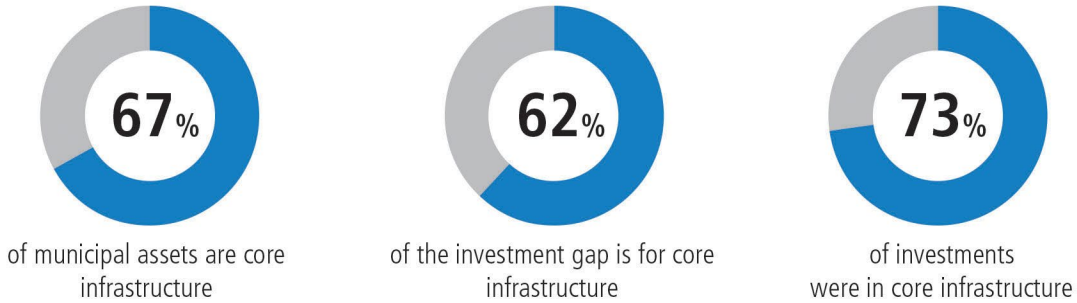
Ontario's municipalities (excluding Toronto) completed over 2,000 projects with the support of the federal Gas Tax Fund between April 1, 2014 and December 31, 2016. These projects were worth a combined \$2.7 billion. Over \$1.3 billion was financed by the Fund.²

Much of this investment was made in core infrastructure.³ Drinking water, roads and bridges, and wastewater accounted for 73% of the investment. The table below shows how municipalities allocated the Fund across eligible investment categories.⁴

Eligible Investment Category	Projects Completed	Federal Gas Tax Funds Invested	Total Project Costs	Funding Leveraged
Broadband Connectivity	1	\$16,886	\$21,886	\$0.30
Brownfield Redevelopment	1	\$1,160,000	\$2,577,972	\$1.22
Capacity Building	102	\$19,706,629	\$42,163,032	\$1.14
Community Energy Systems	135	\$59,235,329	\$179,136,681	\$2.02
Culture	3	\$390,878	\$772,440	\$0.98
Disaster Mitigation	2	\$204,673	\$241,028	\$0.18
Drinking Water	90	\$41,139,980	\$97,656,954	\$1.37
Local Roads and Bridges	1,439	\$854,948,619	\$1,635,663,351	\$0.91
Public Transit	71	\$236,896,031	\$369,764,005	\$0.56
Recreation	36	\$5,947,658	\$9,350,041	\$0.57
Solid Waste	37	\$31,878,619	\$107,834,317	\$2.38
Sports	2	\$940,770	\$6,496,579	\$5.91
Tourism	3	\$25,630	\$43,470	\$0.70
Wastewater	136	\$70,865,435	\$208,046,314	\$1.94
Total	2,058	\$1,323,357,136	\$2,659,768,069	\$1.01

Investments mirrored local priorities

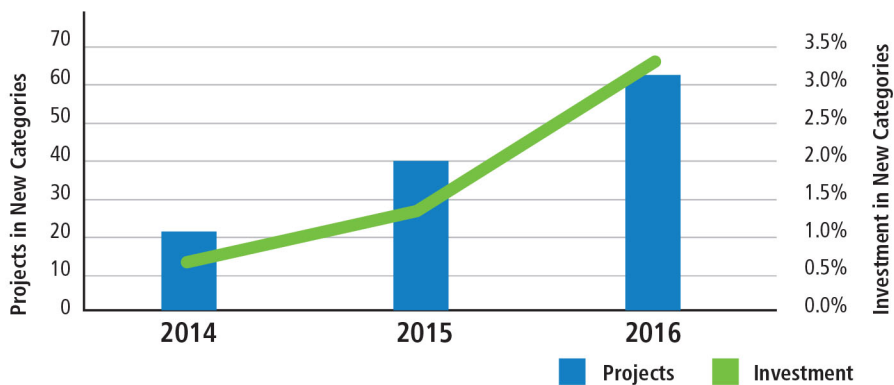
The emphasis on core infrastructure reflects municipal priorities. Core infrastructure comprises the bulk of Ontario’s municipal assets⁵ – and of Ontario’s infrastructure investment gap.⁶ Municipalities also own the majority of Canada’s core infrastructure,⁷ and citizens look to municipal governments to maintain the critical services that core infrastructure provides.



Nevertheless, municipalities invested the federal Gas Tax Fund to meet their diverse needs. Over half of municipalities investing in multiple projects also invested in multiple categories. Nearly a third of municipalities receiving \$500,000 or more annually from the Fund invested in three or more categories.

Municipalities increasingly invested in new categories

Investment in eligible project categories introduced in 2014 remained low throughout the 2014-2016 period, but picked up over time.⁸ Investment in new categories is likely to increase as new federal infrastructure funding allows municipalities to redirect the Fund to other priorities.



Economic, Environmental and Community Benefits

Benefits were quantified with output and outcome indicators

Federal Gas Tax Fund investments helped municipalities boost productivity and economic growth, promote a cleaner environment and strengthen communities. Economic, environmental and community benefits generated by infrastructure projects are summarized below.⁹

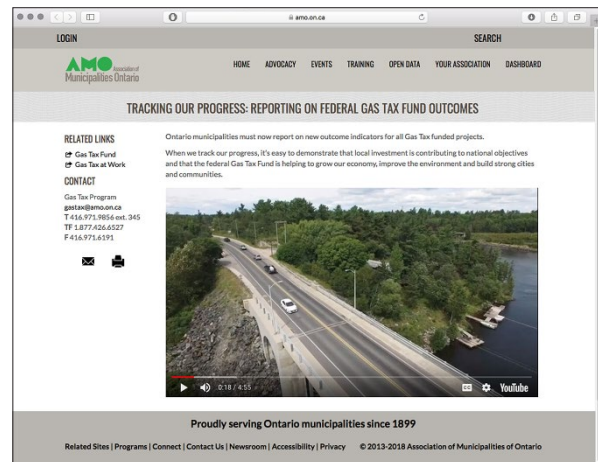
Some benefits are easy to measure. An investment in public transit, for example, may involve the purchase of a bus or the construction of a transit station. These tangible benefits are directly produced by the investment and are called outputs.

Other benefits are difficult to measure. That new bus may encourage residents to take public transit – reducing greenhouse gas emissions and improving air quality – and connect employers with residents looking for work – boosting incomes and strengthening businesses. These intangible benefits are typically indirect consequences of the investment and are called outcomes.

AMO, in consultation with municipalities and with the approval of the Fund's Oversight Committee, developed a series of output and outcome indicators to measure the benefits of each infrastructure investment. Outputs and outcomes are described in the sections below and are tabulated in the Appendix to this report.¹⁰ Several sessions on outcome reporting – the what, why and how – took place with municipalities throughout the province in 2016 and 2017.

Additionally, [a video was prepared in late 2016 to highlight the importance of outcome reporting](#). When we track our progress, it is easy to demonstrate that local investment is contributing to national objectives and that the federal Gas Tax Fund in Ontario is helping to grow our economy, improve the environment and build strong communities.

Municipalities began reporting benefits generated by federal Gas Tax investments under these new indicators in the 2016 reporting year. Details are captured in Part 1 of AMO's [2016 Federal Gas Tax Annual Report](#). Municipalities now report benefits annually.






BROADBAND CONNECTIVITY

Broadband connectivity projects expanded Internet access

Broadband connections provide rapid, 24/7 access to the Internet – and all the economic and social benefits that come with it. Nearly all Ontarians have access to broadband Internet in some form – but only 88% have access to broadband speeds meeting national targets.¹¹ Broadband Internet access is particularly limited in rural communities.¹²

Rural communities are therefore using federal funding to expand broadband access. The federal Gas Tax Fund helped municipalities expand access to 284 households between 2014 and 2016.

 **284**
more households with landline access to
broadband speeds of 10 Mbps or higher.




BROWNFIELD REDEVELOPMENT

Brownfield redevelopment projects created safe spaces to live and play

Brownfield redevelopment projects clear contaminants and create space to live and play. Estimates of the number and extent of brownfield sites across Ontario vary, but brownfield redevelopment has been critical to rebuilding communities across Ontario.

Investment in brownfield sites revitalizes neighbourhoods, reduces urban sprawl, and removes hazardous contaminants. These changes boost tax revenues and attract new businesses, cut commuting times and greenhouse gas emissions, and improve the quality of our water and air.¹³ Federal Gas Tax Fund investments helped redevelop brownfield sites large enough to accommodate eight soccer fields between 2014 and 2016.

 **19**
different types of contaminants removed or reduced
to safe exposure levels; six hectares of brownfield
sites remediated, decontaminated or redeveloped.



Community energy system investments cut energy consumption

Municipalities used the federal Gas Tax Fund to help cut annual electricity consumption by 21 GWh between 2014 and 2016 – enough to power over 2,400 houses for a year.¹⁴ This reduction decreases Ontario's annual greenhouse gas emissions by approximately 840 metric tonnes of CO₂ equivalents,¹⁵ helping communities create a better future for children and families.



Wawa's LED Streetlight Retrofit Project

Located at the gateway of the Boreal Forest, the Northern Ontario community of Wawa is investing in reducing its energy use and greenhouse gas emissions. In 2015, Wawa invested \$213,000 from the federal Gas Tax Fund into an LED streetlight retrofit project. The municipality replaced 426 existing streetlight fixtures with new LED streetlight cobra fixtures that use less power and last longer. Wawa's investment has reduced annual energy use more than 50% from 277,008 kWh to just 136,813 kWh.



840 metric tonnes of CO₂

equivalents cut from Ontario's greenhouse gas emissions; 21 GWh decrease in annual energy consumption (equivalent to 2,400 houses/year).



Cultural infrastructure investments encouraged community engagement

Cultural facilities are shared spaces where we can learn, connect, and grow together. These facilities include the museums that commemorate our common past and foster a sense of belonging, the galleries that promote local talent and encourage creative expression, and the libraries that offer opportunities to explore new interests and develop new skills.

These facilities strengthen our communities. Investments in cultural infrastructure help boost volunteerism and civic engagement, improve residents' health and quality of life, and draw people together. Cultural infrastructure projects completed with the support of the federal Gas Tax Fund between 2014 and 2016 increased the frequency of cultural events and helped more residents engage with their communities.



Guelph's Civic Museum Exterior Enhancement

The City of Guelph's Civic Museum is home to a collection of more than 40,000 artifacts that bring Guelph's history to life. The City worked to improve the museum's exterior finishes, including hardscaped areas for public gatherings, new plantings and other features to accent the building's heritage façade. A landscaped terrace was designed to accommodate a statue, donated by Guelph citizens, in honour of Lt. Col. John McCrae and the 100th anniversary of his poem "In Flanders Fields." Guelph invested \$350,000 from the federal Gas Tax Fund into the project with a total cost of \$696,320.

The exterior enhancement resulted in an impressive new green space right in the core of the City and has increased the profile of a beautiful heritage building. The museum is a source of civic pride, encouraging residents and visitors to take part in local cultural activities and contributing to a 250% increase in the number of cultural events in the downtown core.



149

**more residents participating
in cultural activities.**



Disaster mitigation projects protected our communities

Natural disasters and extreme weather events are becoming more common – and more expensive.¹⁶ Municipal staff are typically the first to respond to disasters, and municipal budgets are increasingly pressured by the costs associated with them.

Resilient infrastructure – including green infrastructure to absorb excess stormwater, seawalls and breakwaters to protect shorelines, and other structures – is critical to reduce the risk and impact of natural disasters. Federal Gas Tax Fund investments helped restore critical infrastructure protecting a combined area large enough to accommodate nearly 20 soccer fields between 2014 and 2016.



Brockville's Hardy Park Shoreline Restoration

The City of Brockville's Hardy Park overlooks the St. Lawrence River and connects with the Brock Trail System. The park includes a public boat ramp, a fully accessible children's playground, volleyball courts and beautiful trails. While the park is a popular spot and plays host to many local events, the concrete between the beams supporting the seawall had significantly eroded. As a result, a substantial portion of the seawall was missing. In 2015, the City invested \$190,000 from the federal Gas Tax Fund in a shoreline restoration project to replace the concrete wall with steel pillings. This work helped to protect the shoreline and the boardwalk structure, reducing the risk of damage to the area from flooding and ensuring that residents can continue to enjoy the shoreline for years to come.

 **2** disaster mitigation projects resulted in 14 fewer hectares of land at risk of damage from catastrophes.



Drinking water system investments delivered safer water

Part of keeping our communities healthy is ensuring that local water systems are safe and reliable. The vast majority of Ontario’s municipal water systems have consistently met provincial water quality standards over the past decade¹⁷ – but as our infrastructure ages, watermain breaks and other service disruptions become more likely.

Municipalities invested the federal Gas Tax Fund in the rehabilitation or replacement of 65 km of water pipe between 2014 and 2016, helping cut the frequency of watermain breaks and improve service to thousands of families. Additional investments in water treatment reduced the number of adverse water quality incidents and boil water advisories across the province.



South River’s Johnston Drive Water Main Expansion

The Village of South River invested \$164,000 from the federal Gas Tax Fund to install 230 metres of watermain along Johnston Drive. This investment increases the supply of water into a local subdivision of 75 homes and decreases the risk of pressure loss so that residents can continue to rely on the local water supply.



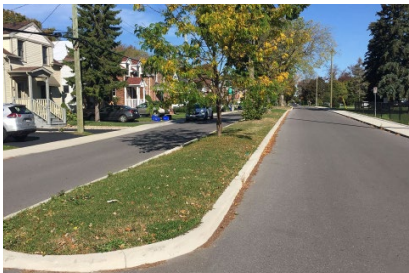
88 fewer watermain breaks
each year; **23,010 residents with access to new, rehabilitated or replaced water distribution pipes.**



Local road and bridge projects kept local economies moving

Ontario's municipalities are responsible for over 140,000 km of roads and more than 15,000 bridges and large culverts.¹⁸ Businesses rely on these roads and bridges to move goods from production centres in local communities to markets around the world, while tourists and seasonal residents depend on them to access vacation spots and second homes across the province.

Most of Ontario's bridges were built almost 50 years ago,¹⁹ and roads and bridges comprise the bulk of the municipalities' infrastructure lifecycle requirements.²⁰ The federal Gas Tax Fund has been critical to keep local roads and bridges in a state of good repair; municipalities repaired or replaced 9,677 lane-km of roads between 2014 and 2016 – enough to drive from Kenora to Cornwall and back twice.²¹



Kingston's Reconstruction of Yonge St. and Ellerbeck St.

Poor road conditions can lead to increased traffic and decreased efficiency, hampering the ability of residents to get where they need to go quickly and safely.

The City of Kingston is a medium-sized city, home to Queen's University and many historic 19th-century buildings. In 2015 and 2016, the City embarked on a major reconstruction project to improve two residential streets, Yonge Street and Ellerbeck Street, located near downtown Kingston. Work included a full reconstruction of 1.4 km of road, full sewer replacement with separated storm and sanitary sewers, and new sidewalks. Transit stops were also replaced and upgraded for increased resident accessibility. This major project resulted in significantly improved road conditions and better drainage.

The \$6.2 million project benefited from an almost \$5.6 million investment from the federal Gas Tax Fund and gave more than 400 residents access to new, repaired, rehabilitated or replaced roads.

 **2,189,084** Ontario residents
now have access to new, repaired, rehabilitated or replaced roads;
809,739 Ontario residents have improved access to highways to
neighbouring municipalities; 928,052 Ontario residents have access
to new, repaired, rehabilitated or replaced bridges.



Timmins' Reconstruction of MacLean Drive and Essa Street

Municipal roads and bridges are a lifeline that bind communities and economies together, especially in rural and northern areas of the province. The City of Timmins, a growing community in Northeastern Ontario, invested \$2.3 million from the federal Gas Tax Fund into the reconstruction of 1.68 km of major local roads. In addition to road resurfacing, the project included the installation of new sanitary sewers, 741 metres of watermain, 434 metres of storm sewer, new concrete sidewalks and curbs, giving 6,600 residents access to new, repaired, rehabilitated or replaced roads.



Tay Township's Rehabilitation of Duck Bay Bridge

Originally constructed in 1927, the Duck Bay Bridge has joined the north and south parts of Tay Township for more than 90 years. In 2014 and 2015 the Township completed a full bridge reconstruction marking an end to almost 30 years of weight restrictions on the vital local roadway. In 1987, weight restrictions on the bridge forced the Township to divert all large vehicles, including buses, municipal emergency and maintenance vehicles onto Highway 400 to access the northern parts of the community. The total project cost was almost \$1.9 million with \$517,151 coming from the federal Gas Tax Fund. Work included removal of the original bridge, rehabilitation of the abutments, and installation of a new truss bridge. The bridge opened to all traffic in December 2015.



Leamington's Trail Expansion

Investing in active transportation gives people more opportunities to walk or cycle in their communities. The Municipality of Leamington invested \$266,075 from the Federal Gas Tax Fund to construct a new walking trail that connects the local trail network to the County Wide Active Trail System. This 3.1 km extension gives users a safe and active alternative to travel between local municipalities in Essex County. This translates to 30,000 residents now having access to new, repaired, rehabilitated or replaced hiking and walking trails. Work included the construction of a new asphalt/granular trail complete with drainage catch basins, benches and trees. A trail was also constructed to connect to the Leamington Hospice to the existing trail.



Public transit projects connected our communities

Local public transit systems connect communities and economies. Investments in public transit help take cars off the street – reducing congestion and cutting the costs that it imposes – and help residents access jobs and services across the municipality.

Commuters are increasingly choosing to take public transit to and from work.²² But public transit users endure longer commutes than drivers²³ and generally report a lower level of satisfaction with their commute.²⁴ Municipalities – particularly Ottawa, Mississauga, York Region, and Brampton – have responded by investing heavily in public transit between 2014 and 2016, putting more vehicles on local roads and improving the accessibility of transit services.



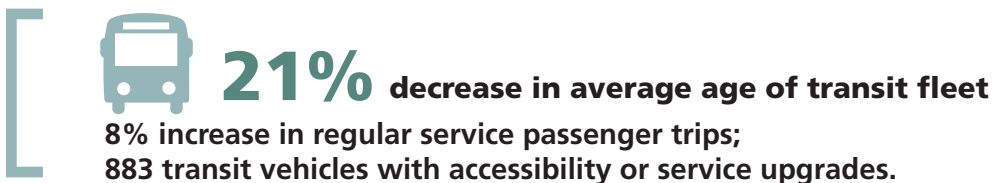
Mississauga’s Transit Facility Construction

Mississauga is Canada’s sixth largest and fastest growing major city with a population of 729,000 residents. Its transit system, MiWay, is the third largest municipal transit system in Ontario operating a total of 87 routes with a fleet of more than 460 accessible buses. To manage its growing fleet of vehicles, Mississauga invested more than \$85 million from the federal Gas Tax Fund to renovate and expand its Central Parkway Transit Campus. The Campus storage capacity increased from 270 buses to 390. The accessible facility also houses a body shop to keep the fleet in good repair.



Ottawa’s Double Decker Buses

Ottawa operates Ontario’s second largest transit system with an average weekday ridership of 320,000.²⁵ The City invested more than \$38 million from the federal Gas Tax Fund into a \$73 million purchase of 81 new double decker buses. 66 of the new buses replaced 158 older buses that were becoming costly to maintain. Double decker buses expand transit capacity by carrying more customers than any other bus, reducing the cost to operate by half compared to a standard bus, and without taking up more space on the road.





Recreational infrastructure investments encouraged exercise

Parks, recreation facilities and open spaces provide opportunities for relaxation and exercise – boosting residents' health and wellbeing, reducing the risk of crime, and encouraging participation in the community. Municipalities used the federal Gas Tax Fund to enhance arenas, playgrounds, and outdoor recreation facilities across the province between 2014 and 2016, improving the services available to 652,321 residents and encouraging over 1,200 people to make greater use of recreation facilities.



Sioux Lookout's Recreation Centre Renovations

In 2015 the Municipality of Sioux Lookout invested \$354,000 from the federal Gas Tax Fund to reconstruct the roof and complete general repairs and renovations at its municipal fitness centre. The fitness centre is more than just a place to exercise – it is a community gathering hub for 29 Far North communities. Keeping the centre in good condition is crucial to the community's ability to continue hosting special events and sports tournaments. 5,300 residents will benefit from this investment in recreation infrastructure. In addition, renovations to the fitness centre led to a 29% increase in visitors to the community.



17,993

more visitors to Ontario communities that invested in recreation infrastructure; 652,321 residents will benefit from the investment in recreational infrastructure.




Solid waste system investments kept our communities clean

Ontario’s municipalities manage waste for more than five million households. Municipalities collect, process, market and dispose of nearly 4.4 million tonnes of material each year – and divert an additional 2 million tonnes.²⁶ To help do this work, municipal governments are investing federal Gas Tax funds in advanced waste management systems. Between 2014 and 2016, municipal investments of the federal Gas Tax Fund extended diversion programs to over 3,000 households and increased the collection of solid waste by over 30,000 tonnes.



Seguin’s Redevelopment of the Stanley House Transfer Station

The Township of Seguin is using the federal Gas Tax Fund to improve local waste management. In 2016 the Township invested \$230,000 from the federal Gas Tax Fund to redevelop the Stanley House Transfer Station. Simply, a waste transfer station is a processing site for waste disposal. The Stanley House Station now has two compaction units for recycling streams and a full-size Transtor, a special machine to transfer hazardous waste. The investment has led to an 11% increase (from 2,556.13 tonnes to 2,831.31 tonnes) in the total waste collected each year.

 **25,516** new blue or green bins
18 new, expanded or rehabilitated solid waste management facilities; 3,193 more households participating in recycling and organics collection.



Sport infrastructure projects promoted fitness

Participation in sports helps residents meet physical activity recommendations and manage stress – but affordability concerns and limited access have driven participation rates down in the past two decades.²⁷ Federal Gas Tax Fund investment helped increase the availability of sports facilities between 2014 and 2016, encouraging an additional 2,706 residents to get involved in local sports programs.



Port Hope's Jack Burger Sports Complex Revitalization

The Jack Burger Sports Complex houses a 25 metre pool, therapy pool and whirlpool, providing access to swim programs for people of all ages. The Municipality demolished the pool portion of the building and rebuilt it with new energy systems and a brand new pool, including a new pool viewing area, change rooms, the addition of a family accessible change room and a community room and mezzanine space. Improvements were also made to increase accessibility. The total project cost more than \$6.4 million with \$931,000 coming from the federal Gas Tax Fund. This major revitalization project gives the community access to a new, modern facility, driving a 20% increase in visitors to the community per year, 22% increase in registered users of the Sports Complex each year, and a 60% increase in the number of sporting events held annually.

 **2,706**
more registered users of local sports/recreation facilities.



Tourism infrastructure projects attracted visitors to our communities

Tourists visiting Ontario's communities contributed over \$30 billion to local economies in 2015, boosting municipal revenues and supporting local businesses.²⁸ Investments of the federal Gas Tax Fund helped attract an additional 4,000 visitors to local municipalities between 2014 and 2016, supporting over 100 local businesses.



North Frontenac's Scenic Route Rest Stop

The Township of North Frontenac is a small community located in the heart of eastern Ontario's "cottage country." Its natural beauty makes it a popular destination for scenic drives through all four seasons and thousands of seasonal residents and tourists visit the Township each year. In 2016 North Frontenac invested \$13,284 from the federal Gas Tax Fund into its Scenic Route Rest Stop Project. Work included installation of an information board, a recreational staging area and parking for people using the local trails, accessible picnic tables and an accessible outhouse. The \$30,539 project can be tied to a 43% increase in tourism as it offers visitors a comfortable spot to stop and enjoy the scenery.

 **4,000** more visitors
to Ontario communities each year; 122 businesses
positively impacted by investment in tourism
infrastructure.




Wastewater system investments kept things flowing

Up-to-date sanitary and storm sewer systems help keep our communities safe and healthy by carrying wastewater to treatment plants and protecting against sewer backups. Municipalities installed 23 km of sanitary and storm sewers between 2014 and 2016 and upgraded or replaced an additional 50 km, cutting the number of annual sewer backups and servicing more residents.



Tecumseh's Sanitary Sewer Extension

The Town of Tecumseh invested \$634,000 from the federal Gas Tax Fund into an almost \$3 million sanitary sewer expansion project, including a full road reconstruction and replacement of existing storm sewers and water mains. The Burke-Outer-Moro Sanitary Sewer was extended to provide sanitary sewer service to 24 industrial lots. Many of these businesses were relying on failing septic sewage systems to collect wastewater. Modern, up-to-date infrastructure provide local businesses with the foundation they need to grow and succeed.

 **93 fewer sanitary sewer backups**
each year; **4,909 more residents serviced**
by stormwater/sanitary infrastructure.

Progress in Municipal Asset Management

The Fund is driving advances in municipal asset management

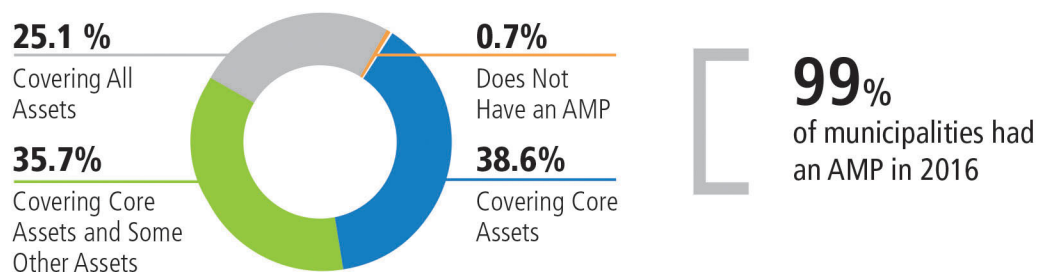
Most municipalities had (or were working on) an asset management plan (AMP) in 2014,²⁹ largely to meet provincial infrastructure funding requirements,³⁰ but these plans varied in scope and comprehensiveness.³¹ The [Administrative Agreement on the Federal Gas Tax Fund](#) required municipalities to implement an AMP meeting requirements set out in Ontario's [Building Together: Guide for Municipal Asset Management Plans](#) by December 31, 2016. Municipalities were additionally required to demonstrate the use of AMPs to prioritize infrastructure investments.

AMO delivered a series of capacity-building initiatives between 2014 and 2016 to help municipalities meet this target. This included online courses for councillors and a council-member toolkit, workshops at the annual AMO conference, and annual symposia on asset management in cooperation with the Municipal Finance Officers' Association.

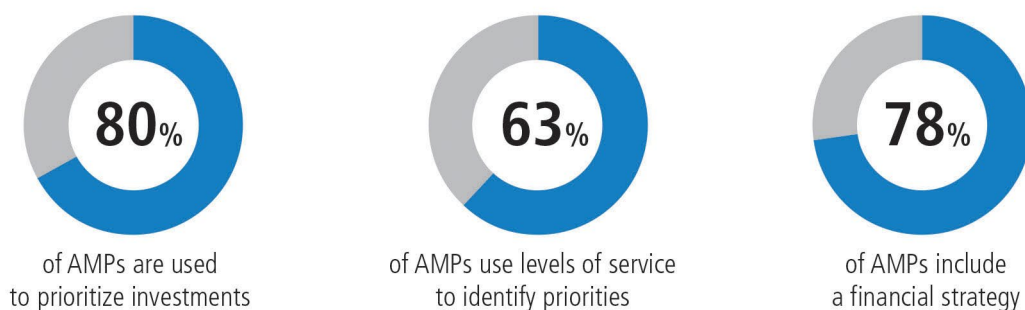
An asset management plan is a roadmap to a municipality's future. AMO produced a [video](#) with over 1,000 views that provided a journey, across 14 different municipalities, to highlight the value of asset management planning and requirements under the federal Gas Tax Fund in Ontario.

AMO asked municipalities to complete questionnaires describing their asset management systems in the 2013 and 2016 reporting years to monitor progress. The 2013 questionnaire was used to establish a baseline for asset management; the 2016 questionnaire was developed in consultation with AMO's Asset Management Outcomes Working Group to assess progress.³² Questionnaires were completed online as described in the Appendix.

By December 31, 2016, all but three municipalities reported that they had an AMP. AMPs generally covered more than the core infrastructure assets recommended in Ontario's [Building Together](#) – but not all assets.³³ The three municipalities that did not have a plan committed to developing one in 2017.



Most municipalities also reported that their AMPs were used to prioritize investments. Analyses of levels of service detailed in AMPs generally helped identify these priorities. Most AMPs additionally described financial strategies to guide implementation of the plan.



The majority of municipalities reported that they used historical costs to calculate the replacement cost of tangible capital assets in their AMPs; however, municipalities have reported to AMO that they are increasingly moving towards using engineering estimates to determine replacement cost.

Municipalities have similarly indicated that they are moving toward using engineering estimates to assign condition ratings to assets with 37% currently using this method. However, 63% of municipalities continue to rely on age or visual inspections to assign condition ratings. Research commissioned by AMO has previously shown that age-based condition ratings underestimate the condition of assets.³⁴ The main constraint to moving towards engineering assessment and inspection has been resources.

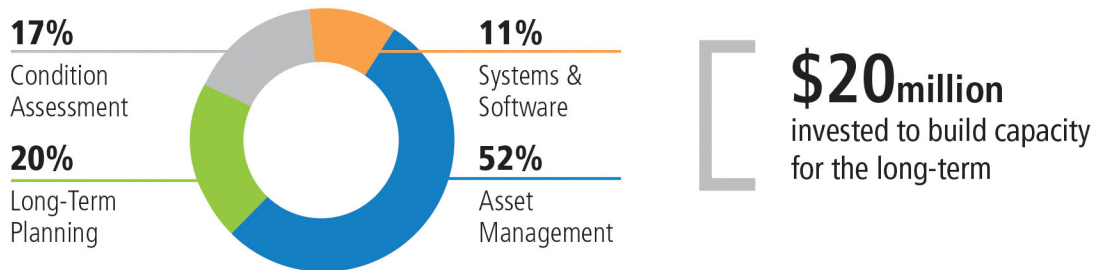
AMO commissioned an independent analysis of municipal AMPs to better understand how these documents evolved between 2013 and 2016.³⁵ The analysis involved a comparison of AMPs prepared by the end of 2013 to AMPs prepared by the end of 2016 across a sample of 35 municipalities.³⁶ The scope of each plan, the condition of assets described within them, and the infrastructure investment gap faced by each municipality were assessed.

The results of the analysis suggest that municipalities are making the most of opportunities to improve asset management systems and replace aging infrastructure. AMPs typically covered core infrastructure in 2013, but covered several additional types of infrastructure by 2016; the average number of asset classes in AMPs jumped from four in 2013 to nine in 2016.³⁷ The infrastructure backlog – i.e., the cost required to replace infrastructure that had exceeded its useful life – fell by 12% for core infrastructure.³⁸

AMO is collecting AMPs to better understand the details of their scope and content in preparation for full implementation of Ontario’s new regulation on asset management, [O. Reg. 588/17](#). Accurate and robust AMPs are necessary to identify, plan for, and sustainably manage both near and long-term investment needs.

Capacity-building investments enhanced asset management systems

Municipalities invested \$20 million from the federal Gas Tax Fund in 102 capacity-building initiatives worth \$42 million between 2014 and 2016. Funds were used to assess the condition of infrastructure, develop asset management systems and refine long-term plans – driving impressive advances in asset management across the sector to optimize infrastructure investment decisions.



Investments in condition assessments, systems and software are really investments in asset management. Systems and software are crucial to organize information about assets and project future investment needs. Condition assessments are crucial to understand the state of infrastructure – and the investments required to keep them in a state of good repair.³⁹



A CCTV camera is used to capture images of Cambridge's storm sewers.



Cambridge's Sanitary Sewer Condition Assessment CCTV

Cambridge invested \$461,965 from the federal Gas Tax Fund into closed-circuit television inspection of storm sewers – a truly innovative way to manage local infrastructure. Images captured from the CCTV cameras allow staff to identify problems that need attention now and provide more information about the sewer's remaining service life. The City is using this information to plan for the future, including determining what infrastructure needs to be replaced and what type of preventive programs should be put in place now.

Cornwall's 2016 Building Condition Assessment

In 2016, the City of Cornwall invested \$150,000 from the federal Gas Tax Fund into a professional assessment of local infrastructure. 95 municipal buildings and 202 fleet assets were assessed and rolled into a 10-year asset management plan. Municipal governments have a lot of infrastructure to manage and must have a plan in place to guide this work. By investing in asset management now, Cornwall is helping to ensure that future generations will have the up-to-date infrastructure that they need to thrive.

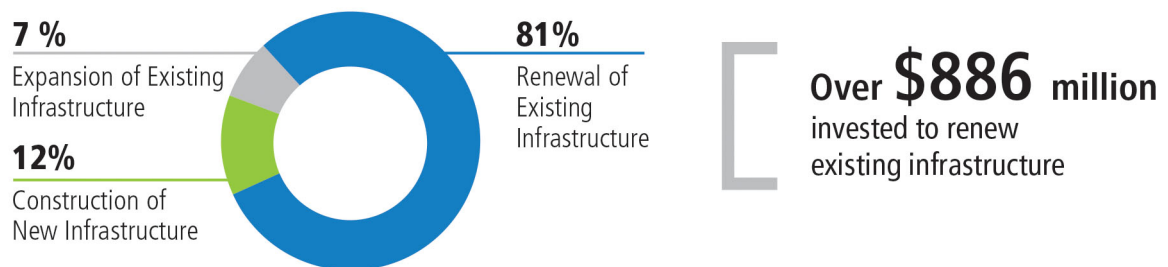
The Infrastructure Investment Gap

A gap separates investment needs from investment capacity

Ontario's municipalities faced an estimated \$6 billion annual infrastructure investment gap in 2008.⁴⁰ This gap reflected the unfunded investment required to replace infrastructure that had exceeded its intended life, meet annual lifecycle costs, and accommodate growth.⁴¹

Progress made since 2008 is difficult to assess. Municipal infrastructure investment picked up in the past decade⁴² and has consistently outpaced amortization⁴³ – but the percentage of municipal assets that are amortized has continued to rise year after year.⁴⁴

These trends suggest that municipalities have focused on constructing or enhancing – rather than replacing – infrastructure. In contrast, municipalities have primarily used the federal Gas Tax Fund to renew existing infrastructure.⁴⁵



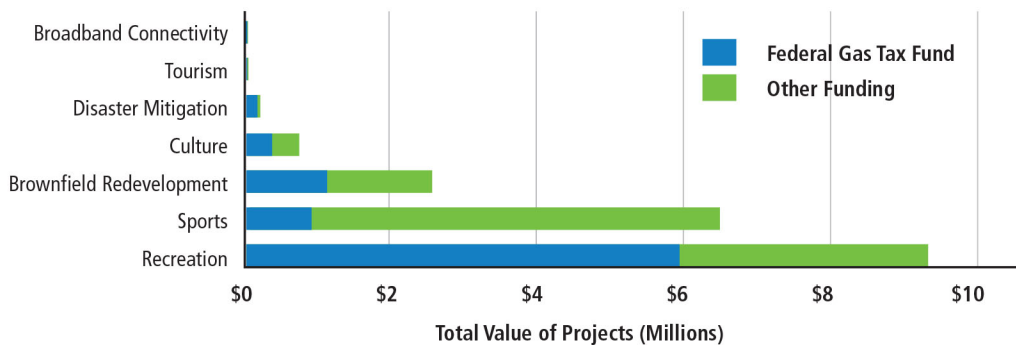
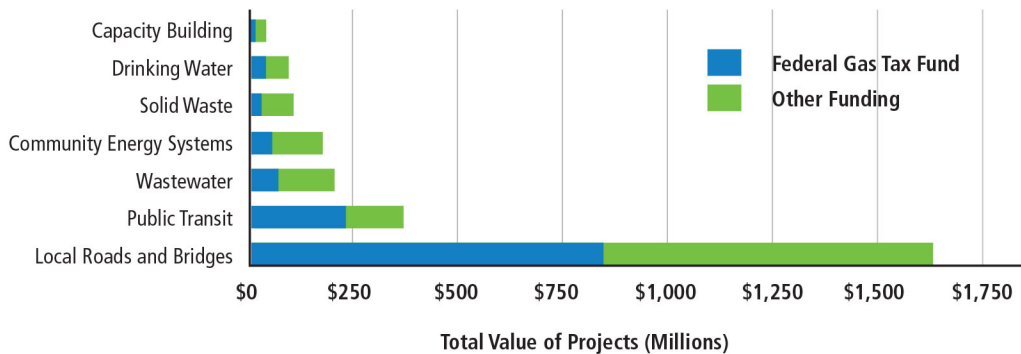
Asset management plans also indicate that some municipalities are replacing aging assets. In a sample of 35 municipalities from across Ontario, the investment required to replace roads, bridges, culverts, and water and wastewater assets fell 12% between 2013 and 2016.⁴⁶ Despite this progress, rising lifecycle costs driven by aging infrastructure pushed the infrastructure investment gap higher for core infrastructure.⁴⁷

AMO called for a 1% increase to the HST in 2017 to help municipalities address the infrastructure investment gap. A 1% HST increase – dedicated principally to municipal infrastructure – would generate an estimated \$2.5 billion and could be equitably distributed to alleviate fiscal pressures on all communities. Visit thelocalshare.ca to learn more.



The Fund is narrowing the gap

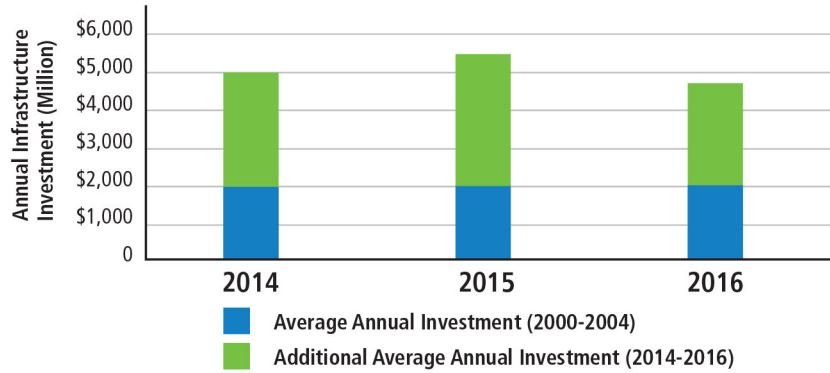
The Federal Gas Tax fund is helping municipalities narrow the gap. Municipalities invested \$1.01 from other sources for every \$1.00 drawn from the Fund to complete projects worth over \$2.6 billion between 2014 and 2016. The Fund accounted for approximately 7.5% of the investment in roads, transit, solid waste, water and wastewater between 2014 and 2016.⁴⁸



Some of this leveraging can be credited to the Fund's incrementality requirement. The federal Gas Tax Fund is intended to complement, without replacing or displacing, existing funding for municipal infrastructure. Municipalities cannot use federal Gas Tax funds to reduce municipal taxes or offset municipal infrastructure investments.⁴⁹

This incrementality requirement means that federal Gas Tax Fund investments must stretch above and beyond municipalities' investments from other sources.⁵⁰ To get a more accurate picture of this, one needs to look at the total municipal expenditures in infrastructure and sources of revenue.

Municipalities demonstrated incrementality between 2014 and 2016 by consistently investing more in local infrastructure than they did prior to the creation of the Fund. Municipalities invested their allocations from the federal Gas Tax Fund incrementally across the entire sector – regardless of region, population size, or population growth rate.⁵¹



But not all municipalities were able to individually demonstrate incrementality. Several municipalities invested less between 2014 and 2016 than they did during the base period, primarily due to demographic change and the fiscal challenges that accompany it.⁵² AMO will monitor this situation as it unfolds, but incrementality is measured over the life of the Fund (i.e., from 2014 to 2023), and some year-to-year variation is expected.



Top: City of Guelph, Civic Museum Exterior Enhancement
 Bottom left: Township of Centre Wellington, Colborne Street Reconstruction
 Bottom right: City of Belleville, Solar Panel System

Top: City of Guelph, Improvements to Lyon's Park
 Middle: City of Ottawa, OC Transpo Double Decker Buses
 Bottom: City of Mississauga, Storm Sewer Trunk Repair

Long-Term Municipal Planning

The Fund facilitates long-term planning

Communities are using the federal Gas Tax Fund to drive their asset management systems forward and are leveraging the reliable revenue that it provides to top up investments in aging infrastructure. These are benefits in themselves; asset management helps municipalities identify future infrastructure needs, and steady funding helps finance them. The broader benefit is the ability to plan for the long term – to establish a vision for the community and the quality of life that it provides, and to plot a financially sustainable path to get there.

The path will look different in different places. While effective asset management is invariably essential to achieve financial sustainability, it is best considered in the context of a broader fiscal strategy that considers the unique circumstances and objectives of the community.

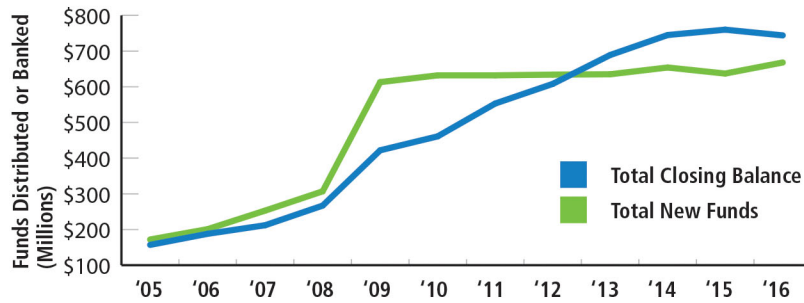
AMO, in partnership with staff from York Region, has investigated the steps required to put Ontario's municipalities on a financially sustainable path.⁵³ The research explores the key demographic and economic features that define the fiscal context of our local communities and identifies a few essential elements of financial sustainability – the strategic use of debt and reserves, for example.

AMO does not ask municipalities about their use of debt and reserves directly. Patterns of investment and other project information nevertheless suggests that municipalities are using the Fund to gradually build up reserves and finance debt to build better communities.

Municipalities are gradually building reserves

Municipalities generally bank a portion of the allocation that they receive from the federal Gas Tax Fund to meet future needs. Only 27% of municipalities invested nearly all of the Gas Tax funds in the year in which they were received between 2014 and 2016; the remaining 73% banked some portion of their allocation. About 13% of municipalities banked nearly all funds received in any given year.

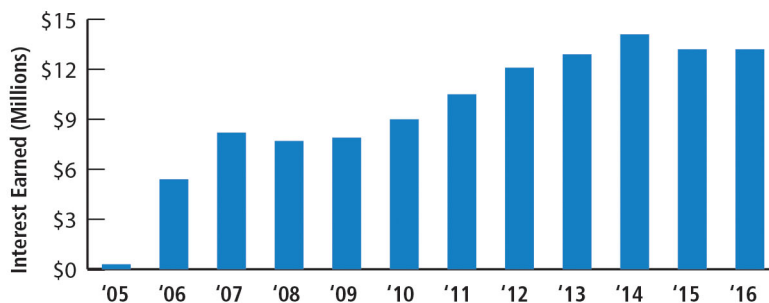
The total quantity of funds banked rose from 2005 to 2015 and appears to have stabilized. Banked funds exceeded annual allocations in 2012.



Most municipalities built up a pool of banked funds gradually and may be using these funds to complement other reserves. Municipalities have generally built up their reserves and reserve funds in recent years,⁵⁴ and effective reserve management is essential to manage year-to-year variations in investment needs and revenues. About 36% of municipalities dipped into their banked funds to finance projects in 2016.

Other municipalities appear to be saving up for larger projects. Municipalities that consistently banked their annual allocations tended to be small and declining – with correspondingly smaller allocations from the federal Gas Tax Fund. Approximately 4% of municipalities alternated between investing nearly all of their allocation and banking nearly all of their allocation year to year, which may reflect that these municipalities were saving up for larger projects.

Municipalities are required to bank funds in interest-earning accounts. Annual interest earnings peaked in 2014 at \$14,153,345, but have been relatively stable since 2012, mimicking the trend in the quantity of banked funds. Municipalities earned \$40.7 million between 2014 and 2016.



Some municipalities use the Fund to pay off long-term debt

Strategic use of long-term debt can promote intergenerational equity and allow growth to pay for growth. Of the 1,956 infrastructure projects completed between 2014 and 2016, 62 were financed for over a year after the completion of construction. An additional 57 projects completed construction between 2014 and 2016, but were financed into the future. Some of these 57 projects will not complete financing until 2028; the combined value of these projects is \$160 million.

Communications and Outreach

Sharing our story and measuring its impact

The Government of Canada, AMO and municipal governments work together to share information about federal Gas Tax investment in Ontario. These efforts give Ontarians access to up-to-date information about the local benefits of federal investment. Communications efforts are guided by a Joint Communications Approach, which is updated annually and sets out roles and responsibilities, objectives, tactics and methods to measure success.

Videos illustrate local investments

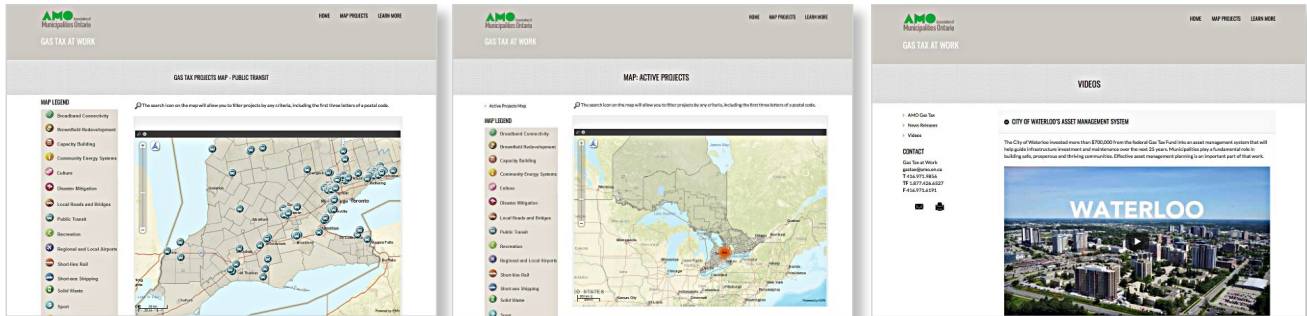
AMO works with Ontario municipalities to produce videos that highlight the Gas Tax Fund's impact on people and communities. With more than 4,200 total views, AMO's [12 videos](#) feature 24 Ontario municipalities:

- Kenora
- Dryden
- Ignace
- Thunder Bay
- Nipigon
- Kapuskasing
- Iroquois Falls
- Kirkland Lake
- Timmins
- Temiskaming Shores
- Pembroke
- North Bay
- Ottawa
- Hawkesbury
- Prescott
- Goderich
- St. Marys
- Gananoque
- Dorion
- Kincardine
- St. Thomas
- Waterloo
- Kitchener
- North Frontenac



Projects are mapped online

AMO's dedicated federal Gas Tax Fund website, www.gastaxatwork.ca, includes an interactive map of Ontario that allows people to search for projects across the province. The map is a unique tool that makes it simple to find out exactly where the Fund is invested.



Information is shared on social media

AMO uses a dedicated Twitter account, [@GasTaxinOntario](https://twitter.com/GasTaxinOntario), to share information about the Fund and engage with others, including Infrastructure Canada, Members of Parliament and local elected officials. Sharing content through social media is a simple and effective way to promote the Fund's benefits. The account currently has almost 980 followers.⁵⁵

2014

@GasTaxinOntario: Newly elected mayor/councillor? Learn more about the federal Gas Tax Fund at work in Ontario <http://bit.ly/1wGrf3a> #infrastructure

@GasTaxinOntario: New facilities make Oak Ridges @MyRichmondHill town's jewel <http://www.yorkregion.com/news-story/4766677-new-facilities-make-oak-ridgestown-s-jewel/> ... via @yorkregion #onmuni #federalGTF

@GasTaxinOntario: The new Gas Tax Agreement will bring an estimated \$8.1 billion to #onmuni over the next 10 years. Learn more: <http://bit.ly/1kLMYrj>

2015

@GasTaxinOntario: RT: @INFC_eng: #CDNmuni can now invest in short-line rail under renewed federal Gas Tax Fund thanks to #GoC. More info <http://infc.gc.ca/05bd> #federalGTF

@GasTaxinOntario: Municipalities need an asset management plan in place by the end of 2016. Learn more: <http://bit.ly/1RR5Vv> #onmuni #federalGTF

2016



@GasTaxinOntario: This will soon be a tennis court in St Thomas. As of 2014, #federalGTF can be invested into local recreation infrastructure.



@GasTaxinOntario: Smooth Rock Falls has won an AMO Gas Tax Award for investment in the Reg Lamy Cultural Centre -#AMOCONF16



@GasTaxinOntario: We're in @citymississauga this morning to celebrate #federalGTF investment in local transit

News releases and media events highlight local projects

While Canadians are increasingly turning to digital and social platforms for information, traditional news releases and media events still play an important role in sharing the benefits of the federal Gas Tax Fund.

Between 2014 and 2016, Ontario's municipal governments completed a total of 35 news releases and/or media events resulting in positive local media coverage across the province.

2014



Penetanguishene upgrades Maria Street sewer, road

– *Midland Mirror*, August 7, 2014

PENETANGUSHENE – If you live in Penetanguishene, the sewer system running underneath your street could be as old as “Leave It to Beaver.”

The town is working to update its storm and sanitary sewers built in the 1950s and people living on Maria Street are the latest beneficiaries.

Filling up on gas tax fund

– *Brantford Expositor*, June 26, 2014

Efforts to improve Shellard Lane are well underway. The reconstruction of Shellard from Colborne Street West to about a kilometre west of Conklin Road began in May.

Seven Adjala-Tosorontio road projects completed

– *Alliston Herald*, November 25, 2014

ADJALA-TOSORONTIO - The federal government is helping to pave the way for a smoother ride in Adjala-Tosorontio. Recently, the township marked the completion of seven road improvement projects that received federal gas tax funding. A total of 6.5 kilometres of road was repaved. The stretches of road include Concession Road 3 Tosorontio, Main Street Lisle, Mulmur-Tosorontio Townline.

2015

Gas Tax funds fuel public transit renewal in Brampton

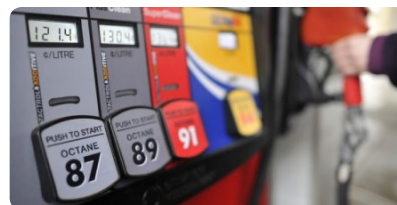
– *Brampton Guardian*, January 16, 2015

BRAMPTON – Even as federal tax coffers take a hit from falling gas prices, Canada's finance minister made a stop in Brampton this morning to highlight the local transit projects that have been fueled by those taxes.

Federal Gas Tax Fund Helping under Bay Infrastructure Projects

– *NetNewsLedger*, February 26, 2015

THUNDER BAY – NEWS – “Our Government is pleased to provide under Bay with exible infrastructure funding that allows the city to support a multitude of projects.



Gas tax funding aids area communities

– *North Bay Nugget*, April 10, 2015

Area municipalities welcomed their share Friday of \$4.3 million in federal gas tax funding for the Nipissing region. The annual funding, which was announced by NipissingTimiskaming MP Jay Aspin, will be divvied up among 11 municipalities on a per capital basis. North Bay is getting the lion's share of \$3.1 million.

2016

Guelph to receive millions in gas tax funds

– *CTV Kitchener*, July 25, 2016

GUELPH – The City of Guelph is being given almost \$7.4 million in Gas Tax Funds from the federal government. The money is part of an allocation for municipal infrastructure. In total, communities around the province will be getting over \$779 million dollars to improve transit and water systems, as well as build roads and other local infrastructure projects. Guelph will be receiving \$340,000 more than in years past.

Federal Gas Tax Fuels Local Road Improvements

– *Sault Online*, August 12, 2016

Perhaps in ten years when we're all driving electric cars the Federal government will have to revise their gas tax, but for now, it means over \$4.5 million to Sault Ste. Marie. That's what MP Terry Sheehan announced today at City Hall. The much needed money has pretty much been a guarantee to the City's bottom line over the years.

Municipalities receive first payment of 2016 gas tax

– *Brampton Guardian*, January 16, 2015

BRAMPTON – Even as federal tax coffers take a hit from falling gas prices, Canada's finance minister made a stop in Brampton today.

Appendix

Notes on the Text

¹ This report fulfils AMO's commitment set out in the Administrative Agreement on the Federal Gas Tax Fund to provide an Outcomes Report to the Government of Canada by March 31, 2018. Consistent with the terms of the Agreement, AMO does not comment on outcomes achieved by the City of Toronto.

For ease of reading, the April 1, 2014 to December 31, 2016 reporting period is referred to as a 2014 to 2016 reporting period in the text of this report.

² The 2,058 projects described in this report do not include the 108 infrastructure projects excluded from the analyses for reasons detailed in the methods section of this appendix.

The federal Gas Tax Fund has supported 7,391 infrastructure and capacity-building projects in Ontario since its inception in 2005. Projects were valued at a combined \$14.3 billion; \$5.0 billion was financed by the Fund.

Between 2014 and 2016, municipalities invested \$1.8 billion from the Fund in 2,682 projects worth \$8.0 billion. See AMO's annual reports on the use of the Fund at www.amo.on.ca for more information.

Note that projects are considered to be completed when both construction and financing are complete. Projects are considered to be in progress between the end of construction and the end of financing.

³ Ontario narrowly defines core infrastructure for the purposes of the [Ontario Community Infrastructure Fund](#) and [O. Reg. 588/17](#) to include roads, bridges, culverts, water assets, wastewater assets, and stormwater assets – i.e., investments eligible under the Local Roads and Bridges, Drinking Water, and Wastewater categories of the federal Gas Tax Fund.

Canada has adopted a broader definition to measure core infrastructure stock and investment that additionally encompasses public transit infrastructure, cultural facilities, and sports and recreation facilities – i.e., investments eligible under the Public Transit, Culture, Sports, and Recreation categories of the Fund. See definitions in the [report](#) of the Standing Committee on Transport, Infrastructure and Communities and [2015 Budget](#).

Ontario's definition is the one used here. Note that estimates of core infrastructure stock and investment produced by Statistics Canada and Infrastructure Canada must therefore be interpreted with care when comparing to Ontario's investment of the Fund.

⁴ Municipalities did not complete any projects under the Regional and Local Airports, Short-Line Rail, or Short-Sea Shipping categories in the April 1, 2014 to December 31, 2016 period covered in this report.

⁵ Core infrastructure comprised an estimated:

- 76% of assets in Ontario's municipal asset management plans (AMPs) in 2016 – based on Public Sector Digest's review of 60 AMPs completed in 2016 and the replacement cost of assets reported therein; and
- 67% of tangible capital assets owned by Ontario's municipalities in 2016 – based on [Financial Information Returns](#) (FIRs) submitted to the province by all municipalities except Toronto in 2016 and the closing net book value of tangible capital assets reported therein.

Municipalities are pursuing initiatives to better understand the condition and value of their assets with the aid of the federal Gas Tax Fund. These efforts will provide a clearer picture of the state and scope of municipal assets – and will help municipalities target their investments accordingly. Learn more in the [asset management](#) section of this report.

⁶ Core infrastructure comprised 80% of the \$60 billion [infrastructure investment gap](#) estimated in the [Provincial-Municipal Fiscal and Service Delivery Review](#) (PMFSDR) in 2008. This gap reflected the unfunded investment required to replace infrastructure that had exceeded its intended life, meet annual lifecycle costs, and accommodate growth. The estimate includes investment requirements for core infrastructure, public transit, solid waste, and conservation areas – but not for other municipal services.

In its call for a [local share](#) of HST revenues, AMO estimated that investment requirements for arenas, libraries and recreation facilities would add \$7.5 billion to the \$60 billion infrastructure investment gap over ten years. Social housing requirements were estimated at an additional \$9.5 billion (\$1.5 billion to repair existing housing and \$8 billion to expand the stock of housing), for a total infrastructure investment gap of \$77 billion over ten years.

Core infrastructure comprises 62% of this total investment gap.

⁷ Municipalities owned an estimated 56.8% of roads, bridges, culverts, and assets providing water, wastewater, stormwater, public transit, cultural, recreational and sport services in 2013. See the June 2015 [report](#) of the Standing Committee on Transport, Infrastructure and Communities.

⁸ Eligible investment categories introduced in 2014 are:

- Broadband Connectivity
- Brownfield Redevelopment
- Culture
- Disaster Mitigation
- Recreation
- Regional and Local Airports
- Short-line Rail
- Short-sea Shipping
- Sports
- Tourism

These categories accounted for a mere 1.6% of total investment from the federal Gas Tax Fund throughout the 2014-2016 period – but grew from 0.5% in 2014 to 2.8% in 2016.

⁹ Benefits generated by the 1,956 infrastructure projects that wrapped up between April 1, 2014 and December 31, 2016 are summarized in this section. Benefits generated by investments in capacity-building initiatives are discussed in the [asset management](#) section of this report.

¹⁰ Output and outcome indicators that were not reported by any municipalities in the reporting period are not shown.

¹¹ Table 5.3.16 of the CRTC's [Communications Monitoring Report 2017](#) indicates that:

- 99% of Ontario households had access to broadband Internet services offering speeds of at least 1.5 Mbps in 2016; but only
- 88% had access to speeds of 50 Mbps or higher.

The CRTC set a target in 2016 to provide all Canadians with access to broadband Internet with speeds of 50 Mbps or higher; see [Telecom Regulatory Policy CRTC 2016-496](#).

¹² Table 5.3.15 of the CRTC's [Communications Monitoring Report 2017](#) indicates that:

- 93% of rural Canadian households had access to broadband Internet services offering speeds of at least 1.5 Mbps in 2016; but only
- 41% had access to speeds of 50 Mbps or higher.

¹³ These benefits – and others – are summarized in the first chapter of the National Round Table on the Environment and the Economy's [Cleaning up the Past, Building the Future](#).

¹⁴ Statistics Canada's [energy data](#) indicates that Ontario's households annually consumed an average 31.2 GJ (8,667 kWh) of electricity in 2015. Note that this value is lower than the Ontario Energy Board's [estimate](#) of 9,000 kWh/year for 2014.

- ¹⁵ Environment Canada's [greenhouse gas emissions data](#) indicate that Ontario emitted 40 grams of CO₂ equivalents per kWh in 2015 – or 40 metric tonnes per GWh (not including emissions associated with transmission losses and other unaccounted for electricity).
- ¹⁶ The Insurance Bureau of Canada's [Facts 2017](#) indicates that catastrophic losses (i.e., insured losses of \$25 million or more resulting from a disaster) reached a peak of \$5 billion in 2016 and have been on the rise since at least 1983. This reflects both the increasing frequency and increasing magnitude of catastrophic losses.
- ¹⁷ The [2016-2017 report](#) of Ontario's Chief Drinking Water Inspector indicates that municipal residential drinking water systems have increasingly met full compliance requirements during annual inspections throughout the 2005-06 to 2016-17 period. The percentage of drinking water tests meeting provincial standards remained above 99.5% over this period, and Ontario's [drinking water quality and enforcement data](#) indicates that adverse water quality incidents reported by municipal residential systems fell from 1,954 to 1,362 from 2014-15 to 2016-17.
- ¹⁸ The Steering Committee of the Provincial-Municipal Roads and Bridges Review [estimated](#) that municipalities were responsible for over 140,000 km of roads and 15,000 bridges and large culverts in 2012.
- These values are broadly in line with the estimates of road ownership reported by municipalities in the 2016 [FIR](#). Municipalities reported that they were responsible for 296,294 lane-km of paved and unpaved roads in 2016, equivalent to 148,147 km of two-lane roads. Municipalities are not required to report the number of bridges and culverts owned in the FIR, but are encouraged to report the area of these structures; municipalities reported that they were responsible for 7,785,430 m² of bridges and culverts.
- ¹⁹ 55% of the 15,000 bridges and culverts examined in the 2012 report of the [Provincial-Municipal Roads and Bridges Review](#) were built before 1970. PSD's analysis of 60 municipalities' asset management plans suggests that little has changed in the six years since the publication of that report; bridges and culverts were, on average, the oldest assets described in municipal asset management plans. Across the 60 municipalities, nearly 50% of bridges and culverts were 50 years of age or older.
- ²⁰ \$2.7 billion of the \$5.3 billion life cycle investment estimated in the [Provincial-Municipal Fiscal and Service Delivery Review](#) are for roads and bridges.
- ²¹ Assuming a driving distance of 2,028 km from municipality to municipality.
- ²² [Census data](#) indicates commuters across Canada are increasingly choosing public transit to get to and from work. The share of commuters using public transit rose from 10.1% in 1996 to 12.4% in 2016; in Ontario, 14.6% of commuters mainly used public transit in 2016. This trend is also replicated in ridership statistics compiled by urban transit operators across Canada, which indicates that ridership rose from 105.9 million passenger trips in 2003 to 138.8 million in 2016 ([CANSIM table 408-0004](#)).
- Smart Commute's [survey](#) of commuters in the Greater Toronto and Hamilton Area suggests that public transit users are drawn to the public transit primarily because it is affordable and convenient.
- ²³ [Census data](#) indicates that the average public transit commute in Canada lasted 45 minutes in 2016. In contrast, the average driver was able to reach home or work in 24 minutes.
- ²⁴ In a [survey](#) of commuters in the Greater Toronto and Hamilton Area, for example, Smart Commute found that 53% of public transit users were satisfied with their commute. In contrast, 78% of drivers and 93% of cyclists were satisfied with their commute.

- ²⁵ OC Transpo [reported](#) an average weekday ridership of 320,000 in 2016.
- ²⁶ See AMO's page on [Waste Diversion in Ontario](#).
- ²⁷ 90% of Canadian parents surveyed for the [2015 Vital Signs report](#) agreed that organized sports were too expensive, and results of the [General Social Survey](#) suggest that access to sporting activities is a limiting factor in rural and mid-sized communities.
- ²⁸ Tourism receipts [contributed](#) an estimated \$32 billion in spending and \$1.2 billion to municipal coffers in 2015.
- ²⁹ AMO asked all municipalities except Toronto to complete a questionnaire to describe the state of their AMPs by the end of 2013. Of the 435 municipalities that responded to the questionnaire, all but six indicated that they either had a plan (61%) or were working on one (37%).
- ³⁰ As part of Ontario's [Municipal Infrastructure Strategy](#), municipalities were required to prioritize their infrastructure needs with an asset management plan to qualify for provincial infrastructure funding in 2012. This requirement stimulated the development of municipal asset management plans across the province. The Ministry of Economic Development, Employment & Infrastructure [estimated](#) that 164 municipalities had an asset management plan prior to 2012 – and that this number rose to 426 by 2014.
- ³¹ Details around service levels and financing strategies were particularly variable among municipal asset management plans in 2014 according to the Ministry of Economic Development, Employment & Infrastructure's [presentation](#) at the 2015 Asset Management Symposium.
- ³² AMO's Asset Management Outcomes Working Group included representatives from municipalities of all types and sizes throughout the province, the federal and provincial government and several membership-based organizations active in the field.
- ³³ Municipalities were asked to indicate whether, as of December 31, 2016, they:
- Had an AMP including all core infrastructure assets;
 - Had an AMP including some other assets in addition to core infrastructure assets;
 - Had an AMP including all infrastructure assets; or
 - Did not have an AMP.
- For the purposes of this question, core assets were defined as described in note 3.
- ³⁴ An [analysis](#) of 93 municipal AMPs prepared for AMO by Public Sector Digest in 2015 found that assets were generally in better condition than age would suggest.
- ³⁵ The analysis was completed by Public Sector Digest, an organization involved in the development of asset management plans and software. Public Sector Digest had previously prepared a similar [report](#) for AMO in 2015 describing the state of 93 municipal AMPs in 2013. A full report on this new analysis will be released in the spring of 2018.
- ³⁶ The analysis also involved a review of 60 municipal AMPs prepared in 2016. These 60 municipal AMPs include the 35 discussed in the text of this report.
- This second component of the analysis is referenced where applicable in the report, but is not described in detail in the asset management section; though the comparison of AMPs prepared in 2013 to those prepared in 2016 speaks to the municipal sector's progress in asset management, the review of AMPs prepared in 2016 does not.

³⁷ The 35 municipalities' AMPs covered an average of four asset classes in 2013 – but nine in 2016.

³⁸ The investment required to replace assets that had reached the end of their useful lives:

- Dropped 30% between 2013 and 2016 for roads; and
- Dropped 20% between 2013 and 2016 for bridges and culverts; but
- Increased 30% between 2013 and 2016 for water and wastewater assets.

The net impact was a 12% reduction in the investment required to replace roads, bridges, culverts, water and wastewater assets that had exceeded their useful lives.

³⁹ In a 2015 [report](#) describing the state of 93 municipal AMPs in 2013, Public Sector Digest found that infrastructure was generally in better condition than age would suggest – at least for roads and bridges. In their subsequent analysis of 60 municipalities' 2016 AMPs, Public Sector Digest found that condition assessments were common for facilities, roads, bridges and culverts – but rare for other types of infrastructure.

⁴⁰ Models prepared by the Government of Ontario for the [Provincial-Municipal Fiscal and Service Delivery Review](#) estimated that municipalities would require nearly \$6 billion a year for ten years to meet unfunded investment requirements. Unfunded investment requirements included in the estimate were those for roads and bridges, water and wastewater, stormwater, transit, conservation authorities, and solid waste management. Requirements for libraries, arenas, parks, and other public facilities were not included.

⁴¹ In its call for a [local share](#) of HST revenues, AMO estimated that investment requirements for arenas, libraries and recreation facilities would add \$7.5 billion to the \$60 billion infrastructure investment gap over ten years. Social housing requirements were estimated at an additional \$9.5 billion, for a total infrastructure investment gap of \$77 billion over ten years.

⁴² [FIR data](#) indicates that municipal capital expenditures averaged \$6.1 billion annually between 2000 and 2008 and \$9.3 billion between 2009 and 2016.

Note that capital expenditures were reported on a cash basis prior to 2009 and on an accrual basis thereafter. Data for 2009 do not include expenditures on construction-in-progress. See the methods section of this appendix for calculation details.

⁴³ [FIR data](#) indicates that additions and betterments averaged \$9.5 billion between 2009 and 2016. Annual amortization expenses averaged \$4.6 billion over the same period.

⁴⁴ [FIR data](#) indicates that 38.5% of municipal tangible capital assets were amortized in 2009, but 40.7% were amortized in 2016. See the methods section of this appendix for calculation details.

⁴⁵ AMO did not ask municipalities to identify the nature of infrastructure investments – i.e., as new construction, expansion, or renewal – prior to 2014. Of the 1,956 infrastructure projects described in the [investment summary](#) of this report, 282 do not have this information. These 282 projects account for \$97.5 million (7.4%) of the total infrastructure investment in projects completed between April 1, 2014 and December 31, 2016.

⁴⁶ The [asset management](#) section of this report describes the analysis in more detail.

⁴⁷ In its study of 35 municipalities' asset management plans, Public Sector Digest found that the total infrastructure investment gap for roads, bridges, culverts, water and wastewater assets across the sample was \$644 per household in 2016. This estimate included investment requirements to replace deteriorated infrastructure and meet lifecycle needs, but not costs required to plan for growth.

In contrast, models prepared by the Government of Ontario estimated that municipalities required an additional \$1,203 per household to fill the infrastructure investment gap in its [Provincial-Municipal Fiscal and Service Delivery](#)

Review. Ontario’s estimate also included investment requirements to replace deteriorated infrastructure and meet lifecycle needs for roads, bridges, culverts, water and wastewater assets – but additionally accounted for growth requirements and included transit, solid waste, and conservation area assets.

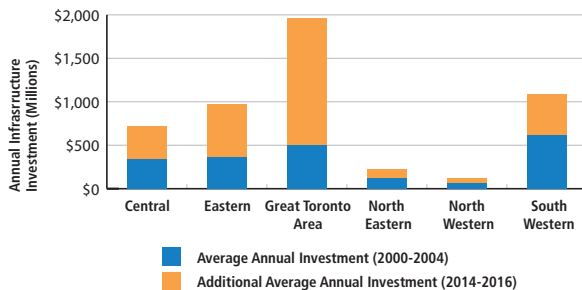
Removing growth requirements for all assets and all requirements for transit, solid waste, and conservation area assets reduces the gap by 46% to \$649 per household – in line with Public Sector Digest’s estimate, and suggesting that despite increased infrastructure investment since 2008, municipalities are struggling to maintain their assets in a good state of repair.

48 **FIR data** indicates that \$775.5 million of the \$10,264.6 million invested in roads, transit, solid waste, water and wastewater was financed by the federal Gas Tax Fund.

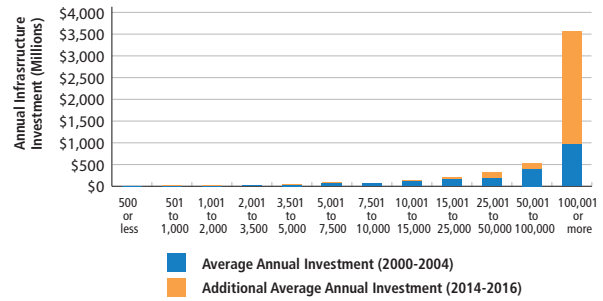
49 This incrementality requirement is established by clause 4, Annex B of the [Administrative Agreement on the Federal Gas Tax Fund](#).

50 AMO monitors incrementality by comparing annual municipal investments in infrastructure since 2014 – in aggregate, across the entire sector, and individually for each municipality – to those in the five-year period prior to the development of the federal Gas Tax Fund (i.e., 2000 to 2004).

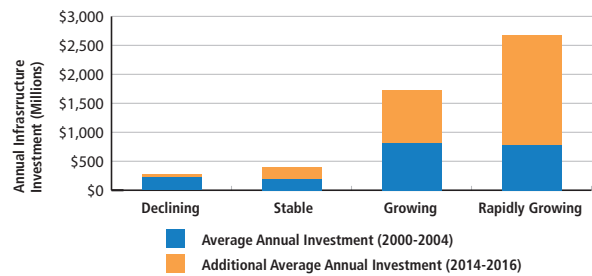
51 Municipalities in all regions of the province, on average, invested more in infrastructure after 2014 than they had prior to the development of the federal Gas Tax Fund.



This was also true across municipalities of different size.



And municipalities experiencing different rates of growth.



52 65 municipalities consistently invested less between 2014 and 2016 than they did during base period. In 36% of cases, this was likely due to demographic change – either population decline and the subsequent reduction in fiscal capacity, or population growth and the sudden influx of development charges (which are subtracted from municipalities’ annual investment estimates as described in the AMO’s Base Amount Adjustments Policy).

53 Bill Hughes spoke at length on the research at AMO’s Annual Conference in 2016. A [video](#) of his presentation is available on YouTube.

54 **FIR data** indicates that reserves have increased in size since 2009.

55 978 followers as of March 29, 2018.

Methods

This report combines:

- **Information describing the use of the federal Gas Tax Fund** – reported by municipalities to AMO as described below;
- **Responses to AMO’s asset management questionnaires** – submitted by municipalities as described below;
- **Research describing the state of asset management in Ontario** – compiled by Public Sector Digest (PSD) for AMO;
- **Research describing the financial sustainability of Ontario’s municipalities** – compiled by York Region for AMO;
- **Municipal financial data** – reported by municipalities to the province using the Financial Information Return (FIR); and
- **Other information sources** – where referenced in the text and in notes on the text in this Appendix.

Information describing use of the federal Gas Tax Fund includes:

- **Investments of the federal Gas Tax Fund** – i.e., project expenditures (and other project details), which were reported annually;
- **Benefits generated by investments of the Fund** – i.e., output and outcome indicators, developed and reported as described below;
- **Transfers of the Fund to or from another municipality** – which required approval by by-law (for transfers to another entity) and were reported annually;
- **Interest earned on banked funds** – which was reported annually; and
- **Revenues generated by the disposal of assets previously financed by the Fund** – which were reported annually.

Information describing the use of the Fund and responses to asset management questionnaires were submitted online using AMO's [Gas Tax Reporting Module](#) (RM).

Investment data [summarized](#) in this report pertains to the 2,058 projects that ended between April 1, 2014 and December 31, 2016 (both inclusive). Projects were deemed to have ended if both construction and financing had been completed. Investment data was reviewed and audited in accordance with the risk-based approach described on [AMO's website](#).

An additional 108 projects that ended within the reporting period are not included. These projects were excluded because either the date of construction or financing changed after data was aggregated for this report, or errors or inconsistencies were detected while reviewing output and outcome data for aggregation.

[Economic, environmental and community benefits](#) generated by infrastructure investments were reported using output and outcome indicators. Indicators were developed by AMO in consultation with municipalities and with the approval of the Fund's Oversight Committee.

Municipalities were required to report, for each project that ended in a reporting year, any applicable output indicators and at least one outcome indicator. Indicators were reported in a pre/post format where appropriate. Information summarized in this report describes the change from pre to post.

Verification functions in the RM minimized data entry errors while reporting indicators. Reported amounts were nevertheless reviewed prior to aggregation to ensure that reported results appeared reasonable.

[Asset management questionnaire responses](#) described in this report were compiled from municipalities' responses to asset management questionnaires distributed in 2013 and 2016 reporting years. Questionnaires were prepared in coordination with AMO's Asset Management Outcomes Working Group. The Working Group included representatives from municipalities of all types and sizes throughout the province, the federal and provincial government and several membership-based organizations active in the field.

Outputs Produced by Infrastructure Investments

Community Energy System Outputs:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Number of new LED street lights installed	26,721	32
Number of new or upgraded high-efficiency equipment in municipal buildings	3,378	52
Total area of existing municipal buildings with energy retrofits (sq m)	227,014	37

Culture Outputs:

Strengthening Cities and Communities	Total Benefit	Projects Completed
Number of new, renovated or upgraded museums, heritage sites or buildings	2	2
Number of new or renovated monuments and sculptures	2	2

Drinking Water Outputs:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Length of new watermains (km)	5	10
Length of repaired, rehabilitated or replaced watermains (km)	65	50

Local Roads and Bridges – Local Road Outputs:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Length of new paved roads (lane km)	510	122
Length of new unpaved roads (lane km)	56	8
Length of repaired, rehabilitated or replaced paved roads (lane km)	8,125	927
Length of repaired or rehabilitated unpaved roads (lane km)	1,552	114

Local Roads and Bridges – Bridge and Culvert Outputs:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Number of new bridges or culverts	29	11
Number of repaired, rehabilitated or replaced bridges or culverts	394	189
Surface area of new bridges or culverts (sq m)	1,453	11
Surface area of repaired, rehabilitated or replaced bridges or culverts (sq m)	70,698	172

Local Roads and Bridges – Active Transport Outputs:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Length of new trails and bike lanes (km)	74	27
Length of repaired or rehabilitated trails and bike lanes (km)	9	7
Length of new sidewalks (km)	16	27
Length of repaired, rehabilitated or replaced sidewalks (km)	61	40

Public Transit Outputs:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Number of new transit vehicles	47	8
Number of rehabilitated, refurbished or replaced transit vehicles	605	26

Recreation Outputs:

Strengthening Cities and Communities	Total Benefit	Projects Completed
Number of new, repaired, renovated, rehabilitated or upgraded arenas, swimming pools or community centres	27	18
Number of new, repaired, renovated, rehabilitated or upgraded fields, courts, or playgrounds	26	9
Number of new, repaired, renovated, rehabilitated or upgraded picnic shelters and comfort stations	12	6

Solid Waste Outputs:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Number of new blue or green bins	25,516	11
Number of new, expanded or rehabilitated solid waste management facilities	19	19

Wastewater Outputs:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Length of new sanitary or stormwater sewers (km)	23	38
Length of repaired, rehabilitated or replaced sanitary or stormwater sewers (km)	50	73

Outcomes Delivered by Infrastructure Investments

Broadband Connectivity Outcomes:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Increase in number of households with landline access to broadband speeds of 10 Mbps or higher	284	1

Brownfield Redevelopment Outcomes:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Number of different types of contaminants removed or reduced to safe exposure levels	19	1
Total area of brownfield sites within municipal boundaries that were remediated, decontaminated or redeveloped (ha)	6	1

Community Energy System Outcomes:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Decrease in annual energy consumption (GWh)	21	99
Average percentage decrease in annual greenhouse gas emissions (%)	38	13
Decrease in annual volume of fossil fuels consumed (ML)	424	24

Culture Outcomes:

Strengthening Cities and Communities	Total Benefit	Projects Completed
Increase in annual number of cultural events	3	2
Number of businesses positively affected by the investment	17	3
Increase in number of residents participating in cultural activities	149	1

Disaster Mitigation Outcomes:

Strengthening Cities and Communities	Total Benefit	Projects Completed
Decrease in area of properties at risk of damage from natural catastrophes (ha)	14	2

Drinking Water Outcomes:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Reduction in annual number of adverse water quality test results	13	6
Reduction in annual number of watermain breaks	88	23
Reduction in boil water advisories	4	1
Increase in number of residents with access to new, rehabilitated or replaced water distribution pipes	23,010	44
Volume of drinking water treated to a higher standard after the investment (ML)	877,872	11

Local Roads and Bridges – Local Road Outcomes:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Increase in length of paved roads rated as good and above (lane km)	6,841	846
Increase in length of unpaved roads rated as good and above (lane km)	1,365	118
Average percent increase in average vehicle traffic speed during peak hours (%)	31	115
Number of residents with access to new, repaired, rehabilitated or replaced roads	2,189,084	438
Number of residents with improved access to highways or neighbouring municipalities	809,739	239

Local Roads and Bridges – Bridge and Culvert Outcomes:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Number of residents with access to new, repaired, rehabilitated or replaced bridges	928,053	83
Increase in the surface area of bridges or culverts where the condition of the primary component is rated as good and above (sq m)	41,338	165

Local Roads and Bridges – Active Transport Outcomes:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Number of residents with access to new, repaired, rehabilitated or replaced bike lanes, sidewalks, hiking and walking trails, and/or pedestrian bridges	1,129,344	77

Public Transit Outcomes:

Boosting Productivity and Economic Growth	Total Benefit	Projects Completed
Average increase in regular service passenger trips (%)	8	11
Percent decrease in average age of fleet (%)	21	9
Increase in number of accessible transit vehicles	103	6
Number of transit vehicles with accessibility or service upgrades/enhancements	883	9
Number of new or existing transit facilities with accessibility or service upgrades/enhancements	270	23

Recreation Outcomes:

Strengthening Cities and Communities	Total Benefit	Projects Completed
Increase in annual number of visitors to the community	17,993	10
Number of businesses positively affected by the investment in recreational infrastructure	414	11
Increase in number of registered users in a year	1,209	7
Number of residents who will benefit from the investment in recreational infrastructure	652,321	28

Solid Waste Outcomes:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Increase in tonnage of solid waste collected (t)	33,912	8
Increase in number of households participating in recycling and organics collection	3,193	4

Sports Outcomes:

Strengthening Cities and Communities	Total Benefit	Projects Completed
Increase in number of registered users in a year	2,706	1
Increase in sporting events held annually	3	1
Increase in availability of the facility (hours per year)	486	2

Tourism Outcomes:

Strengthening Cities and Communities	Total Benefit	Projects Completed
Increase in annual number of visitors to the community	4,000	2
Number of businesses positively affected by the investment	122	3

Wastewater Outcomes:

Promoting a Cleaner Environment	Total Benefit	Projects Completed
Reduction in annual number of sanitary sewer backups	93	28
Increase in total number of residents serviced by stormwater/sanitary infrastructure	4,909	44



Association of Municipalities of Ontario (AMO)

200 University Ave., Suite 801, Toronto, ON M5H 3C6

Telephone direct: 416-971-9856

Voicemail: 416-971-8099

Fax: 416-971-6191

Toll-free in Ontario: 1-877-4-AMO-LAS (1-877-426-6527)

E-mail: gastax@amo.on.ca

Twitter: [@GasTaxinOntario](https://twitter.com/GasTaxinOntario)

Websites: www.amo.on.ca

www.GasTaxAtWork.ca

www.infrastructure.gc.ca

