

City of Winnipeg 2018 State of the Infrastructure Report



Vision

To be a vibrant and healthy city which places its highest priority in quality of life for all its citizens.

Corporate Mission Working together to achieve affordable,

responsive and innovative public service.

Table of Contents

Introduction	5
Winnipeg's Infrastructure at a Glance	6
Citizen Satisfaction Survey Highlights	7
State of Local Infrastructure	8
Capital Expenditures	
Capital Projects	
Strategies to Address the Infrastructure Deficit	14
Summary of Replacement Value	16
Summary of Average Condition	
Summary of Infrastructure Deficit	20
Infrastructure Deficit Comparison	
 Local Infrastructure Reports Infrastructure Elements Map Roads Bridges Parks and Open Space Water Utility Sewer Utility Land Drainage Utility Solid Waste Utility Police Services Fire and Paramedic Services Community Services Municipal Properties Transit Information Technology 	26 27 28 29 30 31 32 33 34 35 36 37
More Information	



Introduction

Winnipeg is growing. The city is in the early stages of a cycle of strong growth, a pace not seen for decades as evidenced by the table below. This momentum is showing no signs of slowing.

City of Winnipeg Annual Population Change



According to the 2016 City of Winnipeg Population, Housing, Investments in key services and infrastructure are critical to and Economic Forecast, Winnipeg's average annual populasupport a growing, thriving, modern city, now and into the tion growth over the next 25 years is estimated to increase future. The 2018 State of the Infrastructure Report provides by 8,200 people per year. It also notes that the city's Census comprehensive information regarding the major asset groups Metropolitan Area population is predicted to exceed 1 million that the City of Winnipeg (City) manages in order to deliver people by 2034/2035 and surpass 1,055,000 by 2040. services for residents.

Winnipeg itself is expected to grow to a population of approximately 922,600 by 2040. In 2017, Winnipeg's population was 749,500*. Furthermore, the number of households is expected to increase by around 32 percent, or approximately 100,000, to a total of 391,100 by 2040.

* Source: Statistics Canada

Source: Statistics Canada

Winnipeg's Infrastructure at a Glance



- 1,939 (lane-km) | Regional Streets **5,396 (lane-km)** | Local Streets (*excluding Lanes/Alleys*) **305,257** | Park and Boulevard Trees **3,587 ha** | Parks and Open Space* 661 | Athletic Fields* **63** | Community Centres **12** | City-Operated Arenas **12** | Indoor Pools **10** | Outdoor Pools **83** | Wading Pools **19** | Spray Pads **42** | Department Offices and Facilities
- 7,085 | Desktop Devices
- * Excludes Assiniboine Park

2,994 km (linear) | Active Transportation (Bike Paths and Sidewalks) **145** | Bridges (Vehicular, Pedestrian, and Underpasses) **2,637 km** | Distribution System Water Mains **2,681 km** | Collection and Interceptor Sewer Mains **1,403 km** | Land Drainage Sewer Mains **152 km** | Feeder Mains **118 km** | Dikes 22,045 | Hydrants **34** | Flood Pumping Stations **3** | Sewage Treatment Plants 615 | Buses **286** | WPS Fleet (*Light, Super, and Heavy Duty*) **30** | WFPS Stations and Academy

Source: City of Winnipeg, 2018 City Asset Management Plan

Citizen Satisfaction Survey Highlights

The City conducts an annual citizen satisfaction survey to solicit opinions on its performance in the delivery of key services. In 2017, 600 Winnipeggers, aged 18 and older, provided their thoughts on what the City is doing well and what needs improvement. Residents were also asked what actions they thought the City could take to improve the quality of life in the city and these actions were grouped by category. Respondents overwhelmingly noted that actions related to roads and infrastructure would improve quality of life.

Top 3 Actions to Improve Quality of Life*

















are very satisfied or somewhat satisfied with **recycling** program



6 City of Winnipeg | 2018 State of the Infrastructure Report

are very satisfied or somewhat satisfied with public transportation**

- * Respondents were permitted to provide more than one response
- ** Those who indicated they have used the service.

State of Local Infrastructure



The City must balance a multitude of competing spending priorities with limited resources. As the city continues to grow at historically high rates, the need to make sustainable, welltimed infrastructure investments is essential to ensure we continue to deliver high-quality services for residents.

To that end, in January 2015, Council approved the City's Asset Management Policy, making asset management a core business function. Asset management is not a singular activity or project; rather, it is a systematic process that facilitates decision-making in regards to the construction, acquisition, operation, maintenance, renewal, replacement, and disposition of assets in the most cost-effective manner.

The adoption of the Asset Management Policy also established the framework for infrastructure stewardship through comprehensive Asset Management Plans (AMPs). AMPs are integrated with and help guide the long-range infrastructure investment planning process based on considerations such as affordability and, in the future, defined service levels. The City completed its first City Asset Management Plan (CAMP) in 2018. The 2018 State of the Infrastructure Report is a high-level summary of the detailed findings of the CAMP.

Through the CAMP, the consolidation and analysis of information on assets across all civic departments, including the historic distribution of capital funding for these assets over the last decade, was undertaken. Providing detailed information about the City's infrastructure as a whole, including the state of existing assets, the assignment of value to needed improvements on existing and future assets, and the remaining service life of current assets has never been performed on this scale within the organization before.

The CAMP applied a consistent approach to how data was collected and analyzed across the entire portfolio of City-owned assets. This instituted a benchmarking tool for monitoring key performance indicators and allowed for an objective comparison over multiple service areas. For the first time, the City has been able to strategically categorize asset types and grade the physical condition of its main infrastructure elements. While the infrastructure elements have condition grades, there remain some assets where formal condition assessments have not yet taken place. The intent is to gather more information about unassessed assets in the future. Presentation of asset condition in this report does not include the replacement value of assets where condition assessments have not taken place.

However, the CAMP has full details on replacement values of these assets.

Adopting a holistic overview the City's condition grade for tax-supported and Transit infrastructure is C+, whereas water and waste utilities' asset conditions are B. The difference is primarily due to the fact that the Water and Waste utilities have dedicated funding and are governed by significant regulatory and level of service requirements, compared to the tax-supported and transit asset base. Combined, the City's condition grade is B-. The City's current asset inventory has a replacement value of approximately \$35 billion.



As the City's asset management plans were developed, support from cross functional teams and dedicated asset management leads fostered a shared vision which improved communication, provided new insights on asset performance and initiated a fundamental change in how investment models could be created to maximize value from City assets. Recognizing that the CAMP is an ever evolving document, strategies and continuous improvement initiatives have also been addressed and will serve as guidelines as the City continues to gain more knowledge about its assets.

The amalgamation of each department's spending plans and needs over the next ten years was used to calculate the City's infrastructure deficit. Total capital investment needs for each department were based on a 10-year horizon and included both existing and new infrastructure. The gap between total capital investment requirements and estimated future capital funding resulted in an approximately \$6.9 billion deficit. While the shortfall seems difficult to overcome, it is encouraging to note that compared to the reported 2009 deficit, progress has been made by investing in priority projects and focusing on maintaining existing infrastructure. In 2009, the reported capital infrastructure deficit was estimated at approximately \$7.0 billion. Converted to 2018 dollars, this equates to approximately \$9.9 billion and provides a more accurate comparison to the 2018 deficit, estimated at approximately \$6.9 billion today.



* The deficit is based on Capital investment needs spanning a 10-year period from 2018 to 2027.

Additionally, as the 2009 deficit included a small portion of operating funds, operational costs in the order of approximately \$400 million were removed from the 2009 deficit figure to further ensure a fair comparison between the 2009 and 2018 infrastructure deficits.

Progress to reduce the infrastructure deficit from 2009 to 2018 may be attributed to a number of variables including allocating \$2.1 billion more to infrastructure investments than originally planned from 2009-2017, successfully leveraging federal and provincial funding for major capital projects and the City dedicating an annual 2 percent property tax increase to improve the condition of roads.



Capital Expenditure

Despite limited growth in revenue over two decades, the city's population, its size, and demands for services continues to grow. Because of population growth at historically high rates, these demands are placing increasingly large pressures on both the operating and capital budgets to the extent that there is an unsustainable structural deficit in the tax-supported operating budget and a parallel infrastructure deficit in the capital budget.

Over the years, the City has seen significant change in the amount and type of capital expenditure. While capital spending amounts vary by year, excluding 2016, it has averaged \$430 million from 2007 – 2017.

From 2010 to 2015, the City spent on average \$689 per person, which is approximately \$90 less per person from the multi city average.

If the City of Winnipeg spent a similar amount compared to the average, the capital expenditures would increase by approximately \$65 million per year.

But this level of spending is still short of what is needed to be sustainable. The infrastructure deficit, pegged at approximately \$6.9 billion, or \$690 million per year over the next 10 years, needs to be funded.

In short, the City will face difficult choices in funding capital projects, determining affordability, and what potential sources of revenue may be available.

Please note, with the exception of the data presented in this section, the financial information presented in the *2018 State of the Infrastructure Report* uses budget information rather than actual expenditures to align with budget and planning documents.



Source: City of Winnipeg, 2018 Community Trends & Performance Report – Volume 1





Capital Projects

Long-range financial planning is an important exercise to Over the next 10 years (2018 – 2027), over \$4.0 billion is estiensure funds are available in the future to meet anticipated mated to go towards investments in the City's infrastructure; needs, as required. On an annual basis, the Public Service however, that level of funding is not adequate to address the prepares a 6-year capital investment plan as required by The City's infrastructure needs. The 2018 deficit is pegged at ap-City of Winnipeg Charter for Council-consideration, which inproximately \$6.9 billion, with transportation services making up the majority of the overall deficit (70 percent). The deficit cludes the current year's capital budget and a 5-year capital forecast. Additionally, 4-year longer-term capital projections has identified a higher need to address existing infrastructure are prepared by the Public Service for planning purposes. The requirements compared to new infrastructure. This is due in City's 2018 preliminary capital budget and the following 9-year part because many larger scale projects that are contemplatestimated capital plan were used to capture anticipated levels ed in the forecasted period are not currently funded. of funding and the corresponding infrastructure deficit over a 10-year period.







Utility



Solid Waste Utility



10-year Capital Plan of \$4,039 million

2018-2027 (in millions)



Strategies to Address the Infrastructure Deficit

A combination of department-specific and city-wide financial strategies are required to effectively address the City's approximately \$6.9 billion infrastructure deficit.

The City's current funding model is not sustainable.

The majority of the City's revenue comes from property taxes, utility fees, and user fees. According to the 2018 Community Trends & Performance Report – Volume 1, other prairie cities in Canada collect on average 44 percent more revenue per capita compared to Winnipeg. Since 1998, the following Canadian cities have roughly doubled their property taxes, equivalent to a 98 percent increase on average, while Winnipeg has increased property taxes by only 9 percent.

Revenue can be attained by maximizing existing revenue sources, accessing new sources of revenue, and maximizing available capital funding from federal and provincial governments. The City is also nearing the maximum borrowing limit set out in the debt strategy.

The net debt increased from 2007 to 2018, and is expected to continue increasing based on current financial commitments. The debt forecast does not currently account for borrowing funds to address the approximately \$6.9 billion deficit, which if included, would become an unsustainable level of debt for the City. The ability to borrow further debt to finance infrastructure investments is more restrictive now than in the past and requires access to additional revenue in order to borrow more debt and make the annual debt interest payments.



Residential Property Tax Change (%) 1998 - 2016

Source: City of Winnipeg, 2018 Community Trends & Performance Report – Volume 1



*Debenture debt and P3 obligations included

Going forward, the City will have to consider a variety of strategies in order to effectively address the infrastructure deficit. Some key financial strategies could include:

- Increasing Access to Revenue: Increases to existing revenues, exploring access to new revenues, and leveraging maximum dollars from federal and provincial capital funding.
- **2. Develop Levels of Service:** Innovative approaches to maintaining or enhancing existing levels of service, as well as challenging decision-making in cases where reductions to service levels are warranted.
- **3. Apply an Affordability Lens to Policy Development and Long-Term Strategic Plans:** Ensure guiding policies, such as *OurWinnipeg*, and service strategic plans, such as the Transportation Master Plan, consider what the City can afford.



Source: City of Winnipeg, 2018 City Asset Management Plan

- 4. Review Assets in Poor to Very Poor Condition: Ensure critical infrastructure continues to receive adequate funding to address Poor to Very Poor condition and mitigate against assets deteriorating to this condition.
- **5. Better Alignment Between the Budget Process and Asset Management:** The asset management program and budget process operate as a system that offer the greatest benefit if processes between each are fully integrated. Ongoing alignments between the asset management program and the budget process will allow for improved decision making related to capital infrastructure requirements and associated operational budget impacts through the implementation of short-term and near-term actions.

Summary of Replacement Value

The City has condition information on assets with a replacement value of \$30 billion. On a city-wide basis, elements related to roads comprises almost half of the City's total asset replacement value. That percentage is indicative of the fact that there are over 7,300 lane-kms of regional and local streets in the City. Water and Waste Utilities hold the second highest value at approximately 40 percent. Together, they represent 82 percent of the total replacement value of all City assets.



Percentages make not equal 100%

Summary of Average Condition

The information on condition ratings presented in the figure below can be used to help inform future investment planning decisions and requested funding levels. Areas with a high percentage of assets with a Poor to Very Poor condition that are deemed essential or critical to residents may require an increase or redistribution of funding to improve their condition. Assets rated in Poor to Very Poor condition are worth approximately \$4.6 billion.

Summary of Condition and Grade per Infrastructure Element (in millions)





Summary of Infrastructure Deficit

The infrastructure deficit represents the current unfunded capital needs to achieve the assumed levels of service for existing infrastructure, as well as to support development of new infrastructure. The deficit is presented over a 10-year timeframe, from 2018-2027, for capital requirements only. Operating funding requirements are not captured.

Based on service needs for both existing and new infrastructure over the next 10 years, there is a deficit of approximately \$6.9 billion, with a higher proportion required to support existing infrastructure needs than new infrastructure.

Total Deficit for Existing and New Infrastructure (in millions)



Existing

"\$- represents a deficit that is still being evaluated"

Infrastructure Deficit Comparison

The figure below provides a comparison of the 2009 infrastructure deficit to the 2018 infrastructure deficit. The last reported deficit in 2009, reported a capital infrastructure deficit estimated at approximately \$7.0 billion. Converted to 2018 dollars, this equates to approximately \$9.9 billion and provides a more accurate comparison to the 2018 deficit, estimated at approximately \$6.9 billion today. Additionally, as the 2009 deficit included a small portion of operating funds, operational costs in the order of approximately \$400 million were removed from the 2009 deficit figure to further ensure a fair comparison between the 2009 and 2018 infrastructure deficits. The 2018 deficit includes a construction escalation related to large infrastructure projects for the years 2018-2027.

Comparison of 2009 Deficit to 2018 Deficit by Percent of Total City Deficit (in millions)

Progress to reduce the infrastructure deficit from 2009 to 2018 may be attributed to a number of variables including allocating \$2.1 billion more to infrastructure investments than originally planned from 2009-2017, successfully leveraging federal and provincial funding for major capital projects and the City dedicating an annual 2 percent property tax increase to improve the condition of roads. Progress made to reduce the deficit is encouraging, however there remains a significant deficit that is becoming more challenging to address.

The two main trends from 2009 to 2018 are that the deficit has decreased, and there is a proportional shift towards existing infrastructure over building new.



	Deficit 2018 %	Deficit 2009 %

Local Infrastructure Reports

INFRASTRUCTURE ELEMENTS MAP

The City's assets are grouped under 13 infrastructure elements: Roads, Bridges, Parks and Open Space, Water Utility, Sewer Utility, Land Drainage Utility, Solid Waste Utility, Police Services, Fire and Paramedic Services, Community Services, Municipal Properties, Transit, and Information Technology.



Note: Tax-supported and Transit infrastructure is C+, whereas water and waste utilities' asset conditions are B.





Replacement: \$722 Million Deficit: \$199 Million Condition: Fair

Fire & Paramedic



Services **Replacement: \$189 Million** С Deficit: \$72 Million **Condition: Fair**



Replacement: \$4.6 Billion B-



Police Services

В

В



Condition: Good



Deficit: To be assessed **Condition: Good**







5

C-

Community Services

Replacement: \$1.4 Billion Deficit: \$843 Million Condition: Fair



Information Technology

Replacement: \$199 Million Deficit: \$63 Million Condition: Good



Municipal Properties

Replacement: \$587 Million Deficit: \$538 Million **Condition: Poor**



Transit

Replacement: \$761 Million Deficit: \$1.3 Billion Condition: Fair

Roads

C+

В

Replacement: \$13.9 Billion Deficit: \$1.9 Billion **Condition: Fair**

Sewer Utility



Replacement: \$6.7 Billion Deficit: \$634 Million **Condition: Good**



Bridges



Replacement: \$1.7 Billion

Deficit: \$1.1 Billion Condition: Good



Solid Waste Utility

Replacement: \$55 Million Deficit: \$24 Million Condition: Good



ROADS

A well-maintained transportation system promotes economic vitality and a positive city image. Investing in a measurable approach in the maintenance of roads infrastructure will ensure the continued economic and social viability of the city.

Winnipeg's road network is intended to accommodate pedestrians, cyclists, transit, motorists, and the movement of goods. It consists of regional streets, local streets, and active transportation. One of the challenges facing the City is the need to balance competing needs between expanding the transportation system to meet growth and managing existing, aging assets.

Overall, the assets in the Roads service area are in *Fair* to *Good* condition.



Condition and Total Replacement Value



BRIDGES

There are 145 bridges in Winnipeg, including vehicular and pedestrian, as well as underpasses.

Any bridge in the *Poor* category is considered to be at a risk of not meeting service levels, and considered a high priority for reconstruction and/or renewal. Overall, Bridge condition is mainly in *Good* condition.







Average Expected Life







PARKS AND OPEN SPACE

Winnipeg's parks and open space system has been designed to contribute to the enjoyment and quality of life for the City's residents and visitors. It is an essential component of the urban fabric that encourages and promotes healthy lifestyles, cleaner environments, civic pride, and urban beautification.

There are approximately 1,200 parks spanning a total area greater than 3,000 hectares, excluding Assiniboine Park. Assets include active transportation pathways within park boundaries, park amenities, park buildings, park roads, and trees.

The average asset condition of this infrastructure element is *Fair*.



Total Infrastructure Deficit



C+

WATER UTILITY

The Water Utility encompasses all aspects of supply, treatment and distribution of water from the source to the customer's tap. This infrastructure element is comprised of two main asset types: water supply and treatment, and water distribution.

Water supply and treatment assets refer to facilities, pumping stations, reservoirs, aqueducts, and feeder mains. Distribution assets include hydrants, water meters, mains, and water services. In addition to these assets, data on buildings and fleet vehicles is also reported.

Overall, the Water Utility assets are in *Good* condition.







Condition and Total Replacement Value



SEWER UTILITY

Winnipeggers value and take pride in the abundant and natural surface water amenities both within and downstream of our city. Ongoing improvements to our wastewater system will be required to maintain or upgrade the level of service our residents currently enjoy.

The Sewer Utility is divided into two main asset types: wastewater treatment and wastewater collection. Wastewater treatment refers to the City's three sewage treatment plants. Wastewater collection assets include lift and diversion stations, chambers and ancillary structures, manholes, sewer mains, and combined sewer network/outfalls.

In addition to these assets, data on buildings and fleet vehicles are also reported.

The overall condition of Sewer Utility assets is *Good*.



Condition and Total Replacement Value

Total Infrastructure Deficit



LAND DRAINAGE UTILITY

The Land Drainage Utility is comprised of two main asset types: land drainage and flood control.

Land drainage assets include manholes, underpass pumping stations, storage tanks, and storm water retention basins, pipes, drains and major ditches, and outfalls. Flood control assets include dikes and flood pumping stations. Overall, the Land Drainage Utility assets are in *Good* to *Very Good* condition.







DEFICIT DECREASED



SOLID WASTE UTILITY

The Solid Waste Utility is comprised of two main asset types: collection and disposal, and recycling and waste diversion. A significant portion of the recycling and waste diversion assets are in new or nearly-new condition.

Solid waste collection services include weekly collection of garbage from single-family and multi-family homes and other miscellaneous services, such as collection of surplus or bulky waste, that are offered on a fee for service basis. Assets includes the Brady Road Resource Management Facility and ancillary structures, as well as garbage and recycling carts.

Recycling and waste diversion services include the weekly collection of recyclables for single-family and some multi-family homes that are delivered to the material recovery facility (MRF) and seasonal leaf and yard waste collection and composting. It also includes 4R Winnipeg Depots.

The overall condition of Solid Waste Utility assets is *Good* to *Very Good*.



Condition and Total Replacement Value



POLICE SERVICES

To be sustainable and livable a city needs to be safe, and the quality of life offered by a city depends in many ways on its safety and security. The Winnipeg Police Service (WPS) plays an integral role in creating safe communities through crime prevention and effective response to social disorder and criminal activity. Significant investments have been made within the last 10 years towards the WPS's assets, including the construction of the East and West District stations and the WPS headquarters building.

Overall, the assets in the Police Services infrastructure element are in overall *Good* condition.







FIRE AND PARAMEDIC SERVICES

The Winnipeg Fire Paramedic Service provides key services for the safety and security of the residents of Winnipeg: fire rescue response; medical response; fire and injury prevention; and disaster preparedness and response.

Assets in the Fire and Paramedic Services infrastructure element include 30 fire stations, one stand-alone ambulance station, as well as a communication centre and training academy. It also includes 310 vehicles and specialized equipment required to provide emergency services. Additional heavy equipment is needed to support and maintain assets at the stations and the training academy.

Overall, the assets in the Fire and Paramedic Services infrastructure element are listed as *Fair*.



Condition and Total Replacement Value



COMMUNITY SERVICES

The City provides high quality aquatics, recreation and leisure opportunities and programs for residents. The inventory of assets includes recreation and leisure centres, community centres, arenas, indoor pools, outdoor pools, wading pools and spray pads. The majority of these assets were constructed prior to the Unicity amalgamation in 1972. Over the years, insufficient capital and operational investments have led to the deterioration of these assets and their building systems.

Functional obsolescence and poor physical ac-

cessibility further compromises the ability of existing assets to adequately meet current service level needs. In addition, existing facilities are not geographically distributed in an equitable fashion across the city, leading to a wide variety of service levels by area. Winnipeg has also seen considerable growth in new areas creating demand for new recreation facilities and services.

The overall condition of the assets in the Community Services infrastructure element is *Fair* trending toward *Poor*; however, a significant number are in *Poor* to *Very Poor* condition.





Condition and Total Replacement Value



MUNICIPAL PROPERTIES

The City has a number of municipal office buildings and facilities. These assets are on average, past their useful life. This category includes office buildings, heritage buildings, cemetery buildings, leased out buildings, buildings and facilities utilized by the City's Special Operating Agencies, as well as other non-building property assets such as riverbanks and surface parking lots.

Overall, the assets that fall within this category are in *Poor* to *Very Poor* condition.



Condition and Total Replacement Value

49 YRS Average Age Average C-6 PREMAINING Life Average C-6



TRANSIT

Winnipeg Transit provides a vital service to the citizens of Winnipeg with an extensive and robust public transit system.

Winnipeg Transit has a network of 93 bus routes, made up of: 10 Rapid Transit routes, 24 express and super express routes, 52 regular routes, 3 free Downtown Spirit routes, and 4 on-demand DART routes. Winnipeg Transit's fleet of approximately 615 buses is 100% accessible. Winnipeg Transit also offers door-to-door service through its Handi-Transit system for individuals who are unable to use the conventional Transit service.

The majority of the Transit infrastructure element's assets are currently in *Fair* to *Good* condition.







Condition and Total Replacement Value



INFORMATION TECHNOLOGY

Information Technology assets are significant enablers of City services provided to residents. The asset types include hardware and software and have been part of the City's overall asset mix for decades, though technology advances have been significant. Overall, the condition of these assets is listed as *Good* condition.



Condition and Total Replacement Value

12 YRS Average Age Average Age Average Remaining Life YRS





More Information

For more information regarding the City's infrastructure, including the Asset Management Program and the 2018 City Asset Management Plan, please see: **winnipeg.ca/infrastructure**.



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