

Trunk Main and Valve Chamber Maintenance

21N.10

Priority Score: 56.30

Project Type: Rehabilitation

Growth Related?: No

Estimated Useful Life (years): 50

Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High

Department: Public Works and Engineering

Staff Contact: Manager of Public Works

Location/Coordinates: Various

Cash Flow Projection:	2024	2025	2026 +
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 150,000	\$ 100,000	\$ 300,000
Materials			
Equipment/Misc			
Contingency			
Total	\$ 150,000	\$ 100,000	\$ 300,000

Costs Incurred to 2023 Year End

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 550,000

Schedule:

Construction Start Date: 05/01/2023

Substantial Completion or purchase date: 10/01/2026

Funding Sources:

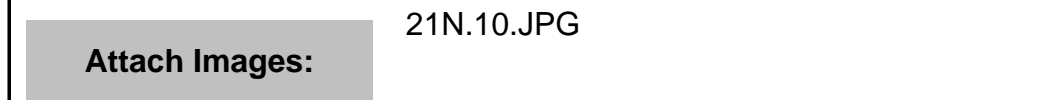
Water Rates	\$ 550,000
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Capital Reserve	\$ 0

Description and Rationale:

Several of the larger diameter watermains in the City's water system serve the purpose of "trunk" watermains (analogous to a tree trunk). These supply water to the grid of smaller diameter watermains, and consequently are key parts of the system. The valves on those watermains (Which are high pressure concrete mains) are located in chambers, and are not direct-buried. There are 8 such chambers on the Municipal Trunk Main, mostly 24" from 1970, and there are 14 such chambers on the Industrial Trunk Main, mostly 18" and 24", ranging in age from the late 1960's, to about 1990.

There are also 22 valve chambers which contain complex control valves (11) and check valves (11) which are key parts of the system, controlling water flow between pressure zones.

The rehabilitation of these valves usually involves the replacement of valves or valve components, or on occasion an entire valve if required. Rehabilitation of the actual chamber is not necessarily required. Often following the work, to clean the structure and component and replace corroded or broken parts, corrosion protection coatings and wraps to the pipe and fittings are applied within the chamber; labour by City forces. Full replacement of even one large diameter valve can cost a substantial portion of the allocated budget. Often this work is done in conjunction with, and in support of, other work (ie 10th St Bridge, and the Kenny Drain pond). In 2023, the valve chamber at 6th St and 18th Ave East is to be rebuilt, and two other valves.



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Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	Failures of trunk mains can be catastrophic and even cause backflow events
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	4	Failures of trunk watermain valves can also impact fire flows.
Legislation	Is the project required for legislative/regulatory compliance?	3	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	3	The trunk watermain valves are priority assets
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	3	If trunk watermain valves do not hold, they can have serious effects as was seen during the 10th St Bridge Project.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	The property owner ultimately must maintain the device after installation and this cost is, therefore, born by them.
Environment	Does the project address needs impacted by climate change?	1	Little or no impact on environment as a result of the project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	The Project does not eliminate an existing public space
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Not significant aesthetic impact
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	1	Watermain projects of this nature are not

Cross Connection Control Program

22N.1

Priority Score: **65.30**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Various

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 250,000	\$ 250,000	\$ 60,000
Materials			
Equipment/Misc			
Contingency			
Total	\$ 250,000	\$ 250,000	\$ 60,000

Costs Incurred to 2023 Year End

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 560,000

Schedule:
 Construction Start Date: 02/01/2023
 Substantial Completion or purchase date: 12/31/2026

Funding Sources:

Water Rates	\$ 560,000
Please Select	
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Capital Reserve	\$ 0

Description and Rationale:

Cross Connection Control Programs have been initiated in many communities in order to ensure that all Commercial, Institutional, and Industrial facilities meet the current backflow preventer requirements for the current Building Code, to prevent backflow and contamination of the City water system. The site surveys of 500 Industrial, Commercial, and Institutional sites indicated a substantial level of effort is required to achieve compliance. Plans to implement in 2020 and 2021, starting with the hiring a backflow prevention coordinator, were deferred in 2020 due to Covid : The position requires on site inspection of each location. In early 2022, the final bylaw was passed, the Backflow Prevention Coordinator was hired, and work has begun. Older City-owned facilities are a priority, as well as higher-risk connections at Industrial, Commercial, and Institutional locations. As of March 2023, the program is approximately 50% complete.

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Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	A significant number of locations (500) will be affected directly, and the program affects the entire City.
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	The City has had two significant backflow events in the past, and this greatly affected businesses and residences in the industrial zone and large portions of the west side of the City.
Legislation	Is the project required for legislative/regulatory compliance?	5	This is required by the building code and the City's Backflow Prevention Bylaw
Asset Management	Is the project a high priority for replacement in the asset management plan.	1	Backflow preventers had not been previously identified on the plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Failure to do this could result in costly impacts in the event of future backflow events
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	The property owner ultimately must maintain the device after installation and this cost is therefore born by them.
Environment	Does the project address needs impacted by climate change?	1	Little or no impact on environment as a result of the project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	The Project does not eliminate an existing public space
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Not significant aesthetic impact
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	2	Not directly, however, there has been considerable media and Public communication to that end

Cathodic Protection Rehab

22N.2

Priority Score: **66.10**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 30
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Various

Cash Flow Projection:	2024	2025	2026 +
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 225,000	\$ 275,000	\$ 880,000
Materials			
Equipment/Misc			
Contingency			
Total	\$ 225,000	\$ 275,000	\$ 880,000

Costs Incurred to 2023 Year End

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 1,380,000

Schedule:

Construction Start Date: 07/01/2023

Substantial Completion or purchase date: 08/01/2026

Funding Sources:

Water Rates \$ 1,380,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Description and Rationale:

Replacement of Cathodic Protection on large diameter critical ductile iron trunk water mains. This slows/eliminates corrosion via an electrochemical process whereby the anode decays instead of the main. However, the anodes were all installed in the early 1990's and are now at the end of their useful life, as determined by a cathodic protection survey undertaken in 2013 which measured the remaining electrochemical protection. In some cases the trunk main can be cathodically protected without disturbing asphalt but in many cases some limited asphalt disturbance will be required.

The City continues to follow the multi year program to protect water mains as laid out in 2013.

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Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	4	Watermain failures can affect a significant area
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Watermain breaks can damage property and result in poor water quality
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	The intent is to extend the useful life of water infrastructure
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	3	Failure to do this could result in vastly increased watermain breaks as older watermain rots in place
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	3	Watermain breaks can affect environment : chlorinated water in receiving water
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Not significant aesthetic impact
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	1	Watermain Projects generally are not.

Watermain Capital Reinvestment in Support of 3rd Ave East/Development

22N.3

Priority Score: **66.30**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 100
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Intersection of 32nd St and East Bay

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering	\$ 50,000		
Communication / Signage			
Construction / Contractor	\$ 500,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 550,000	\$ 0	\$ 0

Costs Incurred to 2023 Year End \$ 200,000

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 750,000

Schedule:
 Construction Start Date: 07/01/2023
 Substantial Completion or purchase date: 12/31/2024

Funding Sources:

Water Rates	\$ 700,000
Tax Levy	\$ 50,000
Please Select	
Please Select	
Please Select	
Capital Reserve	\$ 0

Description and Rationale:

At the intersection of 32nd St and East Bayshore Road, the trunk watermain will have to be relocated to avoid conflict with other infrastructure. Additionally reconfiguration of watermain on 32nd Street is required in support of supply security and water quality, for the development, and the overall system. This will avoid the risk of failure of this trunk main.

Additionally, there is an anticipated need to replace the existing ductile iron and asbestos cement watermain, on 32nd Street, at the same time as the reconstruction of 32nd St by the developer. Cost of this watermain replacement will need to be supported by the City.

\$50,000 is the City's contribution towards the road rehabilitation portion of the project.

It should be completed in 2023 or 2024 in support of adjacent development. However timing is entirely dependent on the timing of the development. Cost shown for this aspect of the project are approximate at this time.

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Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	4	Typically just the area of a break, but excavating new asphalt is always best avoided.
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	4	Watermain breaks carry some risk of Adverse Conditions, though this risk is mitigated by good procedures.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	Locations are older main identified as such in the plan.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Would avoid watermain breaks in newly paved areas
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	1	Little or no impact.
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Project has no aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	1	None.

WTP Filter Refurbishment

22N.4

Priority Score: **82.60**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: Very High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering	\$ 150,000		
Communication / Signage			
Construction / Contractor	\$ 2,325,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 2,475,000	\$ 0	\$ 0

Costs Incurred to 2023 Year End \$ 2,560,000

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 5,035,000

Schedule:
 Construction Start Date: 07/01/2022
 Substantial Completion or purchase date: 12/31/2024

Funding Sources:

Water Rates	\$ 1,535,000
Grant	\$ 3,500,000
Please Select	
Please Select	
Please Select	
Capital Reserve	\$ 0

Description and Rationale:
 Further to a consultant's study completed in 2020, and subsequent report presented to the Operations Committee, the filters at the Water Treatment Plant require rehabilitation work. This includes media and underdrain replacement as well as air scour installation. The upgrades will increase the useful life of the asset and also improve filter capacity substantially during wet weather events. Additionally, as part of the work, other work included in the capital plan will be undertaken, including valve, piping, other mechanical replacements, instrumentation work, and pump control equipment.

This project was included in the City's "Green Stream" Provincial/Federal program funding application in 2021. The grant was successful. Approximately \$3,000,000 of the cost will be covered by the grant funding.

Additional costs have arisen during detailed design, for primarily 2 reasons:

1. HVAC improvements are required to prevent mould regrowth (a previous issue) in the filter rooms due to the increased humidity resulting from air scour.
2. A new access hatchway, challenging to implement, into the Plant 1 filter clearwell, to remove lining which was discovered to have failed and which, while redundant, poses a risk to the filter system if it remains.

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Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the water source for the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	The project will address the risk of inadequate quantity or quality of water during poor raw water quality events.
Legislation	Is the project required for legislative/regulatory compliance?	4	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	5	Yes. A number of high priority items in the 10-year plan will be implemented.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	5	This can greatly improve efficiency both Water and Public Works (Winter Control)
Financing	Can the cost of investment be leveraged or are there partnership funds available?	5	Yes. 75% funding from upper levels of government.
Environment	Does the project address needs impacted by climate change?	3	Yes. Increased frequency of storms adversely affects raw water quality during and after the storms.
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	The Project does not eliminate an existing public space
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Not significant aesthetic impact
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	1	Numerous reports to committee but no direct public engagement relevant. No requirement for a Class EA.

Watermain Capital Reinvestment in Support of Paving

22N.5

Priority Score: 66.30

Project Type: Rehabilitation

Growth Related?: No

Estimated Useful Life (years): 100

Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High

Department: Public Works and Engineering

Staff Contact: Manager of Public Works

Location/Coordinates: Various

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 75,000	\$ 50,000	
Materials			
Equipment/Misc			
Contingency			
Total	\$ 75,000	\$ 50,000	\$ 0

Description and Rationale:

During the paving program it is desirable to replace some sections of poor-condition valves, hydrants, and watermain in the paving area, to reduce the probability of having to excavate the new asphalt in the future to repair a watermain break.

This is especially important for older, shallower watermains which can be damaged during the paving compaction process. Galvanized main is especially prone.

Costs Incurred to 2023 Year End \$ 100,000

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 225,000

Schedule:

Construction Start Date: 07/01/2024

Substantial Completion or purchase date: 12/31/2024

Funding Sources:

Water Rates \$ 225,000

Please Select

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Capital Reserve \$ 0

Attach Images:

22N.5.JPG

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Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	4	Typically just the area of a break, but excavating new asphalt is always best avoided.
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	4	Watermain breaks carry some risk of Adverse Conditions, though this risk is mitigated by good procedures.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	Locations are older main identified as such in the plan.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Would avoid watermain breaks in newly paved areas
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	1	No significant Environmental Impact
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	0	None

Water Treatment Plant Transformer

22N.6

Priority Score: **76.50**

Project Type:	Rehabilitation
Growth Related?:	No
Estimated Useful Life (years):	50
Future Replacement Cost:	Enter Replacement Cost & Year of Replacement

Priority Level:	Very High
Department:	Public Works and Engineering
Staff Contact:	Manager of Public Works
Location/Coordinates:	Water Treatment Plant

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 200,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 200,000	\$ 0	\$ 0

Costs Incurred to 2023 Year End \$ 30,000

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 230,000

Schedule:

Construction Start Date: 05/01/2024

Substantial Completion or purchase date: 12/31/2024

Funding Sources:	
Water Rates	\$ 230,000
Please Select	
Please Select	
Please Select	
Please Select	
Capital Reserve	\$ 0

Description and Rationale:

The existing on-site transformer at the Water Treatment Plant is original equipment (late 1960's) and is due for replacement. Failure of the on-site transformer at this location would create a serious issue due to the long lead time to get a replacement. The plant would have to use the diesel generators for an extended period of time.

In 2019, a voltage fluctuation event highlighted the vulnerability of the Water Treatment Plant to transformer failure. No damage occurred to the transformer in that instance, but at first that seemed like a real possibility.

It is intended to hire an electrical engineering consultant to specify a transformer suitable for the Water Treatment Plant, and also suitable as a spare, at least on a temporary basis, for the Wastewater Treatment Plant, then procure the transformer.

The current plan is to tender the procurement of the transformer, to have available for use in event of failure of the aged existing transformer. The critical time path for acquiring a new transformer is the ordering, fabrication, and delivery process, due to supply chain issues. Current delivery estimate is 12 months. Having a transformer available in storage is a risk management measure against failure.

Attach Images: 22N.6.JPG

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Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This can affect the water treatment train which affects the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	The inability to treat water would be an adverse condition.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	5	This has been identified on the 10 year plan for some time, and the vulnerability recently emphasized
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	5	Electrical supply is key to operational performance
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	1	No significant Environmental Impact
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Some improvement in Aesthetics
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	0	None

Spring Pressure Zone Phase Out Master Plan

22N.7

Priority Score: **66.30**

Project Type: Study

Growth Related?: No

Estimated Useful Life (years): 50

Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High

Department: Public Works and Engineering

Staff Contact: Manager of Public Works

Location/Coordinates: Various

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 5,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 5,000	\$ 0	\$ 0

Costs Incurred to 2023 Year End \$ 19,000

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 24,000

Schedule:

Construction Start Date: 01/01/2024

Substantial Completion or purchase date: 07/31/2024

Funding Sources:

Water Rates \$ 24,000

Please Select

Please Select

Please Select

Please Select

Capital Reserve \$ 0

Description and Rationale:

During the 10th Street Bridge Project, it was determined that the replacement of the bridge and the subsequent temporary unavailability of the trunk watermains crossing it created a vulnerability in the water system, including susceptibility to low fire flows and inadequate supply and low pressures.

As a consequence a watermain replacement project called the "golden horseshoe" was undertaken. This project replaced various blocks of watermain and reconfigured how the Spring and Municipal Pressure Zones are fed from the east side, to the west side.

A study is proposed to lay out a series of future similar projects, dovetailed with other infrastructure work, to determine how to replace the aged Spring watermains with new mains.

Recall that the Spring pressure zone only exists as a separate lower pressure zone, because this older part of the system cannot support the higher pressures of the main Municipal pressure zone.

Additionally, the City had a formal watermain looping program in the capital budget, to address water quality issues in the early 2000s. Priority locations to reduce adverse results were completed in multiple years, and then this work was suspended in 2015 to use funds for specific watermain rehabilitation projects. Some looping opportunities remain, to address water quality concerns. These will be incorporated into the plan.

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Justification for Matrix Values**Score 0 - 5****Justification / Rationale for Rating**

People	How many people will be directly impacted by the project?	4	The entire Spring pressure zone will be positively affected with greater pressure, fire flows, and security of supply.
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	4	Watermain breaks carry some risk of Adverse Conditions, though this risk is mitigated by good procedures.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	Location is older main identified as such in the plan.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Would decrease watermain breaks in the area and increase fire flows and reduce likelihood of low pressure events
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	1	Little or no impact.
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Project has no aesthetic value or impact
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None.

SCADA Computer and Software Upgrade WTP

22N.10

Priority Score: 62.30

Project Type: Rehabilitation
 Growth Related?: No
 Estimated Useful Life (years): 50
 Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
 Department: Public Works and Engineering
 Staff Contact: Manager of Public Works
 Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 90,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 90,000	\$ 0	\$ 0

Description and Rationale:
 The City's remote locations (Beattie St, East Hill Booster Station, the reservoir and the Genoe Leachate monitoring system.) require PLC upgrades due to age (20 years), planned in 2024.

Costs Incurred to 2023 Year End

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 90,000

Schedule:
 Construction Start Date: 01/01/2024
 Substantial Completion or purchase date: 04/30/2024

Funding Sources:
 Water Rates \$ 90,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images: 22N.10.JPG

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the water source for the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	3	Network system failures can result in SCADA failures and an inability to treat and/or pump water
Legislation	Is the project required for legislative/regulatory compliance?	4	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	Yes. The SCADA is a high priority item in the 10-year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	This will ensure reliable operation of the SCADA system. It includes some programming changes to optimize treatment, as well.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	1	Not a direct link
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Not significant aesthetic impact
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	0	None

Replacement of Flocculation System

22N.12

Priority Score: **65.90**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 30,000	\$ 30,000	
Materials			
Equipment/Misc			
Contingency			
Total	\$ 30,000	\$ 30,000	\$ 0

Costs Incurred to 2023 Year End \$ 600,000

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 660,000

Schedule:
 Construction Start Date: 07/01/2023
 Substantial Completion or purchase date: 07/30/2025

Funding Sources:

Water Rates	\$ 660,000
Please Select	
Please Select	
Please Select	
Please Select	
Capital Reserve	\$ 0

Description and Rationale:
 The flocculation system is a treatment process, ahead of the filters, where coagulation chemical is mixed to pre-treat the water in such a way to allow the filters to remove particulate. It is a critical part of the process, and a flocculation failure requires the associated filter to be taken offline to prevent a formal Adverse condition.

The flocculation equipment (motors and mechanical components) has been operated for four decades, and are due for replacement. This is a multi-year program to replace aging infrastructure critical to the proper operation of the filtration process.

In addition to the planned work on all four flocculator motors, a failure of the walking beam flocculator for filter number one requires a substantial rebuild, subject of a report to committee in March 2023.

Current Status : Pursuing a local-source option, as well as the successor company to the original equipment supplier, out of New Jersey. Most economical and most timely option not yet determined.

Attach Images: 22N.12.JPG

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This can affect the water treatment train which affects the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	4	A flocculation failure can require the associated filter to be taken offline to prevent a formal Adverse condition.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	These have been identified on the 10 year plan for some time.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	3	A failure of a flocculator can cause that filter to be off line during high flows. This would decrease capacity by 25%, which would be a concern if concurrent with a wet-weather event.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	3	A link to poor raw water quality in wet weather events.
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Watermain Capital Reinvestment in Support of County 2nd Ave

23N.2

Priority Score: 68.70

Project Type: Rehabilitation

Growth Related?: No

Estimated Useful Life (years): 100

Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High

Department: Public Works and Engineering

Staff Contact: Manager of Public Works

Location/Coordinates: 2nd Ave E (Grey County Road 5)

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 80,000	\$ 800,000	\$ 10,000
Materials			
Equipment/Misc			
Contingency			
Total	\$ 80,000	\$ 800,000	\$ 10,000

Description and Rationale:

In 2024 it is proposed to replace the watermain on 2nd Ave East (Grey Road 5) in conjunction with road reconstruction planned by the county.

Recall that in the winter of 2014/2015 a short portion of pipe (80m) was replaced on this section since it had frozen. It is intended to preserve this section but that is a small portion of the total 505m.

Costs Incurred to 2023 Year End

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 890,000

Schedule:

Construction Start Date: 07/01/2023

Substantial Completion or purchase date: 12/31/2024

Funding Sources:

Water Rates \$ 890,000

Please Select

Please Select

Please Select

Please Select

Capital Reserve \$ 0

Attach Images: 23N.2.JPG

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	Typically just the area of a break, but excavating new asphalt is always best avoided. This is a significant trunk main.
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	4	Watermain breaks carry some risk of Adverse Conditions, though this risk is mitigated by good procedures.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	Locations are older main identified as such in the plan.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Would avoid watermain breaks in newly paved areas, and coordinate resources properly with County.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	1	No significant Environmental Impact
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	1	None

Ultraviolet Unit Replacement

23N.3

Priority Score: **63.50**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 300,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 300,000	\$ 0	\$ 0

Costs Incurred to 2023 Year End \$ 300,000

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 600,000

Schedule:
 Construction Start Date: 06/30/2023
 Substantial Completion or purchase date: 12/31/2024

Funding Sources:
 Water Rates \$ 600,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Description and Rationale:
 There are four ultraviolet disinfection units at the Water Treatment Plant. They have been in operation for 19 years (since 2003); one per filter.
 The manufacturer provided a letter in September 2021, stating this older generation model of the UV system will be retired from active support. The model itself was sold beginning in the year 2000 and has not been sold since 2006; having been supplanted by upgraded models. The City has been put on notice that parts for that model will become less attainable within the next 3 years.

It is intended to replace two units per year in 2023 and 2024.

The WTP Capital Asset Assessment undertaken in 2016 guides the City's 10-year Water Capital Plan. This plan assessed that these units were in good condition at that time (which was accurate). But there was no reasonable way to predict the manufacturers future plans for support at that time.

Attach Images: 23N.3.JPG

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This can affect the water treatment train which affects the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Failure to maintain the UV units would result in a deemed failure to disinfect, which would be an Adverse condition in the regulations.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	2	These were not identified on the 10 year plan. The obsolescence information was only recently received.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	3	Considerable impact of attempting to keep obsolescent units running with parts limitations. Also newer unit controls are better optimized with respect to energy use and dosage.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	2	Link to poor raw water quality in wet weather events. During high colour events optimized UV operation is important.
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	0	None

Water Distribution System New Valve Chambers

23N.4

Priority Score: 62.90

Project Type: New Asset
 Growth Related?: Yes
 Estimated Useful Life (years): 50
 Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
 Department: Public Works and Engineering
 Staff Contact: Manager of Public Works
 Location/Coordinates: 9th Ave E South of 32nd St E, 20th A

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 250,000		\$ 250,000
Materials			
Equipment/Misc			
Contingency			
Total	\$ 250,000	\$ 0	\$ 250,000

Description and Rationale:
 Between the various Pressure Zones of the City's water distribution system, there are interconnecting valve chambers.
 There are two potential valve chamber locations which are to be coordinated with new development of adjacent lands. At this time it is difficult to be sure of timing of the new development, but it considered most likely that two of these locations will be required in the short to medium term (ie, within 5 years) and a good probability that one will be required in 2024.

Costs Incurred to 2023 Year End

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 500,000

Schedule:
 Construction Start Date: 04/30/2024
 Substantial Completion or purchase date: 11/30/2026

Funding Sources:
 Water Rates \$ 500,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

The locations are (1) 9th Ave East South of 32nd St East by the Soccer Complex, (2) 20th Ave East South of 16th St East, East of Home Depot

Attach Images: 23N.4.JPG
 Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	4	Proper Operation of the Valve Chambers affects the entire pressure zone
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Failure to feed between zones can lead to low pressure and backflow events and reduced fire flow
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	1	N/A : New Assets to be coordinated with development
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Interconnecting valve chambers improve fire flows, as well as system circulation which improves chlorine residuals
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Possible Contributions from Development Charges
Environment	Does the project address needs impacted by climate change?	1	No significant Environmental Impact
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	0	None

Water Distribution System SCADA 23N.5

Priority Score: **68.80**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Distribution System

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering	\$ 30,000		
Design or Engineering			
Communication / Signage			
Construction / Contractor		\$ 170,000	
Materials			
Equipment/Misc			
Contingency			
Total	\$ 30,000	\$ 170,000	\$ 0

Costs Incurred to 2023 Year End

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 200,000

Schedule:
 Construction Start Date: 01/01/2024
 Substantial Completion or purchase date: 04/30/2025

Funding Sources:
 Water Rates \$ 200,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Description and Rationale:

The City of Owen Sound, due to its topography, has a relatively complex Water Distribution with six (6) pressure zones, two (2) booster pumping stations, and many interconnecting control valve chambers between the zones.

The system pressures, flows, and chlorine residuals are monitored at three (3) locations only; the Water Treatment Plant, the East Hill Booster Pumping Station, and the Beattie St Booster Station.

Consequently, when adverse events (low chlorine residuals, low pressures, watermain breaks etc) occur, it can be very difficult to know the extent and nature of the impact, and (for instance) to know exactly where a watermain break is located. Additional points of monitoring would permit better control and prevention of adverse situations.

This program can help identify leakage locations, to guide projects to reduce leakage

The intention is to retain a consultant to work with a system integrator and the City's Water and IT departments to specify monitoring equipment and locations, and to work with City staff to install them.

Attach Images: 23N.5.JPG

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	Issues with the distribution system can affect the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Increasing the level of operational monitoring of the distribution system will permit rapid intervention and help prevent adverse scenarios.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act (specifically Adverse Condition provisions of the regulation)
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	These have been identified on the 10 year plan for some time.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Increasing the level of operational monitoring of the distribution system will greatly improve troubleshooting of watermain breaks and other adverse events.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	No
Environment	Does the project address needs impacted by climate change?	1	No significant Environmental Impact
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	1	None

Facility Maintenance i/c Roof

24N.2

Priority Score: **63.40**

Project Type: Maintenance
Growth Related?: No
Estimated Useful Life (years): 0
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment

Cash Flow Projection:	2024	2025	2026 +
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor			
Materials			
Equipment/Misc	\$ 15,000	\$ 90,000	\$ 215,000
Contingency			
Total	\$ 15,000	\$ 90,000	\$ 215,000

Description and Rationale:
 A roof needs study undertaken for the WTP and WWTP in 2020 outlined a roof replacement program going forward. In 2024 roof rehab is proposed at the WTP including the low lift building shown.
 The multi-year plan shown on the 10-year capital plan was derived from the above mentioned 2020 assessment

Costs Incurred to 2023 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 320,000

Schedule:
 Construction Start Date: 01/01/2024
 Substantial Completion or purchase date: 12/31/2026

Funding Sources:
 Water Rates \$ 320,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images:

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the water treatment for the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Roof failure could affect water quality and staff safety
Legislation	Is the project required for legislative/regulatory compliance?	4	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	5	This is identified in the 10-year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	3	Ultimately roof failure could cause leakage and damage to important treatment components; equipment and mechanical and electrical.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Not a direct link
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Not significant aesthetic impact
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	1	None

Water Shop Building Roof Extension

24N.3

Priority Score: **43.90**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 30
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: Moderate
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Shop (1900 20th St E)

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 150,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 150,000	\$ 0	\$ 0

Description and Rationale:

The existing water shop building at the Public Works facility was constructed in 2001. It houses the Water Distribution staff, equipment and material.

There is a loading dock section located on the east side of the building which houses various fittings and material and, if covered, would be capable of housing and better protecting fittings and any stored equipment.

The intent is to extend the roof and the rear and side walls, at minimum, and ideally provide full enclosure with an overhead door.

Costs Incurred to 2023 Year End

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 150,000

Schedule:

Construction Start Date: 05/31/2024

Substantial Completion or purchase date: 07/31/2024

Funding Sources:

Water Rates \$ 150,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images: 24N.3.JPG

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	1	Primarily the staff will have more room to enclose materials and equipment for protection from the elements
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	2	The risks to the staff from handling heavy fittings in icy conditions in that area are a large part of the risk.
Legislation	Is the project required for legislative/regulatory compliance?	3	This will improve compliance with health and safety
Asset Management	Is the project a high priority for replacement in the asset management plan.	1	Enhancement to existing asset
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	This would reduce weathering on the larger fittings and pipe sections, and improve efficiency and allow for equipment to be properly stored in the existing space. Currently the bays in the existing shop are fully utilized with other equipment stored between the bays.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Water Rates
Environment	Does the project address needs impacted by climate change?	1	Little or no impact.
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	3	Project does have a minor aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A: Core Service
Public Input	Has the project been identified through public engagement?	1	None.

Leak Detection Survey

24N.5

Priority Score: **70.80**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 0
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: Very High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Distribution System

Cash Flow Projection:	2026	2027	2028
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor			
Materials			
Equipment/Misc	\$ 15,000		
Contingency			
Total	\$ 15,000	\$ 0	\$ 0

Description and Rationale:
 The City undertakes a leak detection survey of the water distribution system every 3 years.
 It has been established that the 3 year interval is optimal in terms of discovering new leaks in a timely manner.

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 15,000

Schedule:

Construction Start Date: 01/01/2026

Substantial Completion or purchase date: 12/31/2026

Funding Sources:

Water Rates \$ 15,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images:

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	The entire City distribution system is surveyed
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Leaks left undetected can fail suddenly and could be a risk to health and safety and the delivery of drinking water to the customer
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	5	This program has been identified on the 10 year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Failure of a major watermain could result in loss of service to a portion of the community
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Not relevant to this project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Confined Space Entry Equipment

24N.6

Priority Score: **70.40**

Project Type: Replacement
Growth Related?: No
Estimated Useful Life (years): 0
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: Very High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water + Wastewater

Cash Flow Projection:	2024	2025	2026
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor			
Materials			
Equipment/Misc	\$ 10,000		
Contingency			
Total	\$ 10,000	\$ 0	\$ 0

Description and Rationale:

The City Water and Wastewater departments have confined space entry equipment, including tripod, winch, harnesses, and associated equipment. This equipment is required in order to safely enter confined spaces in accordance with the regulations.

In 2018 this equipment was standardized across the Water and Wastewater groups.

In 2024, some of the equipment will require updating.

Costs Incurred to 2023 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 10,000

Schedule:

Construction Start Date: 01/01/2024

Substantial Completion or purchase date: 12/31/2024

Funding Sources:

Water Rates \$ 10,000

Please Select

Please Select

Please Select

Please Select

Capital Reserve \$ 0

Attach Images:

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	3	Water and Wastewater Staff
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Confined Space Entry, done improperly, with improper equipment, kills a number of people in Ontario yearly.
Legislation	Is the project required for legislative/regulatory compliance?	5	Occupational Health and Safety Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	5	Identified in Asset Management Plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	5	Confined Space Entries will not be possible.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Not Applicable
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	Not Applicable
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	Not Applicable
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	Core Service
Public Input	Has the project been identified through public engagement?	1	None

Water Meters Replacement Tender 25N.1

Priority Score: **56.60**

Project Type: Replacement
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Various

Cash Flow Projection:	2025	2026	2027
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 3,500,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 3,500,000	\$ 0	\$ 0

Costs Incurred to 2024 Year End \$ 0

Impact on Operating Budget \$ 0 \$ 0 \$ 0

Total Project Budget: \$ 3,500,000

Schedule:
 Construction Start Date: 01/01/2025
 Substantial Completion or purchase date: 12/31/2025

Funding Sources:
 Water Rates \$ 3,500,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Description and Rationale:
 Many of the City's residential water meters, representing most of the meters, were first installed in the early 1990's. The capital plan has, for some time, had a "placeholder" recognition that at some point a large-scale replacement would be needed. However, it has become apparent that this project should be implemented as soon as 2025, for the following reasons:

- a-There are an increasing number of meters requiring maintenance.
- b-As meters get older they have greater potential for decreased accuracy especially on the lowest end of the flow range.
- c-There are now opportunities for improved technology which would:
 - 1 Decrease reading effort and costs
 - 2 Open up options for a more frequent reading schedule
 - 3 Make tracking water losses more accurate, especially for homes running water to prevent freezing in winter
- d-A larger scale project should reduce unit costs, compared to a more incremental approach.

Attach Images: 25N.1.JPG

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	Most of the City's residential customers will be affected.
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	2	Due to their locations, accessing many water meters to obtain readings poses a health and safety risk to staff.
Legislation	Is the project required for legislative/regulatory compliance?	3	Ability to meter all locations is key to system financial sustainability.
Asset Management	Is the project a high priority for replacement in the asset management plan.	5	Many water meters are approaching or have reached the end of their useful life.
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Increased operating costs are currently realized due to the difficulty reading the meters, and possible lost revenue.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	No opportunity for partnership or grant funding. Funded through water rates.
Environment	Does the project address needs impacted by climate change?	1	Little or no impact on environment as a result of the project.
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	The Project does not eliminate an existing public space.
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	Project does not impact the aesthetic value of the impacted asset.
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	Project supports core service delivery.
Public Input	Has the project been identified through public engagement?	0	Has not been identified by the public.

Water System Model Update & Training

26N.1

Priority Score: **59.60**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2026	2027	2028
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 15,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 15,000	\$ 0	\$ 0

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 15,000

Schedule:
 Construction Start Date: 01/01/2026
 Substantial Completion or purchase date: 12/31/2026

Funding Sources:
 Water Rates \$ 15,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Description and Rationale:
 The City's Engineering Department maintains a working computer model of the water distribution system
 This is typically used to assess the impact of proposed changes, whether permanent, or temporary due to construction.
 It is an invaluable too, but requires updates as the water system, and software, changes.

Attach Images: water model.jpg

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	Accurate modeling of the water system is important to ensure the impact of changes on fire flows in the City are understood.
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	3	There is some probability of a modeling error resulting in an issue with fire flows.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	These are identified on the 10 year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	3	A failure to accurately assess fire flows can result in mischaracterization (ie colour coding) of individual hydrants, which could cause the fire department to select the "wrong" hydrant.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Wet weather flows are now more frequent but this is not a relevant factor for this project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Condition Assessment Municipal Reservoir

26N.2

Priority Score: **73.30**

Project Type: Maintenance
Growth Related?: No
Estimated Useful Life (years): 8
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: Very High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Municipal Reservoir 8th St

Cash Flow Projection:	2026	2027	2028
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 20,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 20,000	\$ 0	\$ 0

Description and Rationale:

As per the City's DWQMS Operational Plan, the reservoir is due for inspection every 8 years. This is completed using a remotely operated vehicle to inspect the inside of the reservoir, without having to drain it. The walls, columns, and floor are inspected for any abnormalities and a report is provided on the overall condition.

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 20,000

Schedule:

Construction Start Date: 01/01/2026

Substantial Completion or purchase date: 12/31/2026

Funding Sources:

Water Rates \$ 20,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images: Res 1.jpg; Res 2.jpg; Res 3.jpg

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the primary water reservoir which can affect the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	If failure led to contamination of the drinking water this could be characterized as a serious public health and safety risk.
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	3	The work is identified on the 10-year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	5	Reservoir issues resulting in low chlorine residual or high turbidity could result in Boil Water Advisories
Financing	Can the cost of investment be leveraged or are there partnership funds available?	2	Reserves
Environment	Does the project address needs impacted by climate change?	1	Wet weather flows are now more frequent but this is not a relevant factor for this project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Valve Replacements 2026

26N.3

Priority Score: **64.80**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2026	2027	2028
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 40,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 40,000	\$ 0	\$ 0

Description and Rationale:

There are a number of valves and components associated with valves such as actuators in the water plant that range in size and age from fairly new to 55 years old (original).

For proper operation of the plant, these valves need to open and close on a very frequent basis, to prevent backflow, control flow or pressure for proper operation of the plant process. Valve replacements usually are incorporated into larger scale projects such as piping rehabilitation or can be isolated to a particular pipe.

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 40,000

Schedule:

Construction Start Date: 01/01/2026

Substantial Completion or purchase date: 12/31/2026

Funding Sources:

Water Rates \$ 40,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images: Valve 1.jpg; Valve 2.jpg; Valve 3.jpg

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the Water Treatment Process which can affect the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Valve failure could be a risk to health and safety and the delivery of drinking water to the customer
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	These are identified on the 10 year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	3	Failure of a significant valve in the water treatment plant could reduce water treatment production.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Wet weather flows are now more frequent but this is not a relevant factor for this project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Piping Rehabilitation WTP 2026

26N.4

Priority Score: **68.80**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2026	2027	2028
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 250,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 250,000	\$ 0	\$ 0

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 250,000

Schedule:
 Construction Start Date: 01/01/2026
 Substantial Completion or purchase date: 12/31/2026

Funding Sources:
 Water Rates \$ 250,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Description and Rationale:
 Due to aging piping in the facility, including original piping from the late 1960's, there are a number of pipes that are rusting to the point of needing replacement.
 Repainting has been considered in the past, but is not an option due to lead content in the paint which would require full lead paint abatement removal job, an expensive option for old pipe. Additionally wall thickness of the older pipe has become reduced by long term corrosion.
 Replacement with stainless steel piping is therefore the preferred option.
 Recall that several stainless piping upgrades have been completed in the past under different projects in 2005, 2013 (emergency repair), and 2020.

Attach Images: piping 1.jpg; piping 2.jpg
 Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the Water Treatment Process which can affect the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Pipe failure could be a risk to health and safety and the delivery of drinking water to the customer
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	These are identified on the 10 year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Failure of a major piping system in the water treatment plant would be a designated emergency and could stop water treatment production.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Wet weather flows are now more frequent but this is not a relevant factor for this project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Instrumentation Replacement

26N.5

Priority Score: **64.80**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 15
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2026	2027	2028
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 30,000		\$ 30,000
Materials			
Equipment/Misc			
Contingency			
Total	\$ 30,000	\$ 0	\$ 30,000

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 60,000

Schedule:
 Construction Start Date: 01/01/2026
 Substantial Completion or purchase date: 12/31/2026

Funding Sources:
 Water Rates \$ 60,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Description and Rationale:
 Instrumentation within the facility ranges from computer related components to analog input/output cards, digital input and output cards, PLC processors, network cards, network cabling, fibre optics, power supplies, relays, and backup power (UPS).
 These devices are important for meeting regulatory requirements and keeping equipment within its lifecycle is critical. To change out everything at the same time can be a challenge, so staged approaches to change out components is a preferred option. The main Plant PLC was upgraded in 2012, including a number of associated components. For the continued ongoing success with the computer architecture, these components will need to be replaced as needed.

Attach Images: Instrumentation.jpg
 Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the Water Treatment Process which can affect the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Instrumentation failure could be a risk to health and safety and the delivery of drinking water to the customer
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	These are identified on the 10 year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	3	Failure of a significant instrument could reduce water treatment production.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Wet weather flows are now more frequent but this is not a relevant factor for this project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Pump Control Replacements

26N.6

Priority Score: **68.80**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 15
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2026	2027	2028
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 200,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 200,000	\$ 0	\$ 0

Description and Rationale:

When pumps are called to start, there are three ways this can happen; one is "across the line", which means the motor starts immediately at full 600 Volt, and instantly goes to full speed, the second is a Soft Start, which slowly increases the pump to 100% speed, and shuts it down in the same fashion, then there are Variable Frequency Drives (VFD's) that can run in a range between minimum and maximum speed during operation. VFD's are by far the most efficient energy-users, and also are much easier on a piping system (ie water hammer)

Some of the pump control systems still require some upgrades to either Soft Starts or Variable Frequency Drives. These pump control systems offer electrical protection to the starter and the motor and help prolong the life of the motor.

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 200,000

Schedule:

Construction Start Date: 01/01/2026

Substantial Completion or purchase date: 12/31/2026

Funding Sources:

Water Rates \$ 200,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images:

pump control.jpg

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the Water Treatment Process which can affect the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Pipe failure due to water hammer could be a risk to health and safety and the delivery of drinking water to the customer
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	These are identified on the 10 year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Failure of a major piping system in the water treatment plant would be a designated emergency and could stop water treatment production.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Wet weather flows are now more frequent but this is not a relevant factor for this project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Repalcement Sluice Gates 2026

26N.7

Priority Score: **68.80**

Project Type: Rehabilitation
Growth Related?: No
Estimated Useful Life (years): 50
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Water Treatment Plant

Cash Flow Projection:	2026	2027	2028
Studies			
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor	\$ 350,000		
Materials			
Equipment/Misc			
Contingency			
Total	\$ 350,000	\$ 0	\$ 0

Description and Rationale:

Sluice gate valves are used generally for isolation of large treated or raw water wells. These valves are normally bolted to a divider wall between two wells, and only closed for maintenance or inspection purposes.

The sluice gates all through the plant are original (late 1960's), except for one that was replaced in 2020, which was the main valve that allows water into the plant from Georgian Bay. These valves have exceeded their expected useful life and should be replaced on a priority basis.

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 350,000

Schedule:

Construction Start Date: 01/01/2026

Substantial Completion or purchase date: 12/31/2026

Funding Sources:

Water Rates \$ 350,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images:

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the Water Treatment Process which can affect the entire City
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	5	Sluice gate failure could be a risk to health and safety and the delivery of drinking water to the customer
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	4	These are identified on the 10 year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	4	Failure of a sluice gate in the water treatment plant would be a designated emergency and could stop water treatment production.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves
Environment	Does the project address needs impacted by climate change?	1	Wet weather flows are now more frequent but this is not a relevant factor for this project
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No public spaces adversely impacted
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	2	No adverse impact on aesthetic value
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	N/A : Core Service
Public Input	Has the project been identified through public engagement?	1	None

Water Rate Study

26N.8

Priority Score: **54.60**

Project Type: Study
Growth Related?: No
Estimated Useful Life (years): 0
Future Replacement Cost: Enter Replacement Cost & Year of Replacement

Priority Level: High
Department: Public Works and Engineering
Staff Contact: Manager of Public Works
Location/Coordinates: Enter Location Info/Coordinates

Cash Flow Projection:	2026	2027	2028
Studies	\$ 50,000		
In House Engineering			
Design or Engineering			
Communication / Signage			
Construction / Contractor			
Materials			
Equipment/Misc			
Contingency			
Total	\$ 50,000	\$ 0	\$ 0

Description and Rationale:
 The Water Rate Study and associated Financial Plan are regular scheduled requirements for the City to update its Drinking Water Licence and Drinking Water Works Permit.

The approved Financial Plan is one of the criteria to renew these documents, in addition to:

- Accredited Operating Authority
- Permit to Take Water

Costs Incurred to 2025 Year End \$ 0

Impact on Operating Budget \$ 0

Total Project Budget: \$ 50,000

Schedule:

Construction Start Date: _____

Substantial Completion or purchase date: _____

Funding Sources:

Water Rates \$ 50,000
 Please Select
 Please Select
 Please Select
 Please Select
 Capital Reserve \$ 0

Attach Images:

Opens the attachment panel. Double click files to view images attached. Maximum Size: 10MB

Justification for Matrix Values

Score 0 - 5

Justification / Rationale for Rating

People	How many people will be directly impacted by the project?	5	This affects the entire system
Health and Safety	What is the risk to the health and safety of the public or Staff if the project does not proceed?	2	This is a regulatory requirement, ultimately a lack of a financial plan could jeopardize the system
Legislation	Is the project required for legislative/regulatory compliance?	5	Safe Drinking Water Act
Asset Management	Is the project a high priority for replacement in the asset management plan.	5	It is a recurring requirement in the 10-year plan
Operational Performance	If the project proceeds (or fails to proceed), what will be the impact on operational performance? Comment on any impact on operating costs, staff time and maintenance.	2	Not particularly applicable to operational performance unless a lack of funding arose.
Financing	Can the cost of investment be leveraged or are there partnership funds available?	1	Reserves/Water Rates
Environment	Does the project address needs impacted by climate change?	1	N/A
Socio-Economic Factors	To what degree does the project support diversity and inclusion Initiatives?	1	No adverse impact on public spaces
Aesthetic Value	To what degree is the aesthetic value of the asset improved?	1	N/A
Strategic Plan	Does the project help to meet a Key Result in the Strategic Plan?	1	Core Service
Public Input	Has the project been identified through public engagement?	1	None