Corporate Asset Management Plan

2024

Per O. Reg. 588/17:
ASSET MANAGEMENT PLANNING FOR MUNICIPAL INFRASTRUCTURE

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Important Terms

Asset replacement value — The total cost to completely replace the asset as a single expenditure.

Actual re-investment rate — the current actuals for what the City is investing annually in an asset through the capital budget process.

Target re-investment rate — The proposed annual investment needed to fully maintain the asset to current levels of service. Based on total replacement cost, age, condition, level of service, and industry re-investment recommendations

Executive Summary

Asset Management, by design, is a process improvement activity where the City can begin to make decisions on asset re-investment based on current replacement value, age, condition, risk priority, and levels of service. This asset management plan is the first time that the City has inventoried its assets consistently, Division-by-Division.

The City's asset portfolio and target re-investment rates are summarized below:

- The City of Sarnia has a total estimated asset replacement value of: **$4.3 billion**
- The actual re-investment rate for 2024 is: **1.4% or $60,211,440** (2024 Capital + LAWSS Capital + Fleet Reserve)
- The target re-investment rate (annual) is estimated at: **1.8% = $78.9 million**

The City should focus on the annual target and continue to invest in capital or reserve funds for large infrastructure projects, facility replacements, and growth.

The asset management plan will continue to evolve with a focus on data improvement and data maintenance to fill existing data gaps. Future plans will build on improvements with GIS, with the ability to analyze, model, and map individual assets, rather than categories of assets currently.

Disclaimers

- Where possible, the inventory of assets from each division and corresponding replacement values were inflated to 2023 dollars.
- Current replacement values identified in the plan should not be used specifically for project estimates or procurement as they are largely based on per unit rates that factor in average costs. Like always, projects vary by circumstance.
- Replacement values were calculated using a combination of original installation costs, unit costs from recent construction projects, asset-specific costing, program estimates, and inflationary indices such as the non-residential building construction price index.
- The target re-investment rates can be offset by grant funding, whenever possible.
- This plan and target reinvestment is based on maintaining current levels of service. Proposed levels of service will be considered with the next variation of the plan to be submitted in 2025. This will include public consultation per O. Reg. 588/17.

City of Sarnia – Background

The City of Sarnia has a population of more than 72,000 and is considered a small to mid-sized city within the province of Ontario. The City is the most populated municipality within the County of Lambton, acting as a commercial, industrial, and employment centre. The City includes both urban and rural areas within its boundaries, and neighboring municipalities include rural and small-town settings.

Assets owned and operated by the City of Sarnia are categorized into the City's management divisions for budget and ownership considerations:

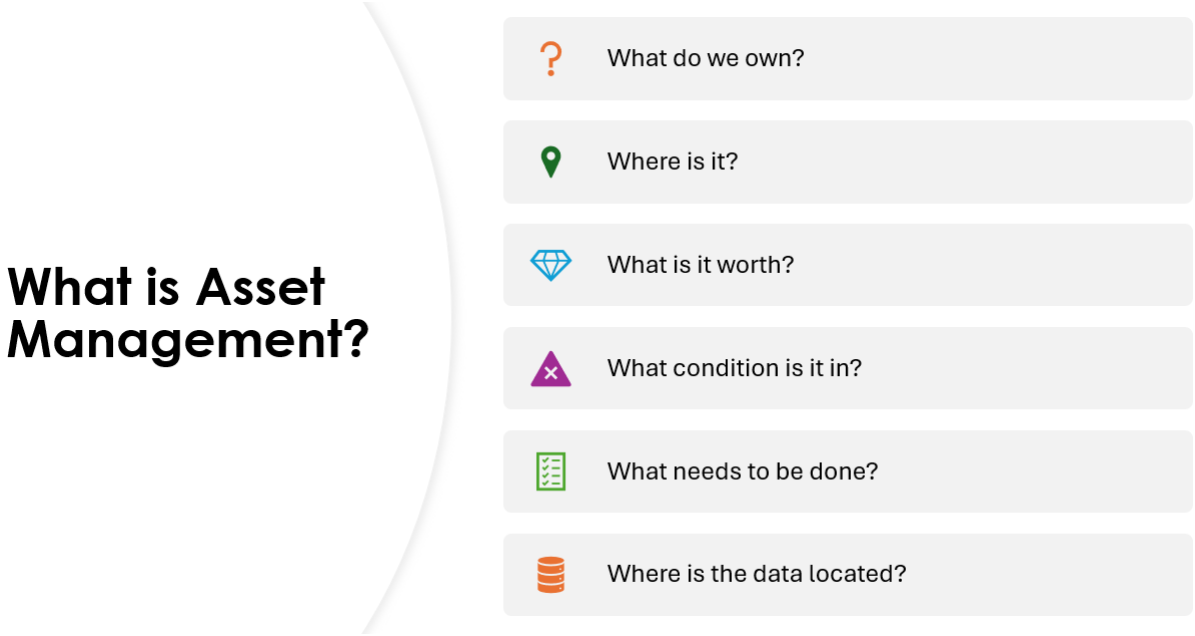
- Corporate Services Division/Administration
- Community Services Division
- Engineering and Operations Division
- Fire and Rescue Service
- Sarnia Police Service Facility

The Sarnia Police Service manages its own assets through the City of Sarnia Police Services Board as set out in Section 31 of the *Ontario Police Services Act*. The police facility remains an asset of the City, whom also retains responsibility for ensuring the facility is adequate and effective for the provision of police services. As such, only the City's Police Service facility is included in this plan.

The City's largest infrastructure partners include the Province of Ontario, Federal agencies, the County of Lambton, and the Lambton Area Water Supply System.

- The Province of Ontario owns two major highways that intersect in Sarnia: Highways 40 and 402 connect to the international border crossing at the Bluewater Bridge.
- The County of Lambton owns and operates a portion of arterial roads and related infrastructure through Sarnia.
- The Lambton Area Water Supply System (LAWSS) provides water to the City of Sarnia and neighboring municipalities and is operated by a Joint Board of Management. This partnership owns and operates a water treatment plant, storage, booster stations, and 250 km of water mains.

What is Asset Management?



Additionally, data management entails:

- Where is asset data stored?
- How complete is the asset data? and
- How is the asset data maintained?

It should be noted that asset management is not a financial exercise using past financial data and historical asset values. There are limitations to existing finance data as it is a legacy database designed for tangible capital asset inventories, pooled assets, and is not complete for individual asset management modelling and decision making. The Finance database focusses on historical costs and amortization versus current replacement costing.

Legislative Summary and Timeline

Asset Management in Ontario is guided by Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure made under the *Infrastructure for Jobs and Prosperity Act, 2015*.

O. Reg. 588/17 has requirements for Strategic Asset Management Policies and Asset Management Plans.

Strategic Asset Management Policies were required in 2019 and municipalities shall update their policy every 5 years.

Asset Management (AM) Plans are to be developed in a phased approach:

- AM Plan for Core Infrastructure (water, wastewater, stormwater, roads, bridges and culverts) (completed in 2022, included in 2024)
- AM Plan for All Municipal Assets (2024), including:
    - Funding strategy for current levels of service
- AM Plan incorporating proposed levels of service, lifecycle management and financial strategy for All Municipal Assets (2025)
- Requirement for Public posting and consultation
- Annual review by municipal council (July)
- Review and update Policy and Plan every five years (min)

Asset Management Steering Committee

A Terms of Reference was drafted in 2022 to establish a Corporate Asset Management Steering Committee. The purpose of this committee is to:

1. Guide the Corporate AM Strategy and Framework development
2. Guide public input and consultation as required under O. Reg 588/17
3. Guide the direction of the Asset Management Working Group (allocate staff and budget) in the development of AM inventories, data collection and inputs that are required for a comprehensive AM Plan
4. Guide the development of AM tools and software
5. Guide the integration of AM plans into the corporate budget cycle and long-term financial plans
6. Guide the integration of AM into corporate strategies, Master Plans, Official Plans, and approaches to emergency planning, climate change, etc.

Asset Management Steering Committee membership includes:

- Asset Management Specialist
- Manager of Design and Infrastructure
- General Manager, Engineering & Operations
- General Manager, Community Services
- General Manager, Corporate Services
- Fire Chief, Fire and Rescue Services
- Treasurer
- Corporate Administrative Officer (as needed)

Asset Management Working Group

A Terms of Reference was drafted in 2022 to establish an Asset Management Working Group. The purpose of the Asset Management Working Group (Committee) includes the following:

1. Provide input into the Corporate Asset Management Policy and Plans
2. Build asset inventories for each respective Department/Division
    a. Collect all data and inputs required for inventory
    b. Coordinate with Asset Management Specialist to determine needs for condition assessments, GIS data, software, priority setting, etc.
    c. Contribute to asset inventories that are consistent across the corporation (for reporting processes)
3. Update all stakeholders on the status of the Department/Division asset inventory
4. Contribute to the development of asset priority matrix, software utilization, and other budget tools
5. Utilize the tools above to formalize capital requests in the annual budget cycle (in the future)
6. Incorporate asset management plans and inventories into all corporate strategies, Master Plans, Official Plans, etc.
7. Provide input into public and council consultation as required under O. Reg 588/17
8. Provide recommendations to the Corporate Asset Management Steering Committee

The Asset Management Working Group members are from each City Division:

- Asset Management Specialist
- Manager of Design and Infrastructure
- Representatives from Engineering & Operations
- Representatives from Community Services

- Representatives from Corporate Services
- Deputy Fire Chief, Fire and Rescue Services

Asset Management Methodology

The City of Sarnia, over decades, has used numerous processes of tracking and keeping inventories of assets. These included internal departmental databases (both hard copy and electronic spreadsheets), project files, operational plans, master plans, Finance Department databases, GIS; and inventories retained by internal knowledge, word of mouth, and long-term employees. Over time, this has made it difficult to centralize data for asset management and long-term planning.

The City is actively developing its capacity to centralize asset information through GIS and Cityworks. Cityworks has the capability to model, predict lifecycle needs, and assess infrastructure to make data-driven decisions.

Since 2022-2023, an asset management work plan was established to work with each division to better gauge internal departmental databases and other data sources for completeness and reliability. During this process, an asset management lens was applied to identify data that is accurate, complete, and robust and to put plans in place to improve these inventories over time. Data improvement plans are a major component of this asset management plan. This coincides with the City's investment in GIS and Cityworks. However, data improvements and inventory credibility will improve only with time, proper governance, and routine data maintenance.

Corporate Methodology for Asset Management Inventories:

1. Meet with Division Representatives from Working Group
2. Develop a service to asset matrix to identify assets within each Division and data sources and subsequent storage locations
3. Review data sources (when available) and compile asset tables
4. Develop high-level asset summaries, consistent across the corporation that are aligned with legislative requirements
5. Compile Asset Management Plan

Future Steps:

1. Align Asset Management Plan with budget and capital planning
2. Implement data improvement plans
3. Full integration with GIS

4. Continue Asset Management development per O. Reg. 588/17 including identifying proposed levels of service and public consultation into 2025

Data Evaluation

Data collected as part of this asset management plan have been evaluated to inform decision makers and divisions on data maturity and completeness. This helps to asses our confidence in the plan and the recommendations overall.

Data Evaluation	**Evaluation Criteria**
A	Good asset management attribution exists. Data has been assessed, maintained, and includes attribute details for asset management. Maintenance Required.
B	Asset management attribution needed; core inventory exists but lacking key attribute details for asset management. Data improvement required.
C	Basic inventory only. Data improvement required.
D	Very limited asset inventory. Data improvement required.

The table below provides examples of key attributes used for asset management.

Attributes	**Examples**
Asset Type	Park Shelter
Installation Year (Age)	1972 (52)
Condition Score (1-100) (Very Poor, Poor, Fair, Good, Excellent)	48 (Fair)
Lifecycle Status	Active
Estimated Service Life	60 years
Estimated Replacement Cost (+Date Stamp)	$500,000 (estimated in 2024)
Estimated Replacement Date or Year	2032
Business Risk Exposure (+Date Stamp)	Medium (evaluated in 2001)
Other Asset Details	Specs, Sizes, Material, etc.

Data improvement plans are a major component of this asset management plan. This coincides with the City's ongoing investment in GIS and Cityworks. However, data improvements and credibility of inventory improve with time and data governance.

Data Attributes and Re-investment Rates

The attributes, above, help us to identify key re-investment factors such as age, estimated service life, estimated replacement date, replacement costs, etc. However, most of the City's asset inventories are missing some, or most of this critical information. As such, re-investment rates can be estimated based on total replacement costs, lifespan of assets, condition, and risk (if available). The 10-year capital plan also provides insight into capital need to help identify re-investment rates. Re-investment rates can also be proposed using sources such as the Canadian Infrastructure Report Card (CIRC, 2016). Data improvement of these key attributes will make re-investment rates much more accurate over time.

City of Sarnia Summary

The City of Sarnia Summary provides a broad overview of all City assets across all divisions.

Asset Inventory

All divisions:

1. Corporate Services/Administration
2. Community Services
3. Engineering and Operations
4. Fire and Rescue Service
5. Sarnia Police Service (Facility)

Data Evaluation

Overall, the City's asset inventories are rated B-C. They range from limited asset inventory data to good attribution within GIS.

Asset Replacement Values

The City of Sarnia's total asset replacement value is $4.3 billion.

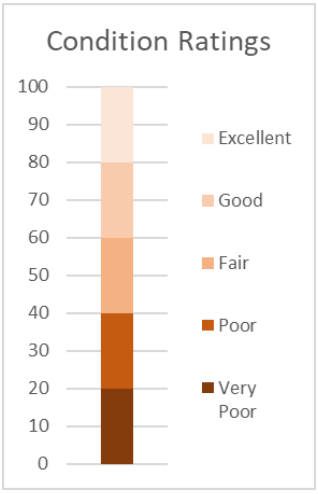
Corporate Services/Administration	$94.6 million
Community Services	$299.6 million
Engineering and Operations	$3.8 billion
Fire and Rescue Service	$48.9 million
Sarnia Police Service (Facility)	$60 million
Total	**$4.3 billion**

Age and Condition Metrics

Most of the City's infrastructures assets were built during the post-war boom period, from the 1950s to 1970s, and are now approaching the end of their design life.

Most of the City's assets, with known conditions, are in the Poor-Fair-Good range (30-70). Few assets or asset categories are in the excellent range. Likewise, few assets or asset categories fall within the very poor range.

Assets are rated using the following scale:



Risk Priority Discussion

The City's asset categories (not individual assets) were collectively analyzed based on low, medium, and high-risk priority ratings. This was based on the probability of failure and impact of failure on services. Priority risk ratings are applied to each category in the asset inventory tables below (Risk Priority). Future data improvement plans include working to add individual risk ratings to assets, not just asset categories, and developing a robust risk framework.

Probability	Impact: Low	Impact: Med	Impact: High
High	Low	Med	High
Med	Low	Med	Med
Low	Low	Low	Low

Current Re-Investment Rate

1.4% or $60,211,440

Current Re-Investment Rate = Current Capital Spending ÷ Total Replacement Cost

Target Re-Investment Rate

1.8% or $78,928,759 annually (towards Capital and Asset Management Reserve)

Target Re-Investment Rate = Annual Capital Need ÷ Total Replacement Cost

2024 Operating Budget

The City's 2024 Operating Budget was $179,594,609.

2024 Capital Budget

The City's 2024 Capital Budget (including LAWSS Capital and Fleet Reserve), was $60,211,440.

The 2023 Capital Budget was $48,546,738.

The 2022 Capital Budget was $53,266,577.

LAWSS Capital and Fleet Reserve included in all amounts.

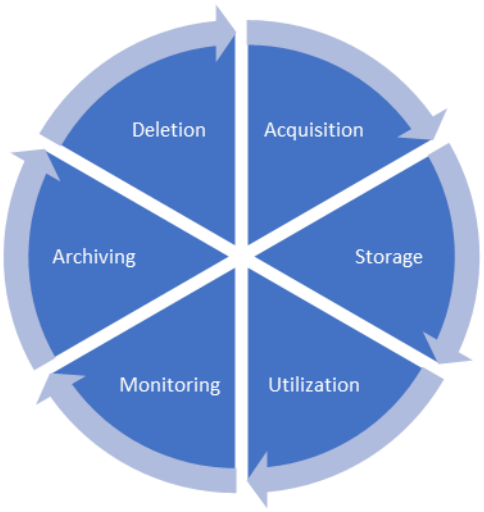
10-Year Capital Plan

As of 2024, there are a number of projects for consideration in the 10-year Capital Plan:

- The total funded project costs equal $430,697,923
- Unfunded projects equal $251,810,600
- Total funded and unfunded project costs equal $682,508,523

Data Governance and Improvement Plan

1. A city-wide asset data governance SOP should be developed and finalized including how all assets move through the asset data cycle, and specific responsibilities of each Division and Department.



2. All Divisions should move their inventories to GIS/Cityworks to create a centralized database for all corporate assets (if possible).
3. Risk ratings should be applied to individual assets, rather than categories of assets, within GIS. This should include a risk framework for all categories of assets.
4. A workplan should be set up specific to Data Improvement for each Division.
5. A target date for key attributes to be populated in GIS should be set by 2026.
6. A key responsibility of corporate-wide asset management will be to perform routine checks on asset data, perform routine gap analysis, and set plans for data improvement to ensure credibility and consistency.
7. Corporate-wide asset management should be closely linked with the City's Geospatial Team.
8. Capital, finance, and purchasing processes should be linked to asset management for inventory and asset attribute purposes.

Current Level of Service

Indicators of current level of service for each asset category were assessed using the following criteria:

1. For core assets: Tables 1-5 per O. Reg. 588/17 (Water Assets, Wastewater Assets, Stormwater Management Assets, Roads, Bridges and Culverts)
2. For all other assets: descriptions and metrics established by the municipality. To rate indicators of level of service, the following table was adopted from Asset Management Ontario (AMONTario, 2024).

Level of Service - Criteria Ratings	
VERY GOOD	Fully meets or exceeds standards.
GOOD	Meets standards.
FAIR	Meets standards with some limitations, exceptions or minor deficiencies.
POOR	Only partially or somewhat meets standards or only meets standards in some circumstances.

Performance of Asset Category

Indicators of performance were divided into the categories, outlined in the table below, as adopted from Asset Management Ontario (AMONTario, 2024):

Operational Functionality	Is the asset or asset category functioning to meet operational needs?
Capacity to Meet Demands	Is the asset or asset category able to meet service demand?
Operational Resiliency	Is the asset or asset category resilient to interruptions with limited impact to service?
Environmental Resiliency	Is the asset or asset category resilient to environmental factors such as storms, extreme heat, climate change, flooding, etc.?

Asset and asset category performance is scored based on the criteria outlined in the table below.

Performance - Current Likelihood of Failure				
Very Unlikely Estimated less than 10%	Unlikely Estimated 10% - 30%	Possible Estimated 30% - 60%	Likely Estimated 60% - 90%	Very Likely or Certain Estimated greater than 90%
VERY GOOD	**GOOD**	**FAIR**	**POOR**	**VERY POOR**
Exceeds or fully meets performance requirements. No affect to services	Meets performance requirements. No affect to services	Just meets performance requirements with some limitations Possible minor affects to services.	Does not meet several performance requirements. Minor to moderate and/or sporadic affects to services	Does not meet many or most performance requirements. Moderate to significant and/or ongoing affects to services.

Corporate Services/Administration: Information Technology Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Computers (laptops, desktops)	295	$640,000	2.6	Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	Low
Network Systems (switches, firewalls, APs)	56	$383,000	4	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Printers	54	$54,292	3.6	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	Low
Other Devices (phones, handsets, cameras, control panels)	877	$601,000	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	Med
Servers 8 Physical servers 2 Test servers	10	$159,000	3	Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High

Network Drops included Network Cables (physical cables servicing facilities)	1000	$200,000	6	Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High

Total Replacement Cost: $2.037 million

Target Re-Investment Rate (annual): 17% = $346,339

- High turnover of information technology assets is based on a six-year replacement cycle

2024 Operating Budget:

- $3,346,545 expenses
- $581,900 revenue

2024 Capital Budget: $146,667 (2024 Operating Budget includes additional $144,000 for IT Accessories, asset replacement)

2023 Capital Budget: $264,000

2023 Capital Budget: $595,000

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $1,466,670 ($146,667 for IT Asset Replacements allocated per year)

10-Year Cost Estimate: $3.4 million

Master Plans: None

Data Governance and Improvement Plan:

1. Routine maintenance of inventory
2. Consider aligning inventory with Cityworks
3. GIS/Cityworks dashboard development for asset management, modelling, reporting (see above, if applicable)

4. Full condition assessment of network cables

Data Sources:

- Internal Database
- Internal Software

Current Level of Service

IT system interruptions are resolved with limited operational impact	Good
Security standards are maintained at or above industry expectations	Fair

Citeria Ratings

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Poor
Environmental Resiliency	Poor

Performance Ratings

Corporate Services/Administration: Sarnia Chris Hadfield Airport Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Airport Fleet (sweepers, plows, mowers, tractors, loaders)	14	$2,420,000	13	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Airport Fencing		$772,915	NA	40 Poor	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	Low
Airport Access Roads 1 (Maintenance, runway access)	1	$172,960	NA	NA	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Airport Runway Lighting (airfield lighting)		$1,135,050	NA	70 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High
Airport Runway 15-33	1	$8,280,460	NA	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High

Airport Runway 06-24	1	$1,124,240	NA	Very Poor	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Apron 1	1	$810,750	NA	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
GA Apron	1	$432,400	NA	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
GA Tie-Down Area	1	$291,870	NA	Poor	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Airport Taxiway A	1	$273,493	NA	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Airport Taxiway B	1	$1,059,380	NA	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High

Airport Taxiway C	1	$151,340	NA	Poor	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Terminal Building	1	$16,029,385	NA	Fair	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Field Centre Building	1	$215,341	NA	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Salt and Sand Dome	1	$1,429,091	NA	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Maintenance Building (7 Bay Garage)	1	$2,093,120	NA	Poor	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Airport Commercial Hangar (Constructed in 2023)	1	$1,650,000	1	100 Excellent	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med

Airport Access Road Rehabilitation (main access)	1	$399,970	NA	70 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Airport Parking Lot Rehabilitation (main parking)	1	$508,070	NA	10 Very Poor	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med

Total Replacement/Rehabilitation Cost: $39.2 million

Target Re-Investment Rate (annual): 3.75% = $1.47 million

- Based on Airport Master Plan implementation (2022), and 1.7-2.5% for Buildings, CIRC 2016

2024 Operating Budget: NA (not classified By Department)

2024 Capital Budget: $0

2023 Capital Budget: $0

2022 Capital Budget: $0

Note: between 2022-2023, the new hangar and airport equipment capital were funded through the Regional Air Transportation Initiative (RATI) for a total of $2,286,068, separate from the City's capital budget.

10-Year Capital Plan:

- No funded projects included.
- Unfunded Grand Total: $14,300,000 (2022 Airport Master Plan implementation)

10-Year Cost Estimate: $14.7 million

Master Plans:

- Sarnia Chris Hadfield Airport – Airport Master Plan, 2022 (HM Aero Aviation Consulting)

Data Governance and Improvement Plan:

1. Routine maintenance of inventory
2. Cityworks and GIS facilities integration
3. GIS/Cityworks dashboard development for asset management, modelling, reporting
4. Renew replacement costs separate from rehabilitation costs
5. Segment facilities into asset components
6. Full condition assessment

Data Sources:

- Sarnia Chris Hadfield Airport – Airport Master Plan, 2022 (HM Aero Aviation Consulting)
- Infrastructure Assessment and 10 Year Capital Plan, 2016 (WSP)
- Walter Fedy Condition Assessments, 2017

Current Level of Service

Facility and services comply with all current regulations and certifications	Very Good
Daily inspection and safety management plan operating to meet service criteria	Very Good

Citeria Ratings

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Good
Environmental Resiliency	Poor

Performance Ratings

Corporate Services/Administration: Sarnia Harbour Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
6 Dock Areas: Government Wharf and Warehouse Area, East Dock, North Slips (Cestar Dock), Sydney Smooth Dock, Mission Park Dock and Land Area	6	See Shoreline	NA	NA	D	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Harbour Electrical Units (across 6 dock areas)	36	$1,750,000	9	Good	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Warehouse and Office Building	1	$2,951,774	38	59 Fair	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Cestar Dock North Slip 1 (South) – Oversized Load Corridor Improvements	1	$8,200,000	1	Excellent	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Main Harbour Shoreline	1540 m	$23,100,000	NA	NA	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High

South Harbour Shoreline	1160 m	$17,400,000	NA	NA	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Parking lots, fencing, other site components (2 main sites North and South Harbours)	2	NA	NA	NA	D	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Shipping Lane – Dredging		Ongoing Operating Requirement	NA	NA	D	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High

Total Replacement Cost: $53.4 million

Target Re-Investment Rate (annual): 2.0% = $1,068,000

- 1.7-2.5% for Buildings, CIRC 2016

2024 Operating Budget:

- $908,315 expenses
- $1,065,835 revenues

2024 Capital Budget: $0

2023 Capital Budget: $0

2022 Capital Budget: $0

Note: the City made harbour-related capital investments in Oversized Load Corridor — $500,000 in 2024; $2,272,613 in 2023; and $6,100,000 in 2022.

10 Year Capital Plan:

- Grand Total Funded 2024-2033 — $0
- Unfunded Total 2024-2033 — $40,000,000 *Harbor Project

10 Year Cost Estimate: $10 million

Master Plans: Pending – Sarnia Harbour Master Plan 2025-2035

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- Internal Database
- City Funding Announcements

Current Level of Service

Facility and services comply with all current regulations and certifications	Fair

Citeria Ratings

Performance of Asset Category

Operational Functionality	Fair
Capacity to Meet Demands	Fair
Operational Resiliency	Fair
Environmental Resiliency	Fair

Performance Ratings

Community Services: Facilities Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Facilities – Leased (Marina Building)	1	$3,411,820	38	59 Fair	C	☐ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Operations Administration (maintenance garages and workshops)	6	$5,517,321	41	66 Good	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Operations Process (Animal Farm shelters)	3	$602,809	14	92 Excellent	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Operations Storage (storage buildings and sheds)	9	$1,864,802	34	53 Fair	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Permanent Recreational (Arenas, community centres, animal barn, libraries and cultural buildings)	14	$138,265,699	47	72 Good	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High

Seasonal Recreational (picnic shelters, pavilions, gazebos, greenhouses, sheds, barns)	61	$38,413,660	33	61 Good	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Public Services Administration (City Hall)	1	$20,470,810	59	68 Good	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low

Total Replacement Cost: $208.6 million
Note: estimates based on current levels of service and condition assessments from 2017 (WalterFedy), including inflationary increase to 2023

Target Re-Investment Rate (annual): 2.5% = $5.2 million

- 1.7-2.5% for Building, CIRC 2016, and
- 1.7-2.5% for Sport and Recreation, CIRC 2016

2024 Operating Budget:

- Facilities – Arenas & Pools — $4,613,676 expenses
- Facilities – Arenas & Pools — $2,679,230 revenues
- Properties – Libraries & Other — $1,745,963 expenses
- Properties – Libraries & Othe r— $40,333 revenues

2024 Capital Budget: Facilities $5,225,000

2023 Capital Budget: Facilities $2,265,000

2022 Capital Budget: Facilities $2,230,000

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $37,030,000
- Unfunded Total 2024-2033 - $71,000,000 (asset management – facility improvements, Clearwater, Brights Grove Library, Multi-use Recreational facility)

10-Year Cost Estimate: $52 million

Master Plans:

- Clearwater Master Plan, pending
- Norm Perry Master Plan, pending
- Germain Park Master Plan 2023

Data Governance and Improvement Plan:

1. Routine maintenance of inventory
2. Cityworks and GIS facilities integration
3. GIS/Cityworks dashboard development for asset management, modelling, reporting
4. Renew replacement costs separate from rehabilitation costs
5. Segment facilities into asset components
6. Renew condition assessments based on future levels of service

Data Sources:

- Walter Fedy Condition Assessments 2017
- GIS

Current Level of Service

% of facilities that are fully accessible	Fair
% of facility and features that are inventoried and inspected annually	Poor
# of service interruptions due to facility or component failure	Poor
Adequate quantity of facilities to meet normal service demands	Good

Citeria Ratings

Performance of Asset Category

Operational Functionality	Fair
Capacity to Meet Demands	Good
Operational Resiliency	Poor
Environmental Resiliency	Fair

Performance Ratings

Community Services: Park Features Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Park Lands (106 locations, totaling 325.21 hectares) Divided into Regional, City-wide, District, and Neighbourhood Parks (GIS)	106	NA	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Benches	492	$738,000	NA	68 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low
Garbage Cans	492	$49,200	NA	69 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low
Parking Lots – Paved (35 locations, totaling 109,966 m2)	35	$17,156,895	NA	NA	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Parking Lots – Gravel (35 locations, totaling 8116 m2)	35	$611,297	NA	NA	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low

Signs	461	$115,250	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	Low
Trails – Paved, inc multi-use paths (48 sections, totaling 17,692 m²)	48	$2,760,305	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Trails – Gravel, inc multi-use paths (48 sections, totaling 21,083 m²)	48	$1,587,971	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Trails – Concrete (48 sections, totaling 2012 m2)	48	$595,350	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Picnic Tables	340	$595,000	NA	64 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low
Play Equipment (various materials and sizes)	147	$15,876,000	NA	68 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High

Playground Areas (minimum wood mulch areas, totaling 34,648 m²)	63	$2,357,528	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Slides (various materials and sizes)	36	$936,000	NA	75 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Swing Sets (various materials and sizes)	87	$1,740,000	NA	71 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Bike Racks	14	$5600	NA	70 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Low
Electrical Outlets (small devices)	51	$17,850	NA	66 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Light Poles – Concrete	30	$54,000	NA	62 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med

Light Poles – Metal	128	$351,680	NA	67 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Light Poles – Wood	52	$142,870	NA	57 Fair	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Light Poles - Other	23	$63,192	NA	67 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Flood Lighting	138	$379,255	NA	68 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Septic Tanks – Concrete/Plastic	4	$40,000	NA	70 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High
Water Taps	34	$8500	NA	56 Fair	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med

Bleachers	16	$240,000	NA	58 Fair	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Bollards	15	$12,000	NA	63 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Charging Stations (small appliance charging)	5	$1750	NA	70 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Cleats – Waterfront	43	$34,500	NA	70 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Low
Dugouts	19	$608,000	NA	69 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Flagpoles	35	$126,000	NA	67 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Low

Gates (various sizes and material)	109	$54,000	NA	67 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Low
Monuments	16	$528,000	NA	68 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Planters	105	$43,575	NA	70 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Low
Plaques	54	$54,000	NA	69 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Baseball Fields (premium fields and neighbourhood parks)	17	$3,300,000	NA	64 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Basketball Courts	3	$240,000	NA	77 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med

Dog Park	1	$200,000	NA	70 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Football Fields (premium fields)	2	$1,103,000	NA	50 Fair	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Soccer Fields	27	$2,781,000	NA	68 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Tennis/Multi-Use Courts	7	$406,000	NA	59 Fair	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Other – Lawn Bowling (leased, premium field)	1	$103,000	NA	70 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Other – Tennis Wall	2	$11,000	NA	70 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med

Other – Pickleball Courts	10	$270,000	NA	70 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Life Guard Stands	3	$15,000	NA	70 Good	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High

Total Replacement Cost: $56.2 million

Target Re-Investment Rate (annual): 3.5% = $1.9 million

- 1.7-2.5% for Building, CIRC 2016
- 1.7-2.5% for Sport and Recreation, CIRC 2016

2024 Operating Budget:

- $5,259,757 expenses
- ($416,150) revenues

2024 Capital Budget: Parks and Recreation $2,000,000

2023 Capital Budget: Parks and Recreation $1,090,000

2022 Capital Budget: Parks and Recreation $2,970,670

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $19,100,000
- Unfunded Total 2024-2033 — $18,500,000

10-Year Cost Estimate: $19.6 million

Master Plans:

- Canatara Park Master Plan – Pending
- Sarnia Downtown Waterfront Master Plan
- Parks, Recreation, and Culture Master Plan 2018-2033
- Germain Park Master Plan
- Active Transportation Master Plan (Engineering and Operations)

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Comprehensive review of GIS attributes and all park locations
3. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- Internal Database
- GIS

Current Level of Service

% of playgrounds that are accessible	10%, Poor
% of park features are inventoried and inspected annually	20%, Poor
# of service interruptions due to park feature failure	Very Good

Citeria Ratings

Performance of Asset Category

Operational Functionality	Fair
Capacity to Meet Demands	Good
Operational Resiliency	Poor
Environmental Resiliency	Fair to Poor

Performance Ratings

Community Services: Fleet Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Fleet – Plated (trucks, trailers, dump trucks, other vehicles)	63	$3,488,500	14	NA	A	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Fleet – un-plated (trimmers, blowers, chain saws, utility vehicles, generators, power washers, lawn mowers, ice resurfacers, tillers)	301	$6,398,000	8	NA	A	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med

Total Replacement Cost: $9.8 million

Target Re-Investment Rate (annual): 8% = $790,920
Note: 10% increase over 2024 to reach sustainability (prevents the backlog from growing), and approximate backlog of $5 million for all divisions

2024 Operating Budget: NA (not classified By Department)

2024 Capital Budget: $0
Note: In 2024, $2.239 million was funded directly from Reserves for Fleet Replacement (for both Community Services, and Engineering and Operations). Based on the proportion of Replacement Cost, Community Services is estimated at $721,459.

2023 Capital Budget: $0

2022 Capital Budget: $0

10-Year Capital Plan:

- No projects included

10-Year Cost Estimate: $7.9 million

Master Plans: None

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- Cartegraph
- Internal database

Current Level of Service

Adequate quantity of vehicles to meet normal service demands	Good
% of vehicles that comply with current regulations	Very Good
Lawn mower equipment meets park service standards	Good

Citeria Ratings

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Fair (technology interruptions)
Environmental Resiliency	Good

Performance Ratings

Community Services: Tree Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Trees – GIS inventory with dbh <40 (right-of-way trees, and trees inventories in select parks) *dbh – diameter at breast height	18183	$4,545,750	35	69 Good	A	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High
Trees – GIS inventory with dbh =>40 (right-of-way trees, and trees inventories in select parks) *dbh – diameter at breast height	9476	$4,733,500	116	68 Good	A	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High
Trees – non-inventoried (estimate)	63000	$15,750,000	NA	NA	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	Med

Total Replacement Cost: $25 million

Target Re-Investment Rate (annual): 1.0% = $250,000
Note: current backlog of planting and maintenance of existing tree inventory, including large invasive inventory (Norway Maple)

2024 Operating Budget: NA (not classified By Department)
Note: Community Services Arboriculture $30,000 replacement of trees, $30,000 new additional trees, $5,000 food-bearing trees

2024 Capital Budget: $0

2023 Capital Budget: $0

2022 Capital Budget: $0

10 -Year Capital Plan:

- No funded or unfunded projects included

10-Year Cost Estimate: $2.5 million

Master Plans:

- City of Sarnia Urban Forestry Master Plan

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. GIS/Cityworks dashboard development for asset management, modelling, reporting
3. Full value assessment
4. Comprehensive assessment on non-inventoried trees

Data Sources:

- GIS

Current Level of Service

% or # of trees that are inventoried and inspected annually	2%, Poor
# of trees replaced according to 1:1 or 2:1 maturity ratio	250, Fair
Total # of trees planted annually	400, Poor
Average # of re-active work orders per year	900, Fair

Citeria Ratings

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Poor
Operational Resiliency	Fair
Environmental Resiliency	Fair

Performance Ratings

Engineering and Operations: Transit Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Transit Administration Site (building, garage bays, parking, 1.52 hectare site)	1	$13,780,825	47	56 Fair	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Transit Terminals (per GIS: Northgate, Downtown, Murphy Rd., Clearwater)	4	$6,025,000	NA	64 Good	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Bus Stops (varying types, concrete pad, sidewalk, grass, gravel, dirt)	463	$323,000	NA	Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low
Bus Shelters with Solar (metal structures)	38	$380,000	NA	68 Good	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low
Bus Shelters (metal structures)	9	$45,000	NA	56 Fair	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low

Garbage/Recycle Stations (various materials)	51	$61,200	NA	58 (Fair)	B	☒ Planning ☒ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Low
Transit Benches (various materials)	66	$33,000	NA	59 (Fair)	B	☒ Planning ☒ Acquisition ☐ OP & MTCE ☐ Renewal ☒ Disposal	Low
Fleet – Conventional	22	$9,842,290	6	70 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Fleet – Care-a-van	7	$1,052,869	5	70 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Fleet – Support Vehicles	4	$164,754	10	Fair	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High

Total Replacement Cost: $31.7 million

Target Re-Investment Rate (annual): 11.0% = $3.5 million

2024 Operating Budget:
- $8,069,229 expenses
- $8,069,229 revenues

2024 Capital Budget: $9,724,096
Note: grant funding opportunities have had significant impact on recent capital budgets

2023 Capital Budget: $513,666

2022 Capital Budget: $3,793,666

10-Year Capital Plan:
- Grand Total Funded 2024-2033 — $34,592,096
- Unfunded Total 2024-2033 — $12,000,000

10-Year Cost Estimate: $35 million

Master Plans: None

Data Governance and Improvement Plan:
1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting
5. Segment facilities into asset components
6. Renew facility condition assessments based on future levels of service

Data Sources:

- Walter Fedy Condition Assessments 2017,
- Internal Database
- GIS

Current Level of Service

% of vehicles that comply with current regulations	100%, Very Good
Adequate quantity of vehicles to meet normal service demands	Fair
Adequate community transit infrastructure	Good
% of transit stop locations that are fully accessible	50%, Poor

Citeria Ratings

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Fair
Environmental Resiliency	Good

Performance Ratings

Engineering and Operations: Fleet Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Fleet – Plated (trucks, trailers, dump trucks, plows, light-heavy vehicles and machinery)	130	$15,224,500	10	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Fleet – un-plated (attachments, light-heavy machinery, equipment)	167	$5,571,100	8	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med

Total Replacement Cost: $20.7 million

Target Re-Investment Rate (annual): 8% = $1.7 million
Note: 10% increase over 2024 to reach sustainability (prevents the backlog from growing)

2024 Operating Budget: NA (not classified By Department)

2024 Capital Budget: NA (not classified By Department)
Note: In 2024, $2.239 million was funded directly from Reserves for Fleet Replacement (for both Community Services, and Engineering and Operations). Based on the proportion of Replacement Cost, Engineering and Operations is estimated at $1,517,541.

10-Year Capital Plan:

- No funded or unfunded projects included

10-Year Cost Estimate: $16.6 million

Master Plans: None

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- Cartegraph
- Internal database

Current Level of Service

Adequate quantity of vehicles to meet normal service demands	Good
% of vehicles that comply with current regulations	Very Good
Snow removal routes are cleared per government standards	Good

Citeria Ratings

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Fair (technology interruptions)
Environmental Resiliency	Good

Performance Ratings

Engineering and Operations: Bridges and Culverts (Core Asset) Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Bridges (11-1 span, 2-2 span, 1-3 span, 1-4 span, 1-13 span)	16	$68,604,965	52	76 Good	A	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Pedestrian/Utility Bridges (4-1 span)	4	$7,265,485	71	62 Good	A	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Culverts - major	12	$6,128,351	34	70 Good	A	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Culverts - minor	83	NA	NA	NA	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med

Total Replacement Cost: $82 million

Infrastructure Backlog (Core Plan, 2022): $8.7 million and $300,000 annual gap

Target Re-Investment Rate (annual): 2.5% = $2 million

- Annual Funding to Reach Sustainability (Core Plan, 2022) = $2 million (prevents the backlog from increasing)
- 1.0-1.5% for Bridges, CIRC 2016

2024 Operating Budget: NA (not classified By Department)

2024 Capital Budget: $670,000

2023 Capital Budget: $950,000

2022 Capital Budget: $850,000

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $18,670,000

10-Year Cost Estimate: $20 million

Master Plans: None

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. GIS/Cityworks dashboard development for asset management, modelling, reporting
4. Improve culvert (major and minor) attribution in GIS

Data Sources:

- GIS
- Core Plan, 2022
- OSIM Inspections, 2022

Current Level of Service

TABLE 5 (O. Reg. 588/17)

Service Attribute	Community levels of Service	Technical levels of service
Scope	Description of traffic that is supported by municipal bridges. All vehicular traffic is supported (heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists): See Appendix A - City of Sarnia Bridge and Culvert Map for OSIM Inspections (Core Plan, 2022).	% of bridges in the municipality with loading or dimensional restrictions: None of the municipality's bridges have loading or dimensional restriction with the exception of pedestrian bridges only.
Quality	1. Description or images of condition and how this would affect use of the bridges 2. Description or images of condition and how this would affect use of culverts Condition ratings are based on Ontario Structure Inspection Manual. The bridges and culverts were last inspected in 2022.	1. For bridges in the municipality, the average bridge condition index value: Avg Condition of Bridges is 76 or Good. 2. For structural culverts in the municipality, the average bridge condition index value: Avg Condition of Culverts is 70 or Good.

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Good
Environmental Resiliency	Good

Performance Ratings

Engineering and Operations: Municipal Drains Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Municipal Drains – Open (235 sections totaling 195km, associated with 17 bridges and 40 culvert crossings)	235	NA – shared cost	NA	NA	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Municipal Drains – Closed (45 sections totaling 26km)	45	NA – shared cost	NA	NA	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Pump Station	1	NA – shared cost	38	Good	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Catch Basins – requires further assessment	NA	NA – shared cost	NA	NA	D	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Junction Boxes – requires further assessment	NA	NA – shared cost	NA	NA	D	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med

Storm Service Outlets – requires further assessment	NA	NA – shared cost	NA	NA	D	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Weirs – requires further assessment	NA	NA – shared cost	NA	NA	D	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med

Total Replacement Cost: Unknown, shared cost per *Ontario Drainage Act*

Target Re-Investment Rate (annual): Unknown, shared cost per *Ontario Drainage Act*

2024 Operating Budget:

- $540,463 expenses
- $52,137 revenues

2024 Capital Budget: $0

10-Year Capital Plan: No funded or unfunded projects included

10-Year Cost Estimate: Unknown, shared cost per *Ontario Drainage Act*

Master Plans: None

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- GIS

Current Level of Service

NA	NA

Citeria Ratings

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Good
Environmental Resiliency	Fair

Performance Ratings

Engineering and Operations: Facilities Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Facilities – Operations Administration Buildings (pump station maintenance building, Public Works Building on Confederation Line, Water Pollution Control Centre)	3	$10,568,981	45	75 Good	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Operations Process and Storage (Control Centres, Recovery Buildings, Storage, Salt Dome) *Pumping Stations included with Sanitary, Storm, and Water sections	20	$101,964,144	30	61 Good	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Public Service Administration (Compost Site Admin, Public Works Building Admin and 6-bay garage on Devine St.)	3	$10,425,931	36	53 Fair	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med

Total Replacement Cost: $123 million

Target Re-Investment Rate (annual): 2% = $2.4 million

- 1.7-2.5% for Building, CIRC 2016
- 1.7-2.0% for Non-linear Infrastructure, CIRC 2016

2024 Operating Budget: NA (not classified By Department)

2024 Capital Budget: $910,000

2023 Capital Budget: $1,470,000

2022 Capital Budget: $450,000

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $13,570,000

10-Year Cost Estimate: $24 million

Master Plans: None

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. GIS/Cityworks dashboard development for asset management, modelling, reporting
4. Cityworks and GIS facilities integration
5. Segment facilities into asset components
6. Renew condition assessments based on future levels of service

Data Sources:

- WalterFedy Condition Assessments, 2017
- GIS

Current Level of Service

% of facility and features that are inventoried and inspected annually	Poor
Adequate facility capacity to meet service demands	Fair

Citeria Ratings

Performance of Asset Category

Operational Functionality	Wastewater Facilities – Fair Public Works Facilities – Fair
Capacity to Meet Demands	Wastewater Facilities – Fair

	Public Works Facilities – Fair
Operational Resiliency	Wastewater Facilities – Fair Public Works Facilities – Fair
Environmental Resiliency	Wastewater Facilities – Fair Public Works Facilities – Fair

Performance Ratings

Engineering and Operations: Traffic Signals and Streetlights

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Poles with Street Lights (owned by the City)	2920	$4,380,000	NA	90 Excellent	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Street Lights 97% LED 52% with photocell technology	8161	$3,182,790	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Traffic Signals (51 = 100% City, 2 = 75% City, 31 = 50% City, 3 = 25% City, includes 60 left turn signals)	91	$9,672,000	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	High
Pedestrian Crosswalks (Solar)	10	$270,000	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	High
Traffic Flashers	7	$14,000	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med

Total Replacement Cost: $17.5 million

Target Re-Investment Rate (annual): 2.8% = $500,000
- 2.0-3.0% for Roads and Sidewalks, CIRC 2016
- 1.7-2.5% for Buildings, CIRC 2016

2024 Operating Budget:
- $2,070,000 expenses
- $155,000 revenues

2024 Capital Budget: $350,000

2023 Capital Budget: $315,000

2022 Capital Budget: $200,000

10-Year Capital Plan:
- Grand Total Funded 2024-2033 — $4,950,000

10-Year Cost Estimate: $5 million

Master Plans: None

Data Governance and Improvement Plan:
1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. GIS/Cityworks dashboard development for asset management, modelling, reporting
4. Continued data partnership with Bluewater Power

Data Sources:
- GIS
- Bluewater Power

Current Level of Service

NA	NA

Citeria Ratings

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Good
Environmental Resiliency	Fair

Performance Ratings

Engineering and Operations: Shoreline Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Total Shoreline	35 km	NA			B	☒ Planning ☐ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	
St. Clair River Shoreline total 18 km (City-owned portion, excluding harbour, 2.9 km)	2.9 km	$43,500,000	NA	NA	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Lake Huron – Sarnia total 11.5 km (City-owned portion 2.4 km)	2.4 km	$35,700,000	NA	NA	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Lake Huron – Brights Grove total 4.9 km (City-owned portion 3 km)	3 km	$45,765,000	NA	NA	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Shoreline Groynes (approx. 205 along shoreline, 55 City-owned)	55	Inc above	NA	Poor	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High

Total Replacement Cost: $125 million

Target Re-Investment Rate (annual): 2.5% = $3.1 million

2024 Operating Budget:
- $500,000 expenses
- $500,000 revenues

2024 Capital Budget: $2,500,000 (related $1-million capital investment in Ferry Dock Hill)

2023 Capital Budget: $2,000,000 (related $947,400 capital investment in Waterfront Master Plan)

2022 Capital Budget: $2,250,000

10-Year Capital Plan:
- Grand Total Funded 2024-2033 — $29,250,000

10-Year Cost Estimate: $31 million

Master Plans: None

Data Governance and Improvement Plan:
1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:
- GIS
- Internal Database
- Shoreline Groyne Liability Council Report, 2020

Current Level of Service

% of shoreline infrastructure that provides protection and benefit to City property	Fair

Citeria Ratings

Performance of Asset Category

Operational Functionality	Fair
Capacity to Meet Demands	Fair
Operational Resiliency	NA
Environmental Resiliency	Poor

Performance Ratings

Engineering and Operations: Stormwater (Core Asset) Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Storm Sewers (4848 sections, totaling 32.8 km)	328 km	$499,174,592	47	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High
Storm Forcemains (2 sections, totaling 970 m)	970 m	$120,800	NA	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	High
Storm Manholes (241 combined, 4906 storm)	5147	Inc above	NA	NA	B	☒ Planning ☒ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Med
Catch Basins	9206	Inc above	NA	NA	B	☒ Planning ☒ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Med
Catch Basin Laterals (limited data)	41	Inc above	NA	NA	D	☒ Planning ☒ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Med

French Drains (18 sections)	831 m	NA	NA	NA	B	☒ Planning ☐ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Med
Storm Sewer Outlets	97	Inc above	NA	NA	B	☒ Planning ☐ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Med
Storm Management Ponds	8	NA	22	Fair 50	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Storm Pump Stations	3	$362,400	28	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High

Total Replacement Cost: $499.6 million

Infrastructure Backlog (Core Plan, 2022):

- $19.6 million total backlog
- $5.5 million annual funding shortfall

Target Re-Investment Rate (annual): 1.25% = $6.2 million (above combined sewer separation grants)

- Annual Funding to Reach Sustainability (Core Plan, 2022): $5.5 million to prevent the backlog from increasing
- 1.0-1.3% for Stormwater (linear), CIRC 2016
- 1.7-2.0% for Stormwater (non-linear), CIRC 2016

2024 Operating Budget:

- $896,312 expenses
- $896,312 revenues

2024 Capital Budget: $2,916,300

2023 Capital Budget: $2,563,200

2022 Capital Budget: $1,230,000

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $95,901,500 (includes combined sewer separation with portions that would be designated to road, water, stormwater, and wastewater reconstruction)
- Unfunded Total 2024-2033 — $10,000,000 (combined watermain, sanitary, and storm sewer replacements)
- Unfunded Total 2024-2033 — $20,000,000 (flood mitigation)

10-Year Cost Estimate: $62 million (above combined sewer separation grants)

Master Plans:

- Watson & Associates, Water and Sewer User Rate Study, Sarnia (City of Sarnia, 2021)

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- GIS
- Core Plan, 2022

Current Level of Service

TABLE 3 (O. Reg. 588/17)

Service Attribute	Community levels of Service	Technical levels of service
Scope	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the stormwater management system. See Appendix A - Sarnia Stormwater Sewer Network (Core Plan, 2022).	1. Percentage of properties in the municipality resilient to 100-year storm: 78% of properties are resilient to a 100-year storm (Core Plan, 2022). 2. Percentage of the municipal stormwater management system resilient to a 5-year storm: 53% of properties are resilient to a 5-year storm (Core Plan, 2022).

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Good
Environmental Resiliency	Fair

Performance Ratings

Engineering and Operations: Wastewater (Core Asset) Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Sanitary Wastewater Sewers (4548 sections, totaling 328 km)	328 km	$384,144,000	47	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	High
Sanitary Wastewater Forcemains (61 sections, totaling 52.1 km)	52.1 km	$69,176,489.65	41	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	High
Manholes	4474	Inc above	NA	NA	N	☒ Planning ☒ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Med
Sanitary Pump Stations	43	$51,016,428	43	Fair	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Combined Sewer Outlet Facility	1	$12,080,000	26	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High

Wastewater Treatment Facilities: Wastewater Pollution Control Centre, 1953-2023	1	$151,000,000	1953 1961 2000 2023	Fair	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Brights Grove Sewage Lagoons, 1974*requires further assessment	1	$50,000,000	1976-2018	Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Combined Sewers	<19 km	$27,784,000	109	NA	B	☒ Planning ☐ Acquisition ☐ OP & MTCE ☐ Renewal ☒ Disposal	High

Total Replacement Cost: $745.2 million

Infrastructure Backlog (Core Plan, 2022):

- $121 million total backlog
- $5.4 million annual funding shortfall

Target Re-Investment Rate (annual): 1.75% = $13 million

- Annual Funding to Reach Sustainability (Core Plan, 2022) — $12.3 million to prevent the backlog from increasing
- 1.0-1.3% for Wastewater (linear), CIRC 2016
- 1.7-2.5% for Wastewater (non-linear), CIRC 2016

2024 Operating Budget:

- $24,860,178 expenses
- $24,860,178 revenues

2024 Capital Budget: $5,746,300

2023 Capital Budget: $6,063,200

2022 Capital Budget: $6,080,000

Note: includes proportional amounts from combined sewer projects

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $60,550,000
  Unfunded Total 2024-2033 — $10,000,000 (asset management - combined watermain, sanitary, and storm sewer replacement)

10 Year Cost Estimate: $130 million

Master Plans:

- Watson & Associates, Water and Sewer User Rate Study, Sarnia (City of Sarnia, 2021)

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- GIS
- Core Plan, 2022

Current Level of Service

TABLE 1 (O. Reg. 588/17)

Service Attribute	Community levels of Service	Technical levels of service
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the	Percentage of properties connected to the municipal wastewater system:

	municipal wastewater system: See Appendix A – Sarnia Sewer Network (Core Plan, 2022).	Approximately 90%
Reliability	1. Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes: There are less than19 km of combined sewers in the City's wastewater system. The City is actively working towards the separation of the remaining combined sewers. To stop sewer backups during storm events the City has installed overflows on these sewer lines. The overflows are designed to relieve overloaded sewers by directing flow to an adjacent storm sewer or body of water instead of backing up into a basement. 2. Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches:	1. The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system: Not available. A project to install equipment to track this data on combined sewer overflows is ongoing. 2. The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system: Not available. Tracking will occur in conjunction with ongoing Cityworks implementation. 3. The number of effluent violations per year due to wastewater discharge compared to the total number of properties

	Sarnia is undertaking a project to install equipment to track these overflows on all outlets. In 2023, the CSO tank experienced an overflow of 8530.31m3 on July 13, 2023 for a duration of 3hrs 47 min. Also, on the same date Wellington St. overflowed 30.572m3. Combined sewer overflows that do occur are released into the St. Clair River. There are no known overflows to Lake Huron. 3. Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes: Inflow and infiltration (I&I) from both stormwater and groundwater enter the sanitary sewers in various ways. Cross-connections, cracks in sewer, foundation drain connections, and catch basins are all ways that unwanted flow can enter the sewer and cause backups. 4. Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events described in paragraph 3:	connected to the municipal wastewater system: For more detailed information refer to the annual reports for both the Water Pollution Control Centre and the Bright's Grove Sewage Lagoons.

	To minimize I&I into the wastewater system the City maintains design standards to accurately calculate the required sewer capacity/size. The City also eliminates discovered cross connections where possible and offers incentive to disconnect existing foundation drains from the sanitary system. 5. Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system: Effluent that is discharged from both the Brights Grove Sewage Lagoons and the Water Pollution Control Centre have documented compliance limits, objectives, and actual performance data.	

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Fair
Environmental Resiliency	Fair

Performance Ratings

Engineering and Operations: Roads (Core Asset) Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Roads (673 km of roads in the City, 66% or 444 km City-owned, 16% or 107 km County-owned, 8% or 87 km Province-owned, 5% or 36 km private)	444 km	Divided below	33	66 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Paved (lane length) Arterial 177 km, Collector 120 km, Local 502 km	806 km	$834,034,665	33	66 Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Tar and Chip (lane length) Arterial 107 km, Collector 6 km, Local 5 km	119 km	$163,080,031	33	56 Fair	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Unpaved (lane length)	1 km	$1,208,000	53	41 Fair	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low
Round-about features	2	Inc above	2	Excellent	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Low

On-road cycling infrastructure	12 km	inc above	NA	Excellent	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Low
Road-related Signs (inventoried in GIS)	3892	$389,200	NA	70 Good	C	☒ Planning ☒ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Med
Road-related Ditches (inventoried in GIS) Rural 10 km, Urban 2 km	12 km	NA	NA	NA	C	☒ Planning ☐ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Med
Guide Rails (4 sections inventoried in GIS)	100 m	NA	NA	NA	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Business Area Road-related Assets (Garbage/Recycle)	71	$35,500	NA	70 Good	C	☒ Planning ☒ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	Low
Sidewalks (498,300 m2)	332 km	$43,765,689	NA	NA	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low

Multi Use Paths	32 km	Inc with Park Features	NA	NA	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low

Total Replacement Cost: $1.042 billion

Infrastructure Backlog (Core Plan, 2022):

- $107 million total backlog
- $4.6 million annual funding shortfall

Target Re-Investment Rate (annual): 1.25% = $13 million

- Annual Funding to Reach Sustainability (Core Plan, 2022) — $10.5 million to prevent the backlog from increasing
- 2.0-3.0% for Roads and Sidewalks, CIRC 2016

2024 Operating Budget:

- $5,948,359 expenses
- $1,297,658 revenues

2024 Capital Budget: $11,242,600 ($1.1 million related capital investments in active transportation)

2023 Capital Budget: $11,809,734 ($1.485 million related capital investments in active transportation)

2022 Capital Budget: $11,242,600 ($2,555,461 million related capital investments in active transportation; $225,000 related capital investment in City Entrance Signs)

Note: includes proportional amounts from combined sewer projects

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $55,100,000 (includes Active Transportation and Oversized Load Corridor)
  Unfunded Total 2024-2033 — $10,000,000 (asset management – road rehabilitation)

10 Year Cost Estimate: $130 million

Master Plans:

- Transportation Master Plan
- Active Transportation Master Plan

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- GIS
- Core Plan, 2022

Current Level of Service

TABLE 1 (O. Reg. 588/17)

Service Attribute	Community levels of Service	Technical levels of service
Scope	Description, which may include maps, of the road network in the municipality and its level of connectivity: See Appendix A - Sarnia Road Network (Core Plan, 2022).	Number of lane-kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of the municipality: • Arterial Roads: ~1.73 km/km² • Collector Roads: ~0.77 km/km² • Local Roads: ~3.05 km/km²

		• (Core Plan, 2022)
Quality	Description or images that illustrate the different levels of road class pavement condition: See Appendix B - Road Condition Images.	1. For paved roads in the municipality, the average pavement condition index value: The average pavement condition index for paved roads is 66 or Good. 2. For unpaved roads in the municipality, the average surface condition (e.g. excellent, good, fair or poor): The average condition for unpaved roads is 41 or Fair.

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Fair
Environmental Resiliency	Fair

Performance Ratings

Engineering and Operations: Water (Core Asset) Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Watermains 9372 sections, 6070 junctions	506 km	$493,355,124	47	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Watermain Valves	3683	Inc above			B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Water Service Valves	16422	Inc above			B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Hydrants	2760	Inc above			B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Hydrant Valves	50	Inc above			B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High

Hydrant Laterals 2750 sections	9.6 km	Inc above			B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Hydrant Junctions	2739	Inc above			B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Watermain Auto Flushers	6	Inc above			B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Lambton Area Water Supply System Assets Total City asset portion (60.06%) was $527,368,465 in 2021. Inflated to 2023.		$637,061,105	NA	NA	C	☒ Planning ☐ Acquisition ☐ OP & MTCE ☐ Renewal ☐ Disposal	High

Total Replacement Cost: $1.130 billion

Infrastructure Backlog (Core Plan, 2022):

- $115 million total backlog
- $1.5 million annual funding shortfall

Target Re-Investment Rate (annual): 1.3% = $14.7 million

- Annual Funding to Reach Sustainability (Core Plan, 2022) — $4.5 million to prevent the backlog from increasing
- 1.0-1.5% for Potable Water (linear), CIRC 2016
- 1.7-2.5% for Potable Water (non-linear), CIRC 2016

2024 Operating Budget:

- $20,057,263 expenses
- $20,057,263 revenues

2024 Capital Budget: $9,011,300

2023 Capital Budget: $5,353,200

2022 Capital Budget: $5,170,000

Note: includes proportional amounts from combined sewer projects

2024 LAWSS Capital: $3,456,677

2023 LAWSS Capital: $3,172,635

2022 LAWSS Capital: $2,804,339

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $39,390,000
- Unfunded Total 2024-2033 — $10,000,000 (asset management - combined watermain, sanitary, and storm sewer replacements)

10-Year Cost Estimate: $147 million

Master Plans:

- Watson & Associates, Water and Sewer User Rate Study, Sarnia (City of Sarnia, 2021)

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- GIS
- LAWSS

Current Level of Service

TABLE 1 (O. Reg. 588/17)

Service Attribute	Community levels of Service	Technical levels of service
Scope	1. Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system: See Appendix A (Core Plan, 2022). 2. Description, which may include maps, of the user groups or areas of the municipality that have fire flow: See Appendix A (Core Plan, 2022)	1. Percentage of properties connected to the municipal water system: 98% 2. Percentage of properties where fire flow is available: 93%
Reliability	Description of boil water advisories and service interruptions: There were no boil water advisories issued in 2023. All watermain breaks were repaired within 24 hours of occurrence and extended service disruptions were avoided.	4. The number of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system: Zero

		5. The number of connection-days per year due to water main breaks compared to the total number of properties connected to the municipal water system: Data not available. Additional data for watermain breaks will require collection. To be implemented in conjunction with CityWorks asset management.

Performance of Asset Category

Operational Functionality	Good
Capacity to Meet Demands	Good
Operational Resiliency	Good
Environmental Resiliency	Good

Performance Ratings

Fire and Rescue: Fire and Emergency Management Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Facilities – Fire Halls	5	$37,500,000	41	68 Good	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Facilities – Storage and Training Structures	5	$223,185	18	93 Excellent	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Med
Engine Fleet (NFPA, 1901 – 15 years move to reserve)	3	$3,000,000	8	Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Ladder Fleet	1	$2,200,000	2	Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Tower Fleet	1	$2,500,000	4	Good	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High

Tanker Fleet	1	$900,000	24	Fair	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Rescue Fleet	1	$1,200,000	8	Fair	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Reserve Fleet	2	NA	24	Fair	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☐ Renewal ☒ Disposal	Med
Light Vehicle Fleet	6	$700,000	18	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Support Vehicle Fleet	8	$445,000	12	NA	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Front Line Response Fleet	3	$330,000	6	NA	B	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High

Public Education Equipment/Vehicles/Trailers	4	$62,000	8	NA	B	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	Low
Equipment/Training (per 2018 Inventory)	2058	$2,104,946	NA	NA	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Emergency Management Command Vehicle (exp Nov 2024)	1	$800,000	1	NA	C	☒ Planning ☐ Acquisition ☒ OP & MTCE ☒ Renewal ☐ Disposal	High
Emergency Management Sirens	12	$100,000	20	Poor	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	High
Emergency Management Trailers (35K per unit)	8	$280,000	10	Good	A	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Emergency Operations Centre Equipment	1	$115,000	1	Excellent	A	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	High

Field Hospital Trailer Contents (Pooled Supplies)	1 Trailer	NA	NA	Fair	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☐ Renewal ☐ Disposal	Med
Shelter Centre Trailer Contents (Pooled Supplies)	3 Trailers	$50,000	10	Fair	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Reception Centre Trailers Contents (Pooled Supplies)	3 Trailers	$87,000	NA	Fair	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
EM General Trailer Contents (Pooled Supplies)	1 Trailer	$50,000	NA	Fair	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med

Total Replacement Cost: $48.9 million

Target Re-Investment Rate (annual): 3.5% = $1.7 million

- 1.7-2.5% for Buildings, CIRC 2016

2024 Operating Budget:

- $23,545,263 expenses
- $190,584 revenues

2024 Capital Budget: $1,173,500 (new firehall construction 2022-2024)

2023 Capital Budget: $3,562,091

2022 Capital Budget: $5,252,441 (new firehall construction 2022-2024)

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $16,727,657
- Unfunded Total 2024-2033 — $0

10 Year Cost Estimate: $17 million

Master Plans:

- Sarnia Fire Rescue Services – Fire Master Plan 2020

Data Governance and Improvement Plan:

1. Routine maintenance of inventory, including replacement costs
2. Data migration to Cityworks
3. Comprehensive condition assessments
4. Renew facility condition assessments based on future levels of service
5. GIS/Cityworks dashboard development for asset management, modelling, reporting

Data Sources:

- Internal Database
- GIS
- WalterFedy Condition Assessments, 2017

Current Level of Service

Fire - % of facility and features that are inventoried and inspected annually	Fair
Fire - # of service interruptions due to facility or component failure	Good
Fire - Adequate quantity of vehicles to meet normal service demands	Good
EM - % of facility and features that are inventoried and inspected annually	Good
EM - # of service interruptions due to facility or component failure	Fair

EM - Adequate quantity of vehicles to meet normal service demands	Fair

Citeria Ratings

Performance of Asset Category

Operational Functionality	Fire – Fair EM – Good
Capacity to Meet Demands	Fire – Good EM – Fair
Operational Resiliency	Fire – Good EM – Fair
Environmental Resiliency	Fire – Good EM – Fair

Performance Ratings

Police Services: Facility Inventory

Asset Inventory	Quantity	Replacement Cost	Avg Age	Avg Condition	Data Evaluation	Lifecycle Activities (Next 10 Years)	Risk Priority
Police Headquarters	1	$60,000,000	36	NA	C	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med
Fleet and Equipment *managed by the Police Service Board	NA	NA	NA	NA	NA	☒ Planning ☒ Acquisition ☒ OP & MTCE ☒ Renewal ☒ Disposal	Med

Total Replacement Cost: $60 million (based on proposed level of service)

Target Re-Investment Rate (annual): 10% = $6,000,000

- Based on a facility replacement in 10 years and subject to change based on long-term planning

2024 Operating Budget:

- $125,711,627 expenses
- $125,711,627 revenues

2024 Capital Budget: $300,000

2023 Capital Budget: $200,000

2022 Capital Budget: $510,000

10-Year Capital Plan:

- Grand Total Funded 2024-2033 — $1,100,000

- Unfunded Total 2024-2033 — $4,000,000 (2024 Police Headquarters)

10 Year Cost Estimate: $60 million

Master Plans: None

Data Governance and Improvement Plan:

1. Cityworks and GIS facilities integration
2. Segment facility into asset components

Data Sources:

- Internal Database
- WalterFedy Condition Assessments 2017

Current Level of Service

Standards regarding regulatory, capacity, safety, and sustainability of services are met by current facility	Poor

Citeria Ratings

Performance of Asset Category

Operational Functionality	Poor
Capacity to Meet Demands	Fair
Operational Resiliency	Poor
Environmental Resiliency	Good

Performance Ratings

Re-cap City of Sarnia Asset Summary

Total Replacement Cost: $4.3 billion

Target Re-Investment Rate (annual): 1.8% or $78.9 million

2024 Operating Budget: $179,594,609

2024 Capital Budget: $60,211,440* (1.4% of total replacement cost)

2023 Capital Budget: $48,546,738*

2022 Capital Budget: $53,266,577*

*LAWSS Capital and Fleet Reserve included in all annual amounts

10-Year Capital Plan:

- Total project costs equal $430,697,923
- Unfunded projects equal $251,810,600

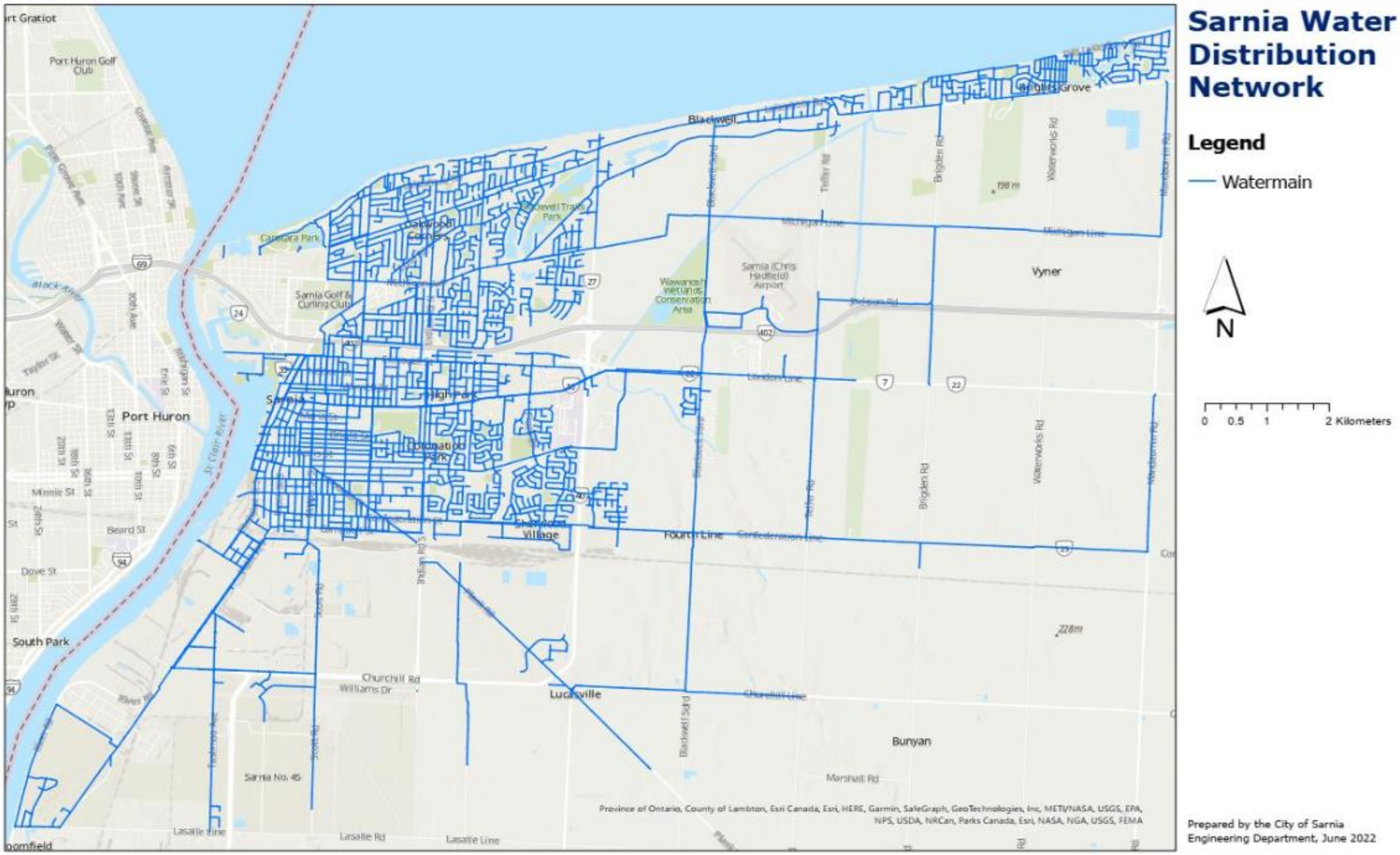
10-Year Cost Estimate: $789 million

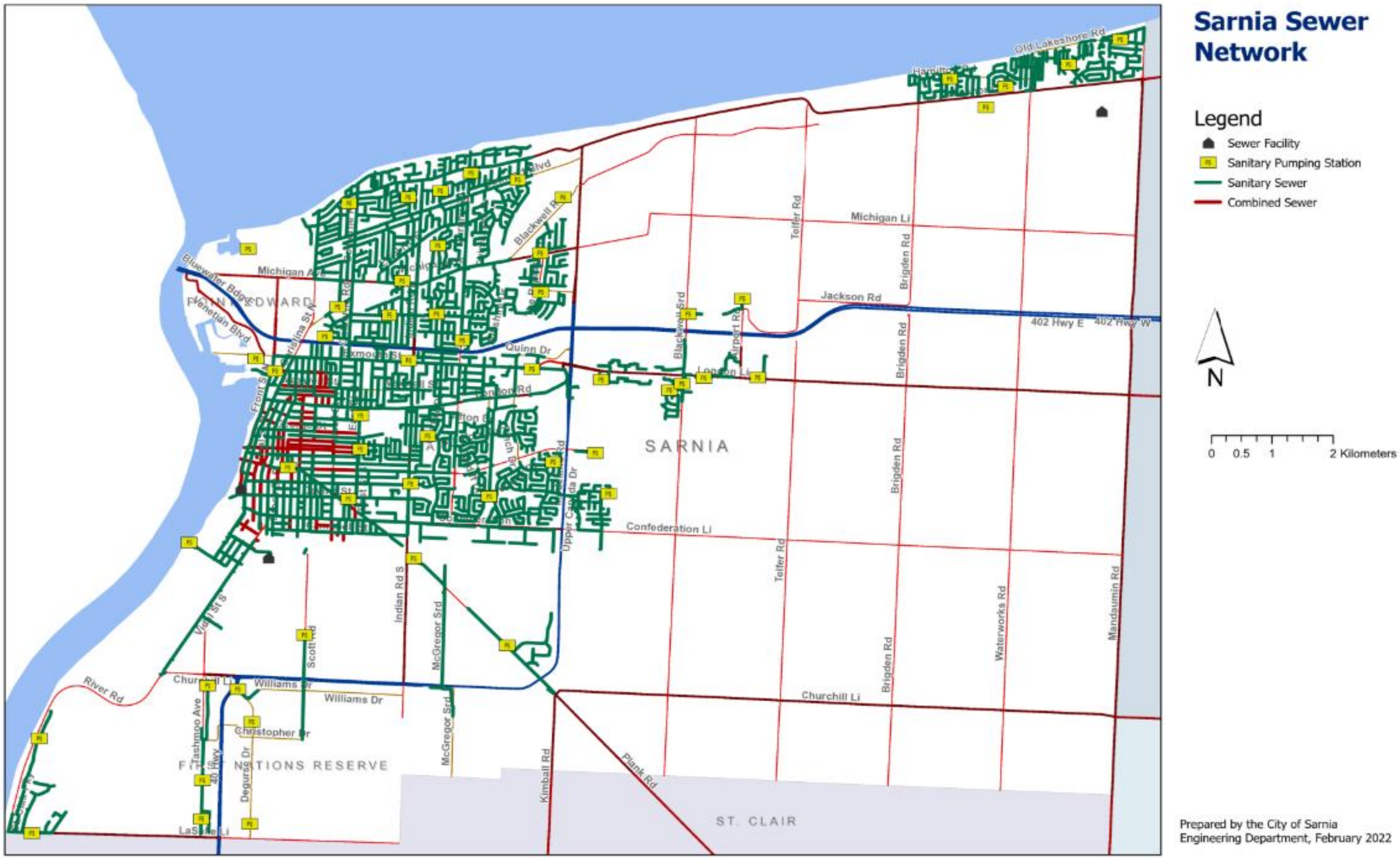
Next Steps and Recommendations

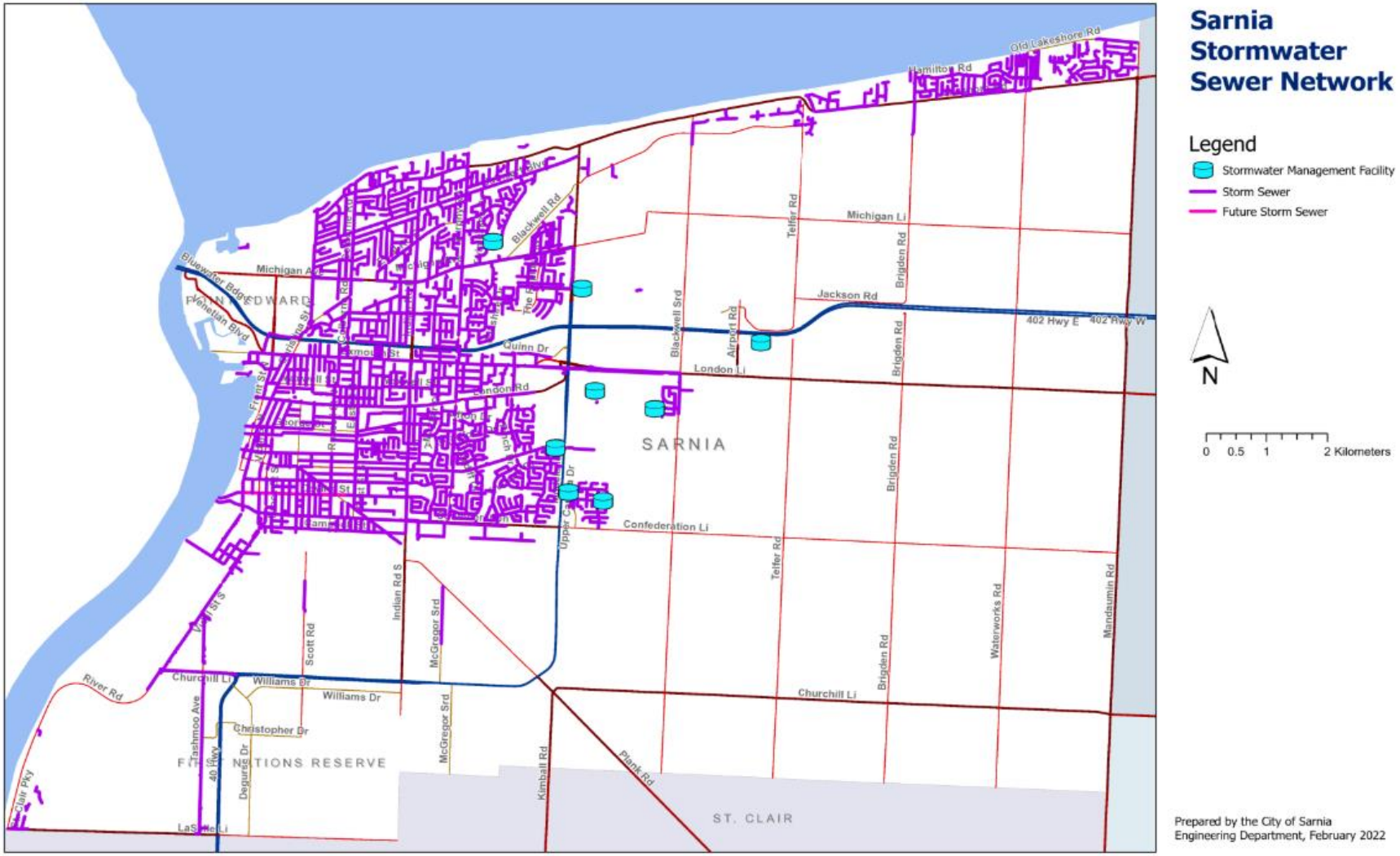
1. Each City Divisions should focus on the target re-investment rates for each asset category and integrate them into their budget and project planning processes.
2. Data improvement plans should be implemented as part of continuous quality improvement with an annual update to council per O. Reg. 588/17
3. The City should begin planning for the next phases of O. Reg. 588/17 with discussions on proposed levels of service and public consultation into 2025.
4. The asset management planning process should be closely aligned with a financial strategy, as required by O. Reg. 588/17, and with the City's budget process.
5. The City should continue to invest in Cityworks and data management through GIS. This will ensure that Asset Management continues to improve and that asset management modelling will assist with project planning and individual asset analysis.
6. With continuous improvements to data quality, the City should strive to focus and Data-driven decision making for individual asset categories.

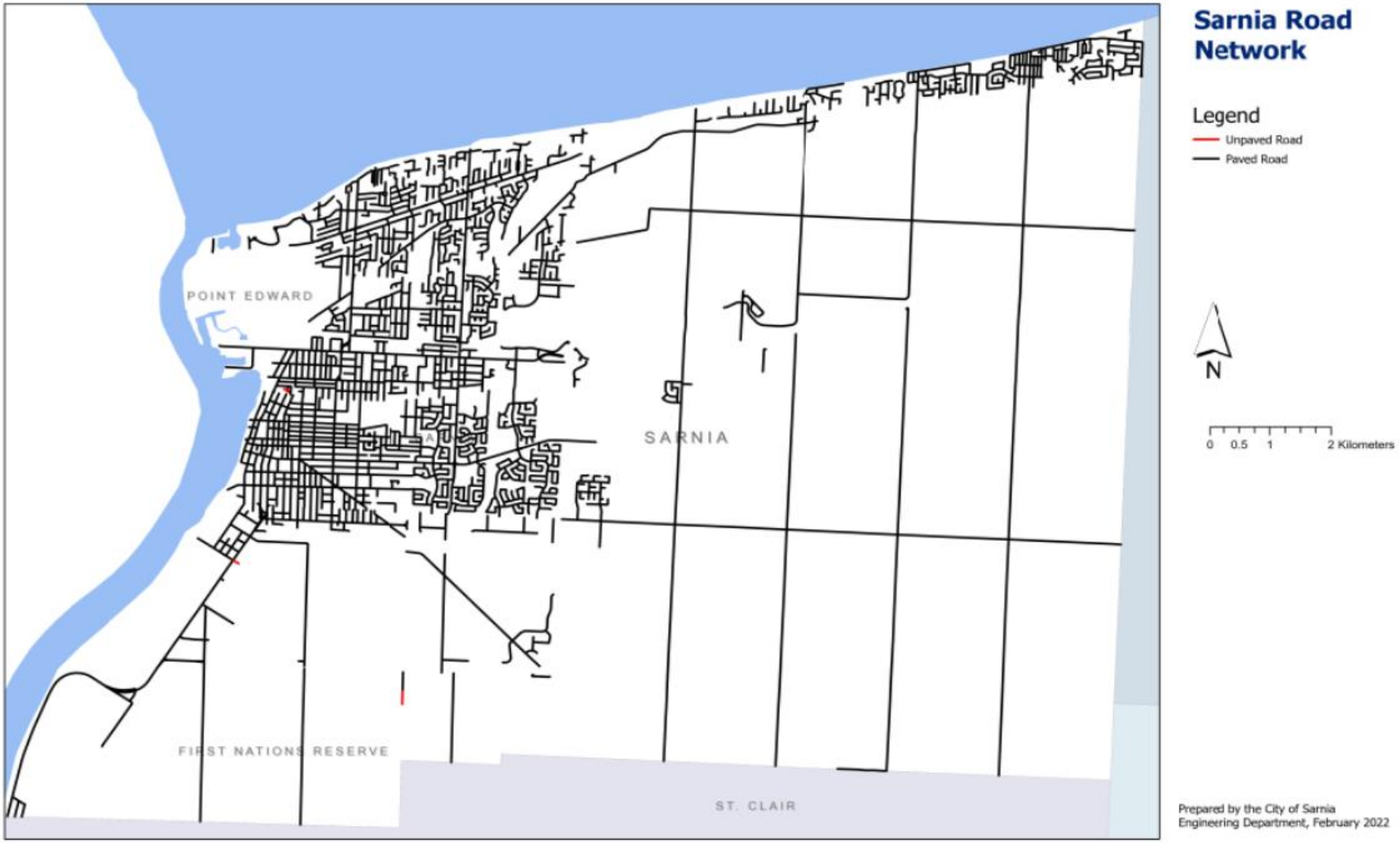
O. Reg. 588/17 Asset Management Planning for Municipal Infrastructure				
2019	**2022**	**2024**	**2025**	**2025+**
POLICY	CORE PLAN	FULL PLAN	BUDGET INTEGRATION	PERMANANCE
Asset Management Policy Development	Asset Management Plan for Core Infrastructure Current Levels of Service	Asset Management Plan for All Municipal Assets Current Levels of Service	Asset Management Plan incorporating: Proposed Levels of Service Lifecycle Management Financial Strategy	Public Posting and Consultation Annual Review by Council (July) Review and Update of Policy and Plan every 5 years (min)

Appendix A – Core Asset Maps


Sarnia Water Distribution Network
Legend
Watermain
N
0 0.5 1 2 Kilometers
Prepared by the City of Sarnia Engineering Department, June 2022
Province of Ontario, County of Lambton, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada, Esri, NASA, NGA, USGS, FEMA
Port Huron
South Park
Sarnia
Blackwell
Brights Grove
Vyner
Bunyan
Lucasville
Sherwood Village
High Park
Michigan Line
London Line
Fourth Line
Churchill Rd
Churchill Line
Lasalle Line
Lasalle Rd
Sarnia No. 45
Sarnia (Chris Hadfield) Airport
Port Huron Golf Club
Sarnia Golf & Curling Club
Canatara Park
Marshall Rd
Williams Dr
Port Huron Golf Club
Blackwell Sdrd
Telfer Rd
Brigden Rd
Waterworks Rd
Modeland Rd
Indian Rd S
Minnie St
Beard St
Dove St
198 m
228m


Sarnia Sewer Network
Legend
Sewer Facility
Sanitary Pumping Station
Sanitary Sewer
Combined Sewer
N
0 0.5 1 2 Kilometers
Prepared by the City of Sarnia
Engineering Department, February 2022
SARNIA
ST. CLAIR
Old Lakeshore Rd
Michigan Li
Jackson Rd
402 Hwy E
402 Hwy W
Telfer Rd
Brigden Rd
Confederation Li
Churchill Li
Waterworks Rd
Mandaumin Rd
Kimball Rd
Plank Rd
Upper Canada Dr
McGregor Srd
Indian Rd S
Scott Rd
Williams Dr
Christopher Dr
Tashmoo Ave
Degurse Dr
River Rd
Vidal St S
Michigan Ave
Bluewater Bdge
Venetian Blvd
Quinn Dr
Blackwell Rd
Blackwell Srd
Airport Rd
Front St N
Christina St N

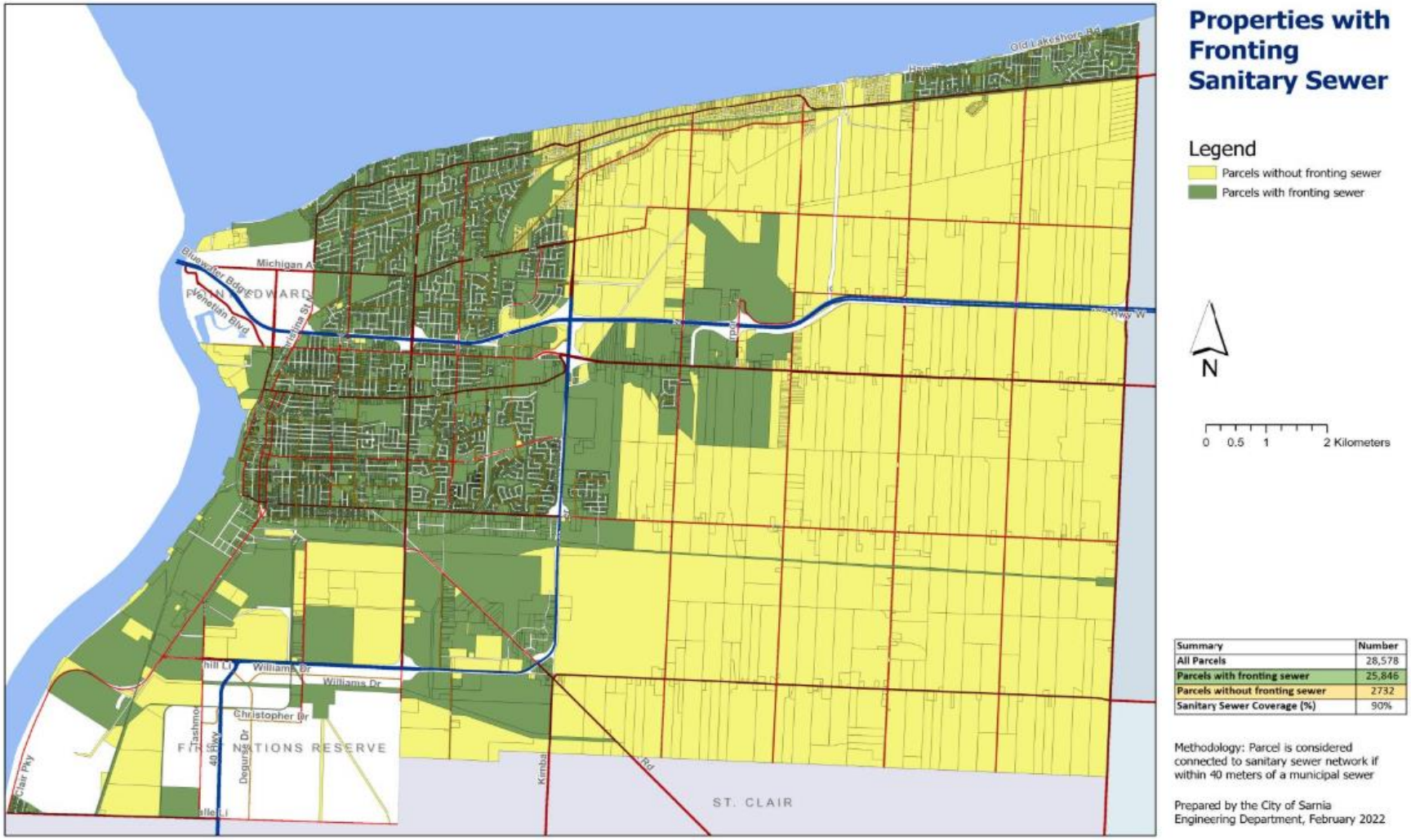

Sarnia
Stormwater
Sewer Network
Legend
Stormwater Management Facility
Storm Sewer
Future Storm Sewer
N
0 0.5 1 2 Kilometers
SARNIA
ST. CLAIR
Michigan Ln
Jackson Rd
London Ln
Confederation Ln
Churchill Ln
Williams Dr
Christopher Dr
Brigden Rd
Telfer Rd
Blackwell Rd
Blackwell Srd
McGregor Srd
Indian Rd S
Scott Rd
Kimball Rd
Plank Rd
Waterworks Rd
Mandaumin Rd
Airport Rd
Quinn Dr
London Rd
River Rd
402 Hwy E
402 Hwy W
Prepared by the City of Sarnia
Engineering Department, February 2022


Sarnia Road Network
Legend
Unpaved Road
Paved Road
N
0 0.5 1 2 Kilometers
POINT EDWARD
SARNIA
FIRST NATIONS RESERVE
ST. CLAIR
Prepared by the City of Sarnia
Engineering Department, February 2022

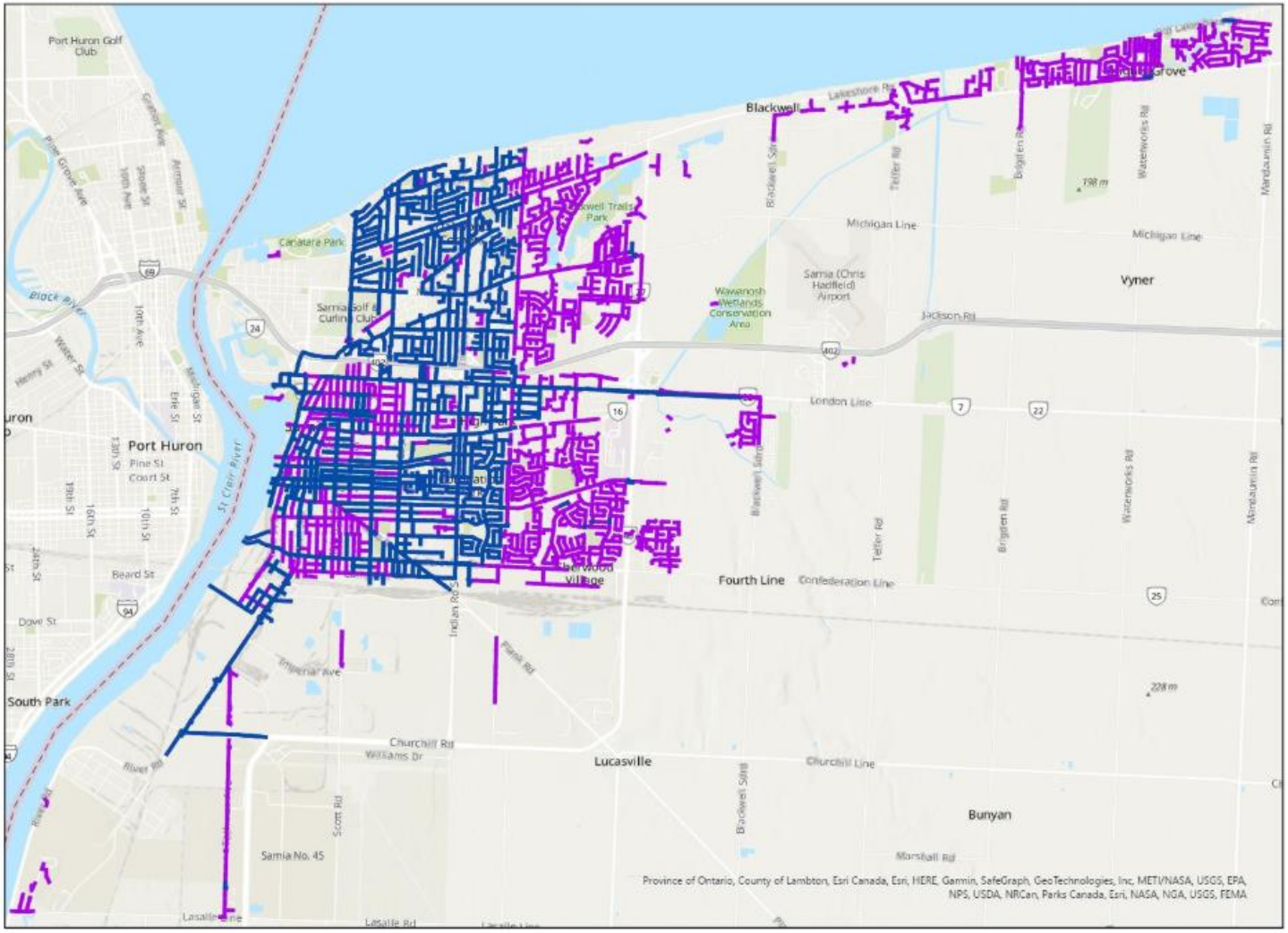

City of Sarnia Bridge and Culvert Map for OSIM Inspections
Legend
Bridges
N
0 0.5 1 2 Kilometers
BRDG_10
BRDG_NP_03
BRDG_NP_02
BRDG_20
CULVT_200
BRDG_50
CULVT_190
BRDG_60
BRDG_40
BRDG_30
BRDG_NP_01
BRDG_70
CULVT_NC_02
CULVT_NC_03
CULVT_NC_01
CULVT_210
CULVT_220
BRDG_230
BRDG_250
BRDG_240
CULVT_260
BRDG_320
CULVT_110
CULVT_300
BRDG_150
BRDG_180
BRDG_270
BRDG_90
CULVT_280
CULVT_290
BRDG_100
SARNIA
ST. CLAIR
FIRST NATIONS RESERVE
Prepared by the City of Sarnia
Engineering Department, February 2022

Appendix B – Level of Service Indicators

*This estimate is an approximation using available data



*This estimate is an approximation using available data



City of Sarnia - Stormwater Management System Resilient to 5-year Storm

Legend

- Sewer Storm
- Storm Sewer Pre 1970

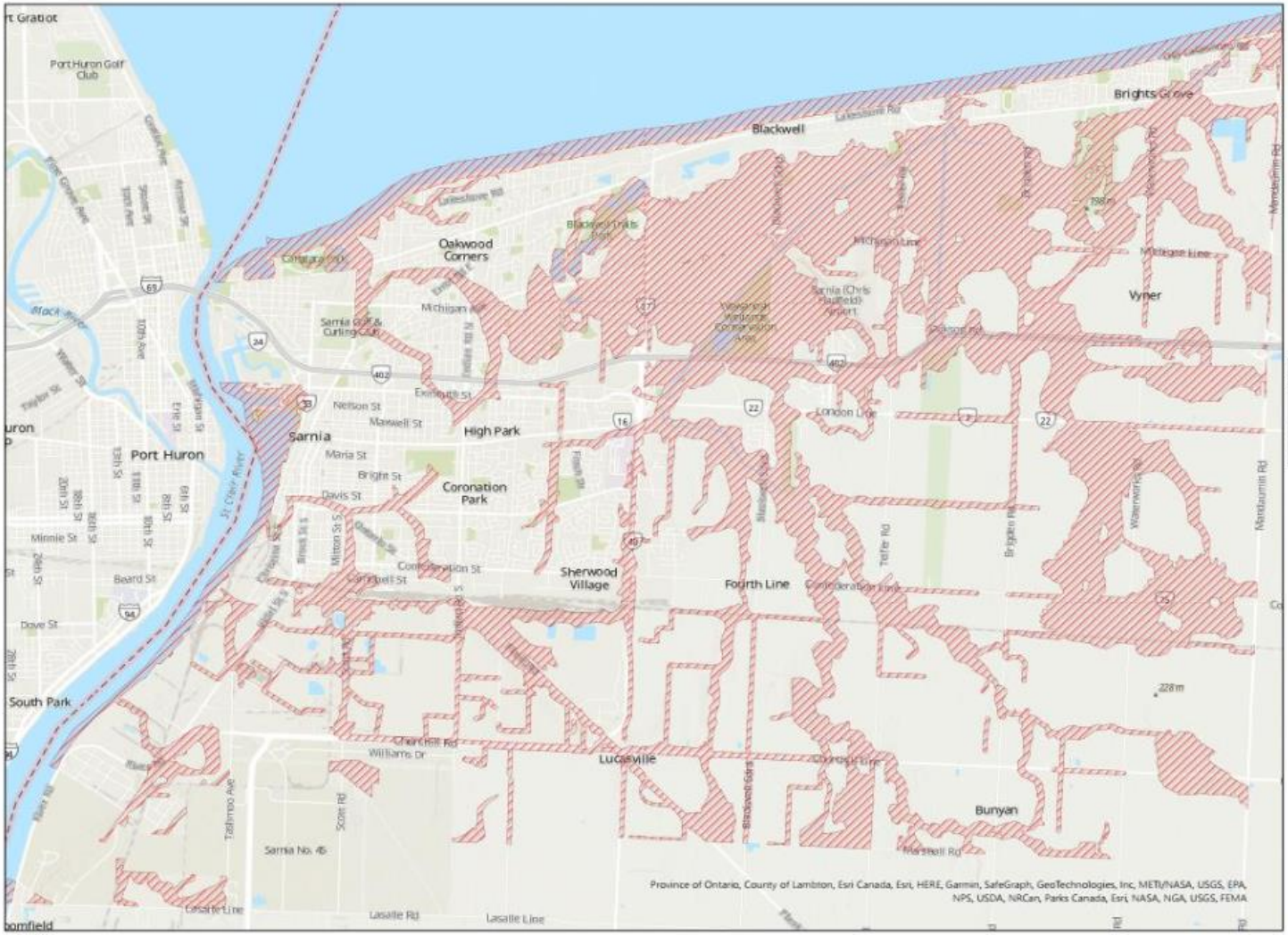
Asset Category	Length (km)	Percentage
Storm and Combined Sewer	343	100%
Storm and Combined Sewer Pre 1970	162	47%

N

0 0.5 1 2 Kilometers

Prepared by the City of Sarnia Engineering Department, June 2022

*Storm sewers built before 1970 are assumed to not be resilient to a 5-year storm



*This estimate is an approximation using available data

Road Condition Images

Very Poor	Poor	Fair	Good	Excellent