



2025

Asset Management Plan

Township of Selwyn

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Table of Contents

1.0 Municipal Information	6
1.1 Municipal Area Characteristics	6
1.2 Purpose	7
1.3 Scope.....	8
2.0 Roads.....	10
2.1 Roads Network	10
2.1.1 Summary of Assets	10
2.1.2 Replacement Cost/Average Age	13
2.1.3 Current Performance/Condition.....	13
2.1.4 Approach to Assessing Condition	18
2.1.5 Lifecycle Activities	18
2.1.6 Current Levels of Service	19
2.2 Sidewalk Assets	20
2.2.1 Summary of Assets	20
2.2.2 Replacement Cost	22
2.2.3 Current Performance/Condition.....	22
2.2.4 Approach to Assessing Condition	24
2.2.5 Lifecycle Activities	24
2.2.6 Levels of Service	25
2.3 Signage – Regulatory and Warning Assets	26
2.3.1 Summary of Assets	26
2.3.2 Replacement Cost	29
2.3.3 Current Performance/Condition.....	29
2.3.4 Approach to Assessing Condition and Lifecycle Activities	31
2.3.5 Levels of Service	31
3.0 Bridges and Culverts.....	33
3.1 Summary of Assets	33
3.2 Replacement Cost/Average Age	34
3.3 Current Performance/Condition.....	35
3.4 Approach to Assessing Condition	35
3.5 Lifecycle Activities	35
3.6 Current Levels of Service	36
4.0 Water - Distribution	38
4.1 Summary of Assets	38
4.1.1 Lakefield.....	38
4.1.2 Woodland Acres	38
4.1.3 Replacement Cost/Average Age	39
4.2 Current Performance/Condition.....	40
4.2.1 Lakefield.....	40
4.3 Approach to Assessing Condition	41
4.3.1 Lakefield.....	41
4.3.2 Woodland Acres	41
4.4 Lifecycle Activities	42
4.4.1 Lakefield.....	42
4.4.2 Woodland Acres	42
4.5 Current Levels of Service	43
5.0 Wastewater Collection and Treatment	45
5.1 Summary of Assets	45
5.1.1 Wastewater Collection Systems	45
5.1.2 Lakefield Wastewater Treatment Plant (Lagoon)	46
5.1.3 Lakefield Wastewater Treatment Plant (Water Street SPS).....	47
5.1.4 Replacement Cost/ Average Age	48

5.2 Current Performance/Condition	48
5.2.1 Wastewater Collection System (including pumping stations).....	48
5.2.2 Wastewater Treatment Facilities	48
5.3 Approach to Assessing Condition	48
5.3.1 Sanitary Collection System (including pumping stations).....	48
5.3.2 Wastewater Treatment Facility	49
5.4 Lifecycle Activities	49
5.4.1 Sanitary Collection System	49
5.4.2 Wastewater Treatment Facility	49
5.5 Current Levels of Service	50
5.5.1 Community Levels of Service	50
5.5.2 Technical Levels of Service	50
6.0 Stormwater	52
6.1 Summary of Assets	52
6.1.1 Stormwater Collection System.....	52
6.1.2 Stormwater Collection Ponds	53
6.1.3 Replacement Cost/ Average Age	53
6.2 Current Performance/Condition	54
6.2.1 Stormwater Collection System.....	54
6.2.2 Stormwater Collection Ponds	54
6.3 Approach to Assessing Condition	54
6.3.1 Stormwater Collection System	54
6.3.2 Stormwater Collection Ponds	55
6.4 Lifecycle Activities	55
6.4.1 Stormwater Collection System	55
6.4.2 Stormwater Collection Ponds	56
6.5 Current Levels of Service	56
6.5.1 Community Levels of Service	56
6.5.2 Technical Levels of Service	56
6.5.3 Five (5) Year Resiliency.....	57
6.5.4 One-Hundred (100) Year Resiliency	57
7.0 Facilities	60
7.1 Summary of Assets	60
7.2 Facility Assessment.....	61
7.3 Current Performance/Condition.....	63
7.4 Approach to Assessing Condition	64
7.5 Lifecycle Activities	64
7.6 Current Levels of Service	64
8.0 Fleet Assets.....	67
8.1 Summary of Assets	67
8.1.1 Plated Fleet	67
8.1.2 Non-Plated Equipment	67
8.2 Current Performance/Condition.....	68
8.3 Approach to Assessing Conditions	68
8.4 Lifecycle Activities	69
8.5 Current Levels of Service	71
9.0 Financial Information	74
9.1 Debt	74
9.2 Reserves	74
9.3 Community Capacity Building Fund (Formerly the AMO/Federal Gas Tax grant)	75
9.4 Ontario Community Investment Fund (OCIF).....	76
9.5 Ontario Municipal Partnership Fund (OMPF)	76
9.6 Specific Conditional Grant Programs	77
9.7 Development Charges.....	77
9.8 Financing Strategy - Next Steps.....	77

10.0 Next Steps 81

10.1 Ensure Asset Inventories are Updated Regularly 81

10.2 Filling Information Gaps 81

10.3 Maximize Use of GIS Capabilities 81

10.4 All Assets Classes 81

10.5 Best Practices..... 82

11.0 References 86

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1.0 Municipal Information

The Township of Selwyn was created by virtue of two amalgamations and one name change: The Township of Smith and the Township of Ennismore amalgamated on January 1st, 1998 and the Township of Smith-Ennismore then amalgamated with the Village of Lakefield on January 1st, 2001. The Township then changed its name to the Township of Selwyn in 2013.

Centrally located in the County of Peterborough, one hour north of the Greater Toronto Area, the community is surrounded by water on three sides and borders the City of Peterborough and the City of Kawartha Lakes. The Township of Selwyn is the most populated municipality in the County of Peterborough, with an approximate population of 18,653 and has close to $\frac{1}{3}$ of all the households in the County of Peterborough and approximately 34% of the workforce. With a broad economic base that includes technology, information services, healthcare, education, retail, finance, and agriculture, its home to one of the County of Peterborough's most stable economies.

1.1 Municipal Area Characteristics

Statistics Canada Descriptions	2016	2021
Population	17,060	18,653
Population Change (2011-2016)	1.3%	9.3%
Total Private Dwellings	8,404	8,540
Private Dwellings Occupied by Usual Residents	6,857	7,483
Seasonal Households	1,547	1,057
Land Area (square kilometres)	315.69	316.12
Population Density per square kilometre	54.0	59.0

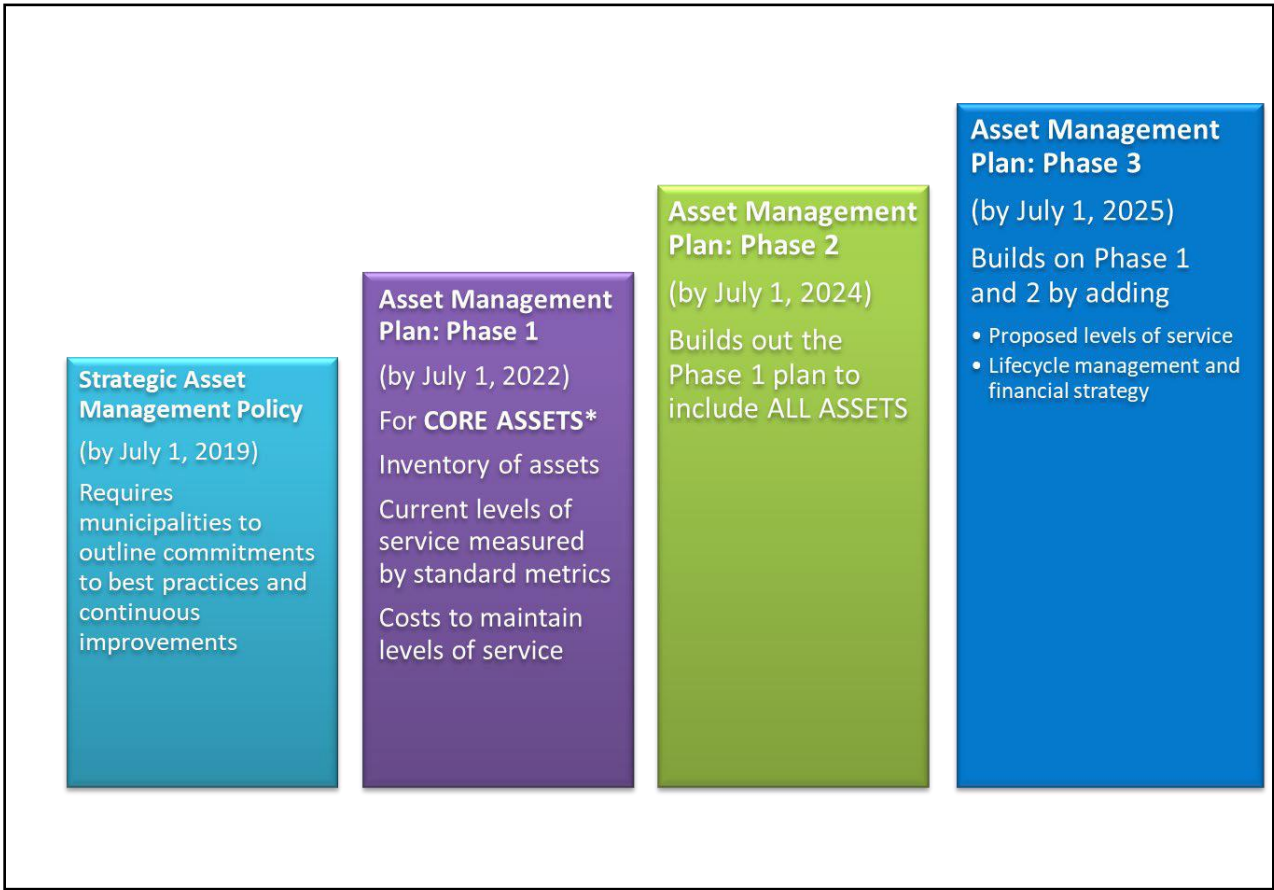
Budget 2025	Operations	Capital	Total
Taxation	\$18,607,177	\$4,422,626	\$23,029,803
Police - Area Rates	\$3,430,022	\$0	\$3,430,022
Water & Wastewater - Lakefield	\$3,116,118	\$840,322	\$3,956,440
Water & Wastewater - Woodland Acres	\$684,752	\$0	\$684,752
Total	\$25,838,069	\$5,262,948	\$31,101,017

1.2 Purpose

Asset management plans formalize the Township’s commitment to ensuring that assets are appropriately utilized and maximize the benefits of the Township’s infrastructure.

In December 2013, Council adopted the Selwyn Township Asset Management Plan – Phase One as the starting point for a new long term asset management planning and budgeting process at Selwyn Township. Subsequently, Selwyn Council received a number of annual updates that prioritized key investments in core assets. This series of asset management plans was based on a guidebook established by the provincial government of the day.

The Asset Management Plan has been prepared in accordance with the requirements of Ontario Regulation (O. Reg) 588/17 – Asset Management Planning for Municipal Infrastructure, as amended.



The Selwyn Township Asset Management Plan is based upon the Council approved Strategic Asset Management Policy and seeks to establish a long-term asset management planning and budgeting process at Selwyn Township.

While the strategic plan for Selwyn is the overarching document that sets the tone and direction for all other plans, there are a number of specific other plans that will also affect AMP. These plans are interconnected and the various infrastructure investment plans come together under the AMP.

These plans and specific asset reviews, condition ratings and technical memos have been utilized to create this version of the AMP for Selwyn and are included in the References section of this report. As the AMP is updated annually and more detailed supporting data is compiled, the References section will be updated.

The ultimate goal is that all of these forward-looking documents will be updated in an appropriate sequence such that they can stand on their own but feed into other complementary plans. This represents our vision for AMP in Selwyn and how ‘it all comes together’.

1.3 Scope

The Township of Selwyn Asset Management Plan includes core municipal infrastructure assets; in accordance with O. Reg 588/17, section 5 - core municipal infrastructure assets are:

- I. Roads and related infrastructure components
- II. Bridge or culvert (Structures)
- III. Water asset that relates to the collection, production, treatment, storage, supply or distribution of water
- IV. Wastewater asset that relates to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater
- V. Stormwater management asset that relates to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater

The AMP also includes all other assets; in accordance with O. Reg 588/17, section 6 - these asset classes are:

- VI. Facilities
- VII. Fleet

The Selwyn AMP should be viewed as a ‘living document’ and an ongoing work- in-progress. From the initial plan approved in 2013, staff has stressed the importance of incorporating more fulsome information in the state of local infrastructure, the need for a more established process as it relates to levels of service and funding priorities, and a long-term financial strategy to fund the infrastructure deficit that exists. The adoption of the 2025 AMP is part of an ongoing process of continuous improvement in asset utilization and service provision.

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2.0 Roads

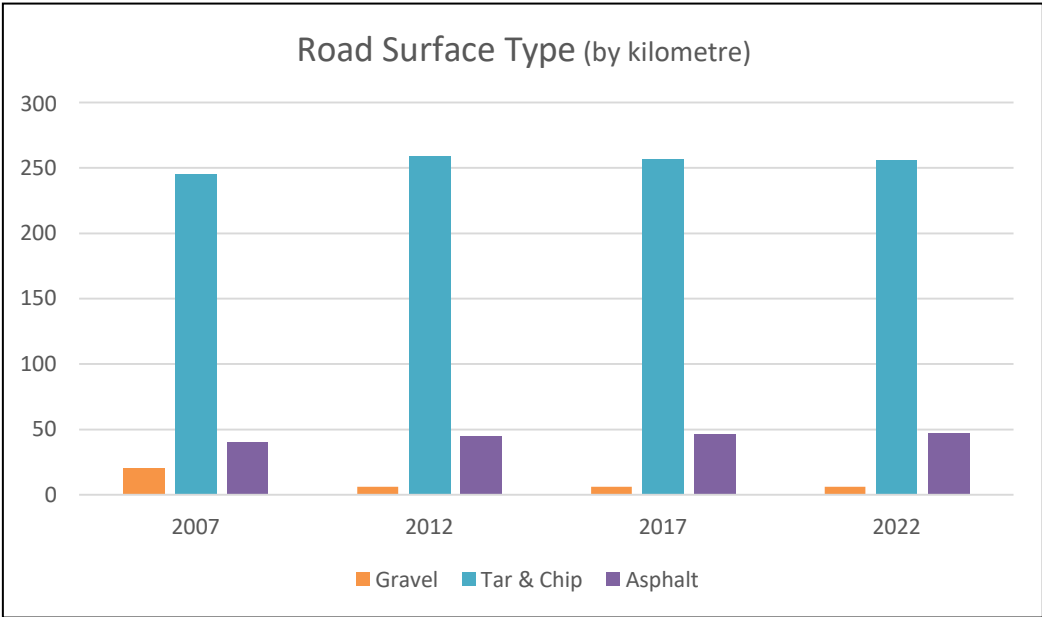
2.1 Roads Network

2.1.1 Summary of Assets

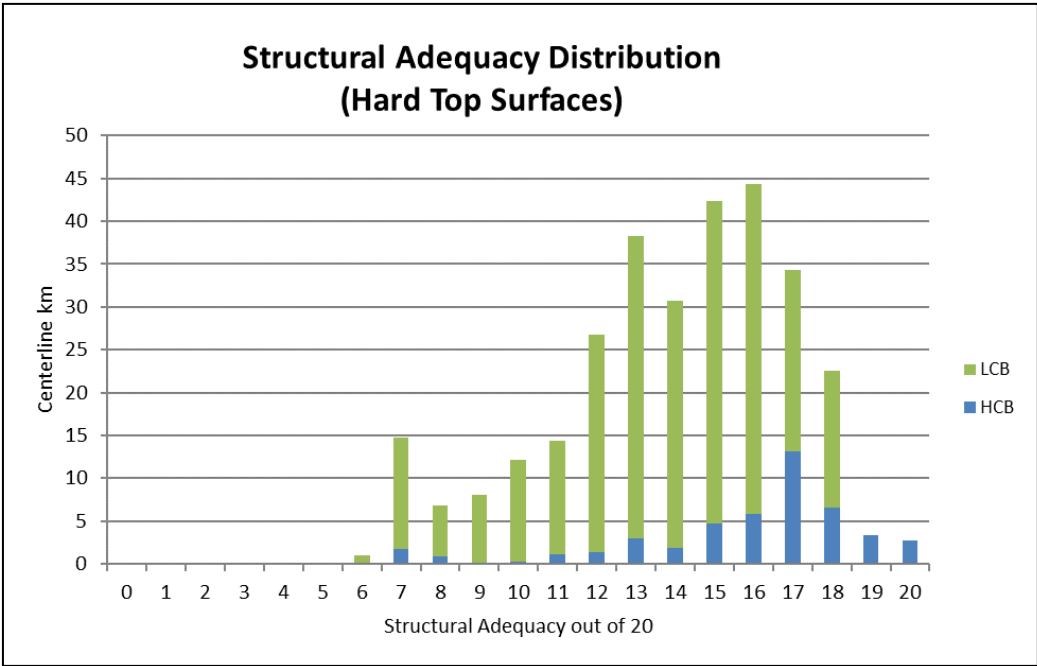
The Selwyn Public Works department is responsible for the maintenance and construction of the Township’s Road network.

The information in this section is based on the 2022 Road Needs Study Report. The road infrastructure system spans a total of 309 km, primarily within a rural setting, with small areas of urban and semi-urban development. The road network includes surfaces ranging from gravel to hot mix paved (asphalt).

Township of Selwyn Road System in Kilometres (As of May 2022)		
A.	Surface Type	Totals*
	Earth	0
	Gravel (Loose Top Gravel)	6
	Surface Treatment (LCB & ICB)	256
	Hot Mix Asphalt (HCB)	47
	Total A	309 km
B.	Roadside Environment	
(i)	Rural	
	Earth	0
	Gravel (loose Top Gravel)	6
	Surface Treatment (LCB & ICB)	186
	Hot Mix Asphalt (HCB)	4
	Total Rural	196 km
(ii)	Semi-Urban	
	Gravel (loose Top Gravel)	<1
	Surface Treatment (LCB)	70
	Hot Mix Asphalt (HCB)	30
	Total Semi-Urban	101 km
(iii)	Urban	
	Gravel (loose Top Gravel)	0
	Surface Treatment (LCB)	0
	Hot Mix Asphalt (HCB)	12
	Total Urban	12 km
	Total B	309 km
*Estimated to the nearest centreline kilometre.		

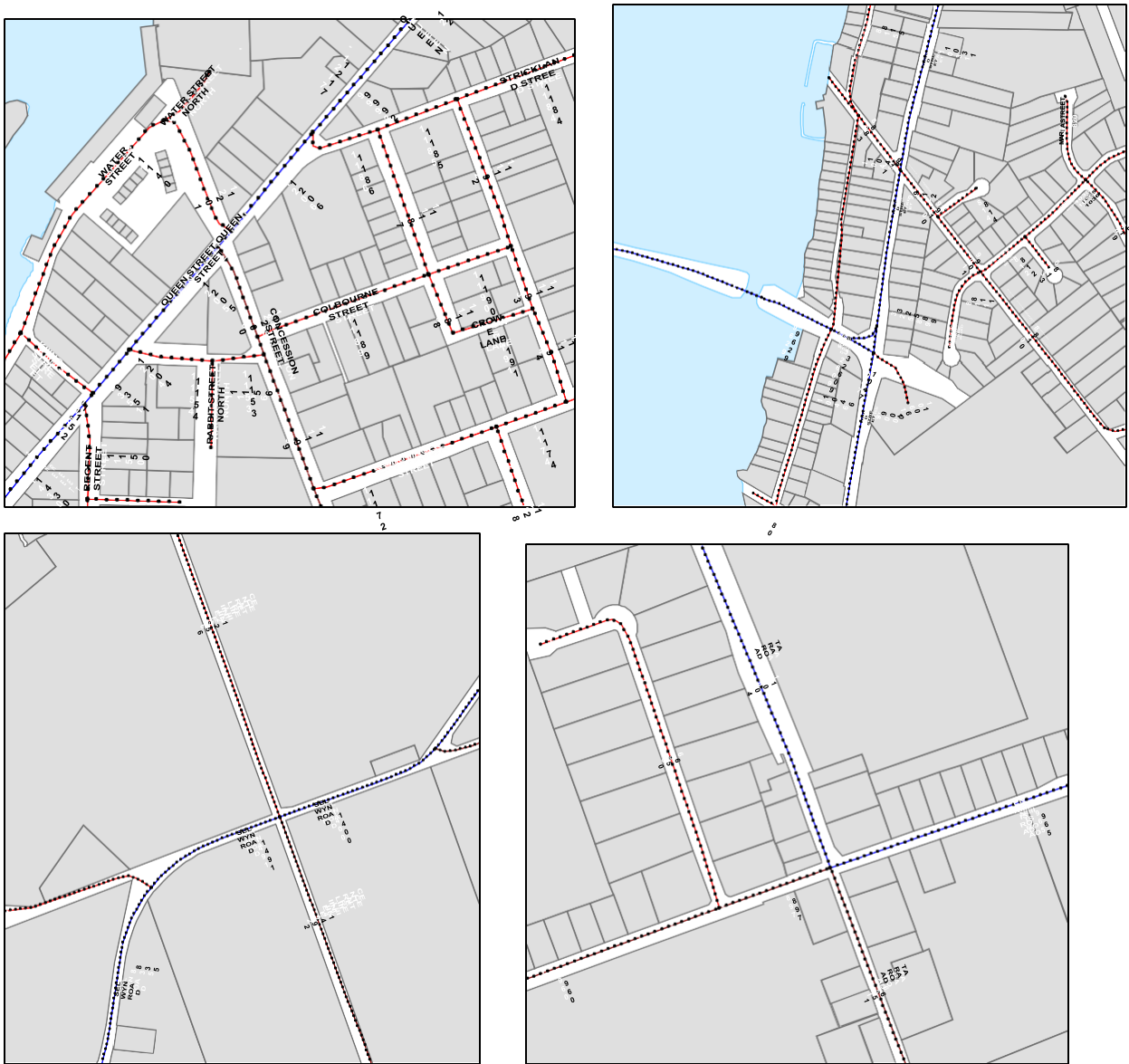


While Pavement Condition Index (PCI) is a key factor in the asset management plan, Road Adequacy is another measure that figures prominently in the RNS. The following graph outlines ongoing investments required over the next period of time.



The Township uses a GIS based program to collect data and track asset attributes. Data stored and displayed on GIS allows the user to display a map of the subject area and then add or remove specific layers that display various data sets.

The following excerpts provide an example of the types of maps and data sets available. The different coloured roads depict road type.



Future iterations of the Selwyn AMP GIS will be included in budget presentations to provide Council with a visual representation of capital project areas and how they may affect adjacent areas or sections of the road network.

2.1.2 Replacement Cost/Average Age

All Road Classes	Replacement Cost	Average Age (based on PCI)
Total	\$52,800,000	9.5 Years

2.1.3 Current Performance/Condition

Maintenance – specific to preservation management

Road Type	Total Kilometres in Length	Percentage of Total Road Network	Estimated Annual Maintenance Cost (Per 2022 RNS)
Gravel	6	1.94%	\$15,600
Surface Treated Roads (LCB)	256	82.85%	\$894,250
Hot Mixed Paved Roads (HCB)	47	15.21%	\$432,400
Total	309	100.00%	\$1,342,250

Construction





Hard Top Roads	Total Kilometres in Length	Percentage of Total Road Network	Estimated Annual Cost Now-Ten (Per 2022 RNS)
Total	309	100.00%	\$9,600,000


Descriptions that illustrate the different levels of road class pavement condition are presented in the tables below. The tables below differ in qualitative description based on the surface type as noted in the heading of each table.

- HCB – Asphalt
- LCB – Tar & Chip
- Gravel – no hard top surface

Qualitative Descriptions of PCI for HCB Roads





Selwyn's HCB roads have PCI's ranging from 100 to 48.

Example Photos	PCI Range	Qualitative Description
	90 - 100	<p>Pavement is in excellent condition with few cracks.</p> <p>The Ride Condition Rating is excellent with few areas of very slight to slight distortion.</p>
	75 - 90	<p>The pavement is in good condition with frequent very slight or slight cracking.</p> <p>The Ride Condition Rating is good with a few slightly rough and uneven sections.</p>
	65 - 75	<p>The pavement is in fairly good condition with slight cracking, slight or very slight distortion and a few areas of slight alligatoring.</p> <p>The Ride Condition Rating is fairly good with intermittent rough and uneven sections.</p>
	50 - 65	<p>The pavement is in fair condition with intermittent moderate and frequent slight cracking, and with intermittent slight or moderate alligatoring and distortion.</p> <p>The Ride Condition Rating is fair and the surface is slightly rough and uneven.</p>

	40 - 50	<p>The pavement is in poor to fair condition with frequent moderate cracking and distortion, and intermittent moderate alligating.</p> <p>The Ride Condition Rating is poor to fair and the surface is moderately rough and uneven.</p>
N/A	30 - 40	<p>The pavement is in poor to fair condition with frequent moderate alligating and extensive moderate cracking and distortion.</p> <p>The Ride Condition Rating is poor to fair and the surface is moderately rough and uneven.</p>
N/A	20 - 30	<p>The pavement is in poor condition with moderate alligating and extensive severe cracking and distortion.</p> <p>The Ride Condition Rating is poor and the surface is very rough and uneven.</p>
N/A	0 - 20	<p>The pavement is in poor to very poor condition with extensive severe cracking, alligating and distortion.</p> <p>The Ride Condition Rating is very poor and the surface is very rough and uneven.</p>


Qualitative Descriptions of PCI for LCB Roads

Selwyn's LCB roads have PCI's ranging from 91 to 33.

Example Photos	PCI Range	Qualitative Description
	80 - 100	Pavement is in excellent condition with just a few bumps or depressions from slight surface deformation. No surface defects such as streaking, potholes or cracking distresses. The Ride Condition Rating is very good.
	60 - 79	Pavement is in good condition with just a few bumps or depressions from slight to moderate surface deformation. Intermittent slight to moderate surface defects and/or cracking distresses. The Ride Condition Rating is good.
	40 - 59	Pavement is in fair condition with intermittent to frequent bumps or depressions from slight to moderate surface deformation. Intermittent to frequent moderate surface defects and/or cracking distresses. The Ride Condition Rating is fair.
	20 - 39	Pavement is in poor condition with frequent bumps or depressions from moderate surface deformation. Frequent moderate to severe surface defects and/or cracking distresses. Localized slight to moderate alligating may be present indicating pavement structural failure. The Ride Condition Rating is poor.
N/A in Selwyn	0 - 19	Pavement is in very poor condition with extensive bumps. The Ride Condition Rating is very poor.

Qualitative Descriptions of Surface Condition for Gravel Roads

Selwyn contains no examples of very good or poor gravel roads, as assessed by surface condition. This is expected as it is rare for a loose-top surface to have a surface condition of 10/10, and gravel roads are always one grading operation away from looking perfect (i.e. if a gravel road had a surface condition less than 4/10, it would likely be repaired by grading).

Example Photos	Surface Condition	Qualitative Description
N/A	10	If the section affords a fully adequate standard of service, with no annoyance or discomfort. Gravel roads rarely score a “10” rating due to their inherent roughness.
	7 - 9	If it is possible to maintain the lesser of the Minimum Tolerable Average Operating Speed or the legal Speed Limit with only a noticeable amount of annoyance to the driver due to sway, vibration or steering effort, but with no noticeable feeling of hazard.
Photo not available	4 - 6	If maintaining even the lesser of the Minimum Tolerable Average Speed or the legal Speed Limit results in either a “tug-of-war” with a too-steep crown, or a feeling that the car is taking undue punishment.
N/A in Selwyn	1 - 3	If the surface irregularities are so severe that a driver will tend to reduce speed considerably, possibly even steering an irregular course, or if the crown is too steep as to be hazardous in winter.

2.1.4 Approach to Assessing Condition

The Township Road network is monitored through regulated road patrols with conditions documented through standardized record keeping in conjunction with Minimum Maintenance Standards.

In addition, it has been the Township's practice since 2002 to complete a comprehensive Road Needs Study (RNS) every five years. The purpose of the RNS is to assess the current condition of the network and update the road inventory to include new additions since the last study. The information derived from the study update provides assistance to the Township for developing and executing a planned road maintenance and improvement program.

Building upon these approaches, the Township can develop a more fulsome understanding of the state of the infrastructure by assessing risks and impacts of asset failures. The Township continues to refine lifecycle maintenance strategies and implement a more consistent risk-based approach.

2.1.5 Lifecycle Activities

For many road classes there are more maintenance techniques available, than are typically used in Selwyn.

For instance, our engineers typically outline all surface preservation techniques for the various types of roads in the RNS. However, Selwyn doesn't typically use all of them. The following outlines the techniques used in Selwyn to maintain the current conditions.

In addition, when significant road maintenance activities are undertaken, a historical 'rule of thumb' used in Selwyn is that if the road preparation costs are greater than 50% of the overall project, then the project is treated as a Capital Construction project for funding purposes.

Asphalt

- Maintain with cold patch – prefer HL2 or HL3 if available – and use edger whenever possible.
- If road is in overall good condition, micro coat to fill minor rutting and cracks to improve road cross fall
- If road is out of shape but overall, in good condition, apply an overlay of HL2 – two
- (2) coats – scratch coat to fill rutting and minor low areas to provide cross fall and then finish top coat

Surface Treatment (Tar & Chip)

- Using the RNS as a guide and spring breakup observations, surface treatment with single lift

- Patch rough areas with edger and HL2 or HL3 hot mix
- If area is deemed to be of sufficient size, scarify, add gravel and grade and contract a double layer
- If area has soft spots, then the area is excavated and filled with pit run and gravel.
- Graded and double surfaced

Gravel

- Grade as needed based on observations (i.e., pot holes, washout)
- Apply calcium in late spring/early summer
- Add 25-50 mm of new aggregates annually, usually in fall

2.1.6 Current Levels of Service

Community Levels of Service

As noted in the County Official Plan Transportation Section, which covers the Township of Selwyn, the overall goal of the road network is *to provide a safe, convenient, efficient transportation system for all persons and goods ... to ensure that roads continue to be effective corridors for the movement of people and goods in and throughout the County of Peterborough.*

As noted under Summary of Assets above, the CGIS system used by Selwyn provides maps of the entire road network, level of connectivity across the municipality and the different road classifications.

As more data is collected and more layers added, this platform will provide a one-stop location to house all relevant attributes of a road section. This information is provided in the Selwyn RNS.

Technical Levels of Service

The RNS provides the following reporting which meets the technical requirements under Table 4 of O. Reg. 588/17.

Road Class Density

Class	Lane-kilometres	Lane-kilometres / Municipal Area*	PCI
Arterial	0.00	0.00	0.00
Collector Roads	185.24	0.59	71.6
Local Roads	431.54	1.37	74.0
All	616.78	1.95	73.3

*Municipal area taken as 316.12 km²

The average PCI for hard top surfaces in the Township is 73.3. The average surface condition of unpaved roads is 8.0 as per the inventory Manual.

This would broadly translate into a road with “good” rating.

2.2 Sidewalk Assets

2.2.1 Summary of Assets

In addition to an extensive roads network, the Selwyn Public Works department is also responsible for the maintenance and construction of the Township’s sidewalk system.

As part of the 2022 Road Needs Study, an update to the sidewalk system information was prepared by the Township’s engineering consultant.

The detailed sidewalk inventory included such factors as;

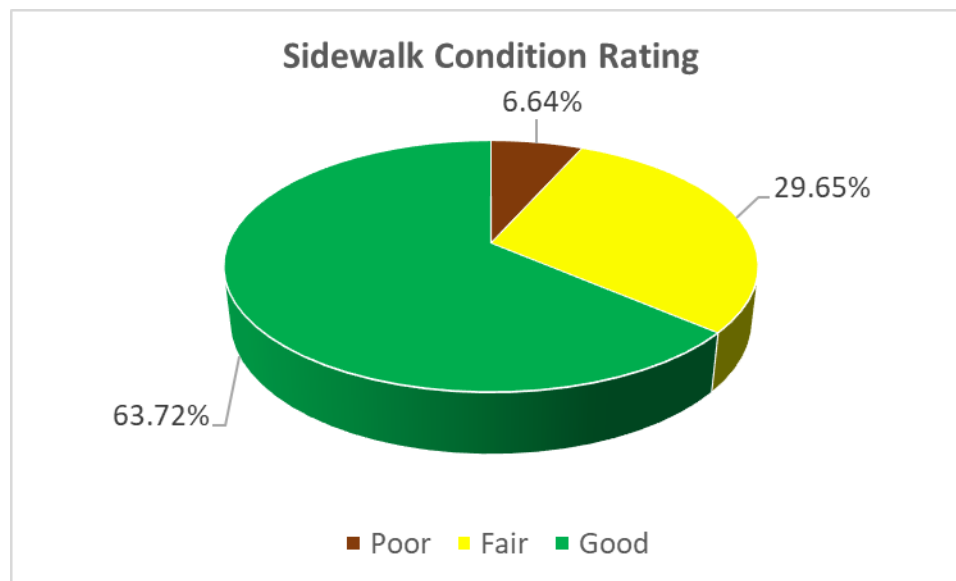
- Segment ID
- Segment Description
- Material Type
- Width
- Side of Road
- Length
- Notes on AODA compliance
- Condition

Basic sidewalk system data is depicted in the following chart:

Material	Length (m)	Area (m2)
Asphalt	37.0	29.6
Brick	137.0	287.7
Concrete	16,564.0	25,772.3
Total	16,738.0	26,089.6

Basic sidewalk system condition data is depicted in the following chart:

Condition	Length (m)	Area (m2)
Poor	1,268.0	1,731.9
Fair	5,182.0	7,734.3
Good	10,288.0	16,623.4
Total	16,738.0	26,089.6



The Township uses an Excel sheet based on road segments to collect data and track asset attributes. The Road Segments ID is the primary data source for storage and display on GIS, allowing the user to display a map of the subject area and then add or remove specific layers that display various data sets.

The following excerpt provides an example of the sidewalk network with the condition rating layer turned on. Colour coding ties in with the pie chart above.



2.2.2 Replacement Cost

The following chart outlines current replacement values by material type. Moving forward this cost will be marginally higher since the sidewalk material standard would be concrete.

All Classes	Replacement Cost
Asphalt	4,243
Brick	46,285
Concrete	4,001,728
Total	\$4,001,728

2.2.3 Current Performance/Condition

Maintenance

Sidewalks are defined and covered under the Minimum Maintenance Standards legislation. In this manner they differ from a shoulder, boulevard, trail or multi-purpose pathway. Maintenance activities include awareness of irregularities through marking, grinding to eliminate trip fall hazards and replacement of individual sections or bays of sidewalks.

Approximately \$33,500 is set aside in the typical annual budget to make repairs, replacing bays, and ensuring safe pedestrian passage. Longer stretches of sidewalks that require full replacement are included as capital budget items or included in capital road projects.

Winter maintenance activities include clearing and sanding with treated sand mixture. Annual budget amounts average \$27,000 for these activities.

Construction

As part of the Township's updated design process, a 1.8 metre width is the starting point for sidewalks and then adjusted for site conditions with 1.5 metre as the minimum. As noted below tactile walking surface indicators will be installed on all new and reconstructed curb ramps in accordance with AODA standards.

Township staff developed a formal policy with procedures as it relates to the criteria for new sidewalk implementation. Council approved the policy through passage of by-law # 2024-079. (road profiles in support of the policy are under development)

Qualitative Descriptions of Sidewalk Segments

Selwyn's condition rating including photos and qualitative descriptions.

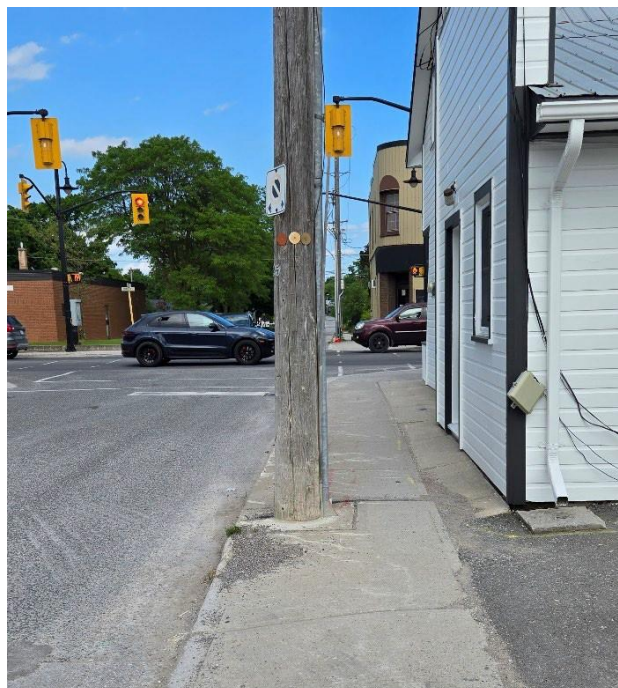
Example Photos	Condition	Qualitative Description
	Good	Concrete is in excellent condition with few cracks. The vertical alignment is excellent with virtually no areas of irregularity.
	Fair	Concrete is in good condition with frequent very slight or slight cracking. The vertical alignment is good with a few slightly rough and uneven sections.
	Poor	The pavement or concrete is in fairly good condition with frequent cracking. The vertical alignment has required marking/grinding and includes intermittent rough and uneven sections.

In terms of AODA compliance, almost all sidewalks were lacking tactile walking surface indicators (TWSI) at the bottom of curb ramps. TWSI should be installed on all new and reconstructed curb cuts/depressed curbs.



Approximately 1,140 m of sidewalk were less than 1.5 m wide, and as these sidewalks tend to be in poor condition, our engineers recommended that as they are replaced that they be installed to the correct width.

Additionally, there were some isolated cases of elevation changes being improperly transitioned and limited areas where other infrastructure impacts the proper sidewalk width.



With these non-conformities taken into account, Township Sidewalks are accessible and met AODA requirements.

2.2.4 Approach to Assessing Condition

The Township sidewalk system is monitored through annual walk throughs and periodic follow up visits with conditions documented through standardized record keeping.

In addition, it has been the Township's practice since 2017 to include Sidewalk System Assessments as part of the comprehensive Road Needs Study which is completed every five years. The purpose is to confirm the network characteristics, assess the current condition of the network and update the inventory to include material changes and new additions since the last study. The information derived from the study provides assistance to the Township for developing and executing a planned maintenance and improvement program.

Building upon these approaches, the Township can develop a more fulsome understanding of the state of the infrastructure by assessing risks and impacts of asset failures. The Township continues to refine lifecycle maintenance strategies and implement a more consistent risk-based approach.

2.2.5 Lifecycle Activities

There are more maintenance techniques available, than are typically used in Selwyn. The following outlines the techniques used in Selwyn to maintain the current conditions and ensure sidewalks are adequately maintained.

The Township is proactive with its approach to selecting tree species to plant in boulevards and in this manner tries to minimize the impact of tree roots on the sidewalk system.

Asphalt

- Maintain with cold patch.

Brick

- Replace or repair damaged area (may include regrading base material)

Concrete

- grinding to eliminate trip fall hazards
- add cold patch to smooth vertical irregularities
- replacement of individual sections or bays of sidewalk (may include grade adjustment).

2.2.6 Levels of Service

In developing levels of service for Sidewalks, it is noted that Council has recently approved a new Sidewalk Policy. This policy will shape not only new developments but the redevelopment of infrastructure as road segments are renewed.

In addition to the policy, the Township also includes feedback and recommendations from the Accessibility Advisory Committee on new and redevelopment projects for conformance with the AODA.

As well, the with the overarching guidance from the Strategic Plan regarding connected communities, the following attributes have been developed as target activities to support and service targets to achieve.

Service Attribute	Community Levels of Service	Activities to Support
Safety	Township prioritizes the safety of its sidewalks	annual inspection and budget allocation
Accessibility	Township strives to ensure that its sidewalks are accessible to all users	reducing list of known deficiencies
Reliability	Township strives to maintain its sidewalks in "Fair" to "Good" condition	annual inspection/complaints and budget allocation

Service Attribute	Technical Levels of Service	Target Service Level
Safety	number of metres of sidewalk in Poor Condition	0
	number of sidewalk defects addressed by painting, grinding or panel replacements	decreasing #
Accessibility	number of metres of sidewalk < 1.5 metres wide	decreasing #
	number of metres of sidewalk obstructed for 2 way pedestrian traffic	decreasing #
Reliability	Percentage of Sidewalks by Metre & CRV in Fair to Good condition at the time of inspection	100%
	Percentage of Sidewalks with identified MMS issues that were addressed within timeframe in O/Reg 239/02 (14 days)	100%

2.3 Signage – Regulatory and Warning Assets

The Township roads network includes a full inventory of regulatory and warning signs. The Selwyn Public Works department is also responsible for the maintenance and installation of these various signs.

As a general description, traffic signs provide important information about the law, warn of dangerous conditions and help the public find their way.

2.3.1 Summary of Assets

The Township employed Advantage Data Collection (ADC), a third-party specialist, to complete a Traffic Sign Retro-reflectivity, Inspection and Inventory.

This contractor uses MESH (Mobile Operations Management Software) to collect data, track asset attributes & retro-reflectivity and update the signage inventory. The Sign ID is the primary data source for storage and display and each sign is inventoried by affixing a heavy-duty, self-adhesive barcode with unique identifier.

The detailed review included such attributes as:

- Date and time of inspection
- Sheeting type
- Sign code
- Sign name
- Post type
- Lighting environment
- Location
- Dimension

The review also included an assessment related to:

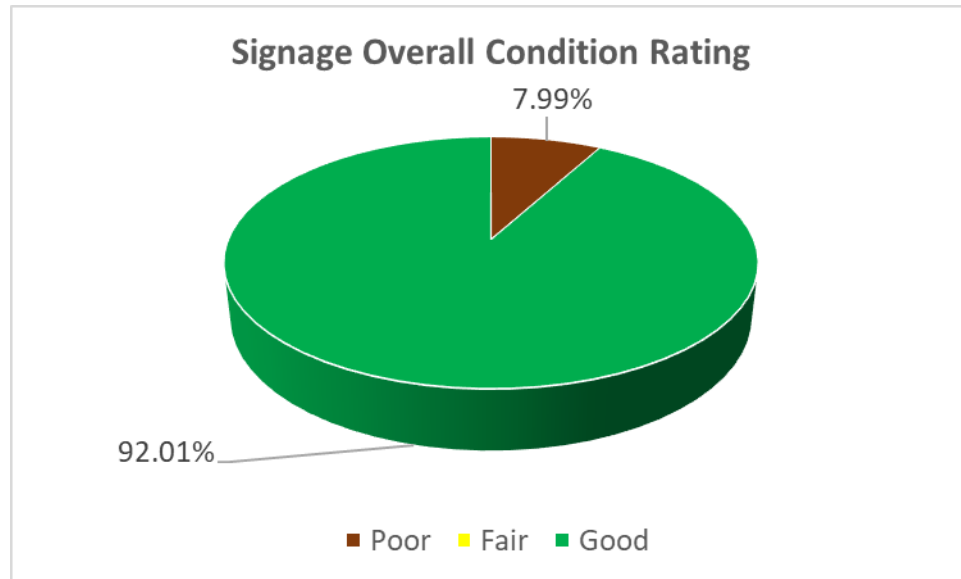
- sign condition
- sign retro-reflectivity
- support post condition

Basic sign data is depicted in the following chart:

Sign Type		Quantity		MMS
Priority		571		Section 11
Regulatory		402		Section 12
Warning		528		Section 12
Not Inspected		301		n/a
Total		1,802		

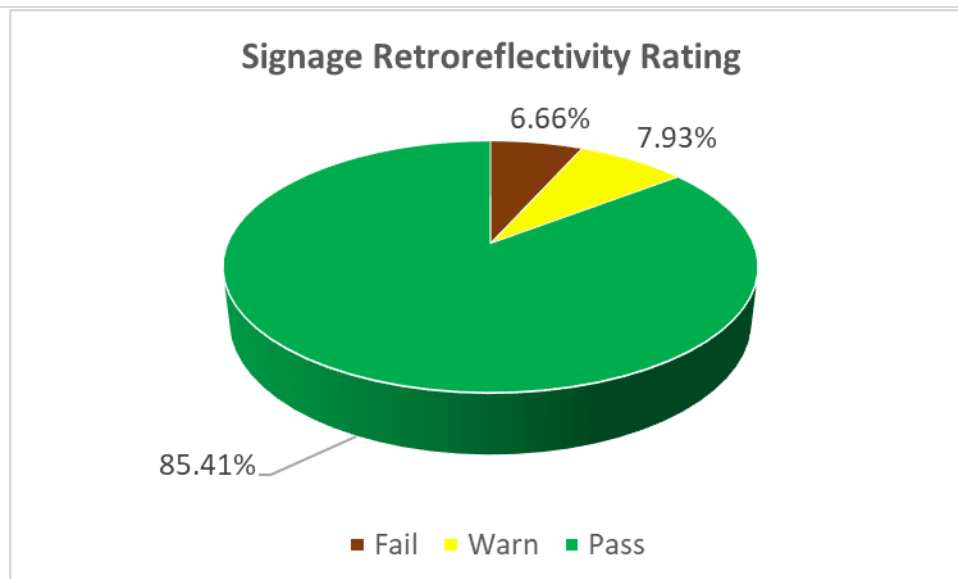
Basic sign condition data is depicted in the following chart:

Overall Condition	Quantity		%
Poor	120		7.99%
Fair	0		0.00%
Good	1,381		92.01%
Total	1,501		100.00%



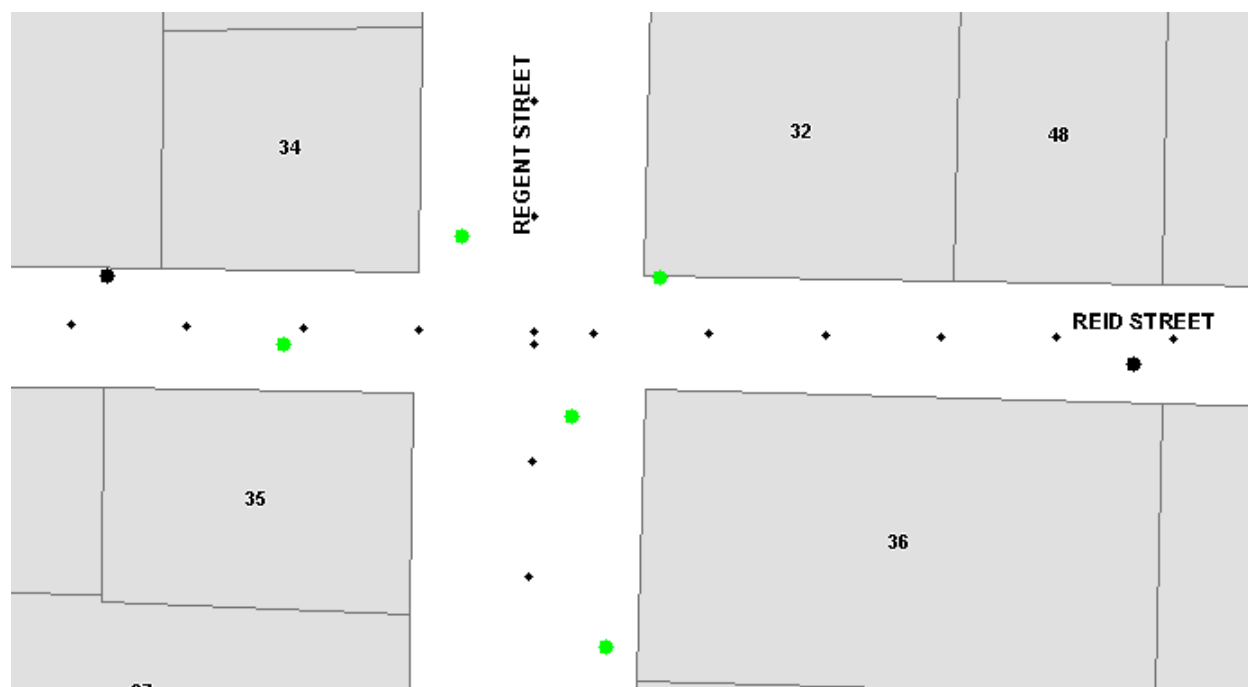
A key aspect of the sign condition is its retro-reflectivity. ADC uses a handheld meter and, in association with the barcode identifier, readings are taken to gauge sign performance and results are documented and evaluated.

Retro-reflectivity	Quantity		%
Fail	100		6.66%
Warn	119		7.93%
Pass	1,282		85.41%
Total	1,501		100.00%



In addition, each sign is logged by geolocation and their coordinates can be displayed on GIS, allowing the user to display a map of the subject area and the various signs that are present in that area.

The following excerpt provides an example of an area with signage with the condition rating layer turned on. Colour coding ties in with the pie chart above.



2.3.2 Replacement Cost

The following chart outlines current replacement values.

All Components	Replacement Cost
Signs	\$68,038
Posts/Supports	\$303,708
Total	\$371,746

2.3.3 Current Performance/Condition

Maintenance

Signage types are defined and covered under the Minimum Maintenance Standards legislation. In this manner they differ from general wayfinding, location and information signage. Maintenance activities include encouraging the public to report on damaged or missing signs, awareness of signage while involved in road patrols and while completing other maintenance activities, and replacement of individual signs or support posts as warranted.

Approximately \$34,000 is set aside in the typical annual budget for sign maintenance, testing and replacement. This budget includes signage supports/posts and may include temporary traffic safety devices as well.




Construction

In construction projects, signs and supports that are in a fair to good condition are documented, removed and stored. At the conclusion of the project, all are reinstated in the proper location.

Road signs that are in Poor condition are included for replacement as part of the Road Construction project.

Qualitative Descriptions of Signage

Selwyn's condition rating including photos and qualitative descriptions.

Example Photos	Condition	Qualitative Description
	Good	Overall condition is very good. The retro-reflectivity is graded as a Pass.
	Fair	Overall condition is good, with some scratches and missing paint. The retro-reflectivity is graded as a Pass.
	Poor	Overall condition is poor and vertical alignment is not good. The retro-reflectivity is graded as a Fail.

2.3.4 Approach to Assessing Condition and Lifecycle Activities

The Township signage is monitored by Public Works staff while on road patrol and while engaged in road maintenance activities. In addition, the public is encouraged to report lost and stolen regulatory signage.

In addition, it has been the Township's practice since 2018 to engage a third-party specialist in assessing the conditions of the signage inventory as noted above. The information derived from the assessment provides assistance to the Township for developing and executing a thorough annual signage replacement program. The overall condition rating informs the potential costs for replacement associated with future budgets.

In recent years, increased theft of signs has had a direct impact on planned replacements and has put a strain on signage funding.

2.3.5 Levels of Service

Signage		
2.3.5 Levels of Service		
Service Attribute	Community Levels of Service	Activities to Support
Safety	Township prioritizes the safety features of its Signage	Annual inspection & budget allocation
Reliability	Township strives to maintain its Signage in "Fair" to "Good" condition	Review annual inspection and complaints/reports from public
Service Attribute	Technical Levels of Service	Target Service Level
Safety	Number of regulatory signs in Poor Condition	0%
	Number of regulatory signs with "Fail" on retro reflectivity testing	0%
Reliability	Percentage of Signage in "Fair" to "Good" condition at the time of inspection	100%
	Percentage of Sign Posts in "Fair" to "Good" condition at the time of inspection	100%
	Under development - section related to MMS?	Under development

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3.0 Bridges and Culverts

3.1 Summary of Assets

In the County of Peterborough, the majority of bridges and culverts that are deemed to be **structures** are the responsibility of the County.

Through the AMP process, and upon further investigation with County representatives, it has been determined that Selwyn is responsible for a limited number of structures within the Township's geographic boundaries.

In accordance with the Canadian Highway Bridge Design Code, a bridge is defined as "a **structure** that provides a roadway or walkway for the passage of vehicles, pedestrians, or cyclists across an obstruction, gap, or facility and is greater than 3m in span."

Culverts are defined as "a **structure** that forms an opening through soil", as per the Canadian Highway Bridge Design Code. Culverts included in the Ontario Structures Inventory Manual (OSIM) inspection have a span greater than or equal to 3 meters, and more than 600 mm of cover.




County of Peterborough By-law # 1336 approved on June 25, 1927 reverted all structures twenty feet or less (less than 6 metres) to the lower tier municipalities.

As a result, there are a group of structures greater than 3 metres but smaller than 6 metres which are the responsibility of Selwyn.

Selwyn Township does not have any bridges but does have 7 structures with varying spans and deck lengths. These structures are comprised of 3 rectangular concrete culverts, 2 twin arch culverts and 2 arch culverts.

Smaller culverts that fall outside of the parameters noted above are not assessed based on the OSIM engineering methodology and are not included as part of this AM plan. So to be clear smaller cross culverts or entrance culverts are not included in this core asset section and more appropriately included as part of the core Roads section.

3.2 Replacement Cost/Average Age

Structure Type	Structure Photo	Count	Average Age	Replacement Cost
Rectangular		3	27	\$1,153,700
Twin Arch		2	32	\$570,500
Arch		2	40	\$502,300
Total		7	32	\$2,456,370

*(Map from CGIS with Culvert Locations Marked is underway
- to be inserted)*

3.3 Current Performance/Condition

With the detailed assessment of each structure, staff can develop an annual process for monitoring and self-assessment.

Initial improvements outlined in the inspection reports relate to the guiderails and hazard signage for two structures in rural areas. This work has been estimated to cost \$60,000, however it is likely to be completed using internal resources, thereby resulting in a lower overall cost.

As noted below, bi-annual inspections will be maintained and completed under the County of Peterborough procurement for services to garner a competitive service rate.

3.4 Approach to Assessing Condition

In accordance with O./Reg. 104/97, Standards for Bridges, “The structural integrity, safety and condition of every bridge shall be determined through the performance of at least one inspection in every second calendar year under the direction of a professional engineer and in accordance with the *Ontario Structure Inspection Manual*. O. Reg. 472/10, s. 2.”

It is the Township’s intention to ‘piggyback” on the County of Peterborough’s engineering contract given the number of structures within the County. As outlined in the regulation, as long as the inspection is completed in every second calendar year, “the inspection referred to in subsection (3) may be performed at any time in the calendar year, regardless of when in a prior calendar year, the previous inspection was performed. O. Reg. 472/10, s. 2.”

The OSIM inspections visually evaluate each component of the structure. The condition of individual components is compiled into a summary, the Bridge Condition Index (BCI). The BCI ranges from 0 to 100, with 0 representing the worst possible condition and 100 representing the best possible condition.

3.5 Lifecycle Activities

During the bi-annual OSIM review, a list of recommended improvements is produced per structure, to outline the type of work that needs to be done.

Minor repairs are relatively inexpensive, but can defer or delay the need for major repairs or replacements in the future, thereby extending the useful life of the structures.

Minor repairs include work such as:

- Crack sealing of wearing surface
- Regular re-coating of railing systems
- Preventative maintenance and cleaning of wearing items
- Regular clearance of debris around and within the structures
- Monitoring for minimum maintenance standards, including safety systems and signs

Current maintenance items noted in the recent inspection note two structures that require guiderail upgrades.

Moderate or major repairs would be evidence based on the BCI index and would typically involve the hiring of an engineer to coordinate approvals and specifications for a tender for repair or replacement.

3.6 Current Levels of Service

Community Levels of Service

GIS Map includes a layer that documents location of all structures. All structures transport all forms of vehicular and pedestrian traffic and are not currently restricted to any traffic type.

Of the seven structures, two structures would not have an alternate travel route or detour available. As a result, the consequence of failure for these two structures would rate high.

Technical Levels of Service

Selwyn engaged engineers, D.M. Wills Associates, to provide a Level of Service technical assessment as it relates to the structures. The assessment provides the following details which meets the technical requirements under Table 5 of O. Reg. 588/17.

Since Selwyn does not have any bridges, the assessment was concerned with structural culverts. The report notes that:

- there are no loading or dimensional restrictions
- all structures are in good condition; and
- the average bridge condition index is 72.74

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4.0 Water - Distribution

4.1 Summary of Assets

The Township of Selwyn owns two municipal drinking water systems located in Lakefield and in the Woodland Acres water service area.

Lakefield

The majority of the Lakefield water system was installed in 1955. The water distribution system received significant upgrades to key water mains in the mid-1990s. The water treatment plant was upgraded at several junctures to add standby power and was expanded with new filter beds and related pumps and equipment in 2002.

The Lakefield Water System was operated and managed under contract with Peterborough Utilities Services Inc. (PUS) beginning in 2001 - PUS was the accredited Operating Authority. In July 2024, operations came back in-house and the Township's new Water & Sewer department began operating and managing the system – acquiring accredited operating authority status in 2024.

The Lakefield water system provides municipal drinking water to approximately 1,275 households and a mixture of semi-urban commercial/industrial/institutional customers, which total approximately 3,600 customers.

The Lakefield water distribution system consists of approximately 24 kms of water main, 115 hydrants, booster station, a standpipe with an effective volume of 900 m³ and an elevated storage tank (water tower) with capacity of 2,750 m³.

The larger effective volume of the elevated tank, combined with the standpipe, allow the system to sustain greater system pressure and operate in one pressure zone. A separate zone can be easily created adjacent to the Standpipe to boost localized pressure if required. This zone can operate in parallel with assistance from the existing booster station, if ratepayer water pressure concerns are raised.

The water treatment plant is located at Water Street North and consists of a dual intake from the Otonabee River, a low lift pumping system located within the water treatment plant, and a treatment process using chemical coagulation, ballasted floc sedimentation (Actiflo), dual media filtration and disinfection. The plant has a two-celled baffled 900 m³ clearwell and a high lift pumping facility discharging to the distribution system.

Woodland Acres

The Woodland Acres water distribution system obtains its water from the City of Peterborough's municipal water system. The Peterborough Utilities Commission owns and operates the Peterborough water system.

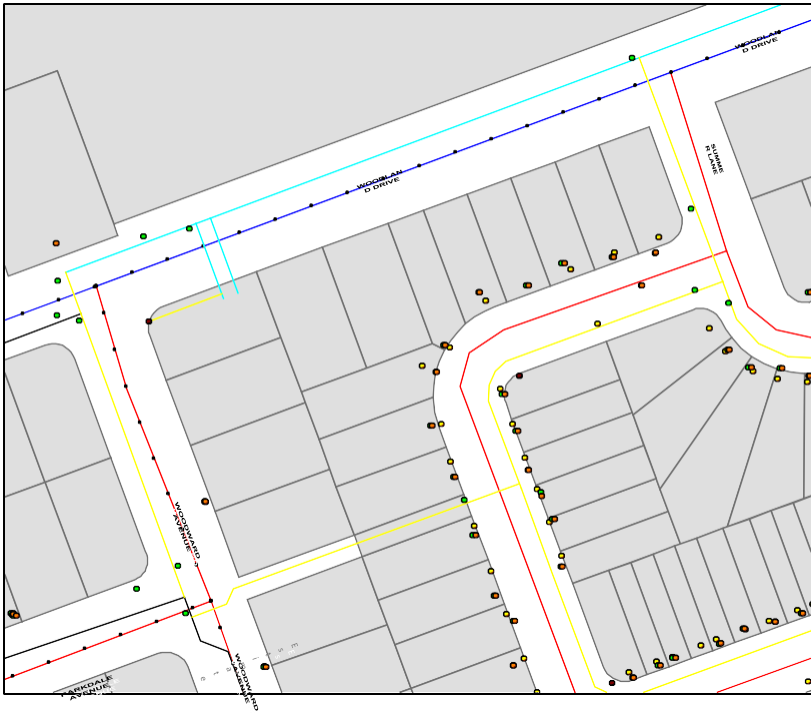
The Woodland Acres water distribution system was operated and managed under contract with Peterborough Utilities Services Inc. (PUS) beginning in 2001 - PUS was the accredited Operating Authority. In July 2024, operations came back in-house and

the Township's new Water & Sewer department began operating and managing the system – acquiring accredited operating authority status in 2024. Lakefield operations staff, monitor and operate the Woodland Acres system with expenses charged back through an interdepartmental transfer.

The Woodland Acres system receives water from a trunk watermain that delivers it to the water booster pumping station at Woodland Drive and Woodward Avenue. A recent extension of the watermain on Hetherington Avenue to Woodland Drive further supports, and creates redundancy, to this supply. The water distribution system consists of approximately 4 kms of water mains, 26 hydrants and 334 individual water services.

The Township uses a GIS based program to collect data and track asset attributes. Data stored and displayed on GIS allows the user to display a map of the subject area and then add or remove specific layers that display various data sets.

The following provides an example of how the various water distribution assets are displayed on the GIS map.



4.1.3 Replacement Cost/Average Age

Asset Class	Quantity	Units	Average Age (years)	Replacement Cost
Watermains	28	km	22	\$13,987,479
Storage and Booster Stations	4	count	23	\$6,442,148
Lakefield Water Treatment Plant	1	count	11	\$11,125,264
Total				\$31,554,891

4.2 Current Performance/Condition

Lakefield

Treatment

With respect to plant and treatment performance one can look to the MECP inspection history as an indicator of meeting these accepted minimum standards. Having regard for scheduled inspection reports and unscheduled focused inspections such activities as disinfection, flow rate, monitoring, sampling, record keeping, training and documentation were reviewed. All inspections have yielded good compliance and no “actions required” noted.

Selwyn staff have worked with the Township’s engineering firms and contractors to develop a proactive approach to replace key components of the treatment and distribution process. In recent years, the Township’s project coordination has provided focus on the water utility and its significant annual projects.

Distribution

Selwyn has over 28 kms of watermain. Of that length, approximately 13.5 kms or 47% of the distribution system are PVC. This asset type has a 100-year useful life. With the first PVC mains installed in the early 90’s, less than half of the system has consumed less than $\frac{1}{3}$ of its useful life. As such, a robust annual maintenance program will keep the overall distribution system in very good condition.

Standpipe - Out of Service

The Lakefield Standpipe was constructed in 1987 and is a coated, welded steel standpipe. It was rehabilitated in 2011 and remained in operation for approximately 2 to 3 years. The Standpipe was drained to complete a 2-year anniversary inspection and during the inspection, it was discovered that brackets supporting the mixing system had sustained damage. Subsequent to this discovery, the Standpipe was not refilled and has remained offline.

Despite the standpipe currently being out of service, a recent study and related inspection recommended very few corrective actions. There were a number of health & safety related improvements that suggested and all interior coatings are in very good condition and the exterior coatings are in good condition.

The Township will complete required repairs with a sustainable repair solution has been developed for the mixing system.

It is the intention of the Township to complete required repairs and place the standpipe back in service later in 2026.

Annual Funding Model

The Lakefield water system is supported through user charges. The majority of customers are charged a uniform flat rate with some metered charges for multi-residential, commercial and institutional customers. The total billing yields approximately \$1.35 million dollars annually and additional reserve transfers offset annual capital expenditures.

Based on the extent of the capital program in each year there is some fluctuation in reserve contributions annually, but the current funding mix for water is typically one third for each of the following:

- Operations & Maintenance
- Capital investments
- Reserve contributions

Working within this mix, an annual rate increase of 1% allows the department to offset typical increases in operation agreement and inflationary factors. Additional annual rate increases would allow for specific annual maintenance programs or targeted capital investments.

4.3 Approach to Assessing Condition

Lakefield

The Township holds monthly operations meeting to consider system issues and determine approaches to resolve any issues. These are documented, updated on GIS as relevant, and taken into account when preparing annual budgets.

As noted below improvements related to SCADA allow the use of trending analysis as an indicator of changing conditions or impacts of a change.

The Township has contracted for leak detection and generally found that the system is in good condition, any suspected leaks were found to be actual water usage.

Prior to considering a comprehensive road construction project in a serviced area, staff review watermain break history, age and type of water main, and any condition notations in the project area.

Woodland Acres

In addition to the above noted condition assessment activities, in Woodland Acres the City of Peterborough has integrated the bulk meter into their Advanced Metering Infrastructure (AMI) network. They now have the ability to read the meter remotely and start to trend and analyze this consumption data. This will ultimately aid operations in proactive system monitoring and performance.

4.4 Lifecycle Activities

Lakefield

Treatment Plant

The Township, as accredited operating authority, has a set of standard operating guidelines in place to outline typical routine maintenance. These documents outline maintenance activities required throughout the useful life of the various assets in the water system, including supplier maintenance manuals, rebuild timelines, etc.

In addition, the operating authority, Township and Township's consultants develop annual investment plans which include:

- pump replacements
- process piping improvements
- instrumentation improvements
- SCADA system upgrades

Distribution System

Hydrant flushing – unidirectional hydrant flushing is completed semi-annually. A unidirectional approach, in conjunction with proper scouring velocities, is employed to help reduce build-up and tuberculation. Reducing this build-up decreases turbidity events and reduces friction loss (C factor), increases overall system efficiency. Chlorine residual readings and flushing duration at the flushing point provide indicators of the condition of the inside of the main, and if cast iron, should it be cement mortar lined. This data, coupled with service requests from customers, helps determine if a relining project should be considered.

Cement Mortar Lining on cast iron mains (CML) – dependent on break history and frequency, a section with no or few breaks would be a candidate for lining. If excessive breaks are noted on the segment, then replacement as part of a construction project would be recommended.

Capital investment

Approximately \$500,000 annually on capital investments, funded through grants and specific water reserve.

Woodland Acres

Since water is provided by the City, Woodland Acres assets are all contained within distribution system sub class. Same processes as noted above in the Lakefield distribution system which results in capital investments as required.

Recent upgrades to the booster station include meter replacement, Program Logic Controller (PLC) upgrade, auto-dialer replacement communications improvements and installation of a back-up generator.

4.5 Current Levels of Service

GIS maps outline Lakefield and Woodland Acres water service area with all relevant water assets noted. Users within the service areas have fire flow available and water hydrants are clearly shown on all relevant maps when the GIS water layer is activated.

There have been no boil water advisories in place in the last decade.

The distribution system experiences an average of 2-3 breaks per year, dependent on winter conditions. Almost all breaks are related to cast iron mains and are 'ring' breaks caused by site conditions and impacts of frost heave. This equates to approximately 0.0009 connection days/connection lost due to water main breaks.

Lakefield has only had one break on a PVC pipe and it was a longitudinal crack or split. The cause was likely the result of poor bedding material or an errant rock that wore on the pipe over time.

Lakefield services 3,100 users and Woodland Acres services 334 users, which is 18% of the Selwyn population. Lakefield and Woodland Acres water system connections are approximately 1,500 properties out of approximately 10,000 Selwyn properties or 15%.

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5.0 Wastewater Collection and Treatment

5.1 Summary of Assets

Selwyn's sanitary collection system includes assets in urban areas of Lakefield and Woodland Acres.

This core infrastructure asset is fundamental in the collection and treatment of municipal wastewater. Water used in the communities is collected, treated and returned to the respective watershed, a key concept in wastewater management.

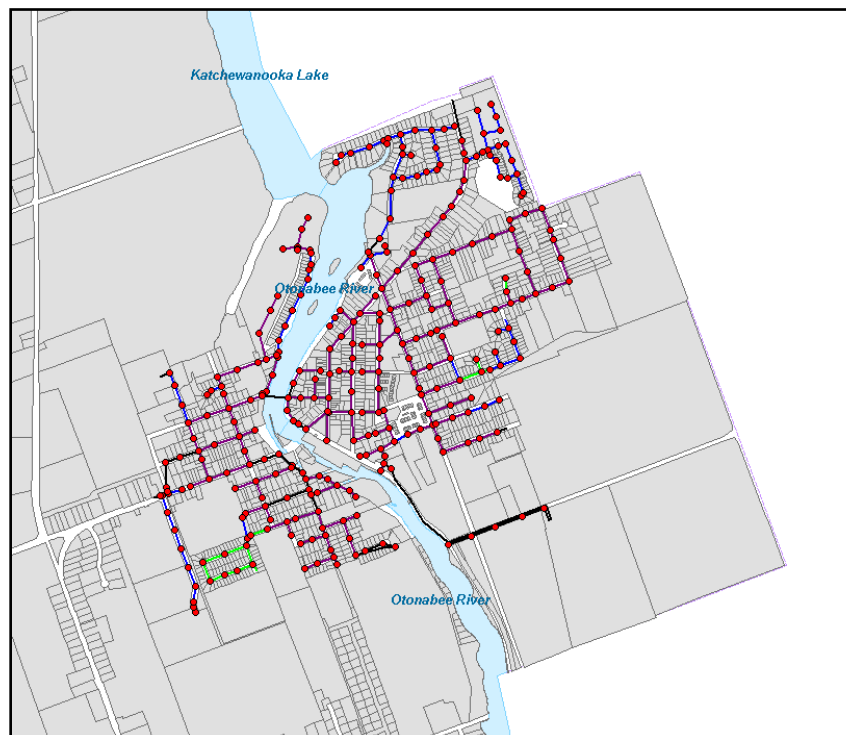
Selwyn has a number of engineer's reports on hand to document the extent of the network, condition of the **network** and maintenance activities.

5.1.1 Wastewater Collection Systems

Networks of varying sized pipes collect and convey residential, industrial, commercial and institutional wastewater to local treatment facilities. These networks consist of both gravity and forcemain transmission to navigate the elevation changes throughout the respective systems.

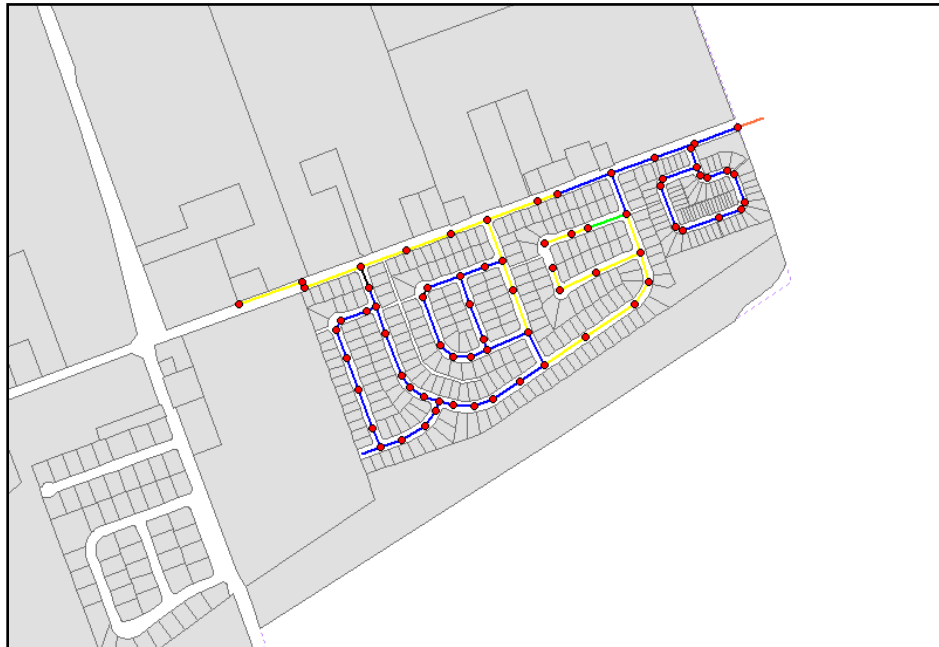
Lakefield

Through over twenty-five (25) kilometres of pipe and six (6) pumping stations, wastewater from Lakefield (including Lakefield College School in Douro-Dummer Township) is collected and transferred to the Lakefield Lagoon for treatment.



Woodland Acres

Approximately 4 kilometres of pipe collect and convey wastewater from the Woodland Acres Subdivision to the City of Peterborough collection system. From here it travels through the City wastewater collection system for treatment at the City's Wastewater Treatment Plant.

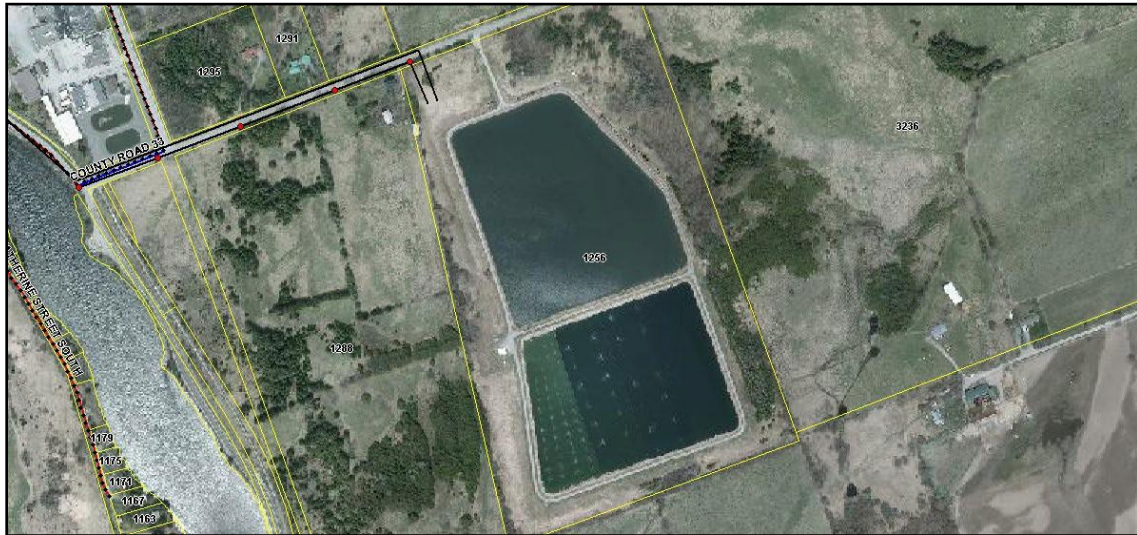


5.1.2 Lakefield Wastewater Treatment Plant (Lagoon)

The sewage treatment plant has a rated capacity of 2,300 m³ per day, and is comprised of an aerated and sedimentation lagoon system and discharging to the Otonabee River. It consists of an aerated lagoon cell (south cell), approximate 275 m long x 212 m wide x 3.1 m deep, complete with a minimum 200 mm depth of clay liner along the cell bottom and side slopes and equipped with the following:

- Three (3) membrane baffles (to form four compartments) anchored to the side slopes by anchor posts and steel cables, and weighted with concrete anchor blocks, to create a serpentine (plug) flow of the effluent through the four (4) compartments, the first three (3) compartments utilized as an aeration zone and the last compartment as a settling zone;
- A 350 mm diameter air header pipe located within the dividing berm between the Cell No. 1 and 2, providing air supply to the three aeration compartments as follows:
 - Four (4) flexible aeration chains (100 mm dia. air hose supported by stainless steel cables complete with bio-fuser assembly comprising of hoses, downcomer fittings, manifolds and appurtenances, and twelve (12)

- submerged fine bubble diffusers per aeration chain) within the first aeration compartment;
- Two (2) flexible aeration chains (100 mm dia. air hose supported by stainless steel cables complete with bio-fuser assembly comprising of hoses, downcomer fittings, manifolds and appurtenances, and sixteen (16) submerged fine bubble diffusers per aeration chain) within each of the second and third aeration compartment;
- an inlet chamber into the first aeration compartment, and an outlet effluent chamber in the settling compartment to discharge effluent to Lagoon Cell No. 1 or to the disinfection facility.



5.1.3 Lakefield Wastewater Treatment Plant (Water Street SPS)

A wet well/dry well sewage pumping station as follows:

- Three vertical centrifugal sewage pumps (2 duty, 1 standby) each with a nominal capacity of 290 m³ per hour at 31 m TDH, and equipped with 45 kW (60 hp) motors with electronic soft start starters.
- A 125-kW diesel engine standby generator, with an 1136 L capacity indoor fuel tank and capable of running 2 of the 3 pumps plus ancillary equipment.
- Twin 300 mm diameter forcemains from the Water Street Sewage Pumping Station to the sewage lagoons.
- An alum feed system (housed within the pumping station building) for phosphorus removal, consisting of two (2) bulk storage tanks, each having a nominal capacity of 13,600 L, a transfer pump, a 2,280 L capacity day tank, duplex metering pumps with nominal capacity of 65 L/hr. feeding into the forcemain, with continuous effluent discharge from lagoon cell no. 2 to existing 300 mm diameter outfall pipe to the Otonabee River.

5.1.4 Replacement Cost/ Average Age

Asset Class	Quantity	Units	Average Age (years)	Replacement cost
Wastewater Main	29	Km	20	\$ 20,289,076.48
Pumping Stations	6	Count	26	\$ 3,631,903.66
Wastewater Treatment Buildings	2	Count	31	\$ 2,992,745.88
Total			26	\$ 26,913,726.02

5.2 Current Performance/Condition

5.2.1 Wastewater Collection System (including pumping stations)

Wastewater pumping stations are inspected on a weekly basis, maintenance and repairs are performed as required. On an annual basis Township staff review operational conditions and capacity requirements to select capital purchases and/or upgrades for the following budget year.

5.2.2 Wastewater Treatment Facilities

Wastewater from the Lakefield wastewater collection system is pumped from a central location to the Lakefield Lagoon for treatment before being discharged back to the watershed. Upgrades to the facility in 1999 included provisions to increase available aeration within each cell and an oversized UV system to accommodate future increases in plant rated capacity. The annual influent average of wastewater flow received at the Lakefield Lagoon was 1,473 m³ per day in 2021. This is within the daily annual average rated capacity of 2,300 m³ per day. The average lagoon effluent flow was 846 m³ per day, well within the Lagoon effluent rated capacity based on UV disinfection rating of 6,800 m³ per day. In 2021 the Lakefield Wastewater Treatment Plant operated at 64% of its design capacity.

As with any wastewater treatment facility the system relies on natural processes for the treatment of incoming wastewater. These processes are greatly affected by the quality of the influent and any contaminants that may be present in this stream. Enhanced sewer use by-law monitoring and enforcement will help extend the useful life and efficiency of this facility.

5.3 Approach to Assessing Condition

5.3.1 Sanitary Collection System (including pumping stations)

At 10-year intervals the Township coordinates a flushing and CCTV inspection program of the entire sanitary collection system in Selwyn. Based on the report generated from this inspection, using industry standard assessment criteria, staff are able to identify problem areas and prioritize capital spending.

this activity is not expected to be required for another 10-15 years. Excess sludge accumulation can lead to incomplete biological breakdown of organics and decreased aeration and ammonia removal. Staff will continue to monitor and trend levels to aid in forecasting this work proactively.

5.5 Current Levels of Service

The levels of service currently provided by the Township's wastewater systems are, in part, a result of the state of local infrastructure identified above. A level of service analysis defines the current levels of service that will be tracked over time. In future iterations of the asset management plan, targets will be set for the technical levels of service.

Wastewater assets have prescribed levels of service reporting requirements under O. Reg. 588/17. These requirements include levels of service reporting at two different levels, i.e., community levels of service and technical levels of service. Community levels of service objectives describe service levels in terms that customers understand and reflect customers' expectations with respect to the scope, reliability, affordability, and efficiency of the wastewater systems. Technical levels of service describe these aspects of the Township's wastewater systems through performance measures that can be quantified and evaluated. These performance measures can be used to assess how effectively a municipality is achieving its established targets.

5.5.1 Community Levels of Service

The wastewater collections system serves the communities of Lakefield and Woodland Acres. The wastewater system is separated, meaning that sanitary and stormwater flows are carried in different mains with different destinations. Despite this, stormwater can enter the wastewater system through numerous sources. The Township has worked to reduce the amount of stormwater entering the wastewater system. The Township completed a flushing and CCTV inspection of the entire network in 2017 and has implemented and completed a sump pump inspection program.

Staff are working to revise the current Sewer Use By-Law to help enforce requirements related to sump pump connections to the sanitary. The priority list generated from the CCTV inspection and assessment is used for capital planning and replacement.

5.5.2 Technical Levels of Service

There are approximately 3,434 residents within the respective sewer sheds with only approximately 17 residents not connected to the Municipal sanitary collection system, representing a 99.5% connection rate. There have been no connection-days lost per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater collection systems.

The Township completed a flushing and CCTV inspection of all known sanitary mains within the Township in 2017.

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6.0 Stormwater

6.1 Summary of Assets

Selwyn's storm water management system includes a number of stormwater collection systems and several stormwater collection ponds.

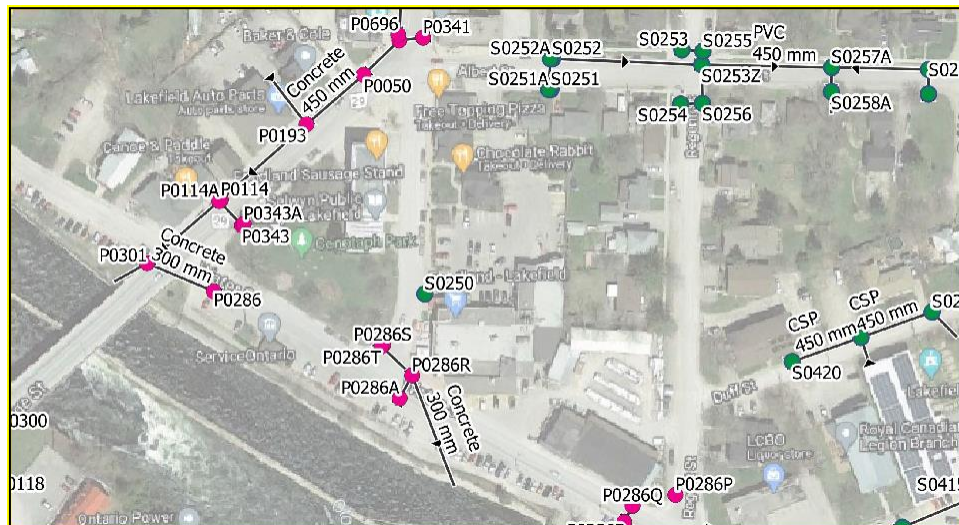
This core infrastructure asset protects the health of streams and lakes as well as mitigating the impacts of urban development. This is achieved by collecting stormwater in order to protect properties and road networks from flooding, managing the flow rate into the environment, and allowing for removal of contaminants.

Selwyn has a number of engineer's reports on hand to document the extent of the network, condition of the network and ponds and proposed maintenance activities.

6.1.1 Stormwater Collection System

While typically associated with an urban road network, stormwater collection systems of varying sizes and composition are located throughout the rural and semi urban areas of the Township as well.

Given the function of this infrastructure, the Selwyn system is often linked with the County of Peterborough system, with each impacting the other.





Selwyn has over 17 kms. of storm sewers, 667 structures and 3 oil/grit separator structures.

6.1.2 Stormwater Collection Ponds

Selwyn has eight (8) Stormwater Management (SWM) facilities that fall within core asset responsibilities. The three (3) types of SWM facilities include extended detention wet ponds, dry ponds and an infiltration basin.

No.	Name/Location	Facility Type
1.	Twin Oaks Subdivision	Extended Detention, Wet Pond
2.	Pine Valley Estates	Dry Pond
3.	Bridgenorth Public Library	Extended Detention, Wet Pond
4.	Selwyn Public Works Yard	Infiltration Basin
5.	Albert Street	Dry Pond
6.	Woodland Acres	Extended Detention, Wet Pond
7.	Chemong Bluffs Subdivision	Extended Detention, Wet Pond
8.	Summerlane Subdivision	Extended Detention, Wet Pond
9.	Burnside Subdivision	Awaiting engineer's report

All SWM Facilities are geo-referenced and plotted on the Township's GIS platform.

6.1.3 Replacement Cost/ Average Age

Asset Class	Quantity	Average Age (Years)	Replacement Cost
Stormwater Mains	17 kms.	18	\$12,229,636
Stormwater Structures	667	17	\$2,267,800
Stormwater Management Facilities	8	13	\$1,260,000
Total			\$15,757,437

6.2 Current Performance/Condition

6.2.1 Stormwater Collection System

Traditionally the Township has coordinated an outside contractor attending annually to clean and vac all municipal catch basins. While thorough, this annual clean-out program has not included the completion of any additional paperwork related to condition, accumulation of debris, type, etc. This data needs to be captured moving forward.

In an associated maintenance operation, the Township completes spring road sweeping to remove winter sand/salt and road debris. While a maintenance operation within roads, this activity directly benefits the storm water collection system by reducing the amount of sedimentation that flows to the catch basin structures.

6.2.2 Stormwater Collection Ponds

Typical maintenance expenditures include work completed by our public works staff and/or contractors to clean out stormwater management ponds as required and in accordance with the engineer's inspection report.

In general, the facilities are in reasonable condition. The primary observation was the accumulation of silt in the facilities, which indicates that the facilities are providing the desired sediment removal function.

An engineer's inspection did note a number of deficiencies which were divided into the following categories for the purpose of compiling the inspection data:

- Safety Items
- Maintenance Items
- Housekeeping Items

These deficiencies are further addressed in the lifecycle activities section.

6.3 Approach to Assessing Condition

6.3.1 Stormwater Collection System

Selwyn engaged an engineer to coordinate a joint CCTV inspection project with the County of Peterborough. This joint project was undertaken given the impact on and linkages with each other's storm water systems.

The project included Inspection, Reporting and Mapping Services for the storm sewer infrastructure network throughout the Township of Selwyn including Lakefield, Woodland Acres, and other locations where buried storm sewer infrastructure is present.

The objective of the condition assessment was to determine an overall rating of the structures that can be compared to other evaluated structures to prioritize system improvements. Wills has assumed that the storm structures will be located in Lakefield, Woodland, and throughout the Township.

System maps were provided to the Township for uploading to the Township's GIS database.

Now that the Township has a storm water asset inventory and initial condition assessment in place, the process of updating the inventory and revising the condition will take considerably less effort in future.

6.3.2 Stormwater Collection Ponds

The Township retained D.M. Wills Associates Limited to complete an inspection of the Township's Stormwater Management (SWM) facilities in 2015. The purpose of the inspection program was to understand the general state and performance of each facility by means of a comprehensive visual inspection program.

The data summarized in the Stormwater Management Facility Inspection Report include basic operational principles of the facilities, photographs, deficiencies and any recommendations for maintenance of the facilities, including further analysis if required.

For the purposes of the pond inspection program, deficiencies were categorized as relating to safety, maintenance or housekeeping measures. Safety measures related to fencing and inlet grates; maintenance related primarily to sediment removal, pipe flushing or grading corrections; and housekeeping related to replacing missing or broken components and addressing areas requiring stabilization.

With this dataset and a related inspection template in-hand, Township staff will be completing annual inspections of the SWMs. Results will be incorporated into reporting under the CLI-ECA framework with the Province.

6.4 Lifecycle Activities

6.4.1 Stormwater Collection System

Annual expenditures are approximately \$18,000, with the largest component being engagement of an outside contractor.

More detailed record keeping associated with this maintenance activity would allow staff to begin to analyze the records to develop appropriate maintenance and capital plans. For instance, could annual catch basin cleaning be switched to bi-annual? Would areas of higher accumulation be an indicator of more serious structural issue? Should isolated CCTV inspections become part of annual maintenance activities?

With improved in-field inspection record keeping and related GIS referencing, life cycle activities could be improved.

6.4.2 Stormwater Collection Ponds

Annual expenditures are less than \$1,000.

The pond inspections and resulting maintenance considered:

- inlet and outlet structures
- overflow spillways
- receiving drainage course
- vegetation
- storage volumes
- human or animal use
- erosion
- debris

Public Works staff has worked through the corrective actions and the deficiencies have been cleared.

In addition, the Project Coordinator - Water & Sewer completed an in-house update of the SWM facilities in November 2021 and produced a supplementary report noting all corrective actions taken.

With the engineer's report on file, the supplementary report on file and a greater awareness of the functioning of the SWM facilities, life cycle activities could be improved.

6.5 Current Levels of Service

6.5.1 Community Levels of Service

GIS Map includes a Stormwater layer that documents all ponds and network locations.

As subdivisions come on stream, a certain number will have SWM facilities and collection systems. These are provided to the Township as contributed assets and are added to the asset management plan.

6.5.2 Technical Levels of Service

The technical criteria look more holistically at the larger picture of flood resiliency and at the capacities of the various collection systems and SWM facilities

Selwyn engaged Wills Associates to provide a Level of Service technical assessment as it relates to storm water resiliency. That assessment provides the following details which meets the technical requirements under Table 3 of O. Reg. 588/17.

6.5.3 Five (5) Year Resiliency

While the term 'resilient' is not clearly defined in the O. Reg, Wills interpreted its meaning to be consistent with typical engineering practices which would, in their experience, include the development of a 'Storm Sewer Design Sheet'. This tool typically demonstrates free-flowing conveyance of the 5-year storm runoff based on local rainfall, soil, and development characteristics and engineering standards.

Wills selected 27 representative locations, towards the outlets of 'branches' of storm sewers, and completed an analysis of lumped sub-sewer sheds. The results in each location were extrapolated to the upstream network, subject to some adjustments, and the impact to the percentage-resiliency was weighted by the area of each sub-sewer shed.

Wills considered the slope of the pipe relative to the surrounding average slope, and strove to ensure that each sub-sewer shed was of a similar vintage. Wills also noted that some pipes at the upstream headwaters of each sewer shed were likely sized appropriately for the 5-year storm, even if the lower end of the system demonstrated a lesser design standard, on the merit of the minimum pipe size requirements.

Ultimately, Wills estimates that 44% of the storm sewer system is currently resilient to the 5-year storm. The results generally indicate that newer systems, such as Summer Lane, Woodland Acres (newer development) and select locations in Lakefield provide a higher level of performance.

This assessment includes numerous assumptions that could be refined based on further study, pertaining to land use, site-specific SWM features, site grading, etc.

No provisions have been included at this time for impacts due to climate change. Given the asset management policy direction, this is a gap that needs to be worked through with the engineer.

6.5.4 One-Hundred (100) Year Resiliency

Once again, the term 'resilient' is not clearly defined in the O. Reg, Wills interpreted its meaning to consider instances where constructed features would be impacted by 100-year flood levels.

In order to estimate the number of properties that were not resilient to the 100-year flood, Wills conducted the following tasks:

- Wills counted all properties with structures or pavement within the Regulatory Floodplain, as developed by Otonabee Conservation and shown on the County of Peterborough web-based GIS system

- Wills reviewed the LiDAR orthophotography throughout the Township to identify any urban streets which do not provide continuous overland drainage (i.e., a 'pocket')
- Wills invited the Township to provide any additional locations of known historical surface flooding.

Based on our estimate of 10,000 properties within the Township, the resulting percentage of properties that are resilient to the 100-year storm is approximately 95%.

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7.0 Facilities

7.1 Summary of Assets

The Township of Selwyn owns a variety of buildings spread across its large geographic area. Given the history of Selwyn's municipal formation, a number of facilities originally put in place for one purpose have now been repurposed for other uses. This has often allowed a municipal facility to be leased to a community group to fulfill a local need while still garnering rental revenues and offsetting operating costs.

In other instances, facilities have been maintained in several communities within Selwyn, when a centralized facility may have inherent efficiencies but may not fulfill the community need adequately. To date, the Township has been able to maintain this level of service within the existing funding framework.

The following provides a summary of facilities by current functional area:

Asset Group Description	Quantity
Administration	1
Fire Services	6
Community Services	6
Police Support	2
Recreation	7
Roads & Landfill	10
Water & Sewer	6
Library	3
Total	41

This summary does not include other miscellaneous structures such as underground pumping stations & booster station, small parks storage sheds and parks shelters. These are, or will be, captured under other asset classes.

The Township uses a series of formatted Excel spreadsheets to consistently track buildings and their various components. Components being tracked start with site conditions outside the building and then delve into detailed building components.

7.2 Facility Assessment

To explore the Facility Assessment Report in a bit more detail, the following facility components outline the detail involved in each assessment. Each of these areas ultimately are reviewed and documented and will yield a condition and proposed maintenance plan.

Site Work

Considers the condition of any parking lots, sidewalks, retaining walls, drainage, landscape, AODA compliance and lighting.

Structure

Begins with the foundation, considers the various structure framing types, load bearing walls and roof structures.

Building Envelope

Has regard for the roofing system, eaves and downspouts, exterior wall cladding, soffits & flashings, insulation, moisture barrier, windows and doors.

Interior

Considers interior walls, flooring, ceilings, doors and hardware, millwork, stairs, guards and railings.

Specialties

Takes into account unique components of the facility like washroom partitions, flag poles, elevators, signage, and architectural features.

Mechanical – HVAC

Looks at not only the HVAC units and types but also the ductwork, diffusers and method for air circulation and exhaust.

Mechanical – Plumbing

Considers the source of water supply, components of water treatment, plumbing fixtures, and septic systems.

Electrical

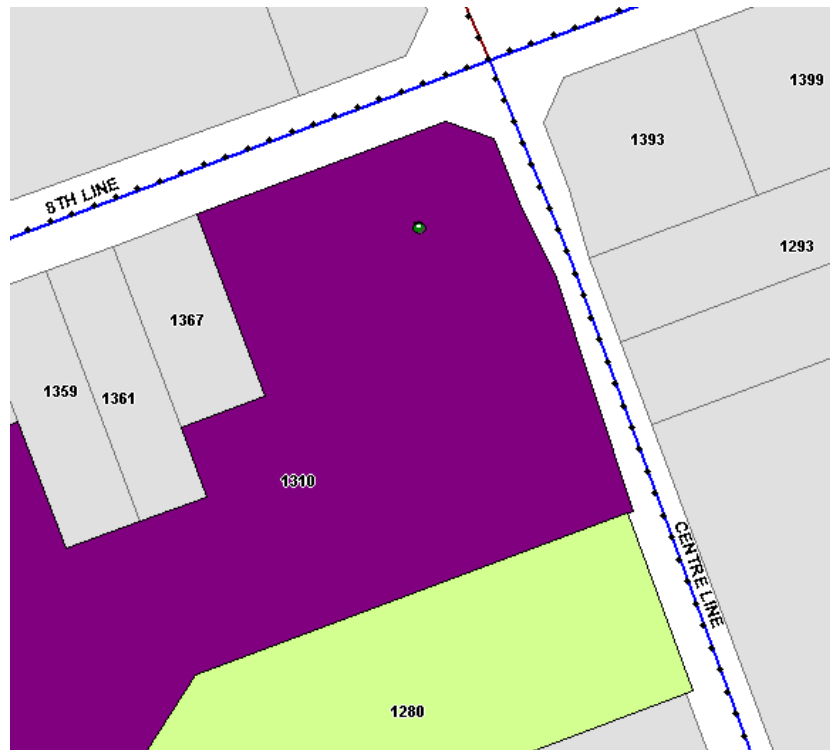
Includes panels, wiring, switches, receptacles, lighting and emergency lighting systems.

All of these components are tracked by location, equipment make and type, expected life, condition, supplementary comments and maintenance priority. These attributes are

then costed as to maintenance requirements and is projected over a 10-year period.

The building locations are also stored and displayed on GIS to display their location on a map.

The following provides an example of how the municipally owned lands appear on the GIS map. The County GIS also includes municipal facilities within a pre-set legend.



Legend: Purple = Public Facility, Green = Works Facility, Grey = Private Property

Replacement Cost/Average Age

When considering values for facilities, factors such as average age, age profile, gross floor area and construction type are often cited and graphed. Since these factors are at an aggregate level, and often segregated by functional area, they do provide a good overview of where investments will be required. As well, based on a sufficient funding model, it is illustrative of how the community “values” the facility and functional area. This process will be added as staff refines this sub-section and the Levels of Service KPIs.

In the meantime, insurance replacement values have been utilized to capture the scope of this asset value at this time. Based on the most recent renewal, our insurance broker values our building and structures at \$71.6 million. This value does include some of the miscellaneous structures noted above. These structures are not included in this particular section, but is still likely under-valuing the current replacement value of all Township facilities.

7.3 Current Performance/Condition

Selwyn has proactively improved and replaced building components over the last 15 plus years. Specific attention has been taken as it relates to roof replacements, HVAC replacements, AODA access through ramps or LULAs/elevators. These capital investments have resulted in fewer emergency repairs and has allowed for a more strategic capital investment program.

Having made these investments and seeking to understand next steps for long term capital planning, the Township engaged Ron Awde, Architect, to complete a Facility Assessment, commonly referred to internally as the Awde Report.

This report resulted in a detailed assessment by facility and its respective building component as outlined above.

Annual Funding Model

Ongoing typical maintenance is budgeted by department and included in the buildings cost centre in each department. Examples of these types of expenditures include:

- HVAC maintenance
- Elevator Maintenance
- Fire Extinguisher review, testing and replacement

Based on the extent of the capital program in each year there is some fluctuation in reserve contributions annually. Capital investments are considered in two streams:

1. Capital Projects – Conditional Grants are secured from federal & provincial partners and other agencies for necessary improvements or retrofits. The Township then utilizes contributions from the Facilities & Property Reserve as the local share of these funding programs.
2. Capital Maintenance – an amount is set aside from the OMPF unconditional grant – currently this amount is approximately \$200,000 annually.

Working within this funding mix, staff make recommendations to finalize outstanding facility improvements and targeted capital investments.

7.4 Approach to Assessing Condition

Many years ago, the Township recognized the number and value of facilities owned across a large geographic area and responded by funding an additional staff person with the responsibility for facilities maintenance. This position, in addition to key staff members that are located in active facilities, ensure that municipal buildings that do not have people or are 'tenanted' facilities, receive periodic reviews and checks.

Of course, despite the best efforts and plans, weather events do cause additional challenges and roof leaks and HVAC failures do occur.

The Township has a series of maintenance contracts in place and a component of their work requires reporting on condition assessment. Working with the detailed assessment report and maintenance contract recommendations, staff will implement a proactive system monitoring and performance review of all building components.

7.5 Lifecycle Activities

With the facility assessment now in hand, staff will review and prioritize annual investments. A number of roof replacements are still outstanding on community facilities, and these are being prioritized to have the biggest impact and to minimize any additional damage of other building components.

When making capital investments, staff have regard for how the improvement will impact ongoing operating costs, energy efficiency, greenhouse gas impacts, overall environmental impacts and working conditions for the facility users.

As the next few years of capital investments are implemented, and with a sustained or increased level of annual funding, staff should be able to switch their recommendations from a reactive repair plan to more of a preventative maintenance approach.

7.6 Current Levels of Service

While the Facilities Report was completed in 2023, this is the first budget cycle to utilize the tool. Using this model, staff are becoming familiar with planning for annual investments on a component-by-component basis.

Project spending in the assessment has been based on:

2024 – 2025

- Further structural and other investigations
- Urgent life safety related work
- Arresting deterioration of building fabric (i.e. roofs)
- Significant projects - Ennismore Arena, Lions Building

2026 – 2028

- Repairs of medium urgency
- Extending service life of envelope and elements
- Major projects that may require some planning for future role (i.e. Storage – Landfill, Fire)

2029 – 2030

- Preventive capital maintenance and replacement

2031 – 2033

- Preventive capital maintenance

Beginning in 2025, repair/maintenance techniques have been grouped to aid the procurement process and result in better overall pricing. In the 2025 budget, over \$250,000 worth of repair expenses were grouped with the following descriptions across all facilities:

- Weatherproofing & Caulking
- Energy & Equipment
- Engineering
- Health & Safety

Based on the 2023 estimated maintenance and replacement costs over the next ten (10) years, the Township will require approximately \$8.7 million dollars of investments. Of course, this includes several remaining roof replacements, the Ennismore arena floor and related improvements, and an expansion of the Lakefield library branch and related improvements. Conditional grant funding will be a key aspect of any expansions and funding models. Once the floor replacement and library expansion is adjusted, capital maintenance totals approximately \$6.2 million over this 10-year period.

The Township's levels of service framework for Buildings and Facilities needs to contain key performance indicators (KPIs) for community levels of service and technical KPIs for infrastructure. These KPIs will be aligned with core values associated with each service area and reflect the priorities identified within Selwyn's Strategic Plan.

A review of industry best practices and facility benchmarks confirms that as a rule of thumb 2-5% of the facilities replacement value should be provided for annual maintenance. Staff can review this metric and consider when establishing the Selwyn performance measures and targets.

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8.0 Fleet Assets

8.1 Summary of Assets

8.1.1 Plated Fleet

The Township's fleet is allocated across all operational departments. It is comprised of plated vehicles ranging from pickup trucks and small hybrid SUVs to large dump trucks and fire apparatus such as tankers, pumpers, and rescue vehicles. This aspect of the Township's fleet includes 43 assets.

Current replacement value of the Township's plated fleet assets is estimated at approximately \$## million. The make-up of the fleet, in terms of numbers, age and replacement value is outlined in the chart below.

Plated Vehicles	# of Assets	Average Age	CRV
Operations - Tax Supported	21		
Fire Services – Tax Supported	18	13.6	8,845,950
Bldg. Dept. - Rate Supported	2		122,500
Water & Sewer - Rate Supported	2	1	180,000
Total	43		9,148,450

8.1.2 Non-Plated Equipment

The Township's non-plated equipment assets are comprised of mainly heavy equipment such as loaders, backhoes, sweeper, grader, tractors, commercial mowers, etc. The inventory also includes two mobile generators, several trailers, two ice re-surfacers, and other non-plated pieces of equipment. This aspect of the Township's fleet includes 33 assets.

Current replacement cost of the Township equipment assets is estimated at approximately \$## million. The make-up of the fleet, in terms of numbers, age and replacement value is outlined in the chart below.

Non-Plated Vehicles	# of Assets	Average Age	CRV
Operations - Tax Supported	27		
Fire Services – Tax Supported	5	8.5	86,000
Bldg. Rate Supported	0	0	0
Water & Sewer - Rate Supported	1	47	
Total	33		86,000

8.2 Current Performance/Condition

Historically the Township's fleet has been tracked by department managers on Excel replacement schedules. While most of these schedules have been based on ten-year replacements, some schedules have been reduced to five years as discussions are underway related to fleet rationalization/optimization.

Data varies by department but would typically include model year, make, position in the fleet. As an example, a public works plow truck would be numbered 12-1 (year-position) and when replaced it would become 24-1. Fire trucks are also numbered more specific to their response and hall, such that Rescue 1 would operate from Hall 1, Bridgenorth and Pumper 51 would operate from Hall 5, Ennismore.

To date most fleet and equipment replacement is based on age with the oldest equipment replaced first and other units moved along the continuum. The forecast assumption developed assumes that age and expected useful service lives of individual assets are the defining factor. The lifecycle expenditure forecast includes an annual reserve allowance based on each department's asset listing and strives to ensure that sufficient funds are being allocated to fund the asset's eventual replacement.

Recently the issue of equipment performance has come to the forefront. Occasionally newer units in the fleet are considered for replacement prior to an older unit based on maintenance issues, industry findings or generally poor performance.

Finally, before leaving this section, we look to the best practices used in other public sector jurisdictions. In some municipalities, the condition of vehicles and equipment include age as a factor but also include a performance rating system that includes qualitative measures, mechanical records, downtime, etc.

As well, the rating system takes into account non-plated equipment that may be past its useful life based on age, but can still receive a favourable rating based on good performance and minimal maintenance costs. For these assets that remain in service beyond their useful service life, the probability and consequence of failure is a measure that is developed and considered annually.

Best practice review should be included as part of our work plan noted above to address these scenarios and create a more robust strategy for fleet condition assessment, suitability for retention and measures for replacement.

8.3 Approach to Assessing Conditions

We have made some progress as it relates to Fire Equipment rationalization and considering new approaches for replacement.

Operationally as replacements are brought into the fleet, based on an assessment of fit, pumpers would be moved to halls with lower typical response volumes. While they are renumbered from a departmental perspective, their make and model year are still

tracked. This common sense approach to replacements has been adopted by the Fire Service for several years and supported by the members of the department.

Standardization of pumper units inclusive of body layout has resulted in consistency across the fleet to a great degree. This serves the department well as volunteers are familiar with the layout of the equipment on pumpers from the different halls. As well, this initially allowed the department to reduce the number in the fleet and reduce replacements.

However, this level of consistency also entailed a great degree of specification and customization. This often equated to higher purchase prices and ultimately put a strain on the replacement schedule and reserve levels.

Most recently, the senior team at the fire department has considered a change in approach. While some level of layout consistency is still expected, the use of Standard Stock Pumpers is being considered as an option moving forward. This has the benefit of quicker delivery time, and by keeping the customization to a minimum, the price point should be better.

In other departments we still are challenged with the development of good performance measures/targets and as such useful life is mostly based on age. If performance is considered, in many instances the useful lives can be stretched.

Ongoing challenges related to the Public Works Fleet utilization and replacement costs are another key project that is on the work plan and needs to be addressed before a meaningful funding strategy can be developed, proposed to Council and implemented.

We do know that it has been many years since hourly equipment charge out rates have been increased in any meaningful way. And when we compare to some of the local industry rates or equipment rates supported at the provincial level, we are falling behind.

The impact of changing these charge-out rates will be an increase in equipment revenues to offset operating, maintenance and replacement costs. The flipside of this charge-out scenario is an increase in operating and capital cost centres where our equipment is charged.

8.4 Lifecycle Activities

The Township's main works depot is outfitted to complete the majority of the fleet maintenance and repairs using two in-house mechanics. Some of the major repairs are sent out to specialized shops with more appropriate personnel or equipment.

Typical life cycle maintenance activities include:

- Inspections and condition assessments
 - Oil changes, wear part replacements, vehicle once over, bulb replacements

- Major operating activities
 - Tire(s), belts, batteries
- Major activities affecting capital contribution
 - Radiators, transmission, re-gen replacement

Expenses are captured in a number of departments specific to each piece of equipment

- Department #14 Building & By-law Inspection Equipment
- Department #22 Public Works Fleet
- Department #35 Water & Sewer Equipment
- Department #45 Parks & Recreation Equipment

With respect to equipment generating revenues one of two methods are utilized in the Selwyn budgeting and cost allocations process:

- Annual allocations
- Hourly charge outs

An annual allocation is based on the historical requirements to maintain, fuel, insure and replace the vehicle/equipment. This method would be typical for pickups, small SUVs, parks maintenance equipment and ice resurfacers.

An annual allocation to the reserve sufficient to purchase required equipment as it relates to safety requirements and other agency technical standards (i.e. NFPA, etc.) would be the method used in the fire department.

Hourly charge-outs are typically used in the Public Works departments so that staff can adequately track operational maintenance activities and capital project values. This also encourages versatile use of equipment across the various seasons. For example, in Selwyn plow trucks used throughout the winter are routinely used throughout the summer months for roads maintenance and road rebuilding activities.

In this manner, the vehicle or piece generates an hourly rate and based on hours in service and the resulting revenues generated justifies its position in the fleet. If sufficient use is not attained, then rental options are considered instead of the cost of maintaining and replacing equipment.

Based on a review of the Township's approved budget, the Township allocated approximately \$1.4 million to fund asset purchases in 2025. Many of these assets are still awaiting delivery and the soon-to-be-replaced assets are currently still in service.

The following forecast was derived by compiling all existing age-based replacement models for all fleet and equipment assets. Based on this forecast the Township's fleet and equipment assets over the next 10 years is expected to total approximately \$ million.

It is worth noting that given the incomplete public works analysis this area of the

completeness and confidence chart would be classed as Low. As well, since the rationalization component of the plan is expected to maximize equipment use, the overall inventory will likely change.

When reviewed in aggregate, the forecast shows deficient funding in 2030 and for several years thereafter.

When reviewed on a departmental basis, Public Works – Roads Fleet and Parks Equipment have deficient reserve levels to replace the current complement of vehicles and equipment beginning in 2027. The parks schedule is in a good financial position until 2029 and then rebounds. So, a review is warranted here as well and prior to the 2026 budget cycle.

Township of Selwyn										
Summary Equipment Replacement Schedule										
Details	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Balance Forward - January 1	2,218,238	1,971,813	1,545,665	1,703,475	1,004,226	436,453	-284,491	37,545	85,552	329,042
Yearly Contributions - Taxation & User Charges	698,550	734,750	769,750	804,750	839,750	874,750	909,750	944,750	979,750	1,014,750
Contribution from Development Charges	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Contribution from OMPF	262,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000
Capital Levy - All Departments	175,000	283,750	292,938	302,584	312,714	323,349	334,517	346,243	358,555	371,482
Total Funding Available	3,355,288	3,241,813	2,859,852	3,062,309	2,408,190	1,886,052	1,211,276	1,580,038	1,675,357	1,966,774
Departmental Expenditures										
Fire Services	592,923	765,092	357,195	1,241,982	1,301,057	1,298,720	655,726	903,075	623,771	1,209,815
Building & By-law	0	58,500	0	0	0	60,000	0	0	62,500	0
Public Works Fleet	731,983	695,575	779,299	701,351	582,392	803,536	493,098	507,891	643,128	0
Parks & Recreation	116,000	222,000	69,500	144,000	101,000	0	26,000	0	26,500	0
Water & Sewer Vehicles	0	0	0	0	0	0	0	86,011	0	0
Total Year Expenditure	1,440,906	1,741,168	1,205,993	2,087,333	1,984,449	2,162,257	1,174,824	1,496,978	1,355,899	1,209,815
Reserve Balance - before Interest	1,914,382	1,500,646	1,653,859	974,977	423,741	-276,205	36,452	83,060	319,458	756,959
Interest on Reserve - 3%	57,431	45,019	49,616	29,249	12,712	-8,286	1,094	2,492	9,584	22,709
Reserve Balance	1,971,813	1,545,665	1,703,475	1,004,226	436,453	-284,491	37,545	85,552	329,042	779,668

8.5 Current Levels of Service

This section provides an overview of the Township's level of service framework for fleet and equipment assets.

Service	Community Measure
Safety	The Township regularly inspects its fleet and equipment assets to ensure they are safe for use.
Reliability	The Township strives to minimize the number and impact of unplanned repair/maintenance activities performed on its fleet and equipment assets.
Capacity	The Township strives to have adequate back up plans in place to mitigate the effects of unplanned events (i.e. extreme weather, mechanical breakdowns, etc.) & achieve minimum maintenance standards
Cost Efficiency	The Township strives to minimize the average annual lifecycle cost of its fleet and equipment assets by ensuring their timely replacement.

Service	Technical Measures	Performance Target
Safety	Percentage of plated assets that underwent at least one inspection in the calendar year.	100%
	Percentage of non-plated heavy equipment assets that underwent at least one inspection in the calendar year.	100%
Reliability	Replacement cost of equipment assets in use beyond their optimal service compared to the replacement cost of all equipment assets.	Track % - trend indicator? ?? target ???
Capacity	Number of times that plow routes changed due to mechanical breakdown (under development)	Low # target ??? impact - target ???
Cost Efficiency	Percentage of fleet that is in fair or good condition. (under development)	??? target percentage???

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9.0 Financial Information

The Township has historically dealt with the tax supported budget and the water & sewer user charge budgets at different meetings to support public optics related to funding sources for projects. However, capital projects that are interrelated do receive appropriate planning/review and are tendered as complete projects.

The Township's average annual level of capital investment across the core infrastructure is approximately \$3.5 million.

The goal of the AMP is to establish an annual lifecycle funding target that would be required to fully support a lifecycle management strategy over the long-term.

The following information provides a general overview of the funding mechanisms used to fund capital in Selwyn.

9.1 Debt

The Township does not currently carry any debt related to core infrastructure. Historically, debt has not been an active part of Township financing since amalgamation in 2001.

In the 1990s and prior, the former Village of Lakefield was required to take on debt related to improvements of the water and sewer system. However, with the retirement of that debt and a restructuring of the water and sewer budget process which included more significant reserve contributions, no additional need to issue debt.

The most recent annual debt repayment limit under O. Reg 403/02 is \$4,295,514. This calculated amount is 25% of net revenues less any existing debt charges. There are no recommended changes at this time to explore debt financing as an active means of funding Selwyn infrastructure.

9.2 Reserves

The Township has established a good reserve allocation with respect to several core infrastructure assets. By maintaining level funding for reserves over the long-term, the periods of relatively low capital needs allow for the building up of reserves that could be drawn upon in times of relatively high capital needs.

The water reserve stands at approximately \$5.3 million with typical annual allocations of \$500,000 - \$700,000.

The sewer reserve stands at \$2.6 million with typical annual allocations of \$450,000-\$600,000. The sewer reserve is currently depleted following the recent expenditures on the George Street pumping station and LSDA sewer main connection. Lakefield South Development Charges will be repaying a portion of these expenditures and typical annual reserve allocations will also help to replenish the sewer reserve.

Likewise in the Woodland Acres Water & Sewer Service Area, a good annual reserve contribution has been established for both water and sewer. The reserve balances for water & sewer are \$1.2 million and \$1.0 million respectively with annual allocations of \$150,000 and \$100,000 respectively.

The Selwyn Roads Construction capital reserve has been established, however the current reserve balance has decreased to \$257,000. Annual contributions are not fully planned over the long term and tend to be increased through projects that did not get completed. More strategy work needs to be completed in this area and the AMP will be a key document in setting a reserve level goal and an acceptable annual reserve contribution.

A Stormwater reserve has been established and sits at \$118,000, but to date any allocation has been utilized in the following year. Given the significant network of storm water collection systems, this core infrastructure should receive attention as to increasing annual allocations. As a positive, the recent system condition ratings seem to show that for the most part the system is in good shape.

With respect to Bridges and Culverts, no dedicated annual reserve allocation exists. Indeed, only through the AMP process, and in clarification with our County partners, was it determined that Selwyn was responsible for any structures within its jurisdiction.

Given the significant asset base of the Roads network and the risk involved with Bridge and Culvert structures, the lack of dedicated reserve allocations is an obvious area that needs to be addressed.

In summary, while the overall approach to reserves in Selwyn has been good, only three (3) core infrastructure assets have established reserves and only two (2) have a well-planned annual allocation process in place.

9.3 Community Capacity Building Fund (Formerly the AMO/Federal Gas Tax grant)

The Association of Municipalities of Ontario (AMO) administers this program in Ontario. The Federal Gas Tax Fund became enshrined in legislation as a permanent annual source of infrastructure funding for Canada's municipalities at \$2 billion per year. The fund is allocated on a per capita basis across Canada.

The Township typically receives approximately \$565,000 under the existing transfer payment agreement.

Since its inception the fund has been used exclusively for roads and storm water works. There are a number of other eligible program areas, but at this time it is proposed that the fund will continue to provide stable funding for roads network and storm water related investments.

9.4 Ontario Community Investment Fund (OCIF)

OCIF is a provincial formula-based grant program under which eligible recipients:

- receive annual allocation notices specifying OCIF funding for the calendar year
- may accumulate annual formula-based grants for up to five years to address larger infrastructure projects

To date, this fund has supported asset management work, data collection and condition assessments. Funding will continue to support asset management plan creation until 2025.

Capital expenditures on core infrastructure projects (such as roads, bridges, water and wastewater, including sanitary and stormwater facilities) that are part of an asset management plan are eligible, including:

- capital construction of new core infrastructure to be owned by the recipient that addresses an existing health or safety issue
- capital maintenance for the renewal, rehabilitation and replacement of core infrastructure owned by the recipient

The OCIF program has been revised since its inception and under the new calculation model the annual allocation reduced the Selwyn share to \$258,743.

The new calculation is expected to use current replacement value of core infrastructure as a key factor. As such, moving forward a portion of OCIF should also be considered for allocation to joint water and sewer projects, since the formula uses the CRV of these assets to determine the annual grant level.

9.5 Ontario Municipal Partnership Fund (OMPF)

OMPF is the largest unconditional grant received by Selwyn and the only one that the local Council truly controls.

The Ontario Municipal Partnership Fund – Grant (OMPF) for 2025 has been confirmed and will be \$1,185,800 (increase of \$52,100 over 2024).

As part of the annual budget process, Selwyn Council reviews recommended projects and approves OMPF use and inclusion in the annual budget. OMPF is typically used to cover ongoing arena deficits, unforeseen departmental deficits, capital programs or one-time expenditures.

This fund has allowed Council to complete numerous facility repairs and renovations over the last few decades. This grant is used as a core funding source for infrastructure investments.

9.6 Specific Conditional Grant Programs

There are still a number of conditional grant programs available for local government.

The most significant program that currently exists to support core infrastructure is (ICIP). This is a three-party grant program with federal, provincial and municipal. Currently funded Selwyn's share of the causeway project and the COVID resiliency stream has funded office improvements at the main municipal office

Other conditional grants that support capital investments include:

- Provincial modernization and efficiency grants
- Ontario Trillium Foundation grants

Many of these grants will be instrumental as the Township continues to invest in facility improvements and enhanced service level opportunities.

9.7 Development Charges

The Township of Selwyn Development Charges by-law was adopted effective September 2023, as amended. A component of the existing DC capital needs includes various road improvements identified in the Township's Roads Needs Study that would benefit future development.

In the Selwyn DC model, a component of Roads is used to offset increases in road capacities as capital projects improve the roads network overall to ensure a safe passage of vehicular traffic, improved rideability characteristics and increased road surface widths.

The annual amount typically flowing from DC deferred revenues for Roads is \$60,000-\$70,000.

In future iterations of the AMP which will consider future growth planning, DC's will play a larger role in addressing future service level considerations.

9.8 Financing Strategy - Next Steps

Once a comprehensive capital needs forecast, including all of the Township's assets, has been developed through future expansions of this asset management plan, a full financing strategy can be developed.

Working within approved Council policy and general Council expectations, staff will spend some effort in consideration of methodologies to implement a separate annual capital levy.

This exercise would first consider the impact on the municipal levy and municipal tax rate, impact that this new source of funding could have on the infrastructure investment decisions and impact on risk mitigation through increased capital funding.

By phasing in the capital levy over a number of years and combining it with other funding sources, it is expected that an additional \$1 million dollars of annual capital investments could result.

This would allow for a Selwyn controlled capital program to be put in place and would remove some of the vulnerability associated with reliance on outside grant programs.

Should those grant programs remain in place, a dedicated capital levy would ultimately free up funding from unconditional grant programs to support other one-time investments in projects of importance to the community and in accordance with Council's strategic plan.

Analysis of Existing Investment Gap								
Core Assets	Cumulative 10 year maintenance required	Cumulative 10 year capital investment required	Cumulative 10 year actual maintenance	Cumulative 10 year actual capital	Maint. Under investment	Capital Under investment	Actual as % of Required Combined Investment	Additional Comments
Roads	17,458,201	11,280,684	6,111,613	9,536,244	-11,346,588	-1,744,440	54.45%	actual capital investments are skewed by CCBF and ICIP conditional grant funding - Water & Strickland
Sidewalks	400,000	1,013,064	90,670	862,422	-309,330	-150,642	67.45%	despite this under investment, the sidewalk network adequacy stands at 93% as Fair to Good
Signage	371,746		343,204	0	-28,542	0	92.32%	annual maintenance estimates seem adequate. No reserve established for large quantity replacement.
Structures	31,250	298,408	724	184,944	-30,526	-113,464	56.32%	this under investment is a result of previously unknown structures prior to the AMP process.
Water	1,052,306	8,125,491	458,151	3,396,585	-594,155	-4,728,907	42.00%	this under investment may be further affected by the CRV for plant equipment - low confidence rating.
Wastewater	777,627	7,362,414	398,095	5,987,483	-379,533	-1,374,932	78.45%	may be overstated given recent significant investments in many SPS, Lagoon and LSDA link
Stormwater	454,787	2,028,797	231,504	1,569,788	-223,283	-459,009	72.53%	reserve balance for this underground asset is small given this asst class is newly established
Facilities	2,587,696	6,245,017	1,349,307	6,325,740	-1,238,388	80,723	86.89%	actual capital investments skewed by federal conditional grant funding for Old Post Office. Parks data outstanding.
Fleet					0	0		PW fleet data > 5 years is not included - potential impact of > \$3 million. Fleet assessment & analysis outstanding.
	23,133,613	36,353,875	8,983,267	27,863,205	-14,150,346	-8,490,670	61.94%	

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10.0 Next Steps

The annual budget process has typically included capital projects and planning for these projects over the short to mid- term. The Selwyn Township Asset Management Plan represents the next step in capital project planning.

Over time this plan will be used to provide the Township with the information it needs to make informed decisions on managing capital assets in a sustainable manner over the long term.

The following recommendations are put forward in response to information gaps, best practices that should be in place, the need to maximize each asset based on its own set criteria, and in the spirit of continuous improvement.

10.1 Ensure Asset Inventories are Updated Regularly

- In order to make sound asset management decisions, the information in the asset database needs to be detailed, supportable and accurate.
- The Township should regularly update the asset database as part of ongoing operations.
- Regular updates should have regard for not only the cost of asset purchases but also have regard for the rationale for the asset upgrades, consider asset condition ratings, and include information about remaining useful life.

10.2 Filling Information Gaps

- A work plan should be developed to address the level of completeness and confidence in the data included on the chart included herein.
- Decision making should rely on data that is as accurate and up to date
- Data gaps or confidence levels with a Low rating should be a high priority for updating to create a more robust inventory.
- Once the data gap is adequately addressed and the reliability for Current Replacement Value is determined to be of higher quality, a more detailed costing of life cycle activities should be presented. This should ideally be incorporated in the annual AMP update presented as part of the annual budget cycle.

10.3 Maximize Use of GIS Capabilities


- With the progress made thus far on implementing GIS layers for core assets, resourcing needs to be put in place to maximize the use of reliable GIS data within the CGIS module.

10.4 All Assets Classes

- Repair and replacement of capital works should be prioritized more formally and include asset condition ratings as a key prioritization factor.
- Risk analysis should be incorporated into annual updates as data is improved and long-term financial planning is entrenched. Levels of Service should be affected by a detailed risk assessment related to each asset class.
- The process for urban area infrastructure improvements should continue to have regard for all components of road sections including road, water, sewer and storm sewer

- The Township should, where possible, coordinate the construction of new infrastructure with infrastructure repairs and replacement to achieve cost efficiencies.

10.5 Best Practices

- As asset management plans in Ontario are developed under the new O./Reg 588/17 protocols, staff should actively seek out sector best practices and incorporate these best practices in annual updates of the Selwyn Asset Management Plan
 - Engineering studies and assessments should be planned in advance of key AMP update cycles and in conjunction with other key municipal plans such as the Climate Change Action Plan, Development Charges Study and system wide master plans
- 

Selwyn Asset Management - Data Summary						June 2025
Confidence and Completeness Chart						
			Data Set	Data Condition	CRV Cost & Age	
Asset Class	Asset Sub-Class	Data Sources	Completeness	Confidence Level	Confidence Level	Comments and Next Steps
Roads	Road Network	Roads Needs Study 2022	High	Moderate	Moderate	engineer's training session on use
		Roads Needs Study - historical				update annually and new study every 5 years
		Tangible Capital Asset Documentation				consider road count supplemental contracts
	Sidewalks	Roads Needs Study 2022 - supplemental	High	Moderate	Low	update annually and new study every 5 years
		Tangible Capital Asset Documentation				
		Departmental inspection/complaints records				
	Signage	MESH Mobile Operations Mgmt Software	High	High	Moderate	annual inspection data sets to be updated in AMP
(o/s write-up)	Streetlights	LAS - retrofit project dataset	Moderate	Moderate	Low	annual inspection data sets to be updated in AMP
		Tangible Capital Asset Documentation				
		Departmental inspection records				
Bridges & Culverts	Structures	Engineer's Bridge Condition Assessment	Moderate	High	Moderate	further ground proofing of Internal GPS Report
	> 3m. & < 6m.	Internal GPS report				bi-annual inspection schedule established
		County of Peterborough records				need 2026 inspection completed in Q2
Water	Distribution System	Tangible Capital Asset Documentation	Moderate	Moderate	Moderate	track costs from present day tender results
		Historical Engineer reports/plans				review main break history
		Hydrant Flushing field reports				use chlorine residual data to consider relining candidates
	Treatment Facilities	Tangible Capital Asset Documentation	Moderate	Moderate	Low	consider engineers study
		Insurance files				determine op. agrmt. maintenance components amounts
		Historical Engineer reports/plans				
Wastewater	Collection System	CCTV Reports and Engineers Assessment	Moderate	Moderate	Moderate	plan for next CCTV project
		Tangible Capital Asset Documentation				track costs from present day tender results
		Historical Engineer reports/plans				
		Operating Authority/Twp. service reports				

	Treatment Facilities	Tangible Capital Asset Documentation	Moderate	Moderate	Low	consider engineers study
		Insurance files				determine op. agrmt. maintenance components amounts
		Historical Engineer reports/plans				
Stormwater	Collection System	Engineers Cost Report	Moderate	Moderate	Moderate	need to identify & capture missing data
		Engineers Representative Pipe Report				track costs from present day tender results
		CCTV Reports and Engineers Assessment				improve data mgmt. on annual structure cleaning
		Tangible Capital Asset Documentation				
	Ponds	Engineers Report on Maintenance	Moderate	Moderate	Low	annual in house updates & additions
		Tangible Capital Asset Documentation				additional Burnside pond to be added
						updated maintenance report to be completed
Facilities	Buildings	Tangible Capital Asset Documentation	Moderate	Moderate	Low	tracking improvements annually
		Architect's Facility Assessment Report 202?				need to build onto the end of the ten year
		Insurance files				need to develop quantitative performance measure
(o/s write-up)	Park Amenities	Tangible Capital Asset Documentation	(o/s write-up)	(o/s write-up)	(o/s write-up)	need to identify & capture missing data
		Recreation Services Master Plan				need to develop qualitative performance measure
		Departmental Checklists/Service reports				need to develop quantitative performance measure
Fleet	Plated Vehicles	Tangible Capital Asset Documentation	incomplete	Low	Low	Works Equipment study to be completed
	Non-plated Eqpmt.	Budgets - replacement schedules				Fire Dept schedule - maintain and update Stock Pumpers
		Work Orders & Annual Inspection Records				

General Comments and Next Steps:

- Financial Information Considerations
- develop process to gather and update consistent use of engineering based construction indices
 - consider comprehensive CRV costs and average age study on all core assets (except Roads given RNS 2022)
 - ensure updates of CRV costs to current day dollars on a go-forward basis
 - consider all aspects of maintenance and confirm what components should be included in average annual maintenance activities

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11.0 References

The compilation of the AMP relied upon a variety of source documents. Since this is the first iteration of the full AMP under the new regulation, no one definitive source provided all aspects of the requirements for each of the asset classes.

The following provides a good general overview of the source documents used in creating the AMP.

- Selwyn Township TCA documentation and audit working papers
- Budgets, narratives and financial statements as approved by Council
- In-house expertise and notes on lifecycle activities
- Insurance records
- Roads Needs Study 2022 and earlier editions dating back to 2002.
- MESH dataset provided by Advantage Data collection – Traffic Signage
- Water system reports – historical studies
- Water Tower and Standpipe inspection and engineering reports
- Sanitary Sewer system reports – historical studies
- Sanitary Sewer CCTV and condition rating
- Stormwater Management Facility Inspection Report and Update
- Stormwater CCTV analysis and condition rating
- Stormwater – Flood Resiliency technical memo with catchment areas
- Structures Inspection Reports and Technical Memos
- Facility Condition Assessments Report (Awde Architects)
- Tender documents on Selwyn projects
- CGIS – GIS - tables and mapping
- County Official Plan
- Stats Can – Selwyn dataset
- Construction price indices from:
 - Peterborough Utilities
 - City of Peterborough
 - DM Wills
 - Watson & Associates

And finally, Selwyn benefited greatly from other municipalities' generosity and the strength of larger municipal centers with in-house expertise. As a result, certain report formats and presentation tables have been used to convey information.

There is no doubt that as the sector becomes stronger in asset management, even more sharing and best practice work will be incorporated into future updates.

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selwyntownship.ca/assetmanagementplan

