THE CORPORATION OF THE
TOWNSHIP OF ARMSTRONG

BY-LAW 2026-04

BEING A BYLAW TO ADOPT AN UPDATED ASSET MANAGEMENT PLAN FOR THE TOWNSHIP OF ARMSTRONG.

WHEREAS Ontario Regulation 588/17 (*Asset Management Planning for Municipal Infrastructure*) made under the *Infrastructure for Jobs and Prosperity Act, 2015*, S.O. 2015, c.15, requires municipalities to prepare and maintain an Asset Management Plan for municipal infrastructure assets, including meeting the July 1, 2025 requirements respecting levels of service and lifecycle management strategies;

AND WHEREAS Section 9 of the *Municipal Act, 2001*, S.O. 2001, c.25, as amended, provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS Council of The Corporation of the Township of Armstrong deems it appropriate to adopt an updated Asset Management Plan in compliance with the requirements of Ontario Regulation 588/17;

NOW THEREFORE the Council of The Corporation of the Township of Armstrong enacts as follows:

1. **THAT** the Asset Management Plan for the Township of Armstrong, prepared in accordance with Ontario Regulation 588/17 and reflecting the July 1, 2025 requirements, be and is hereby adopted, as attached hereto as Schedule "A" and forming part of this by-law.

2. **THAT** the CAO/Clerk-Treasurer is hereby authorized to make minor administrative, numerical, grammatical, or typographical corrections to this by-law and its schedules, if required.

3. **THAT** all by-laws or resolutions or parts thereof inconsistent with this by-law are hereby repealed.

4. **THAT** this by-law shall come into force and effect upon the final passing thereof.

READ A FIRST, SECOND AND THIRD TIME AND FINALLY PASSED IN OPEN COUNCIL THIS 14th DAY OF JANUARY, 2026.

Jean Marc Boileau

JEAN MARC BOILEAU
MAYOR

DAN THIBEAULT
CAO/CLERK TREASURER

Schedule "A" to

By-law No. 2026-04

ASSET MANAGEMENT PLAN

Township of Armstrong

Asset Management Plan

Prepared in accordance with Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure, made under the Infrastructure for Jobs and Prosperity Act, 2015.

Prepared for: Council and Public Distribution

Prepared by: Dan Thibeault, CAO Clerk Treasurer

Date: January 14, 2026

1. Table of Contents

2. Introduction

Purpose of the Asset Management Plan

The purpose of the Township of Armstrong's Asset Management Plan (AMP) is to provide a structured framework for managing municipal infrastructure in a sustainable and cost-effective manner. This plan guides decision-making by identifying the current state of local infrastructure, evaluating levels of service, forecasting future needs, and aligning financial strategies with long-term community priorities. The AMP supports Council, staff, and the public by promoting accountability, transparency, and evidence-based infrastructure planning.

Legislative Requirements (O. Reg. 588/17)

This AMP has been developed in accordance with Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure, made under the Infrastructure for Jobs and Prosperity Act, 2015. The regulation requires municipalities to:

- Prepare and maintain a strategic asset management policy.
- Document the current levels of service for all core assets (water, wastewater, stormwater, roads, bridges, and culverts) and non-core assets.
- Establish proposed levels of service for a 10-year planning period.
- Identify lifecycle management strategies, financial strategies, and risks related to achieving proposed levels of service.
- Review and update the plan at least every five years and conduct annual progress reporting to Council.

By meeting these requirements, Armstrong ensures compliance while also strengthening its ability to deliver reliable services to the community.

Scope and Asset Categories

This AMP includes both core and non-core municipal infrastructure assets, as required by O. Reg. 588/17. The asset categories covered are:

- Core Assets: Water, Wastewater, Stormwater, Roads, Bridges and Culverts.
- Non-Core Assets: Facilities, Fleet and Equipment.

Together, these assets have a total replacement value exceeding $151 million (2023 dollars). They represent the essential systems and resources that enable the Township to deliver safe, reliable, and affordable services to residents and businesses.

Methodology and Data Sources

The preparation of this AMP involved compiling and analyzing available data from a variety of sources, including:

- Municipal asset inventories and financial records.
- Staff knowledge and experience regarding asset condition, performance, and maintenance history.
- Visual inspections conducted by Public Works and Building Department staff.
- Engineering reports and condition assessments (e.g., Bridge Condition Index inspections).
- Best practices and life expectancy data from engineering literature and provincial standards.

Where detailed technical data was not available, the Township used an age-based condition approach supplemented by staff expertise. This methodology balances regulatory compliance with local capacity, while providing a realistic foundation for future improvements in data collection and analysis.

3. Strategic Alignment

Link to Strategic Asset Management Policy

The Township of Armstrong adopted its Strategic Asset Management Policy to provide guiding principles for infrastructure decision-making. This Asset Management Plan aligns with the policy by:

- Supporting the Township's long-term goals for service delivery, sustainability, and fiscal responsibility.
- Ensuring that asset management planning is integrated into municipal decision-making and that Council remains engaged in the process.
- Reflecting the principles set out in the Infrastructure for Jobs and Prosperity Act, 2015, including stewardship of resources, affordability, transparency, and continuous improvement.

Integration with Budgeting and Financial Planning

This AMP is directly tied to the Township's annual budget process and multi-year financial planning. Asset data and lifecycle needs inform capital budgets, reserve contributions, and long-term financial forecasts. The AMP identifies the average annual investment required to sustain service levels and highlights funding gaps that must be addressed through a combination of taxation, user fees, reserves, debt financing, and external grants.

Climate Change, Risk, and Resilience Considerations

The Township recognizes that climate change will impact infrastructure performance and service delivery. Extreme weather events, freeze–thaw cycles, and flooding risks increase the likelihood of infrastructure deterioration and failure. This AMP incorporates:

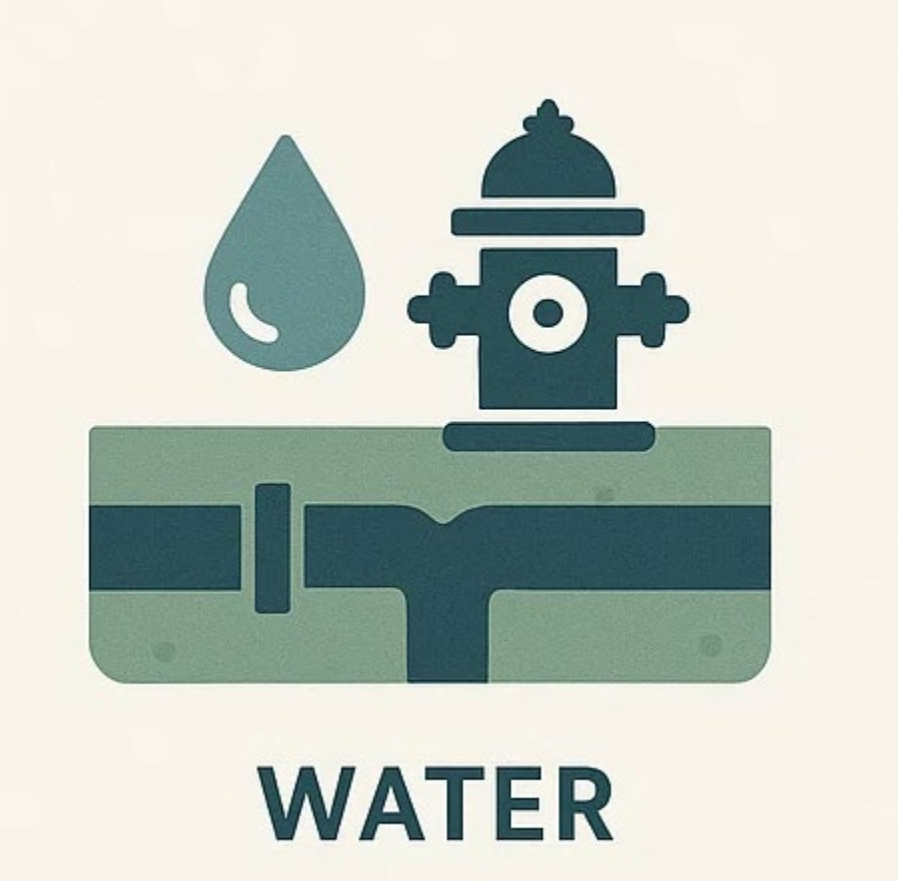
- Adaptation measures, such as higher maintenance frequencies, culvert upgrades, and stormwater system improvements.
- Mitigation measures, including energy efficiency in facilities and fleet modernization.
- Risk management practices, such as prioritizing critical assets, conducting inspections, and planning for contingencies if funding gaps prevent full lifecycle renewal.

Land Use Planning and Growth Assumptions

Asset management planning is integrated with Armstrong's land use planning framework, including the Township's Official Plan and zoning by-laws. Population growth within the settlement area of Earlton remains modest, and most asset demands are driven by renewal rather than expansion. Growth assumptions therefore focus on maintaining service capacity within existing built-up areas, while ensuring that infrastructure investments support safe, efficient, and resilient development.

Public Engagement and Continuous Improvement

The Township is committed to engaging residents, stakeholders, and partner municipalities in asset management planning. Council meetings provide a public forum for reviewing and approving the AMP, and the plan will be posted on the Township's website for transparency. The Township also commits to annual progress reporting and five-year updates, ensuring that the AMP evolves with new data, improved methodologies, and community feedback.


WATER

4. Water

State of Local Infrastructure

This section provides an overview of the assets that make up the Township's Water system. It summarizes the inventory, replacement value, and age of the assets, and describes how they are distributed across the municipality. Understanding the current state of local infrastructure is a key step in effective asset management, as it establishes the baseline from which condition, levels of service, and future investment needs are determined.

Asset Types

The Township of Armstrong owns and manages a range of water infrastructure assets that deliver safe and reliable drinking water to residents and businesses in the Village of Earlton. These include:

- **Watermains and service lines** – 11,209 metres of watermains and 1,260 metres of service lines form the backbone of the distribution network.
- **Treatment facilities** – one water treatment plant, equipped with a SCADA system, responsible for ensuring regulatory compliance and water quality.
- **Wells** – three wells that supply the system.
- **Pumps and controls** – assets critical to maintaining pressure and flow.
- **Monitoring equipment** – including chlorine pumps and turbidity analyzers to maintain safety and quality standards.

Replacement Value and Average Age

The Township's water system has an estimated replacement value of $33.995 million (2025). The average age of the water assets is 20 years, though some components (such as pumps and analyzers) are nearing the end of their useful life and will require replacement sooner.

Distribution and Network Characteristics

The water system primarily serves the Village of Earlton, where 415 of 523 households (79%) are connected. The remaining 108 households (21%) rely on private water systems. All properties on the municipal system have adequate fire flow capacity, though the current fire pump is aging.

The distribution system is relatively compact, with infrastructure concentrated within the urban settlement area, while rural households are generally served by private wells.

Supporting Visuals

Figure 1 - Water Distribution Network

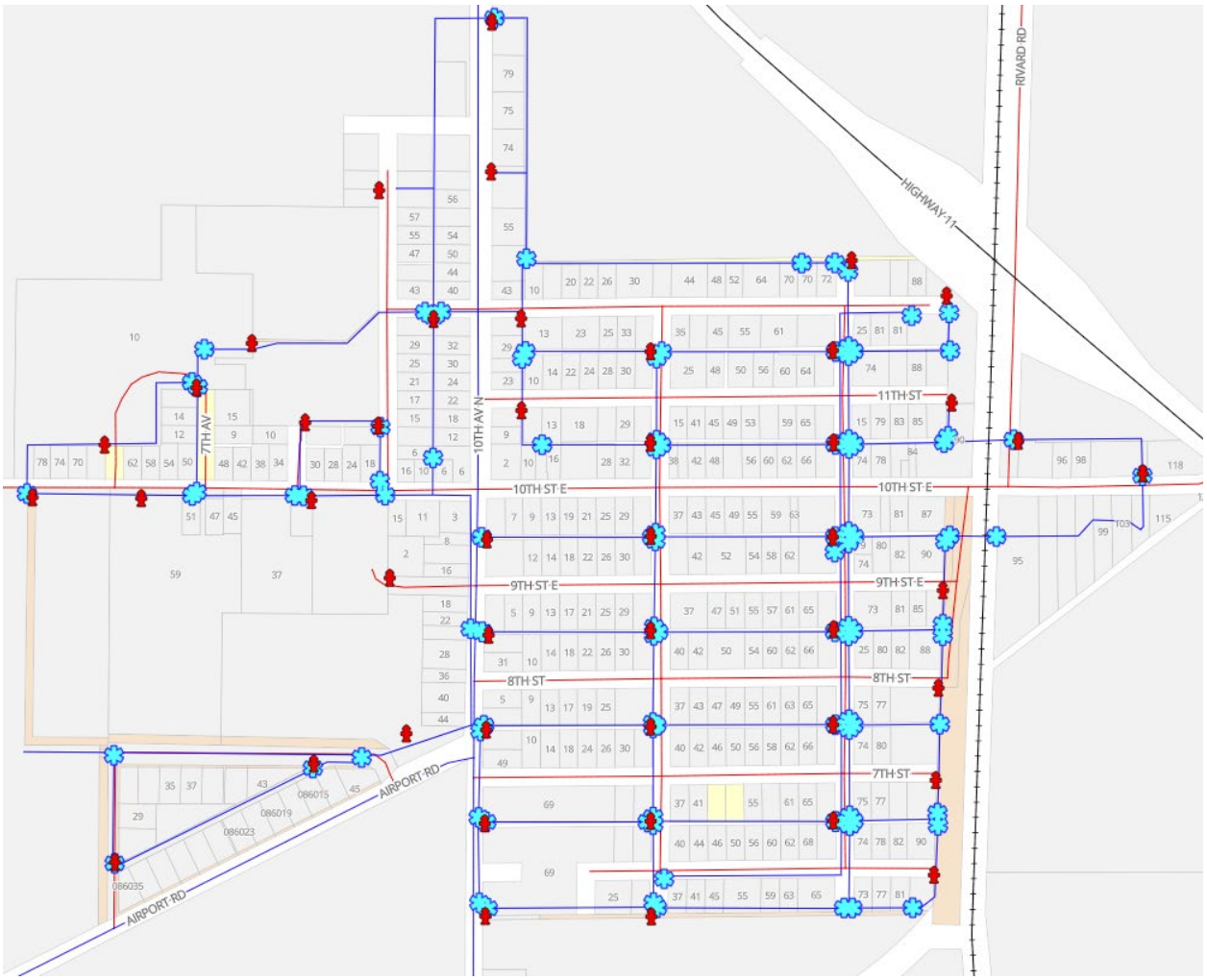


Figure 2-Water Asset Inventory Breakdown

Type	Quantity		Average Age (years)	Replacement Cost
Watermains	11209	metres	32	$30,264,840
Water Valves	99	valve	32	$524,700
Hydrants	44	hydrant	32	$281,600
Service Lines	1260	metres	32	$2,016,000
Curbstops	420	curbstop	32	$462,000
Wells	3	well	33	$110,700
Well Pumps	3	pumps	5	$31,800
Filtering System	2	filtering systems	7	$21,200
Chlorine Pump	10	pumps	22	$30,000
Chlorine Analyser	2	analyser	2	$17,000
Turbidity Analyser	2	analyser	12	$17,000
Highlift Pump	4	pumps	14	$34,000
Fire Pump	1	pumps	33	$15,800
Scada	1	system	2	$84,200
Ferric Sulfate Pump	2	pumps	3	$5,400
Generator	1	generator	33	$78,900
		TOTAL	20	**$ 33,995,140**

Condition Analysis

Methodology

A five-point condition scale (“Very Good” to “Very Poor”) based on useful life was applied. Due to budget limitations, the Township used an age-based assessment approach instead of full physical testing of underground assets.

Condition Results

- 99% of water asset replacement value falls within the **Good** category.
- Next expected replacements: chlorine pump, turbidity analyzer, and fire pump.

Summary of Condition State

The water system is in overall **Good** condition but faces risks:

- **Aging infrastructure** – many assets were installed at the same time, which could cause simultaneous failures.
- **Funding limitations** – small tax/user base makes large-scale renewal difficult.
- **Regulatory requirements** – ongoing upgrades needed to meet evolving standards.
- **Climate change risks** – extreme weather may increase stress on the system.

Supporting Visuals

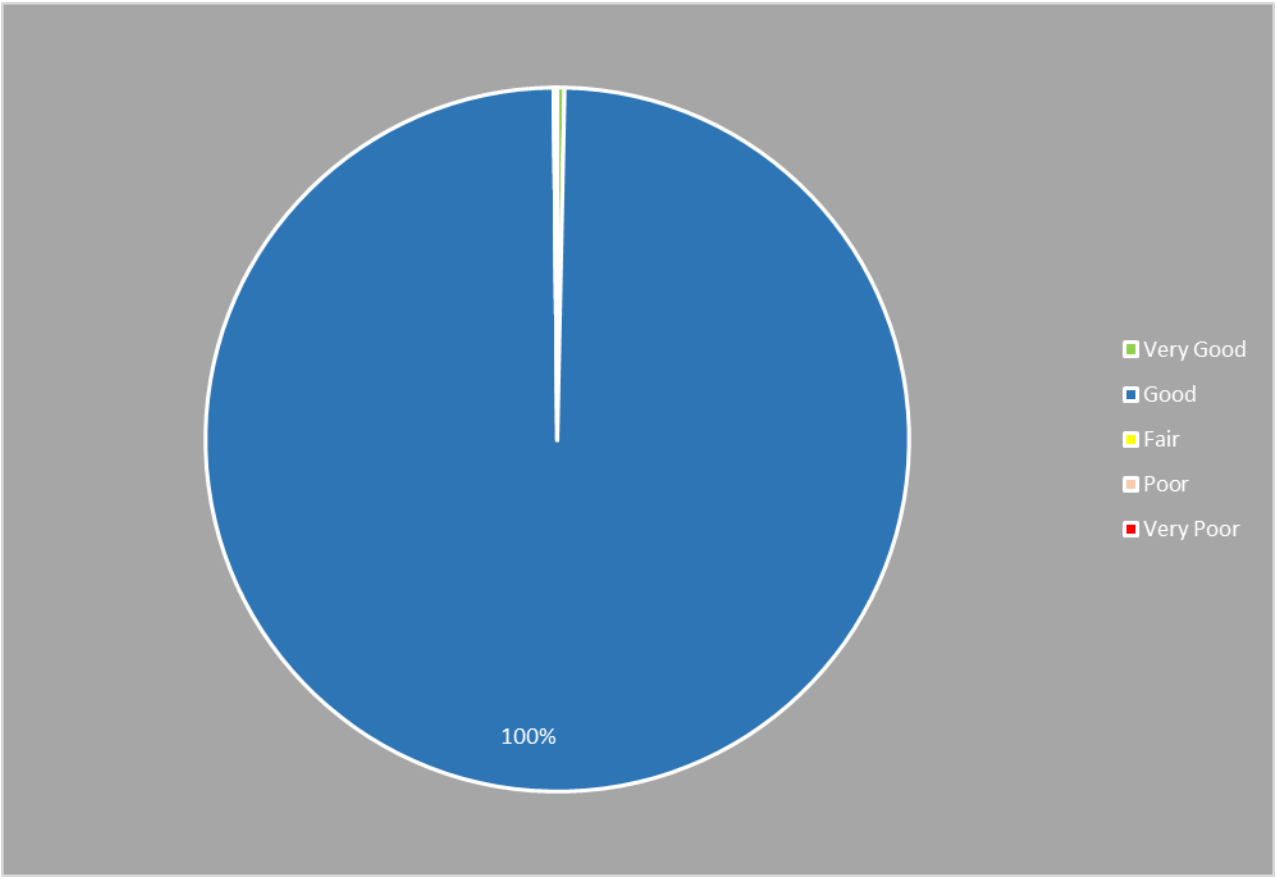
Figure 3-Condition Descriptions

Condition	Value		Description
Very Good	45%	and below	No concerns.
Good	90%	46%	Minor deterioration with minimal effect on service delivery.
Fair	100%	91%	Some deterioration reflected in service restrictions. Concerns noted.
Poor	125%	101%	Significant deterioration, frequent service interruptions. High risk of failure.
Very Poor	126%	and above	End of service life, generally not suitable for use.

Figure 4-Average Condition by Asset Type

Type	Average Percentage	Average Condition State
Watermains	53%	Good
Water Valves	80%	Good
Hydrants	53%	Good
Service Lines	79%	Good
Curbstops	79%	Good
Wells	73%	Good
Well Pumps	47%	Good
Filtering System	22%	Very Good
Chlorine Pump	110%	Poor
Chlorine Analyser	20%	Very Good
Turbidity Analyser	120%	Poor
Highlift Pump	71%	Good
Fire Pump	110%	Poor
Scada	10%	Very Good
Ferric Sulfate Pump	12%	Very Good
Generator	66%	Good

Figure 5-Chart of Replacement Cost by Condition Type



Current Levels of Service

Community Levels of Service (Qualitative)

- The Township provides water services within the Village of Earlton.
- Of the 523 households, 415 are served by municipal water, and 108 are on private wells.
- All connected properties have adequate fire flow capacity.
- No boil water advisories or service interruptions have occurred in the last three years.

Technical Levels of Service (Quantitative)

- % of households connected to system: **79%**.
- % of properties with fire flow: **100%** of connected properties.
- Number of boil water advisories in last 3 years: **0**.
- Number of connection-days per year due to water main breaks: **0**.

Proposed Levels of Service

Target Service Levels (10-Year Horizon)

- Maintain current connection rate of 79% and ensure fire flow remains available to all serviced properties.
- Avoid boil water advisories and water service interruptions.
- Maintain watermain condition in “Good” category through proactive investment.

Rationale for Service Targets

- Targets balance affordability with reliability.
- Maintaining current LOS avoids costly system expansion while ensuring safety.
- Focus is on extending service life of existing infrastructure.

Comparison with Current Levels of Service

- Current and proposed service levels are essentially the same, reflecting affordability and sustainability constraints.
- Minor improvements (e.g., fire pump replacement, improved monitoring) are proposed to reduce risk.

Lifecycle Management and Financial Strategy

Lifecycle Activities

- **Preventive maintenance:** pump servicing, valve checks, SCADA monitoring.
- **Rehabilitation/replacement:** pumps, analyzers, and fire pump scheduled within 10 years.
- **Upgrades:** treatment facility improvements as required to meet standards.

10-Year Capital and Operating Costs

- Annual average capital investment required: **$2,324,980 (2025)**.
- Expected costs will rise as assets near end of life.

Funding Strategy and Sources

- Current water rates and tax base cannot fund full system replacement.
- Federal and Provincial grant partnerships (as with the original system installation) will be required.
- Township will continue building reserves and seeking external funding opportunities.

Risk and Funding Gap Management

- **Funding shortfall:** Township cannot independently fund full renewal.
- **Risk mitigation:** phased replacement, prioritization by risk assessment, and targeted external funding.
- **Contingency planning:** additional monitoring (visual inspections, SCADA upgrades) to predict failures earlier and spread costs over time.


WASTEWATER

5. Wastewater

State of Local Infrastructure

This section provides an overview of the assets that make up the Township's Wastewater system. It summarizes the inventory, replacement value, and age of the assets, and describes how they are distributed across the municipality. Understanding the current state of local infrastructure is a key step in effective asset management, as it establishes the baseline from which condition, levels of service, and future investment needs are determined.

Asset Types

The Township of Armstrong owns and operates wastewater infrastructure that provides for the safe collection, conveyance, and treatment of sewage in the Village of Earlton. These include:

- **Wastewater mains** – 9,121 metres of pipe.
- **Personal drain connections** – 1,239 metres.
- **Manholes** – 109 units.
- **Pump station** and **lagoon**.
- **Ancillary buildings** – alum and blower buildings (captured under facilities).
- **Generator** – ensures backup power for uninterrupted operations.

Replacement Value and Average Age

- Total replacement value: **$42.076 million (2025)**.
- Average age of mains: **39 years** (mostly installed in 1974).
- Material: primarily asbestos cement, with some newer plastic components.

Distribution and Network Characteristics

- The system serves 413 of 523 households (79%) in Earlton; 108 households (21%) are on private systems.
- System layout includes mains, manholes, and a single lagoon treatment facility.
- The wastewater system is centralized in Earlton, with rural households relying on septic systems.

Supporting Visuals

Figure 6-Wastewater Distribution Network

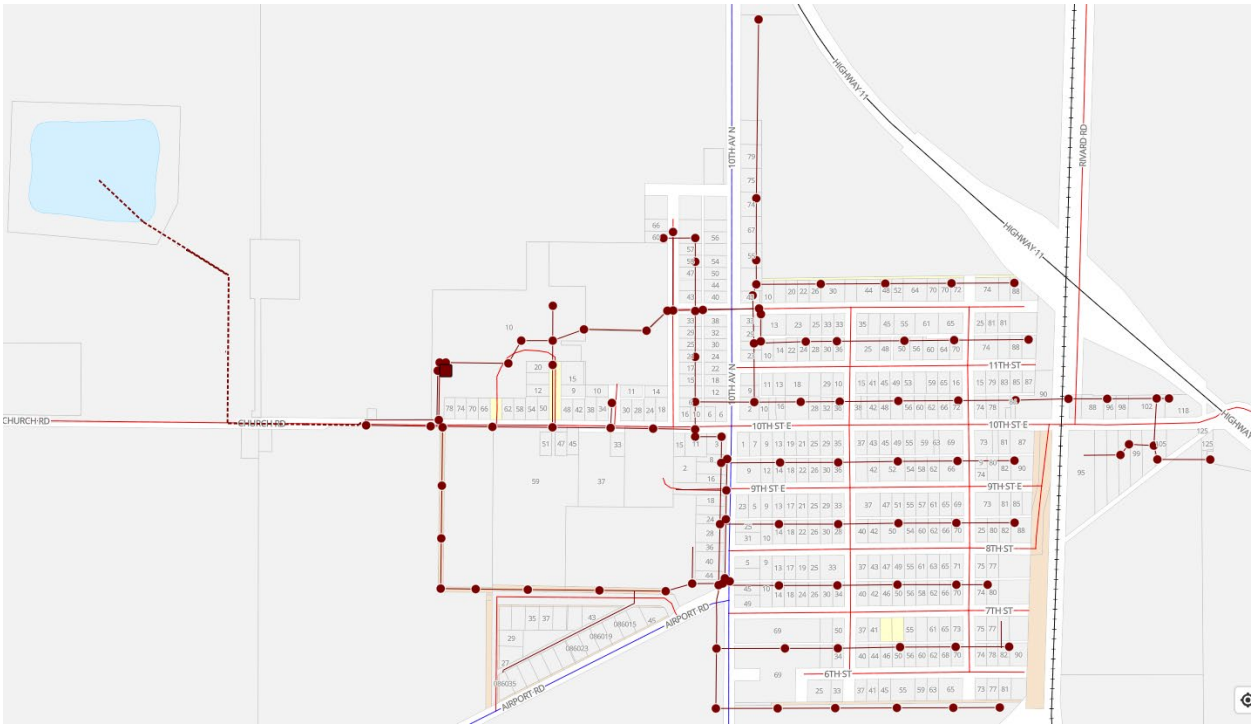


Figure 7-Wastewater Asset Inventory Breakdown

Type	Quantity		Average Age (years)	Replacement Cost
Wastewater Mains	9121	metres	39	$ 29,187,712
Wastewater Personal Drain Connections	1239	metres	39	$ 3,717,000
Wastewater Manholes	109	Manholes	37	$ 545,000
Pump Station	1	unit	22	$ 6,410,689
Lagoon	1	unit	51	$ 2,136,897
Generator	1	unit	2	$ 78,900
			TOTAL	**$ 42,076,198**

Figure 8-Wastewater Pipe Type Breakout

Material	Size (mm)	Length (m)
Asbestos Cement	200	5443
	250	402
Plastic	30	81
	200	566
	250	53
	300	655
	375	1139
	450	782
	TOTAL	**9121**

Condition Analysis

Methodology

The Township applied a five-point condition scale (Very Good to Very Poor) based on expected useful life. An age-based approach was used, supplemented by staff expertise, as funds were not available for detailed subsurface inspection.

Condition Results

- Wastewater mains: 62% of life used → **Good** condition.
- Personal drain connections: 62% of life used → **Good** condition.
- Manholes: 59% of life used → **Good** condition.
- Pump station and lagoon: 47% of life used → **Good** condition.
- Generator: 0% of life used (new in 2023) → **Very Good** condition.

Summary of Condition State

Most wastewater infrastructure remains in Good condition, with limited risk in the short term. The mains and laterals were largely constructed at the same time, creating the risk of simultaneous end-of-life failures in the future. Ongoing renewal planning is essential to spread costs over time and avoid system-wide failures.

Supporting Visuals

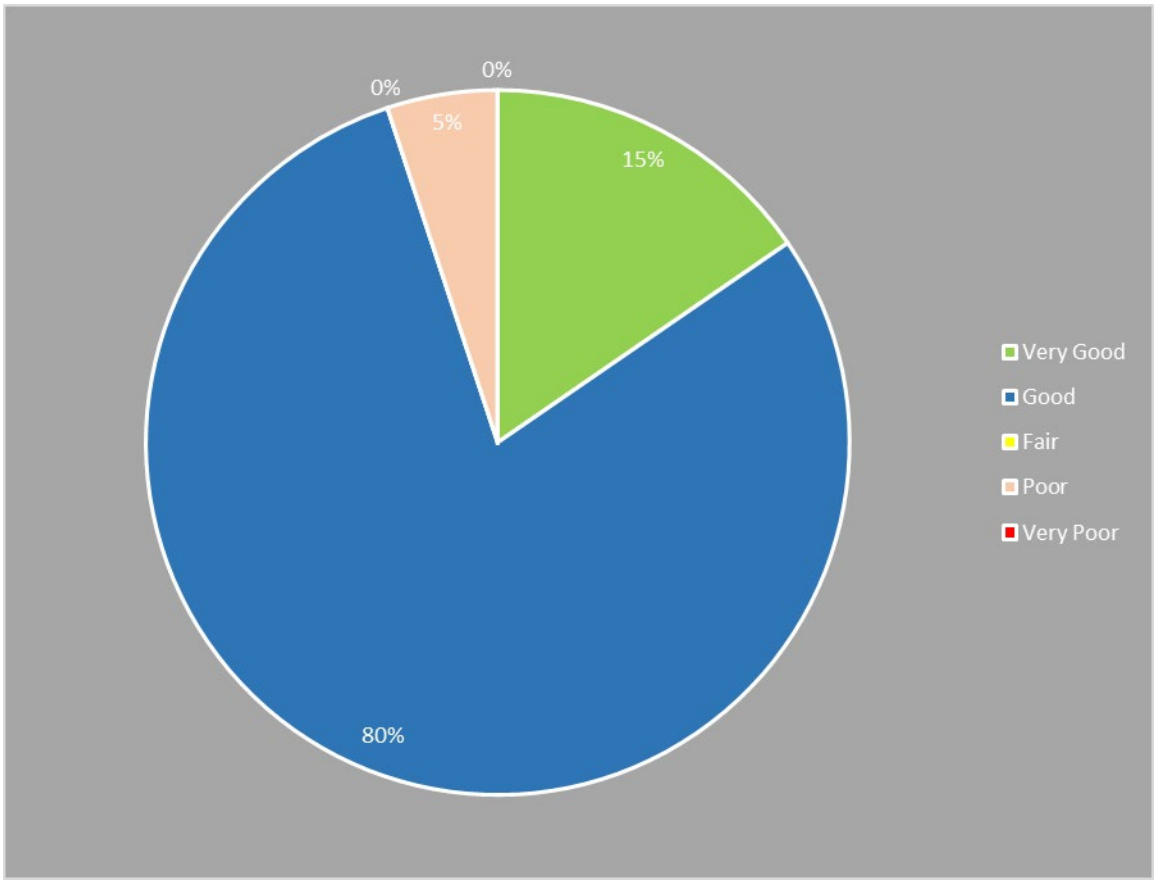
Figure 9-Wastewater Condition Descriptions

Condition	Value		Description
Very Good	45%	and below	No concerns. Infrastructure is in excellent condition and performing as intended.
Good	90%	46%	Minor deterioration observed but minimal influence on system performance. Occasional maintenance issues raised by staff.
Fair	100%	91%	Noticeable deterioration beginning to affect performance, such as minor infiltration or capacity restrictions. Service concerns may arise periodically.
Poor	125%	101%	Significant deterioration with recurring issues (e.g., backups, blockages, mechanical breakdowns). Requires frequent repairs and monitoring.
Very Poor	126%	and above	At or beyond useful life. Infrastructure is generally not suitable for reliable use. High risk of failure and major service disruptions.

Figure 10-Wastewater Average Condition by Asset Type

Type	Average Percentage of Life Used	Average Condition State
Wastewater Mains	66%	Good
Wastewater Personal Drain Connections	66%	Good
Wastewater Manholes	62%	Good
Pump Building	44%	Very Good
Lagoon	102%	Poor
Generator	4%	Very Good

Figure 11-Wastewater Chart of Replacement Cost by Condition Type



Current Levels of Service

Community Levels of Service (Qualitative)

- **Coverage:** 79% of households are connected to the municipal wastewater system.
- **System Design:** Armstrong does not operate combined sewers.
- **Reliability:** The system is designed to prevent stormwater infiltration and to ensure compliance with effluent discharge standards.

Technical Levels of Service (Quantitative)

- % of households connected to municipal wastewater system: **79%**.
- Number of combined sewer overflow events: **0 per year**.
- Number of wastewater backups per year: **0 connection-days**.
- Number of effluent violations per year: **0**.

Proposed Levels of Service

Target Service Levels (10-Year Horizon)

- Maintain 79% household connection rate within settlement area.
- Prevent all wastewater backups and overflows.
- Maintain compliance with provincial effluent standards.
- Ensure reliable operation of treatment and pumping facilities through proactive maintenance.

Rationale for Service Targets

- Current service levels meet community expectations and provincial standards.
- Targets are realistic and affordable, focusing on **maintaining performance** rather than expansion.
- Protecting compliance with effluent quality avoids regulatory penalties and environmental impacts.

Comparison with Current Levels of Service

- Current LOS already meets proposed targets.
- The focus over the next 10 years will be sustaining this level of reliability through timely reinvestment.

Lifecycle Management and Financial Strategy

Lifecycle Activities

- **Preventive maintenance:** routine inspections, manhole maintenance, pump servicing.
- **Rehabilitation:** lining or spot repairs for mains to extend service life.
- **Replacement:** eventual phased replacement of mains and laterals, especially asbestos cement pipes.
- **Upgrades:** system improvements as regulatory requirements evolve.

10-Year Capital and Operating Costs

- Average annual investment required: **$3,383,315 (2025)**.
- No major replacements anticipated in the next 10 years, though repairs may increase with age.

Funding Strategy and Sources

- Wastewater system is funded primarily through user rates.
- Current rate base is insufficient for full system replacement.
- Long-term sustainability will require external support from provincial and federal infrastructure funding programs.

Risk and Funding Gap Management

- Funding gap: The Township cannot cover full lifecycle costs through rates and taxes alone.
- Risk mitigation: visual inspections to better predict failures, phased replacement strategies, and prioritization of high-risk segments.
- Contingency planning: reliance on provincial/federal partnership funding similar to that used during system construction.


STORMWATER

6. Stormwater

State of Local Infrastructure

This section provides an overview of the assets that make up the Township's Stormwater system. It summarizes the inventory, replacement value, and age of the assets, and describes how they are distributed across the municipality. Understanding the current state of local infrastructure is a key step in effective asset management, as it establishes the baseline from which condition, levels of service, and future investment needs are determined.

Asset Types

The Township of Armstrong's stormwater infrastructure is essential for managing rainfall runoff, mitigating flooding, and protecting water quality. Assets include:

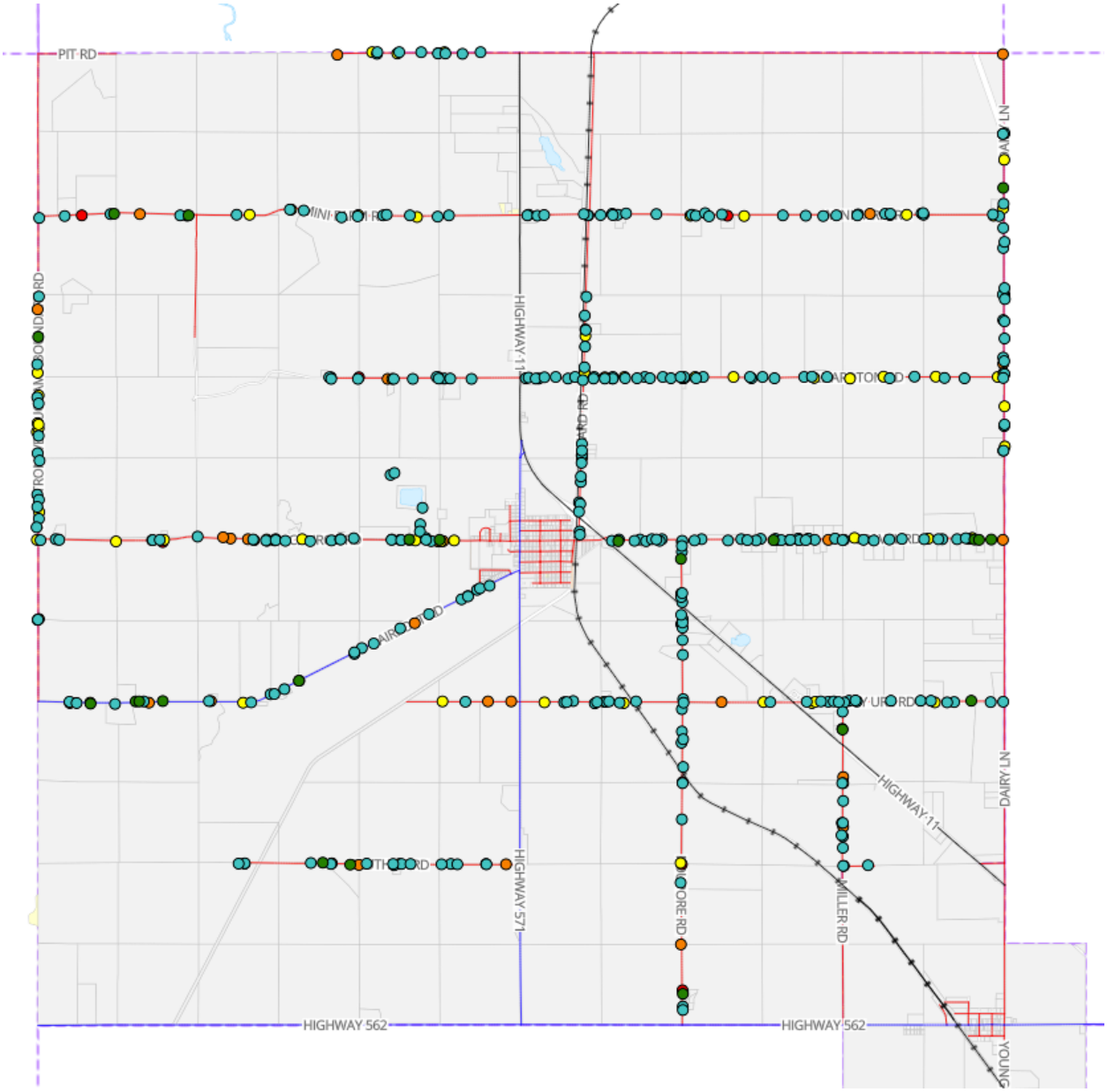
- **Urban stormwater system** – 12,448 metres of stormwater pipe, ranging from 200 mm to 900 mm in diameter.
- **Rural culverts** – 8,238 metres of culverts located throughout the Township.
- **Erosion control measures** – riprap, vegetated buffers, and ditches.
- **Detention and retention basins** – storage areas that temporarily hold runoff.

Replacement Value and Average Age

- **Urban stormwater pipes:** replacement value of **$6.60 million (2023)**, average age **23 years**.
- **Rural culverts:** replacement value of **$4.37 million (2023)**, average age **24 years**.
- Lifespan varies significantly by material, size, and environmental conditions (20–75 years).

Distribution and Network Characteristics

- Urban system: concentrated within the Village of Earlton, conveying runoff from streets, roofs, and developed areas.
- Rural system: extensive network of culverts and open ditches serving agricultural and low-density areas.
- Coverage: The system provides basic stormwater management but limited resilience to extreme events.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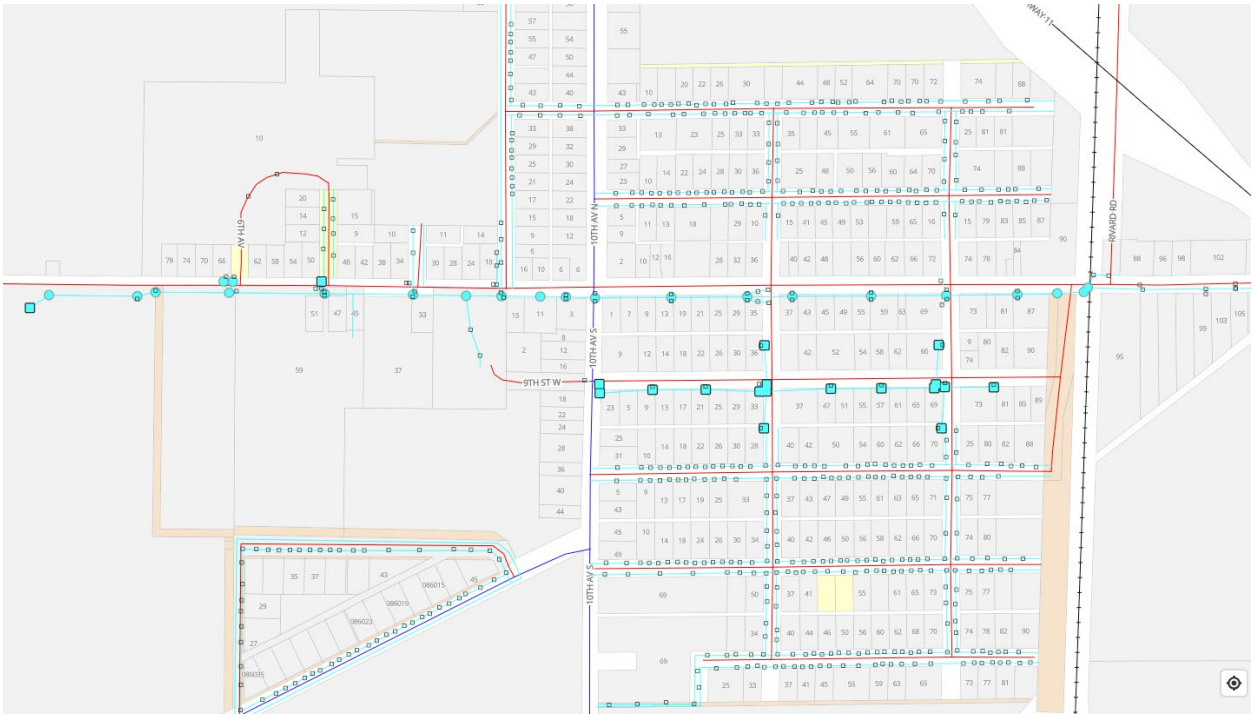
HIGHWAY 11
DAIRY LN
HIGHWAY 571
MILLER RD
HIGHWAY 562
HIGHWAY 562



Condition Analysis

Methodology

- **Urban stormwater pipes:** assessed using age-based analysis relative to expected service life.
- **Rural culverts:** assessed through visual inspections by Public Works staff in 2023. Each culvert was photographed and catalogued to monitor change over time.

Condition Results

- Urban stormwater pipes: most remain serviceable but aging.
- Rural culverts: majority in **Poor** condition, none rated above Fair.
- 60% of stormwater assets fall in the **Poor** category.

Summary of Condition State

The stormwater system is the **weakest of Armstrong's core assets**. Urban pipes are aging but functional, while culverts are deteriorating and represent a high risk of localized flooding or washouts if not addressed. Deferred renewal poses a growing risk to roads, properties, and public safety.

Current Levels of Service

Community Levels of Service (Qualitative)

- Urban stormwater system provides drainage coverage in Earlton.
- Rural culverts and ditches provide basic flood management in agricultural and rural areas.
- No formalized system-wide protection against large-scale flooding.

Technical Levels of Service (Quantitative)

- % of properties in the municipality resilient to a 100-year storm: **0%**.
- % of municipal stormwater management system resilient to a 5-year storm: **100%**.

Proposed Levels of Service

Target Service Levels (10-Year Horizon)

- Improve rural culvert conditions to reduce risk of road washouts and flooding.
- Maintain urban stormwater pipes at serviceable condition, prioritizing replacements as they near end of life.
- Develop incremental resilience to climate events (e.g., capacity upgrades, green infrastructure solutions).

Rationale for Service Targets

- Complete resilience to extreme events (100-year storms) is not financially achievable for a small municipality.
- Focus remains on managing risk and maintaining essential serviceability.
- Incremental improvements will provide better protection against localized flooding.

Comparison with Current Levels of Service

- Current LOS: basic drainage with minimal resilience to extreme events.
- Proposed LOS: maintain current baseline but reduce high-risk culvert failures and gradually enhance resilience where affordable.

Lifecycle Management and Financial Strategy

Lifecycle Activities

- **Preventive maintenance:** debris clearing, ditch cleaning, erosion control.
- **Rehabilitation:** culvert relining or partial replacement to extend life.
- **Replacement:** full culvert or pipe replacement when deterioration is advanced.
- **Upgrades:** capacity increases in areas with recurring flooding.

10-Year Capital and Operating Costs

- Required average annual investment: **$401,215 (2023)**.
- Includes culvert replacements, stormwater pipe rehabilitation, and erosion control work.

Funding Strategy and Sources

- Current funding comes from taxation and grants; no stormwater user rate system is in place.
- Given limited municipal revenues, external funding from provincial/federal programs is essential to address culvert backlog.

Risk and Funding Gap Management

- Funding gap: renewal requirements exceed available funding.
- Risk mitigation: prioritize culverts by criticality (e.g., arterial vs local roads, single-access routes).
- Contingency planning: continue incremental upgrades, spread costs over time, and pursue grant opportunities for major projects.


ROADS

7. Roads

State of Local Infrastructure

This section provides an overview of the assets that make up the Township's Roads network. It summarizes the inventory, replacement value, and age of the assets, and describes how they are distributed across the municipality. Understanding the current state of local infrastructure is a key step in effective asset management, as it establishes the baseline from which condition, levels of service, and future investment needs are determined.

Asset Types

The Township of Armstrong owns and maintains **131.74 lane-kilometres of roads**. Assets include:

- **Asphalt roads** – typically arterial or collector roads, carrying heavier traffic volumes.
- **Surface-treated roads** – primarily local residential and lower-volume roads.
- **Gravel roads** – mainly rural access routes.

Replacement Value and Average Age

- Total replacement value: **$31.6 million (2023)**.
- Average age: ranges from **2 years (arterial gravel)** to **14 years (asphalt)**.
- Asphalt roads are generally the oldest, while gravel roads have the youngest average age.

Distribution and Network Characteristics

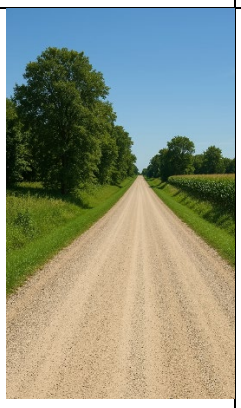
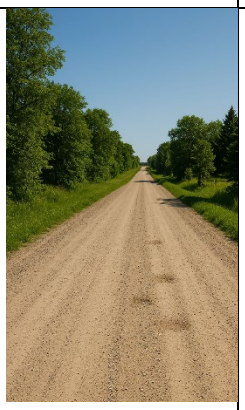
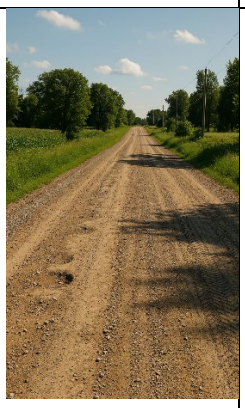
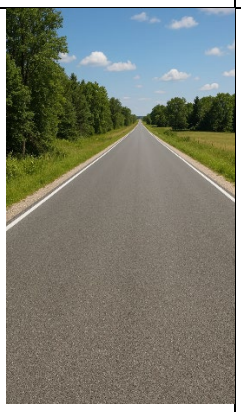
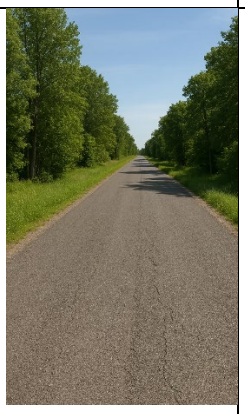
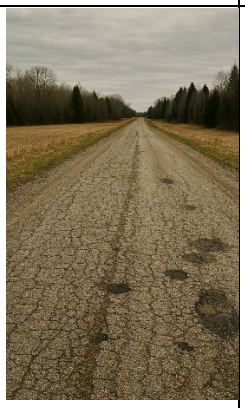
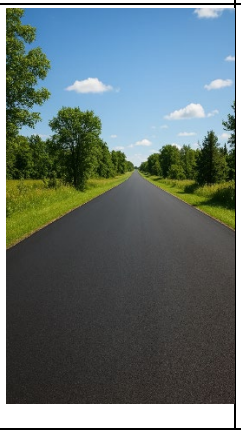
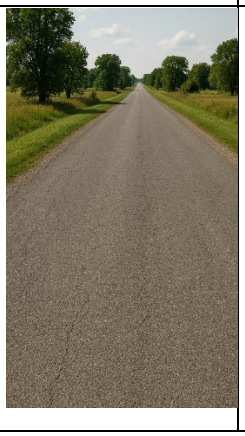
- Total Township size: 90.20 km².
- Road distribution:
  - Arterial: 0.50 lane-km per km².
  - Local: 0.96 lane-km per km².
- Road network is a mix of urban streets in Earlton and extensive rural roads serving agricultural areas.

Condition Analysis

Methodology

- Roads were visually assessed in 2023 by Public Works staff using:
  - **Pavement Condition Index (PCI)** for paved roads.
  - **Gravel Condition Index (GCI)** for unpaved roads.
  - Condition ratings were standardized using a **five-point scale** (Very Good to Very Poor).

Figure 12-Roads Visual Conditions

Condition	Very Good	Good	Fair	Poor	Very Poor
PCI/GCI Rating	>=80	>=60	>=40	>=20	>=0
Gravel Road					
Surface Treatment					
Asphalt					

Condition Results

- Average PCI for paved roads: **66.35 (Good)**.
- Average GCI for gravel roads: **67.89 (Good)**.
- Lowest condition: **48.19 (Fair)** for Rural Local Asphalt roads.
- Highest condition: **93.13 (Very Good)** for Urban Local Surface-Treated roads.

Summary of Condition State

Most roads are in the **Good** category, but some arterial and rural local roads (e.g., Beauchamp Boundary Road, Hilliardton Road) are in **Fair** condition and require attention. Deferred maintenance risks accelerated deterioration, especially under heavier equipment and increased traffic volumes.

Current Levels of Service

Community Levels of Service (Qualitative)

- Road network provides mobility for residents, businesses, agriculture, and industry.
- Urban streets provide direct residential access, while rural gravel and surface-treated roads serve as key farm and transport links.
- Arterial roads carry the highest traffic, including heavy trucks and emergency vehicles.

Technical Levels of Service (Quantitative)

- **Lane-km by classification:**
  - Arterial: 0.50 per km².
  - Local: 0.96 per km².
- **Condition metrics:**
  - Average PCI for paved roads: **66.35 (Good)**.
  - Average GCI for unpaved roads: **67.89 (Good)**.

Proposed Levels of Service

Target Service Levels (10-Year Horizon)

- Maintain **arterial roads** at **80 PCI/GCI**.
- Maintain **local roads** at **60 PCI/GCI**.
- Continue to provide gravel surface re-grading and dust suppression to maintain drivability.

Rationale for Service Targets

- Higher standard for arterial roads reflects their importance for mobility, emergency response, and heavy loads.
- Local roads remain serviceable at a lower target condition due to lower traffic volumes.
- Balances affordability with community expectations.

Comparison with Current Levels of Service

- Current averages: PCI 66.35 and GCI 67.89 → generally in line with targets.
- Some arterial roads fall below target thresholds and will require prioritized renewal.

Lifecycle Management and Financial Strategy

Lifecycle Activities

- Asphalt roads: crack filling, overlays every 15 years, resurfacing at end of life.
- Surface-treated roads: surface reapplication every ~5 years, crack filling as required.
- Gravel roads: annual grading, calcium application, re-graveling every 5 years.

Upgrade Decision Framework

In addition to routine lifecycle activities, the Township must sometimes determine whether a road should be upgraded from gravel to surface treatment or from surface treatment to asphalt. Decisions are guided by the following framework:

1. From Gravel to Surface Treatment

- Road carries moderate to high traffic volumes (particularly year-round residential or farm-to-market routes).
- Road requires frequent re-graveling and grading, increasing maintenance costs.
- Dust suppression or resident complaints indicate the need for a more durable surface.
- Drainage improvements are feasible and affordable.

2. From Surface Treatment to Asphalt

- Road serves as a primary arterial or collector (e.g., 10th Street).
- Carries heavy truck traffic, agricultural equipment, or emergency vehicles.
- Surface-treated road requires frequent patching and re-application, making asphalt more cost-effective long-term.
- Intersection or connectivity considerations (e.g., linking arterial networks).

Prioritization Methodology

- The Township prioritizes road work based on the gap between target and current condition scores, not just classification.
- Example: a local road with a larger condition gap may be prioritized ahead of an arterial road with a smaller gap.
- This ensures investment is directed where service levels are most at risk, balancing fairness with efficiency.

10-Year Capital and Operating Costs

- Average annual investment required: **$1,182,035 (2023).**
- Thirty roads require near-term rehabilitation, with others expected to deteriorate into the Fair/Poor category within the planning horizon.

Funding Strategy and Sources

- Primarily taxation and provincial/federal infrastructure programs.
- Given Armstrong's small population and tax base, external funding will continue to be critical.

Risk and Funding Gap Management

- Funding gap: Township cannot fully self-fund required annual investments.
- Risk mitigation:
    - Apply gap-based prioritization.
    - Use phased rehabilitation and lower-cost lifecycle treatments where possible.
    - Maintain strong advocacy for external funding partnerships.


BRIDGES &
CULVERTS

8. Bridges and Culverts

State of Local Infrastructure

This section provides an overview of the assets that make up the Township's Bridges and Culverts system. It summarizes the inventory, replacement value, and age of the assets, and describes how they are distributed across the municipality. Understanding the current state of local infrastructure is a key step in effective asset management, as it establishes the baseline from which condition, levels of service, and future investment needs are determined.

Asset Types

The Township of Armstrong owns **8 bridge structures** and **44 culverts** with spans greater than 3 metres. These assets form a critical part of the transportation network by enabling vehicle, farm, and emergency access across waterways.

Replacement Value and Average Age

- **Bridges:** replacement value of **$6.58 million (2023)**, average age **49 years**.
- **Culverts:** replacement value of **$7.82 million (2023)**, average age **29 years**.
- Combined replacement value: **$14.40 million (2023)**.

Distribution and Network Characteristics

- Bridges are located primarily on rural arterial and local roads, supporting agricultural, commercial, and residential traffic.
- Culverts are distributed across the Township's road network, many on gravel or surface-treated roads.
- These assets provide essential connectivity for goods movement, school buses, and emergency services.

Condition Analysis

Methodology

- Inspections were carried out under the **Ontario Structure Inspection Manual (OSIM)**.
- Each structure was assigned a **Bridge Condition Index (BCI)** value.
- Condition ratings were grouped into the five-point scale: Very Good, Good, Fair, Poor, and Very Poor.

Condition Results

- **Average bridge BCI:** 61.90 (Fair).
- **Average culvert BCI:** 70.98 (Good).
- One bridge has reached **Very Poor** condition, while most culverts remain in the Good category.

Summary of Condition State

- Bridges are generally in **Fair** condition and will require significant rehabilitation or replacement in the medium term.
- Culverts are in **Good** condition but will need continued inspection and timely replacement to avoid sudden failures.
- Deferred renewal could disrupt connectivity and create safety risks, particularly on single-access routes.

Current Levels of Service

Community Levels of Service (Qualitative)

- Bridges and culverts enable vehicle access across waterways, including heavy trucks, farm equipment, and emergency vehicles.
- Condition affects accessibility: weight restrictions or closures reduce network reliability.

Technical Levels of Service (Quantitative)

- % of bridges with loading or dimensional restrictions: **12.5% (1 of 8 bridges)**.
- Average BCI value: **61.90 for bridges**, **70.98 for culverts**.

Proposed Levels of Service

Target Service Levels (10-Year Horizon)

- Maintain all bridges and culverts in at least **Fair** condition (BCI ≥ 60).
- Ensure **0% of bridges** have load restrictions that limit heavy trucks or emergency vehicles.
- Continue to inspect all structures on a **biennial OSIM cycle**.

Rationale for Service Targets

- Bridges are critical links for emergency response and agriculture; load restrictions significantly disrupt service.
- Proposed targets focus on **preserving safe accessibility** while recognizing affordability limitations.

Comparison with Current Levels of Service

- Current LOS: 1 bridge in Very Poor condition with restrictions.
- Proposed LOS: remove restrictions by rehabilitating or replacing the failing bridge.

Lifecycle Management and Financial Strategy

Lifecycle Activities

- **Preventive maintenance:** joint sealing, deck patching, culvert flushing, erosion control.
- **Rehabilitation:** deck overlays, girder strengthening, culvert relining.
- **Replacement:** full bridge or culvert replacement at end of service life.

10-Year Capital and Operating Costs

- Required annual average investment: **$511,793 (2023)**.
- Major near-term project: rehabilitation or replacement of the bridge in Very Poor condition.
- Ongoing program: culvert replacements to prevent failures.

Funding Strategy and Sources

- Bridges and culverts are funded through taxation, reserves, and **Ontario Community Infrastructure Fund (OCIF)** grants.
- Given the scale of investment required, additional **federal and provincial funding** will be essential.

Risk and Funding Gap Management

- **Funding gap:** Township revenues alone cannot address bridge rehabilitation and culvert replacements.
- **Risk mitigation:** prioritize structures with restrictions, high traffic, or single-access reliance.
- **Contingency planning:** phased replacements, applying for senior government support, and extending life through rehabilitation where feasible.


FACILITIES

9. Facilities

State of Local Infrastructure

This section provides an overview of the assets that make up the Township's Facilities. It summarizes the inventory, replacement value, and age of the assets, and describes how they are distributed across the municipality. Understanding the current state of local infrastructure is a key step in effective asset management, as it establishes the baseline from which condition, levels of service, and future investment needs are determined.

Asset Types

The Township of Armstrong owns and manages a variety of facilities that support municipal administration, emergency response, recreation, and public works. Key facilities include:

- **Municipal Office** (administration and Council chambers).
- **Fire Hall** (emergency services).
- **Public Works Garage** (vehicle storage and operations).
- **Arena and Community Centre** (recreation and events).
- **Water Treatment Plant** and **Wastewater Lagoon Buildings** (included under utilities but part of facilities asset group).
- **Library** (community services).

Replacement Value and Average Age

- Total replacement value: **$28.44 million (2023)**.
- Average facility age: **37 years**, with a range from newer utility buildings to older recreation and municipal facilities.
- Many facilities remain functional but will require modernization or major renewal in the next 10–20 years.

Distribution and Network Characteristics

- Facilities are concentrated in the Village of Earlton, serving the Township's administrative, recreational, and emergency needs.
- Utility-related buildings are located at water and wastewater treatment sites.
- Facilities provide a mix of essential services (fire hall, public works) and quality-of-life amenities (arena, library).

Condition Analysis

Methodology

- Visual inspections by staff in 2023.
- Five-point scale (Very Good → Very Poor) applied based on physical condition and expected useful life.

Condition Results

- Municipal Office: Good.
- Fire Hall: Fair.
- Public Works Garage: Fair.
- Arena: Fair to Poor in certain components (mechanical and structural elements).
- Library: Good.
- Water/Wastewater utility buildings: Good to Very Good.

Summary of Condition State

Overall, facilities are in **Fair to Good condition**. The arena and older municipal buildings require the most attention, while utility-related buildings remain in better shape due to recent upgrades. Deferred maintenance could result in higher rehabilitation costs in the medium term.

Current Levels of Service

Community Levels of Service (Qualitative)

- Facilities provide space for administration, governance, emergency response, recreation, and cultural activities.
- Availability of facilities supports community wellbeing, safety, and quality of life.

Technical Levels of Service (Quantitative)

- Square metres of municipal facilities per resident: **approx. 5.2 m² per capita**.
- % of facilities meeting accessibility standards: [insert available data].
- Number of facilities providing community access (arena, library, community centre): **2**.

Proposed Levels of Service

Target Service Levels (10-Year Horizon)

- Maintain all essential service facilities (office, fire hall, public works) in at least **Fair condition**.
- Upgrade arena and community centre components to sustain recreational use.

- Ensure all facilities meet accessibility standards in line with the **Accessibility for Ontarians with Disabilities Act (AODA)**.

Rationale for Service Targets

- Essential facilities must remain operational to deliver critical services.
- Arena/community centre upgrades support community wellbeing and recreation.
- Accessibility targets reflect legislative compliance and community expectations.

Comparison with Current Levels of Service

- Current LOS is generally aligned with targets, except for components of the arena and fire hall that fall below desired standards.
- Planned upgrades will close gaps and extend service life.

Lifecycle Management and Financial Strategy

Lifecycle Activities

- **Preventive maintenance:** HVAC servicing, roof inspections, minor repairs.
- **Rehabilitation:** mechanical system replacements, accessibility retrofits, energy-efficiency upgrades.
- **Replacement:** major building renewal or reconstruction at end of useful life.

10-Year Capital and Operating Costs

- Required average annual investment: **$720,190 (2023)**.
- Significant renewal needs anticipated for arena/community centre and fire hall.

Funding Strategy and Sources

- Facilities are funded primarily through taxation and reserves.
- Grant programs (e.g., Canada Community-Building Fund, NOHFC) are essential for major upgrades and energy-efficiency projects.

Risk and Funding Gap Management

- Funding gap: facility renewal needs exceed available annual funding.
- Risk mitigation: prioritize essential service buildings, pursue grant partnerships, and defer non-essential improvements until funding is available.

Contingency planning: phased renovations to spread costs and extend building life.


FLEET &
EQUIPMENT

10. Fleet and Equipment

State of Local Infrastructure

This section provides an overview of the assets that make up the Township's Fleet and Equipment. It summarizes the inventory, replacement value, and age of the assets, and describes how they are distributed across the municipality. Understanding the current state of local infrastructure is a key step in effective asset management, as it establishes the baseline from which condition, levels of service, and future investment needs are determined.

Asset Types

The Township of Armstrong owns and operates a fleet of vehicles and equipment that support road maintenance, winter control, landfill operations, parks, and emergency services. Assets include:

- **Public Works vehicles** – grader, plow trucks, dump trucks, loaders, and backhoe.
- **Light-duty vehicles** – pickup trucks and staff vehicles.
- **Specialized equipment** – mowers, small tractors, and landfill equipment.
- **Fire department fleet** – fire trucks and emergency response vehicles.

Replacement Value and Average Age

- Total replacement value: **$3.62 million (2023)**.
- Average age: **8 years**, with significant variation between light vehicles (shorter life) and heavy equipment (longer service life).
- Several fleet assets are approaching or exceeding their expected service life.

Distribution and Network Characteristics

- Fleet and equipment are based primarily at the Public Works Garage and Fire Hall.
- Vehicles and equipment support all municipal services, including snow removal, grading, waste management, fire response, and facility operations.
- Assets are widely used year-round, making lifecycle management critical to maintaining service reliability.

Condition Analysis

Methodology

- Age-based analysis relative to expected service life.
- Supplemented with staff input regarding mechanical reliability, downtime, and maintenance history.
- Five-point scale (Very Good → Very Poor).

Condition Results

- Approximately **64% of fleet assets** are in **Good** condition.
- **15% of assets** are in **Fair** condition.
- **21% of assets** are in **Poor or Very Poor** condition, including older heavy equipment and fire vehicles nearing end of life.

Summary of Condition State

While most of the fleet remains serviceable, several critical units will require replacement soon to avoid breakdowns and service disruptions. Heavy trucks and fire apparatus represent the most urgent replacement priorities.

Current Levels of Service

Community Levels of Service (Qualitative)

- Fleet enables essential services such as snow clearing, grading, landfill operations, and emergency response.
- Equipment downtime directly affects service delivery reliability, particularly in winter control and fire response.

Technical Levels of Service (Quantitative)

- % of fleet available during winter control operations: **>95%**.
- % of fire response vehicles meeting National Fire Protection Association (NFPA) age guidelines: [insert available data].
- Average fleet age: **8 years**.

Proposed Levels of Service

Target Service Levels (10-Year Horizon)

- Maintain **>95% fleet availability** for winter control and public works operations.
- Ensure fire apparatus is replaced in line with **NFPA guidelines** for frontline reliability.
- Maintain average fleet age at or below **10 years** through phased replacement.

Rationale for Service Targets

- Reliable fleet is critical for public safety, especially snow clearing and emergency response.
- Proposed targets balance affordability with the need to sustain service reliability.

Comparison with Current Levels of Service

- Current LOS generally meets targets, but fire trucks and heavy equipment approaching end of life may compromise reliability if not replaced.

Lifecycle Management and Financial Strategy

Lifecycle Activities

- **Preventive maintenance:** regular servicing, inspections, oil changes, safety checks.
- **Rehabilitation:** major component replacements (e.g., transmissions, hydraulics) when cost-effective.
- **Replacement:** phased renewal of vehicles and equipment at end of service life.

10-Year Capital and Operating Costs

- Required average annual investment: **$235,187 (2023)**.
- Major replacements anticipated for aging fire apparatus and heavy public works equipment.

Funding Strategy and Sources

- Fleet replacement is funded primarily through taxation and reserves.
- External funding programs may be available for **fire apparatus** or **green fleet upgrades**.

Risk and Funding Gap Management

- **Funding gap:** available resources do not fully cover upcoming replacement needs.
- **Risk mitigation:** prioritize critical fleet (fire, snow removal) ahead of secondary equipment.
- **Contingency planning:** extend life through major repairs if replacement is delayed, while monitoring reliability risks.

11. Financial Strategy (Aggregate)

10-Year Capital and Operating Summary

The Township of Armstrong's asset management planning identifies an **average annual investment need of approximately $4.30 million (2023 dollars)** across all asset categories. This includes both capital renewal and significant operating costs required to maintain proposed levels of service.

Breakdown by asset category:

- **Water:** $667,550 per year
- **Wastewater:** $585,291 per year
- **Stormwater:** $401,215 per year
- **Roads:** $1,182,035 per year
- **Bridges and Culverts:** $511,793 per year
- **Facilities:** $720,190 per year
- **Fleet and Equipment:** $235,187 per year

Total: **$4,303,261 per year**

This level of investment is significantly higher than the Township's historical capital spending, reflecting the reality that much of the infrastructure was installed or upgraded during the same period and will require renewal within the same timeframe.

Funding Sources and Options

The Township currently relies on a combination of **taxation, user fees, reserves, and grants** to fund infrastructure. Each source plays a role in sustaining assets:

- **Taxation:** Primary source of funding for roads, facilities, bridges, culverts, and fleet.
- **User fees:** Support water and wastewater systems; however, the small user base limits revenue potential.
- **Reserves:** Used to smooth fluctuations in annual spending, though balances are modest compared to renewal needs.
- **Debt financing:** Used sparingly, but may be considered for large, long-lived capital projects.
- **Grants:** Senior government programs such as the Ontario Community Infrastructure Fund (OCIF) and Canada Community-Building Fund (CCBF) are critical to addressing major funding shortfalls.

Options under consideration to improve funding capacity include:

- Incremental increases to reserves through dedicated annual transfers.
- Long-term debt financing for major rehabilitation or replacement projects.
- Continued advocacy for expanded provincial and federal infrastructure funding tailored to small municipalities.
- Exploring partnerships with neighbouring municipalities where feasible (e.g., shared equipment or service delivery).

Funding Gap and Risk Mitigation

Current funding levels fall well short of the required $4.3 million annual investment. Without significant increases in revenue or external support, the Township will face a growing infrastructure funding gap.

To mitigate these risks, the Township will:

- **Prioritize investments** using the condition gap approach, directing funds to assets with the largest difference between target and actual service levels.
- **Phase projects** to spread costs over time while maintaining minimum service levels.
- **Extend asset life** through preventive maintenance and rehabilitation to delay costly replacements.
- **Leverage external funding** by applying aggressively to senior government grant programs.
- **Plan contingencies** to manage the service and financial risks of deferred renewal, including interim repairs and risk-based restrictions where necessary.

12. Risk Management and Prioritization Framework

Risk-Based Decision-Making

The Township of Armstrong recognizes that limited financial capacity makes it impossible to renew all infrastructure at once. To manage this challenge, the Township applies a risk-based decision-making framework to identify which assets require the most urgent attention.

Risk is assessed using three main factors:

- **Likelihood of failure** – based on asset age, condition, and performance history.
- **Consequence of failure** – considering public safety, service disruption, environmental impact, and financial liability.
- **Criticality of the asset** – essential services such as water supply, wastewater treatment, emergency access, and main arterial roads receive higher priority.

Prioritization Methodology

Investment priorities are determined using a **condition gap approach**:

- Each asset category has a target condition level (e.g., PCI 80 for arterial roads, PCI 60 for local roads).
- Assets are scored based on the difference between actual and target condition.
- Assets with the largest condition gap are prioritized for renewal, regardless of classification.

This approach ensures that resources are directed to areas where service levels are most at risk, while still considering safety, usage, and affordability. For example, a local road in “Poor” condition may be prioritized over an arterial road in “Fair” condition if the condition gap is larger.

Climate Change and Resilience

The Township also incorporates climate change considerations into risk management. Extreme weather events — such as freeze–thaw cycles, flooding, and heavy rain — increase the risk of premature asset failure. Resilience measures include:

- **Stormwater upgrades** to reduce flooding and culvert washouts.
- **Stronger materials** in road and bridge rehabilitation projects.
- **Preventive maintenance** (e.g., ditching, grading, sealing) to extend asset life.
- **Emergency response planning** for temporary service disruptions.

Integration with Asset Management Planning

Risk management and prioritization are integrated into all parts of the Township's AMP:

- Water & Wastewater: prioritize regulatory compliance and continuous service (no boil water advisories, no effluent violations).
- Roads: prioritize based on condition gap, with higher standards for arterials.
- Bridges & Culverts: prioritize structures with load restrictions or single-access service.
- Stormwater: prioritize culverts in poor condition where failure would cut off key routes.
- Facilities & Fleet: prioritize essential service buildings and critical emergency response vehicles.

Continuous Improvement

Risk management practices will be reviewed annually alongside the AMP progress report. Future improvements will include:

- More detailed data collection (e.g., CCTV inspection of underground infrastructure).
- Improved risk scoring tools (likelihood × consequence models).
- Closer integration with emergency management planning.

13. Implementation and Monitoring

Governance and Roles

Successful implementation of the Asset Management Plan (AMP) requires clear roles and responsibilities:

- **Council** – Approves the AMP and provides policy direction, ensuring that infrastructure investment decisions align with community priorities.
- **CAO/Clerk-Treasurer** – Serves as the executive lead, responsible for overseeing the AMP's implementation and reporting progress to Council.
- **Department Heads (Public Works, Facilities, Fire)** – Manage asset inventories, condition assessments, and capital project delivery.
- **Staff Teams** – Provide data, conduct inspections, and deliver day-to-day asset management activities.

Annual Progress Reporting

As required under O. Reg. 588/17, the Township will prepare an annual asset management progress report to Council by July 1st each year. This report will include:

- Progress made in implementing the AMP.
- Factors that have affected implementation (e.g., funding limitations, unexpected failures, grant opportunities).
- A strategy to address barriers and keep the Township on track with its lifecycle and financial strategies.

Annual reporting ensures transparency to residents and provides Council with the information needed to make informed infrastructure decisions.

Plan Review and Update Schedule

This AMP is a living document that will evolve as better data and tools become available. Updates will occur as follows:

- **Comprehensive review and update every five years**, in line with O. Reg. 588/17 requirements.
- **Interim updates** as needed when significant new asset information, condition data, or capital project changes arise.
- **Data improvements** (e.g., digital inventories, condition inspections, GIS mapping) will be integrated as they become available.

Integration with Municipal Planning

The AMP will continue to be integrated into the Township's:

- **Annual budgets** – guiding the allocation of capital and operating funds.
- **Long-term financial plans** – identifying funding needs and gaps.
- **Official Plan and land use planning framework** – ensuring infrastructure capacity supports development.
- **Emergency and climate adaptation plans** – linking risk management and resilience measures to asset strategies.

Commitment to Continuous Improvement

The Township is committed to advancing its asset management practices by:

- Enhancing data accuracy through more frequent inspections and digital record-keeping.
- Using condition-based rather than solely age-based assessments.
- Exploring regional collaboration opportunities through the Temiskaming Municipal Services Association (TMSA).
- Engaging residents by making the AMP publicly available and encouraging feedback.

14. Conclusion

The Township of Armstrong's Asset Management Plan (AMP) provides a clear, evidence-based framework for managing municipal infrastructure in a sustainable, affordable, and transparent manner.

The AMP highlights the following key findings:

- The Township's infrastructure has a total replacement value of approximately **$151 million (2023 dollars)**.
- Most assets are currently in **Good** condition, though significant portions of the road, stormwater, and bridge networks are approaching renewal needs.
- Maintaining existing service levels will require an average annual investment of **$4.3 million**, far above current funding capacity.
- A growing **funding gap** presents risks to service delivery, particularly for roads, culverts, and facilities.

To address these challenges, the Township commits to:

- **Prioritization:** directing limited resources to assets with the largest condition gaps and highest risk to service delivery.
- **Financial strategy:** pursuing a mix of taxation, user fees, reserves, debt, and external grants to fund renewal.
- **Climate resilience:** incorporating adaptation and mitigation strategies into asset planning.
- **Continuous improvement:** enhancing data collection, refining condition assessments, and updating the AMP every five years.
- **Transparency:** providing annual progress reports to Council and making the AMP available to the public.

The Township recognizes that the funding gap cannot be closed without sustained provincial and federal support. Armstrong will continue to advocate for small municipalities in Northern Ontario, emphasizing the critical need for infrastructure funding partnerships.

By implementing this Asset Management Plan, Armstrong will strengthen its ability to deliver safe, reliable, and affordable services to its residents, while laying the foundation for long-term sustainability and resilience.

15. Appendices

Detailed Asset Inventories

Condition Data and Inspection Records

Maps and Schematics

Glossary of Terms