

RM of Lac du Bonnet – Operational Review of Transportation

June 2023



Notice

This report (the “Report”) by KPMG LLP (“KPMG”) is provided to the Rural Municipality of Lac du Bonnet (“the RM” or “Lac du Bonnet”) pursuant to the agreement for professional services between the Government of Manitoba Municipal Relations and KPMG dated 2020 as part of the Municipal Service Delivery Improvement Program. A Scope of Work was signed on January 3rd, 2023 to conduct a review of Lac du Bonnet’s Public Works Transportation Services (the “Review”).

If this Report is received by anyone other than Lac du Bonnet or the Government of Manitoba, the recipient is placed on notice that the attached Report has been prepared solely for Lac du Bonnet for its own internal use and this Report and its contents may not be shared with or disclosed to anyone by the recipient without the express written consent of KPMG and Lac du Bonnet. KPMG does not accept any liability or responsibility to any third party who may use or place reliance on the Report.

The intention of the Report is to conduct an assessment of Lac du Bonnet’s Public Works Transportation Services and to identify potential areas of opportunities for efficiencies, cost improvement, innovation and reinvestment. The procedures we performed were limited in nature and extent, and those procedures will not necessarily disclose all matters about a business unit’s functions, policies and operations, or reveal errors in the underlying information. Our procedures consisted of inquiry, observation, comparison and analysis of data and information provided by the RM. In addition, we considered comparisons to select municipalities and leading practices.

The procedures we performed do not constitute an audit, examination or review in accordance with standards established by the Chartered Professional Accountants of Canada, and we have not otherwise verified the information we obtained or presented in this Report. We express no opinion or any form of assurance on the information presented in the Report, and make no representations concerning its accuracy or completeness. The RM is responsible for their decisions to implement any opportunities/options and for considering their impact. Implementation will require the RM to plan and test any changes to ensure that the RM will realize satisfactory results.

Table of Contents

Executive Summary	3	Appendices	108
Introduction	9	Appendix A – Equipment Purchases	109
Objective & Scope.....	10	Appendix B – Snow Clearing Routes.....	110
Current State Assessment	11	Appendix C – Cost of Transfer Stations	111
Public Works Overview.....	12	Appendix D – Redevelop Select Heavy Equipment Routes	112
Transportation Overview.....	13	Appendix E – Enhance Work Planning & Management	116
Organizational Chart.....	15	Appendix F – Critical Spares Inventory	117
Administration.....	16	Appendix G – Administrative Improvements.....	120
Fleet.....	17	Appendix H – Cemetery Estimated Expenses.....	121
Service Profiles.....	21	Appendix I – Fleet Operations Dashboard	123
Municipal Benchmarking.....	36		
Leading Practices	47		
Key Findings	56		
Improvement Opportunities	59		
1. Redevelop Select Heavy Equipment Routes.....	63		
2. Enhance Work Planning & Management.....	67		
3. Expanding & Maintaining Asset Data.....	71		
4. Critical Spares Inventory.....	74		
5. Expand Inter-Municipal Cooperation.....	79		
6. Administrative Improvements.....	87		
7. Enhance Recruitment & Retention Practices.....	91		
8. Improve Cost Recovery.....	99		
9. Implement a Fleet Operations Dashboard.....	105		

Executive Summary

Executive Summary

Background

The Province of Manitoba (the “Province” or “Manitoba”) engaged KPMG LLP (“KPMG”) to conduct an independent Operational Review of the Rural Municipality (“RM of Lac du Bonnet” or “RM”) of Lac du Bonnet’s Public Works Transportation Services’ operations (“Transportation” or “Transportation Services”). The goal of the review was to identify areas impeding Transportation’s ability to complete growing infrastructure servicing requirements in a cost effective manner, while continuing to provide high quality services, and provide suggestions on what is needed to meet these requirements. The review was requested by the RM.

The Review presents a comprehensive analysis of the current state of Transportation and provides recommendations for enhancing its operations by benchmarking against comparable municipalities, leading practices, identifying opportunities, and addressing the RM’s concern regarding rising transportation costs and the perceived decline in productivity

The Review was not an audit, and focused on identifying opportunities for Transportation’s consideration based on comparisons with practices and benchmarks from other municipalities, the experience of the KPMG team, and input from stakeholders primarily within the RM. The Review was undertaken between December 2022 and May 2023.

Context

The RM of Lac du Bonnet’s population growth rate from 2016-2021 was 14%, compared to 5.0% and 5.2% for Manitoba and Canada, respectively. Moreover, in addition to the expected continuing of this overall population trend into the future, the RM experiences a 125% population increase between the months of May and October as cottage owners swell the population from 3,563 to over 8,000 residents. Such an increase is due to the beauty of the surrounding area, community, and RM’s ability to keep a well-functioning and safe municipality for its permanent and seasonal residents.

Public Works is facing a growing demand for services, including from the Lac du Bonnet Airport, which is a regional airport supported through collaboration with neighbouring rural municipalities. As well, there have been hints of provincial roads being assigned to the municipality to maintain. In these and other scenarios, it’s important for decision-makers to understand the cost of services, assets employed, and people resources required to undertake new bodies of work, as well as the service standards that are expected in the provision of those services.

Goals and Objectives

The objective of the Rural Municipality of Lac du Bonnet was to conduct an operational review (the “Review”) of Transportation Services provided by the RM’s Public Works function and the infrastructure associated with those services. This was to be done with an eye to improving efficiency and effectiveness, and to give decision-makers a thorough understanding of the services and activities performed by Transportation Services. At a high level, the RM wanted to evaluate whether it has sufficient resources to perform its work and to identify areas, if any, not meeting service expectations.

Key Findings – Service Delivery

A key objective of the review was to evaluate the extent to which Transportation Services has sufficient resources to meet Level of Service (LOS) expectations. The following chart summarizes its success in meeting service expectations.

Service Area	Service	Priority	Are LOS Expectations Met?	Level of Service Delivered
Roadways	Inspections	High		Roads are regularly inspected and requests from the public are responded to.
Roadways	Seasonal Grading			All roads are graded twice per year.
Roadways	Maintenance Grading			Priority high-traffic routes are maintained consistently. Some heavy equipment routes require significant, regular maintenance, resulting in some routes receiving less attention. Transportation is not currently able to maintain all roads to the desired standard.
Roadways	Dust Control			Dust control solutions are applied to all gravel roads on a 2-year rotation. Extra applications are made as needed.
Winter Operations	Snow Clearing at the Airport			The demand for clearing the runway and supporting roads exceeds current capacity of equipment and operators.
Winter Operations	Snow Clearing on Roads			Snow accumulation of 10cm is cleared within 2.5 days as per policy.
Drainage	Culvert Maintenance/Steaming	Medium		Culverts are steamed in spring to support land drainage. Culverts are replaced in summer as per plans.
Drainage	Drainage Network Maintenance			Planned culvert replacements are completed, though there are unaddressed drainage network challenges.
Drainage	Brushing	Low		A large portion of roads are not being brushed due to being a relatively lower priority.
Parks, Cemeteries, & Boat Launches	Grounds Keeping, Marking, & Repair			Seasonal staff consistently maintain parks and grounds. No concerns noted in this area.
Street Lighting & Signage	Installation of Signage & Civic Addressing			Signage and civic addressing is consistently updated and maintained.

Key Findings – Identified Challenges & Gaps

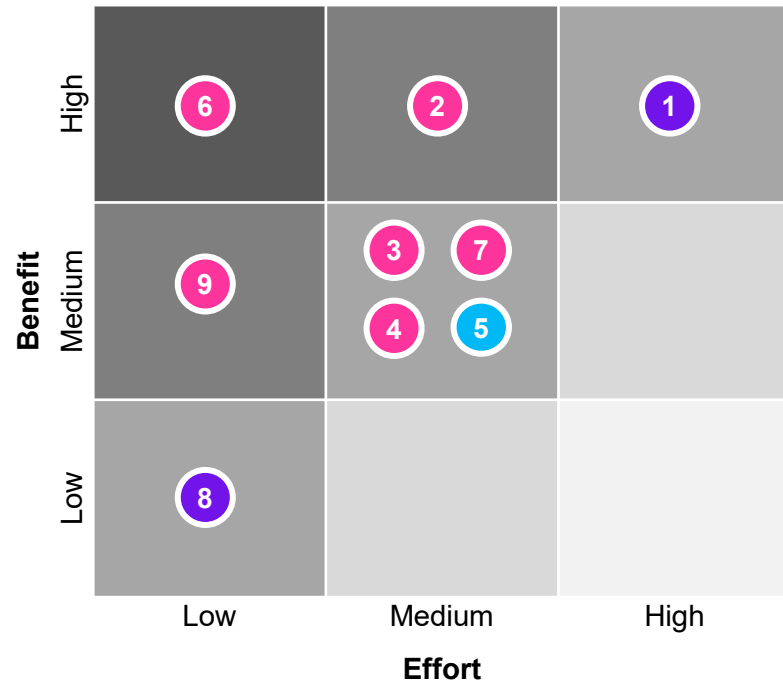
The assessment of Transportation Services has revealed a number of key areas where the RM is faced with challenges and gaps in delivering against its goals of efficient and effective service delivery. These are listed below along with actions that the RM can take to make improvements.

Challenge	Description of Challenge or Gap	Opportunity to Bridge the Gap	Action
1. Excessive condition decay on some roads	Many road sections are impacted by semi-truck and heavy equipment traffic. This has resulted in much higher levels of maintenance.	1. Redevelop Select Heavy Equipment routes	Develop a cost-benefit framework to evaluate the potential long-term benefits of reconstruction.
2. Service Standards & Tracking Resourcing	Transportation lacks a summary level view of the annual work it performs, making annual work planning less efficient.	2. Enhance Work Planning & Management	Create a work plan that measures whether services are being accomplished within their planned timeframe.
3. Asset Management	The RM has not yet collected asset data for some asset types to better manage and maintain those assets.	3. Expanding & Maintaining Asset Data	Enhance data accuracy for improved representation of current conditions and extend asset data collection across all service areas.
4. Fleet	A few vehicles have relatively low utilization. Also, excessive supply chain delays kept one grader out-of-service for a number of months.	4. Critical Spares Inventory	Consider avenues to navigate around supply chain challenges to increase equipment up-time.
5. Resource Efficiency	Benchmarking highlighted that many rural municipalities of similar size utilize resource-sharing agreements to find efficiencies.	5. Expand Cooperation	Identify where service standards can be improved by engaging in resource-sharing relationships with neighbouring municipalities.
6. Administration	There are gaps in administrative effectiveness in the RM's service capabilities, and financial approval limits.	6. Administrative Improvements	Add features to improve the service tracker, and consider raising designated officers' approval limit.
7. Staffing	Transportation has difficulty recruiting and keeping talent as exhibited by the high turnover of staff.	7. Enhance Recruitment & Retention	Consider new avenues to recruit talent and lower turnover by enhancing training and performance management practices.
Unrecovered Costs	There are some areas where Transportation does not recover the costs it takes to provide select services.	8. Improved Cost Recovery	Consider ways to recover or partially recover lifecycle costs of providing Cemeteries and grading of private roads.
Fleet	Leading practice suggests that Transportation expand the fleet data it collects to better manage assets.	9. Fleet Operations Dashboard	Build a fleet operations dashboard to monitor and manage fleet operations in real-time.

Key Findings – Opportunity Assessment

The following high level summary compares the relative benefit and effort for each identified opportunity. This assessment suggests that those opportunities in the top-left should be prioritized based on a return on effort cost-benefit assessment. Opportunities have been aligned to key areas of strategic focus.

ID	Name	Effort	Benefit	Strategy
1	Redevelop Select Heavy Equipment Routes	High	High	B
2	Enhance Work Planning & Management	Medium	High	C
3	Expanding & Maintaining Asset Data	Medium	Medium	C
4	Critical Spares Inventory	Medium	Medium	C
5	Expand Cooperation	Medium	Medium	A
6	Administrative Improvements	Low	High	C
7	Enhance Recruitment & Retention Practices	Medium	Medium	C
8	Improve Cost Recovery	Low	Low	B
9	Implement a Fleet Operations Dashboard	Low	Medium	C



Strategic Category Legend
A. Enhanced Cooperation
B. Better Infrastructure Management
C. Improved Admin Support Systems

Key Findings – Inputs to Strategic Planning

The RM could look at these opportunities two ways:

1. Consider quick wins (as identified on previous page).
2. Consider strategic choices that improve operational efficiency.

The RM invited input from this review into its next strategic plan. To that end, consider the following:

Strategic Initiative	Goal	Quick Actions
1. Enhanced Cooperation	Find value and efficiency in partnering with neighbouring municipalities to perform common tasks and/or share scarce resources	Expedite regional coordination and planning for emergency services.
2. Better Infrastructure Management	Make informed, smart capital investments in infrastructure with outcomes to both provide improved services and reduce operational liabilities	Fill data gaps in asset knowledge.
3. Improved Administrative support systems	Improve Administrative effectiveness and efficiency by developing tools/process/systems for planning, resource management, and data management and analysis.	Raise delegation of authority limits for key administrative personnel.

Introduction

Objective & Scope

Background

The Rural Municipality of Lac du Bonnet is a community located in southeastern Manitoba with a permanent population of approximately 3,500 and a seasonal population of approximately 8,000.

There has been concern over various factors that may be driving up costs in the RM of Lac du Bonnet's ("the RM" or "Lac du Bonnet") Public Works Transportation Services function. These factors include: growing infrastructure servicing requirements, staffing levels (across permanent, seasonal and student programs) and declining productivity.

The RM has indicated that there is an existing 4-year strategic plan that may influence the direction of opportunities flowing out of the review. Conversely, the RM notes the strategic plan may require revision in response to this operational review.

Goals and Objectives

The objective of the Rural Municipality of Lac du Bonnet was to conduct an operational review (the "Review") of Transportation Services provided by the RM's Public Works function and the infrastructure associated with those services. This was to be done with an eye to improving efficiency and effectiveness, and to give decision-makers a thorough understanding of the services and activities performed by Transportation Services. At a high level, the RM wanted to evaluate whether it has sufficient resources to perform its work and to identify areas, if any, not meeting service expectations.

In context, Public Works is facing a growing demand for services from the Lac du Bonnet Airport, which is a regional airport supported through collaboration with neighbouring rural municipalities. As well, there have been hints of provincial roads being assigned to the municipality to maintain. In these and other scenarios, it's important for decision-makers to understand the cost of services, assets employed, and people resources required to undertake new bodies of work, as well as the service standards that are expected in the provision of those services.

Scope

Though both teams are part of Public Works, this project is focused on reviewing Transportation Services and excludes Environmental Health Services. The Review included an assessment of financial, organizational, and operational information.

Stakeholder Involvement

Key stakeholders helped to assess the current state of the RM and identify opportunities for improvement. The Review recognizes and appreciates the importance of their collective input. Stakeholders included the Chief Administrative Officer (CAO), Deputy CAO, Public Works Manager, and numerous Public Works staff.

Current State Assessment

Public Works – Overview

RM of Lac du Bonnet

The Rural Municipality of Lac du Bonnet (the “RM,” “Lac du Bonnet”, or “Municipality”) is located in southeastern Manitoba. It is part of a region known for its natural beauty and it supports a growing seasonal cottage population. The RM is focused on effective leadership, consistent municipal services, economic growth, cultural heritage, and improved quality of life.

The **Public Works (PW) Department** is dedicated to delivering on the goals, values, and aspirations of the RM, taking on a diverse range of responsibilities with excellence. With a commitment to delivering high-quality services in an economical manner, the PW Department works alongside key stakeholders and residents to help maintain and deliver critical infrastructure to support the prosperity of the municipality.

Public Works is organized into two functional groups for the provision of services:

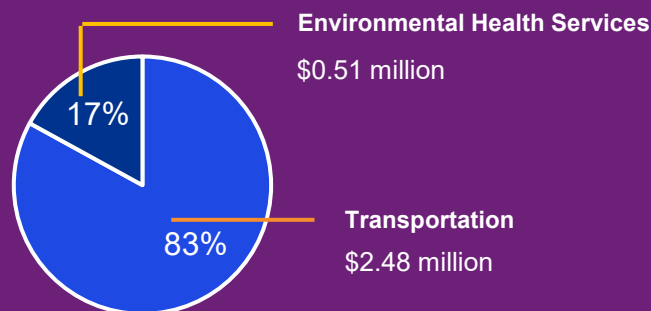


Transportation Services is responsible for maintaining public roads, drainage systems, cemeteries, boat launches, and parks. Additionally, Transportation Services deliver select transfer station services on behalf of the Environmental Health. Transportation Services is the focus of this engagement.



Environmental Health Services is responsible for potable water distribution systems and solid waste transfer stations. Environmental Health is out-of-scope for this engagement.

2022 Operating Expenditures



Due to the nature of the services delivered, Transportation Services represents a substantial portion of Public Work’s total operating expenditures. In 2022, PW spent \$2.48 million on transportation, which accounted for 83% of the total PW operating expenditures.

Source: Derived from information provided by the RM of Lac du Bonnet.

Transportation – Overview

Transportation Services

Public Works Transportation Services is responsible for the maintenance of 724 km of roads, including grass/dirt, limestone, and gravel roads. Transportation Services supports safe and reliable transportation by maintaining the transportation network through its series of maintenance operations and infrastructure investment. In addition to managing fleet & fleet maintenance for the RM, the area is also responsible for the maintenance and operation of the municipality's parks, cemeteries, and boat launches.

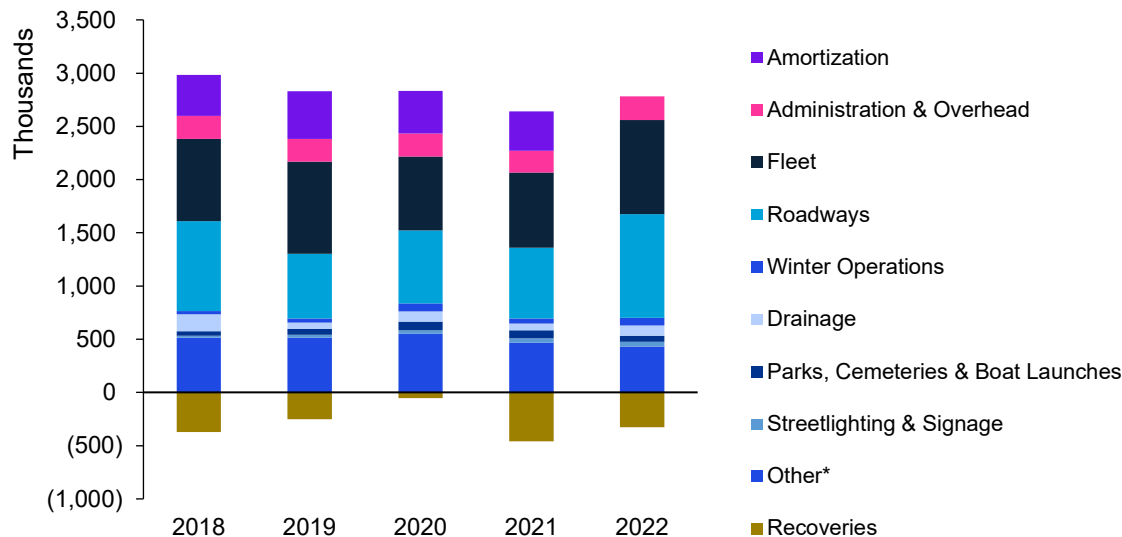
Transportation Public Service List

- 1 Roadways
- 2 Winter Operations
- 3 Drainage
- 4 Street Lighting & Signage
- 5 Parks, Cemeteries, & Boat Launches

Overview of expenditures

Total operating expenditures for Transportation Services in 2022 were approximately \$2.5 million. As a whole, the function has kept its costs very close to even from 2017 to 2022.

Operating Expenditures by Service Area (2018-2022)



Source: Derived from information provided by the RM of Lac du Bonnet.

*The "Other" category includes general maintenance tasks, yard cleanup, miscellaneous tasks and untracked time. Untracked time accounted for approximately 5-9% of total employee costs.

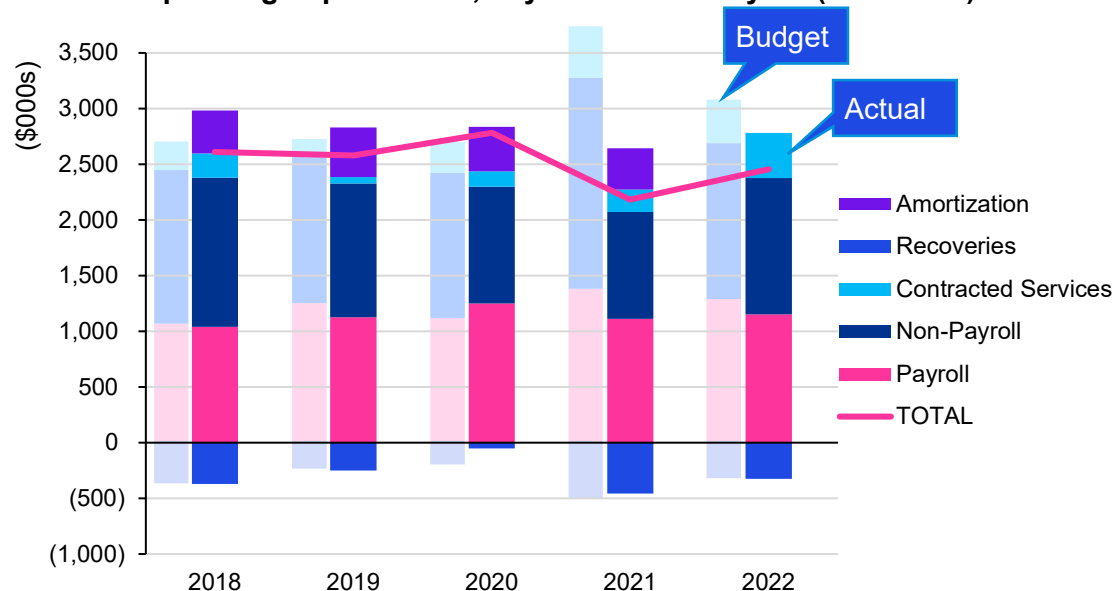
Transportation - Overview

Financial Overview

Considering Lac du Bonnet's financial picture, a number of observations can be made, including:

- The RM has contained cost growth over the last five years. This is unique given the current economic times.
- Current data indicates that for Transportation, net expenditures were approximately \$2.5 million in 2022.
- The RM has consistently been able to deliver performance and services that are reasonably close to its budgets.
- The RM tracks recoveries internally between various services, supporting a clearer view of what effort is spent by the particular business unit.
- The current collective bargaining agreement, dated January 1, 2022, will continue to run through 2024.

Operating Expenditures, Payroll vs. Non-Payroll (2018-2022)



Note: Amortization data for 2022 was not available at this time of this report.

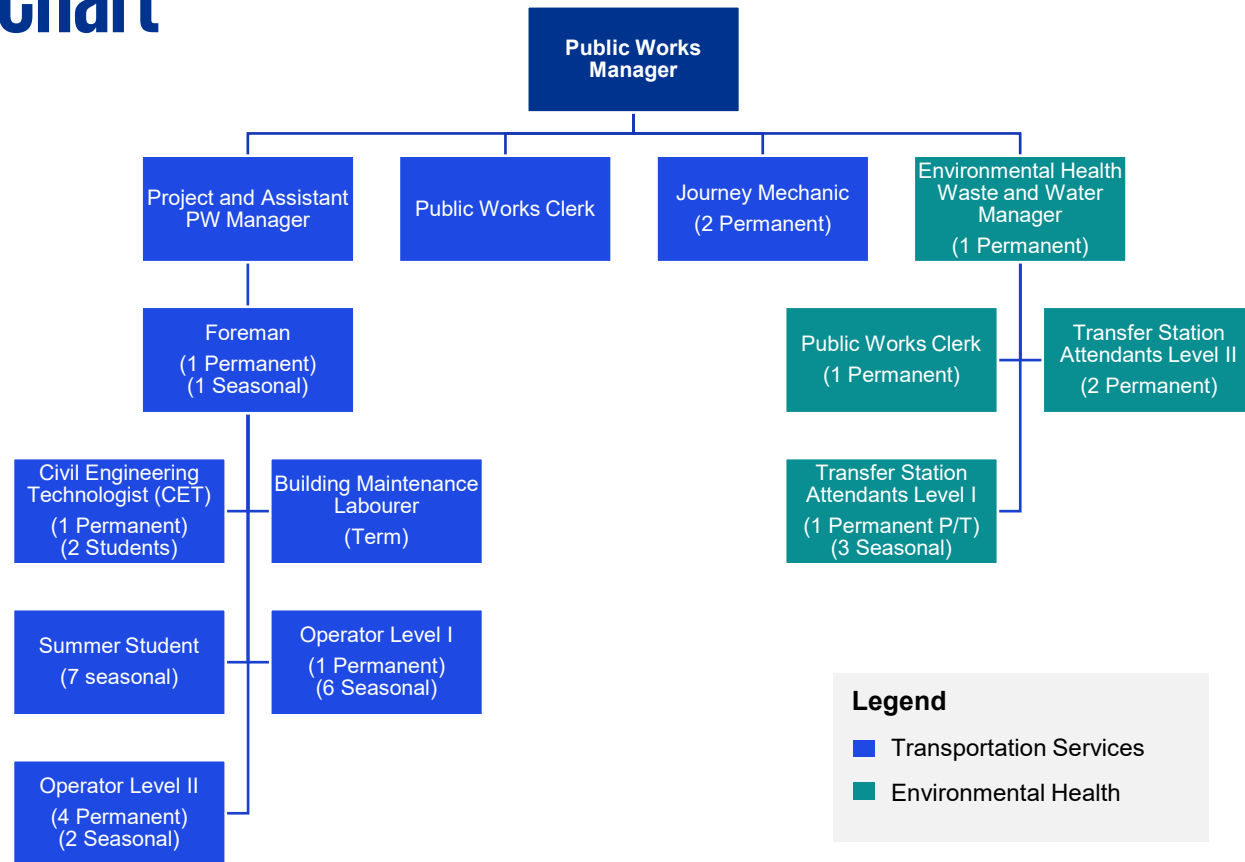
Source: Derived from information provided by the RM of Lac du Bonnet.

Organizational Chart

In 2022, Public Works had 39 employees. They worked a total of approximately 46,400 hours, which amounts to 22.3 full-time equivalents (FTEs).

Out of the 39 employees, 31 (including the manager) were part of Transportation Services who worked 33,300 hours or 16.0 FTEs.

Transportation staff consisted of 11 permanent and 19 Seasonal employees.



Transportation Services	2017	2018	2019	2020	2021	2022
Permanent Hours	N/A	16,500	14,400	15,000	27,600	21,600
FTEs (Permanent)	N/A	7.9	6.9	7.2	13.3	10.4
Seasonal Hours	N/A	18,400	19,200	21,100	5,900	5,900
FTEs (Seasonal)	N/A	8.9	9.2	10.2	2.8	5.6
Total Hours	26,800	34,900	33,600	36,100	33,500	33,300
FTEs Total	12.9	16.8	16.1	17.4	16.1	16.0

Source: Derived from information provided by the RM of Lac du Bonnet.

Note: Totals of hours and FTEs may not seem to add up correctly due to rounding.

Administration

The Public Works Transportation Services administration strives to optimize the well-being and interests of ratepayers by ensuring that the transportation services provided align with the Rural Municipality of Lac du Bonnet's mission, values, strategic goals, objectives, policies, and procedures. Furthermore, Administration ensures that all operations are carried out in compliance with provincial and federal laws, as well as the collective agreement. Administration accounts for three of the 31 Transportation staff which includes the Public Works Manager, Project/Assistant Public Works Manager, and Public Works Clerk.

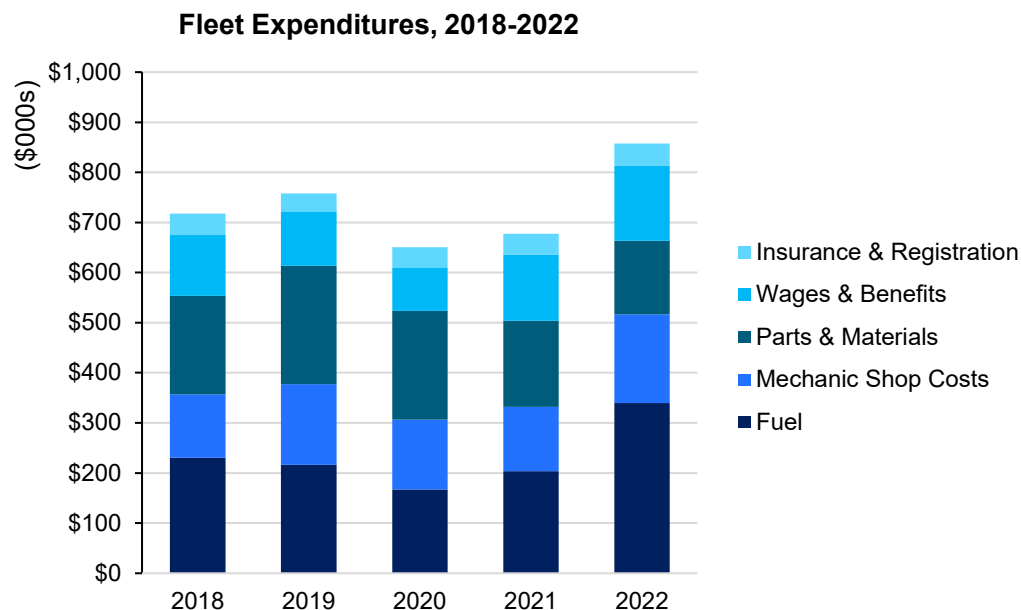
Position	Key Responsibilities
Public Works Manager	<ul style="list-style-type: none"> Coordinate and supervise work assignments for departmental employees, contractors and consultants. Prioritize, recommend and implement safe and efficient management practices that contribute to the growth and development of public works employees. Develop and implement departmental budgets, monitor costs and maintain budget integrity. Keep up to date with latest design standards, technology and servicing requirements. Manage, recruit, train, motivate, evaluate and supervise employees while keeping accurate employment records and staying up to date with provincial legislation, municipal policies and procedures. Attend meetings, prepare and submit reports to the CAO, and act as a liaison with various Provincial Government Ministries, Council, Crown Corporations, and government agencies.
Project & Assistant Public Works Manager	<ul style="list-style-type: none"> Provide vision and leadership to integrate operations and build teamwork in the Public Works Department. Direct and execute the strategic business plan in accordance with council and corporate approval. Supervise and evaluate employee performance on day-to-day operations of the department and assume the role of Public Works Manager when required. Execute projects while adhering to occupational health and safety policies and fostering a positive workplace culture. Develop, manage, and monitor departmental budgets and implement management strategies, policies, and procedures.
Public Works Clerk	<ul style="list-style-type: none"> Respond to and track service requests received from the public via the web-based Service Tracker, email, or by phone. Forward payments to accounts receivable for depositing. Manage and maintain administration for cemeteries, accurate Civic Addressing directory, Drainage Licensing process, and electronic document management system. Handle administration functions for Water and Wastewater Utility. Document insurance for all department assets, complete and track permit applications. Facilitate work and purchase orders. Administer the inventory system and asset management program.

Source: Strategic plan, job descriptions provided by the RM of Lac du Bonnet.

Fleet (1/4)

The RM owns, operates and maintains the fleet of heavy equipment, light vehicles and light equipment used in delivering services. It also has established practices in the area of fleet procurement.

The RM's operating expenditures in servicing its fleet in 2022 was approximately \$857,000. This includes costs of maintenance labour (2 mechanics), fuel, parts and materials needed to service the fleet, insurance and registration, and mechanic shop overhead costs (i.e., utilities, facility maintenance, etc.). Overall expenditures for Fleet vary from year-to-year. As a whole, the RM seems to manage costs fairly consistently. However, 2022 expenditures were approximately 19.6% higher than 2018. The largest change in expenditure category was in the area of fuel, where costs rose from, on average, approximately \$200,000 per year (for 2018-2021) to approximately \$340,000 in 2022. This is largely attributed to the rising cost of fuel (see analysis on subsequent pages).



Source: Derived from information provided by the RM of Lac du Bonnet.

Fleet (2/4)

The RM's fleet is comprised of 16 light to medium sized vehicles and 15 pieces of heavy equipment used in the Public Works department, giving the RM a total inventory of 29 fleet assets. The tables below summarize annual usage in terms of kilometers (km) for the light vehicles and total usage by hours for the heavy equipment assets. In the experience of KPMG, some fleet organizations look for vehicles with usage lower than 5,000 km as a measure to identify underused vehicles. These light vehicles may be candidates for disposal or to be repurposed as a shared asset with other functions or rural municipalities. In addition, it seems there are a number of pieces of heavy equipment with variable but low usage. The RM may wish to consider making these available for resource-sharing with neighbouring municipalities. Vehicles for consideration are highlighted in the tables below.

Unit Number	Light Vehicle Description	2021 Total Usage (km)	2022 Total Usage (km)
3120	2016 Star Semi	141,931	37,832
3144	2021 Freightliner bin truck	-	71,807
3149	2021 Dodge**	n/a	19,463
3121	2017 Dodge	31,259	17,546
3115	2017 Dodge	65,084	15,283
5002	2017 GMC	31,448	11,298
3140	2017 GMC	9,196	11,085
3072	2012 Chevy 3/4 ton	6,438	9,810
3063	2011 Chevy	7,362	9,803
3103	2015 Dodge	10,629	7,978
3095	2014 Chevy	7,177	4,907
3014	1996 Mack Semi	n/a	4,544
3109	2005 Chevy 1 Ton with dump	3,996	3,131
3032	2005 Chevy*	4,120	1,671
3127	1996 Dually*	4,348	-
3128	1974 Ford Tanker	1,528	138
Total		233,764	183,782

Unit Number	Heavy Vehicle Description	2021 Total Usage (Hours)	2022 Total Usage (Hours)
3120	Star Semi 2016	141,931	37,832
3157	Grader 2021	-	2,427
3132	Grader 2018	1,719	1,636
3098	Grader 2015***	1,241	1,163
3033	Cat Loader	172	573
3074	JD Loader	542	509
3123	JD Excavator	817	430
3114	Case Tractor	109	408
3062	Volvo Excavator	642	333
3105	Grader 2016*	1,314	228
3082	New Holland Tractor	592	120
3034	D3 Crawler	180	109
4018	2012 Mack Bin Truck	674	98
3160	JD Skidsteer	-	48
3023	JD 5220 Tractor 2002	656	40
3075	Volvo Skidsteer*	254	-
Total		150,843	45,954

*This asset has been removed from service.

**Purchase used in 2021.

***This asset was traded in due to unavailability of parts for a new grader to be delivered in Spring 2023.

Note: The 2014 Mack Tandem and the 2016 Star Tandem vehicles are not included as the annual mileage could not be measured.

Source: Derived from information provided by the RM of Lac du Bonnet.

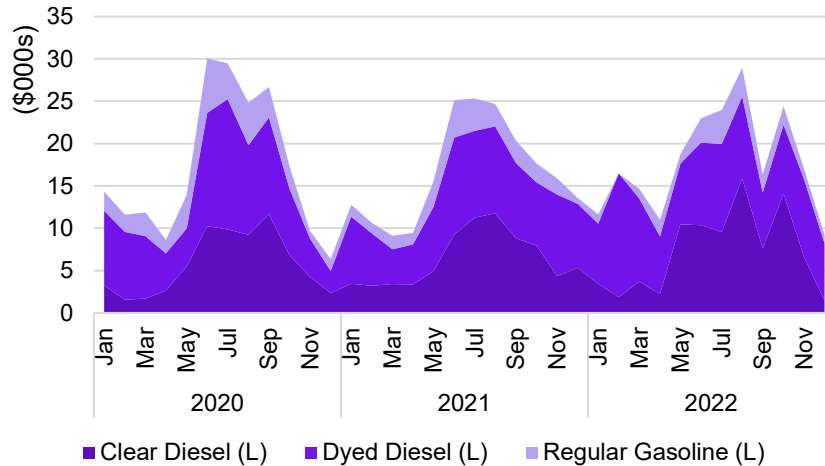
Fleet (3/4)

The RM of Lac du Bonnet's fleet fuel expenditures and consumption levels can be seen in the graphs below.

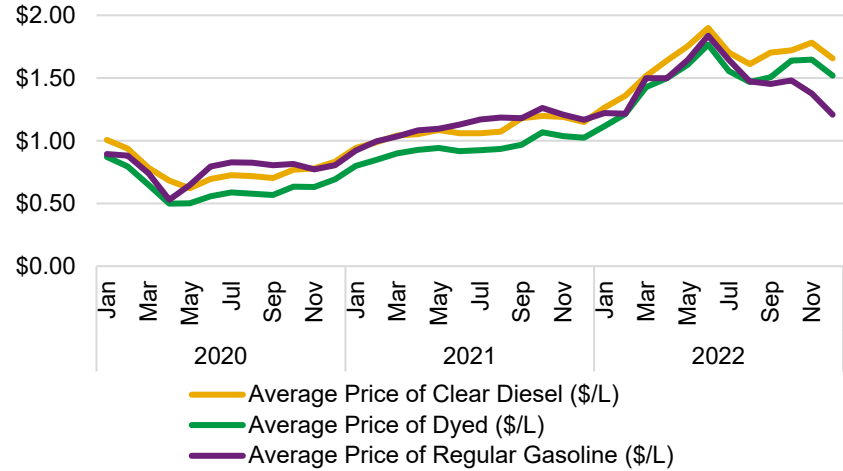
- Total fuel consumption has remained fairly constant over the last three years, though the total fuel cost per year has more than doubled since 2020.
- The increase in cost may be explained by rising fuel prices across all types of fuel. This has been driven by global pressures on fuel prices as well as the recent introduction and subsequent increases in the federal carbon tax.

	2020	2021	2022
Total Fuel Consumption (L)	205,000	200,000	216,000
Total Cost of Fuel	\$142,000	\$206,000	\$340,000

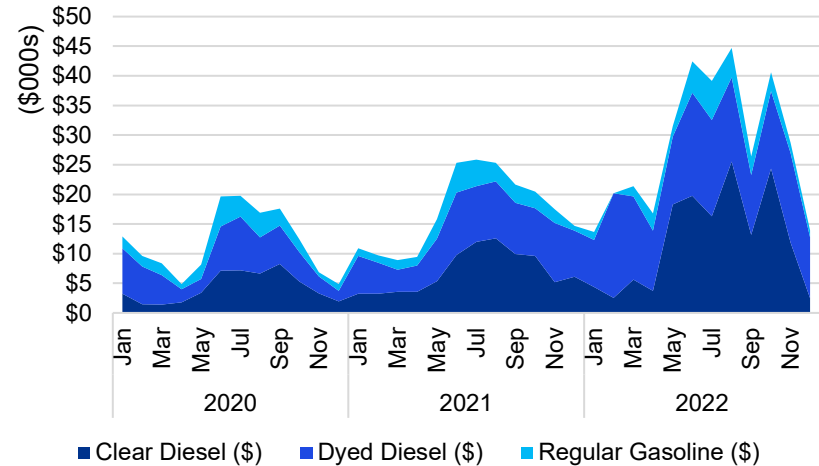
Fuel Consumption (litres), 2020-2022



Fuel Prices (\$/L), 2020-2022



Fuel Expenditures (\$), 2020-2022



Source: Derived from information provided by the RM of Lac du Bonnet.

Fleet (4/4)

Below is a table that displays the equipment procured by Transportation Services from 2018 to 2022, along with the corresponding expenditures for each asset. Purchased assets were categorized into three groups: heavy equipment, light vehicles, and light equipment (see Appendix A for additional details). Fleet capital expenditures averaged approximately \$387,000 per year during this period. Compared to a typical operating budget for fleet – approximately \$700,000 per year – capital expenditures make up a significant portion of the cost of service. Seeking opportunities to reduce the overall fleet size may permit opportunity to improve costs. There may also be an opportunity to review the criteria used to identify new capital purchases.

	2018		2019		2020		2021		2022	
	# of Equipment	Spending	# of Equipment	Spending	# of Equipment	Spending	# of Equipment	Spending	# of Equipment	Spending
Heavy Equipment	1	\$285,040	2	383,460	1	210,273	0	0	2	569,290
Light Vehicles	1	39,117	0	0	1	30,495	1	34,764	0	0
Light Equipment	3	155,928	0	0	2	19,646	6	110,481	3	97,051
Totals	5	480,085	2	383,460	4	260,414	7	145,246	5	666,341

Source: Derived from information provided by the RM of Lac du Bonnet.

Service Profiles

Service Profiles – Overview

Individual “service profiles” have been developed to describe key components of public-facing Transportation services. These include: a high-level overview, service standards, delivery methods, descriptions of activities involved, assets involved in service delivery, and analysis and commentary. These are provided to help decision-makers have a more thorough understanding of Transportation Services.

“Service Standards & Regulations” describes the expectations, frequency, or trigger points for a service.

The “Overview” give a broad view of what’s involved in delivering this service.

“Service Delivery Method” describes how or by whom a service is delivered?

“Service Delivery Description” describes the activities involved in performing a service.

Service Profile
Roadways

Confidential Draft

Overview
 Transportation Services is responsible for the maintenance, repair, and reconstruction of all municipally-owned roads as well as for the management of dust control.

Service Standards & Regulations

- Once a year, during spring, roadways are maintained by adding gravel, which is then graded to a layer thickness of 2-3 inches.
- For requests from residents, response time to grade a section of road is approximately ten days, though this is not a formal commitment.
- Grading of roadways following the application of dust control is counterproductive. As a result, grading is performed at the discretion of management.
- In a typical spring, contractors finish graveling in a few weeks. In 2022, with the limited availability of contracted trucks, completion time was approximately 7 weeks.
- Dust control measures are applied annually on arterial roads and adjacent to homes. Otherwise, roads are treated every other year.

Service Delivery Method

In-house:

- Grading (there are no local companies to which to consider outsourcing).
- Gravel is sourced from local quarry.
- Roadway watering and some chemical dust suppressant application
- Regular road condition inspections.
- Smaller road repair and reconstruction projects

Contracted:

- Gravel mixing and crushing.
- Hauling and dumping of gravel.
- Chemical dust suppressant solution (magnesium chloride) and its application (partially-contracted).
- Tile drainage repairs and installation (partially-contracted).
- Road repairment and reconstruction is partially-contracted subject to the nature and size of the project. Both larger projects and specific ones, such as limestone recapping, are fully-contracted.

Service	Service Delivery Description
Inspections / Surveying	• The foreman periodically inspects road conditions, including those requested by the community.
Grading & Dust Control Suppressants	• Periodically during the warm season, operators grade roads using graders and apply water and magnesium chloride to control dust on maintained roads. The dust control trailer is attached to a semi-truck.
Graveling	• Transportation Services staff count trucks and monitor the distribution of gravel as contractors deliver aggregate.
Gravel Sourcing	• Gravel quarry is monitored by Transportation Department staff.
Reconstruction & Repairment	• For non-contracted projects, operators and labourers use excavators, loaders, tandem trucks, semis, belly dumps, and graders to perform road repairments and reconstruction.

Source: Derived from information provided by the RM of Lac du Bonnet.

© 2023 KPMG LLP, an Ontario limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved. The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.

18

Service Profiles – Overview

Each service profile includes an analysis of related costs. Costs related to contracted services, materials, etc. are taken from the RM's financial statements. Costs related to payroll has been derived using timesheet codes allocating time to various types of work. These were instituted in 2020, thus staff time cannot be accurately determined in prior years.

“Assets”, “Resourcing”, and “Staffing Tables” describes the equipment and people involved in delivering a service.

Service Profile
Roadways

Assets

- 3x Grader*
- 2x Excavator*
- 3x Semi Truck
- 2x Tandem Truck*
- 1x Tractor
- 2x Loader
- 1x Bulldozer
- 7x Attachments
- 590 km gravel road
- 54 km dirt/grass roads**
- 4 km limestone
- 76 km Right of Way road

Resourcing

- Building maintenance labourer (CET Student)
- Foreman
- Labourer/Green Team
- Operator I
- Operator II

Staffing Totals

- Permanent = 7
- Seasonal = 19

Figure 1.0 – Roadway Service Expenditures

Year	Material	Contracted	Non-Contracted
2018	~500	~200	~100
2019	~450	~150	~100
2020	~400	~200	~100
2021	~350	~250	~100
2022	~450	~400	~150

Figure 1.1 – Material Expenditures

Year	Grader Blades	Gravel	Limestone	Road Renewal	Dust Control	Quarry
2018	~150	~100	~100	~100	~100	~100
2019	~100	~100	~100	~100	~100	~100
2020	~100	~100	~100	~100	~100	~100
2021	~100	~100	~100	~100	~100	~100
2022	~100	~100	~100	~100	~100	~100

Observations

- In 2022, road maintenance services required approximately 5,040 hours of effort, equivalent to 2.4 full-time equivalent employees (FTEs), which accounted for approximately 15% of Transportation's annual efforts.
- In 2022, approximately \$1.0 million was spent on roadway services which accounts for 41% of Transportation's annual operating expenditures (Figure 1.0).
- The 50% increase in road maintenance expenditures from 2021 to 2022 was due to the large contracted reconstruction project of hobo lane road.
- Figure 1.1 gives a breakdown of the material costs in Figure 1.0.
- Road renewal materials have decreased in cost by an annual average of 49% due to the shift in contracting out road reconstruction and rehabilitation services. This is responsible for the decline in material costs and increase in contracted costs seen in Figure 1.0.
- There is limited data to confirm achievement of desired levels of service. Anecdotally, the RM has stated that it achieves them in most cases. The exceptions where the RM is challenged to meet their own standards (e.g., removing ruts in roads) is when roads are damaged by heavy truck traffic. In these cases, the RM spends more effort to achieve the desired standard.

Current Challenges

- The RM is challenged to maintain good road conditions for segments of road that receive significant heavy truck traffic due to usage from the agricultural sector. The RM is faced with a decision of how to best adapt: 1) accept the need to maintain (i.e., grade) these roads more frequently, or 2) to rebuild selected road segments to a higher standard that can handle the heavy traffic.

Source: Derived from information provided by the RM of Lac du Bonnet. *These vehicles are used across service areas, often across multiple seasons. **The RM calls these roads "unmaintained roads."

© 2023 KPMG LLP, an Ontario limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. All rights reserved. The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organization.

“Observations” provides insights into some aspect of the analysis.

“Current Challenges” identifies key concerns and decisions that the RM is facing.

Roadways

Overview

Transportation Services is responsible for the maintenance, repair, and reconstruction of all municipally-owned roads as well as for the management of dust control.

Service Standards & Regulations

- Once a year, during spring, roadways are maintained by adding gravel, which is then graded to a layer thickness of 2-3 inches.
- Main feeder routes and high traffic roads receive gravel annually, while subdivision roads receive gravel on a three-year rotation.
- All gravel roads are graded twice per season.
- Main routes are graded one-two times weekly or bi-weekly subject to traffic and weather conditions.
- For requests from residents, response time to grade a section of road is approximately 48 hours if the complaint is valid.
- Grading of roadways following the application of dust control is counterproductive. As a result, grading is performed at the discretion of management.
- In a typical spring, contractors finish graveling in a few weeks. In 2022, with the limited availability of contracted trucks, completion time was approximately 7 weeks.
- Dust control measures are applied annually to all frontages, major intersections, and dangerous curves or hills. Subdivision residential areas receive dust control every second year.

Service Delivery Method

In-house:

- Grading (there are no local companies to which to consider outsourcing).
- Gravel is sourced from local quarry.
- Roadway watering and some chemical dust suppressant application
- Regular road condition inspections.
- Smaller road repair and reconstruction projects

Contracted:

- Gravel mixing and crushing.
- Hauling and dumping of gravel.
- Chemical dust suppressant solution (magnesium chloride) and its application (partially-contracted).
- Tile drainage repairs and installation (partially-contracted).
- Road repairment and reconstruction is partially-contracted subject to the nature and size of the project. Both larger projects and specific ones, such as limestone recapping, are fully-contracted.

Service	Service Delivery Description
Inspections / Surveying	<ul style="list-style-type: none"> • The foreman periodically inspects road conditions, including those requested by the community.
Grading & Dust Control Suppressants	<ul style="list-style-type: none"> • Periodically during the warm season, operators grade roads using graders and apply water and magnesium chloride to control dust on maintained roads. The dust control trailer is attached to a semi-truck.
Graveling	<ul style="list-style-type: none"> • Transportation Services staff count trucks and monitor the distribution of gravel as contractors deliver aggregate.
Gravel Sourcing	<ul style="list-style-type: none"> • Gravel quarry is monitored by Transportation Services staff.
Reconstruction & Repairment	<ul style="list-style-type: none"> • For non-contracted projects, operators and labourers use excavators, loaders, tandem trucks, semis, belly dumps, and graders to perform road repairments and reconstruction.

Source: Derived from information provided by the RM of Lac du Bonnet.

Roadways

Managed Assets

- 666 km gravel road
- 54 km dirt/grass roads**
- 4 km limestone

Delivery Assets

- 3x Grader*
- 2x Excavator*
- 3x Semi-Truck
- 2x Tandem Truck*
- 1x Tractor
- 2x Loader
- 1x Bulldozer
- 7x Attachments
- 3x Pull-behind Mowers

Resourcing

- (CET Student)
- Foreman
- Labourer/Green Team
- Operator I
- Operator II

Staffing Totals

- Permanent = 7
- Seasonal = 19

Figure 1.0 – Roadway Service Expenditures (Operating & Capital)

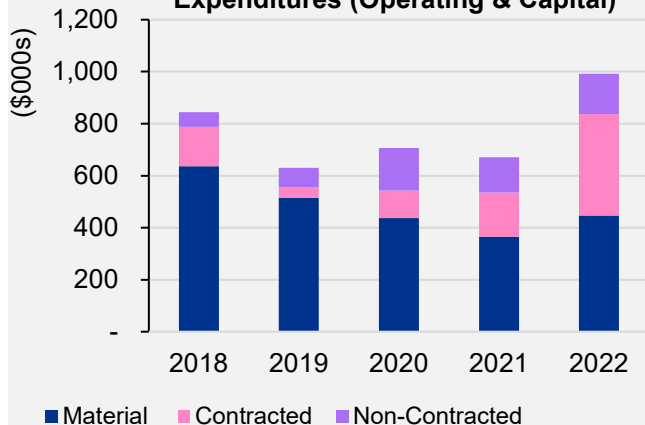
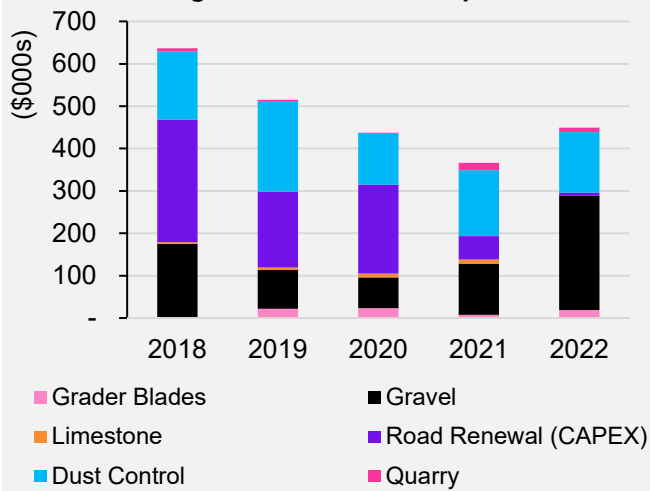


Figure 1.1 – Material Expenditures



Observations

- In 2022, road maintenance services required approximately 5,040 hours of effort, equivalent to 2.4 full-time equivalent employees (FTEs), which accounted for approximately 15% of Transportation's annual efforts.
- In 2022, approximately \$1.0 million was spent on roadway services which accounts for 41% of Transportation's annual operating expenditures (Figure 1.0).
- The 50% increase in overall expenditures from 2021 to 2022 was due to the large contracted reconstruction project of Hobo Lane Road.
- Figure 1.1 gives a breakdown of the material costs by year.
- Road renewal materials have decreased in cost by an annual average of 49% due to the shift in contracting out road reconstruction and rehabilitation services. This is responsible for the decline in material costs and increase in contracted costs seen in Figure 1.0.
- There is limited data to confirm achievement of desired levels of service. The RM has stated that it achieves them in most cases. The exceptions where the RM is challenged to meet their own standards (e.g., removing ruts in roads) is when roads are damaged by heavy truck traffic. In these cases, the RM spends more effort to achieve the desired standard.

Current Challenges

- The RM is challenged to maintain roads at the desired level of condition due to the level of construction employed historically. This particularly affects segments of road that receive significant heavy truck traffic due to summertime cottage traffic as well as usage from the agricultural sector. The RM is faced with a decision of how to best adapt: 1) accept the need to maintain (i.e., grade) these roads more frequently and achieve a lower standard; or 2) to rebuild selected road segments to a higher standard that can handle the heavy traffic.

Source: Derived from information provided by the RM of Lac du Bonnet.

*These vehicles are used across service areas, often across multiple seasons. **The RM calls these roads "unmaintained roads."

Roadways

Figure 1.2 – Contracted Services Expenditures

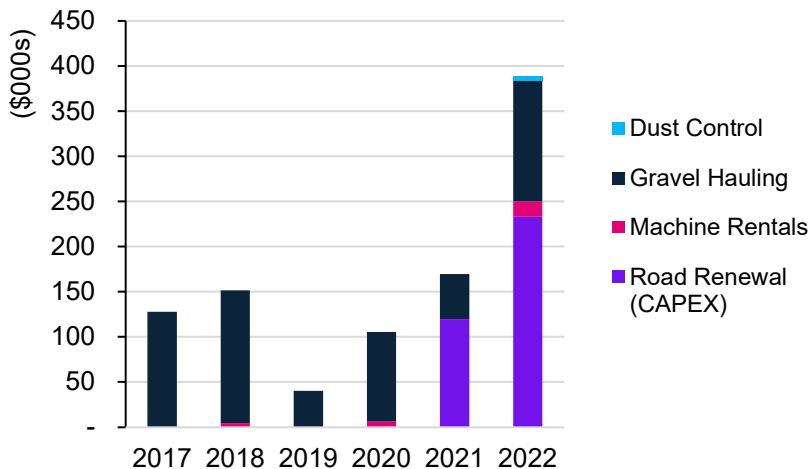
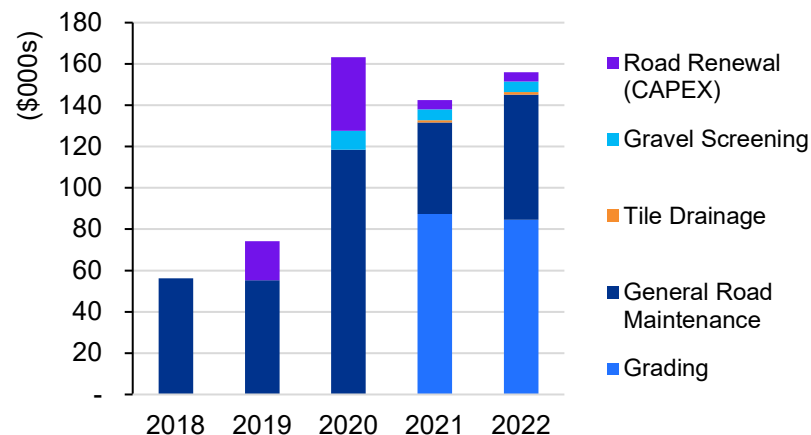


Figure 1.3 – Non-Contracted Expenditures



Observations

- Figure 1.2 shows the contracted road services which include dust control, gravel hauling, machine rentals, and road rehabilitation.
- Contractors have been utilized more than usual over the past 2 years to increase productivity. In 2021 and 2022, road rehabilitation expenditures reached approximately \$120,000 and \$230,000, respectively. The increase in 2022 was due to the Hobo Lane Road reconstruction.
- In 2019, the entrance to the RM's gravel pits was obstructed, which prevented Transportation from graveling that year.
- Further, in 2019, the RM's annual operating license for the quarry was delayed resulting in the RM using an alternative supplier and adapted our gravel program to complete roadwork closer to the supplier and performed less work overall to reduce the costs of the contract services.
- In 2021, gravel hauling costs dropped due to a suspension of graveling caused by an unusually dry summer season.
- Non-contracted services include grading, tile drainage, gravel screening, general road maintenance, and road reconstruction (Figure 1.3). These expenditures are the cost of internal labour hours paid to the employees.
- Grading accounted for the largest expenditure component of non-contracted roadway services in both 2021 and 2022.
- The General Road Maintenance category in Figure 1.3 contains all other non-contracted roadway activities that were not logged under a project number (e.g., inspections and surveys).

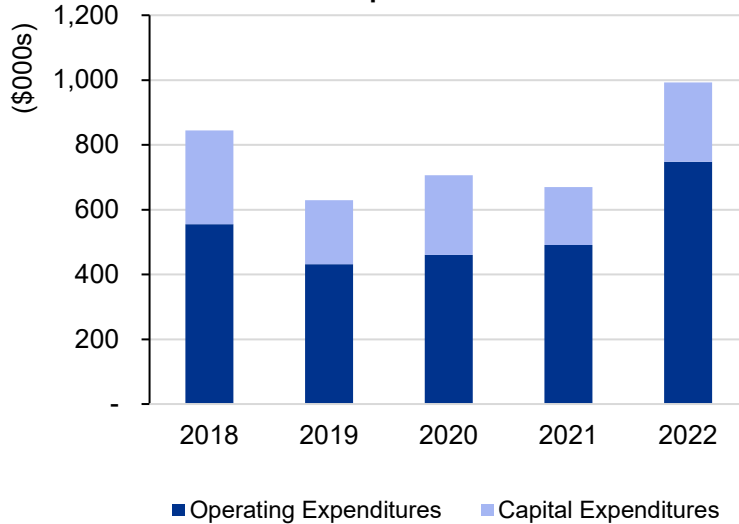
Assumptions

- Using equipment hours in-tandem with consolidated timesheets and projects logs, close estimations of grader usage were derived.
- In 2021 and 2022, approximately 2,700 and 2600 hours were tracked towards road grading codes. Using this number, payroll estimates were derived totalling \$87,300 and \$84,500 in 2021 and 2022, respectively.
- Grading was unable to be separated from general road maintenance between 2017 and 2020 as Transportation only recently began logging grader usage hours.
- In 2018 and 2019, project hours were not accurately logged. Therefore, road maintenance hours overall are lower and do not represent an accurate estimate.

Source: Derived from information provided by the RM of Lac du Bonnet.

Roadways

Figure 1.4 – Operating versus Capital Expenditures



Observations

- Figure 1.4 compares the operating and capital expenditures from 2018 to 2022.
- From 2021 to 2022, capital expenditures rose by approximately \$64,000, primarily due to the increased maintenance required to tackle deteriorating conditions of gravel roads, particularly the large-scale reconstruction project on Hobo Lane Road.
- From 2021 to 2022, operating expenditures rose by approximately \$260,000, or approximately 53%, primarily due to the purchasing and hauling of gravel for the large-scale reconstruction project on Hobo Lane Road.

Source: Derived from information provided by the RM of Lac du Bonnet.

Winter Operations

Overview

During the winter season, Transportation Services provides snow removal, clearing, and ice control to the RM, including the Lac du Bonnet Airport. When there is a sufficient accumulation of snow, heavy equipment is sent out to clear snow and apply road salt/sand. The region is organized into four zones for execution.

Service Standards & Regulations

- Snow removal occurs if snowfall has ended or will end shortly, and visibility is greater than 300m. If snowfall ends in the evening or night, snow clearing is done the next morning.
- Roads must remain passable to emergency vehicles that are properly equipped for winter driving.
- During a snow plowing event, three Graders (with wings) and one Tandem Truck Plow (with wing attachment) are dispatched. Additionally, depending on snowfall event, a loader, grader, skidsteer, or snow blower will be sent to clear the airport.

Service Delivery Method

- Snow removal, clearing, and ice control are all delivered in-house. There are not local options for outsourcing this work.

Note

- Discussions are underway between Council and the airport authority with respect to how servicing the airport will be integrated with current operations. This could alter the priorities under each level of snowfall.

Levels of Snowfall	Delivery Subject to Snowfall Level
Level 1: Snowfall < 10 cm	<ul style="list-style-type: none"> • Main feeder routes are cleared. For a comprehensive list of feeder routes, see Appendix B. • Ice control and sanding are subject to temperature, forecast, wind, and previous sanding. • Front end loader dispatched to clear accumulated snow surrounding the Lac du Bonnet Fire Department building.
Level 2: Snowfall ≥ 10 cm	<ul style="list-style-type: none"> • All roads will be cleared. • Operators are pulled from other tasks to complete snow clearing. • Routes for the snow clearing equipment can be seen in Appendix B. • Snow is cleared off municipally-maintained roads at a maximum 2.5 days post-snowfall. During extreme snowfall events, response times may differ.
Level 3: Maintenance Activities	<ul style="list-style-type: none"> • After an extreme snow clearing event two Front End Loaders are dispatched to remove any additional snow accumulations in problem areas such as cul-de-sacs and intersections. • Sanding trucks are deployed to ensure all roads with provincial access have traction.

Source: Derived from information provided by the RM of Lac du Bonnet.



Winter Operations

Managed Assets

- 724 km of road

Delivery Assets

Heavy Equipment

- 3x Grader*
- 1x Tandem Plow*

Attachments

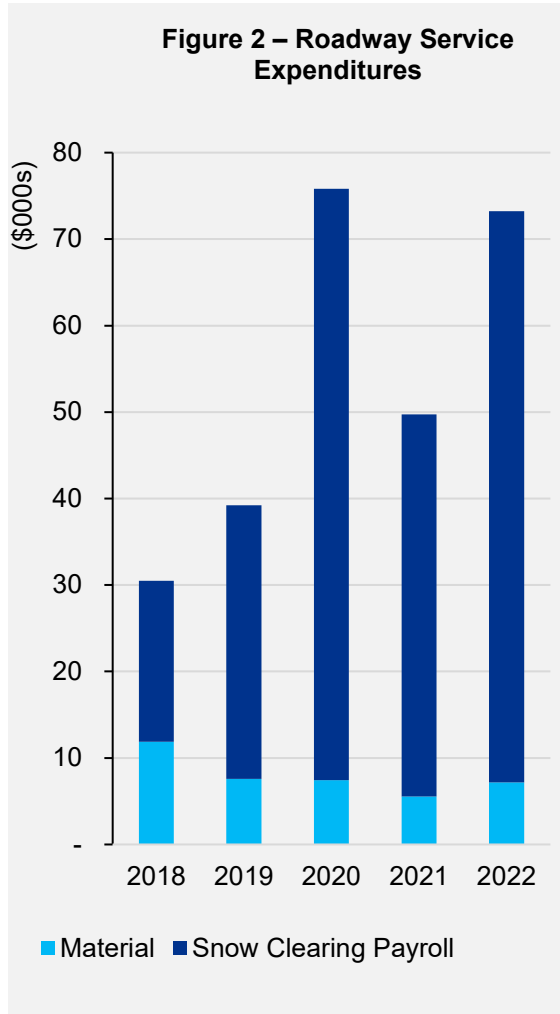
- 1x Wing Package
- 1x Tandem Plow
- 1x Harness
- 1x Snowblower

Resourcing

- Foreman
- Operator I
- Operator II

Staffing Totals

- Permanent = 6
- Seasonal = 9



Observations

- In 2022, winter operations required approximately 2,100 hours of effort, equivalent to 1.0 FTEs, which accounted for approximately 6% of Transportation's annual efforts
- In 2022, approx. \$73,000 was spent on winter operations.
- Snow clearing made up the majority of winter operating expenditures. In 2022, snow clearing payroll totalled approximately \$66,000.
- The fluctuation in winter related service costs from 2020-2022 is subject to the weather conditions of the season.
- The portfolio of roads maintained by the RM has been fairly constant over the last number of years, though there have been hints from the Province of Manitoba that it may assign these roads to the RM to manage and maintain. The result of this is that Transportation will be further stretched in providing services. The same can be said now that the RM is servicing the Lac du Bonnet Airport.
- Material costs for winter and summer operations are tracked separately since they are unique to the season, with the exception of fuel costs and grader blades.
- Fuel is not included in material costs due to the inability to allocate quantity used per equipment; sand is an example of a materials included.

Current Challenges

- Transportation has been asked by the Lac du Bonnet Airport and Council to maintain its runways and service roads. Operationally, winter is a demanding time for Transportation Services. There will need to be an exploration of desired service levels and trade-offs between the performance expectations of the airport and the local road network.

Assumptions

- Data given for 2018 and 2019 did not track hours as closely as the following years, hence the total expenditures are significantly lower.
- Transportation began logging grader usage hours only recently, between 2017 and 2020, making it difficult to separate grading activities from other payroll during that period.

Source: Derived from information provided by the RM of Lac du Bonnet.

*These vehicles are used across service areas, often across multiple seasons.

Drainage

Overview

Transportation Services is responsible for ensuring that the drainage systems in the RM are free from obstructions and permit efficient drainage. This prevents disruption to the transportation network, prevents damage to roads, and is critical to maintaining roadway service standards during and after storm events.

Service Standards & Regulations

- During spring, approximately one month is allocated to address culvert flooding and cleaning. This process involves the use of a high-pressure steam generator to clear any ice blockages from the culverts. This approach ensures that culverts remain in good working condition, ready to handle the demands of spring thaw.
- Flooding roads are considered an emergency drainage issue.
- Transportation strives to maintain a rotation of brushing (road allowance mowing) on every road and right of way 2-3 times each per year.

Service Delivery Method

In-house:

- Culvert transportation.
- Culvert maintenance.
- Tree removal and beaver control.
- Brushing.
- Transportation of culverts.
- Regular inspections.
- Culvert steaming.
- Beaver dam removal.

Contracted:

- Engineering assessments for drainage.
- Beaver trapping/removal.

Service	Service Delivery
Airport Drainage	<ul style="list-style-type: none"> • Operators and labourers maintain the drainage system supporting the airport.
Beaver Dams	<ul style="list-style-type: none"> • Operators and labourers remove beaver dams located along roadsides or small bodies of water such as creeks.
Brushing	<ul style="list-style-type: none"> • Operators use excavators and mowing equipment to clear roadsides along the 724 km of the municipally-owned roads.
Culverts	<ul style="list-style-type: none"> • The foreman, operators, and labourers conduct maintenance and replacement of culverts. • A propane heater and pressure washer are used to steam culverts. • The foreman, operators, and labourers manage the transportation of culverts using trailers, semi-trucks, excavators, and other necessary equipment owned by Transportation. • The foreman, operators, and labourers install new drains.
Inspections & Assessments	<ul style="list-style-type: none"> • Periodic inspections and assessments are conducted across drainage systems by the foreman, operators, and labourers to ensure proper functioning.

Source: Derived from information provided by the RM of Lac du Bonnet.

Drainage

Managed Assets

- Ditches along 724 km of road
- Drainage in fields
- Culverts

Delivery Assets

- 2x Excavators*
- 3x Trailers
- 1x Steamer
- 2x Brushers
- 2x Tandem Trucks*

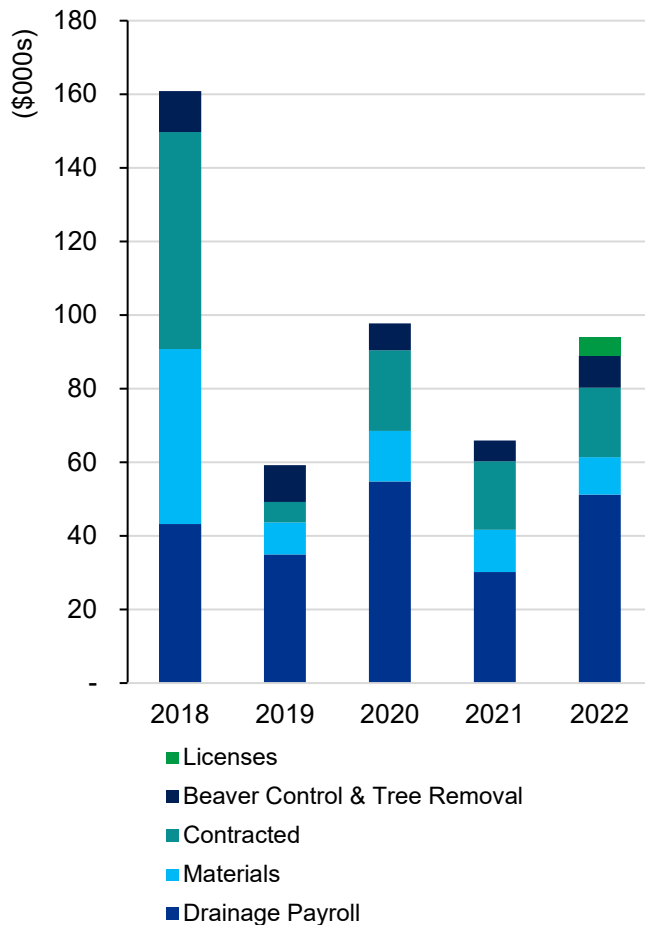
Resourcing

- Foreman
- Civic Engineering Technologist (CET)
- Operator I
- Operator II
- Labourers / Green Team Students

Staffing Totals

- Permanent = 7
- Seasonal = 18

Figure 3 – Drainage Expenditure Breakdown



Observations

- In 2022, drainage services required approximately 1,700 hours of effort, equivalent to 0.8 FTEs.
- In 2022, expenditure on drainage totalled approximately \$87,300.
- In 2018, drainage expenditures were significantly higher than in the following four years totalling approximately \$0.15 million.
- Drainage costs are generally driven by two components: 1) maintenance of the drainage network; and 2) effort to manage the spring thaw.
- In 2018, payroll costs remained relatively similar at \$33,800 compared to the five-year average of \$37,000. Large material and contracted service costs accounted for the significant difference in expenditures. Material and contracted services combined for a total of approximately \$0.11 million in comparison to an average cost of approximately \$27,000 from 2019-2022.
- Regarding Transfer Stations, the work is delivered by Transportation, but is paid for by Environmental Health Services through internal recoveries (see Appendix C).

Current Challenges

- The municipalities in the region are in initial stages of developing a Water Conservation District. This will open options for the RM to develop better drainage solutions in some areas that require an approach from a watershed perspective.

Assumptions

- In the absence of the required data, some payroll costs for 2018-2019 were estimated based on previous years' data on wages.

Source: Derived from information provided by the RM of Lac du Bonnet.

*These vehicles are used across service areas, often across multiple seasons.

Parks, Cemeteries, & Boat Launches

Overview

Transportation Services oversees the maintenance of parks, cemeteries, and boat launches. Providing these services involves groundskeeping tasks such as mowing, trimming, and garbage and recycling collection. Transportation also manages cemetery plots and structures, and ensures that boat launch docks are safe and ready-to-use.

Service Standards

- Park green spaces are mowed as needed throughout summer. Garbage is removed weekly and flower beds are actively maintained during this time.
- During winter, designated areas are plowed for ice fishing.
- Cemeteries have a semi-annual clean up every spring and Fall.
- Cemeteries are mowed once every week or two weeks subject to weather conditions.
- General maintenance is performed on boat launches and parks twice per week, while grass is mowed once per week.

Service Delivery Method

In-house:

- Mowing, trimming, grading, landscaping, garbage, and recycle services.
- Cemetery headstone and monument maintenance and repair.
- Marking of cemetery plots.

Contracted:

- Dock lifting is partially-contracted.

Service	Service Delivery
Boat Launches	<ul style="list-style-type: none"> • Maintenance activities performed include grass cutting, trimming, collection of garbage and recycling, and grading. • Non-contracted docks are dropped and place in their designated locations.
Cemeteries	<ul style="list-style-type: none"> • Maintenance activities performed include grass cutting, trimming, collection of garbage and recycling. • Transportation marks headstone and monument plots. • Plots are sold by Public Works.
Parks	<ul style="list-style-type: none"> • Maintenance activities performed by labourers include grass cutting, trimming, collection of garbage and recycling, care of picnic tables, grading, and landscaping.

Source: Derived from information provided by the RM of Lac du Bonnet.

Parks, Cemeteries, & Boat Launches

Managed Assets

- 18 Parks and Public Reserves
- 7 Cemeteries
- 6 Boat Launches

Delivery Assets

Light Equipment

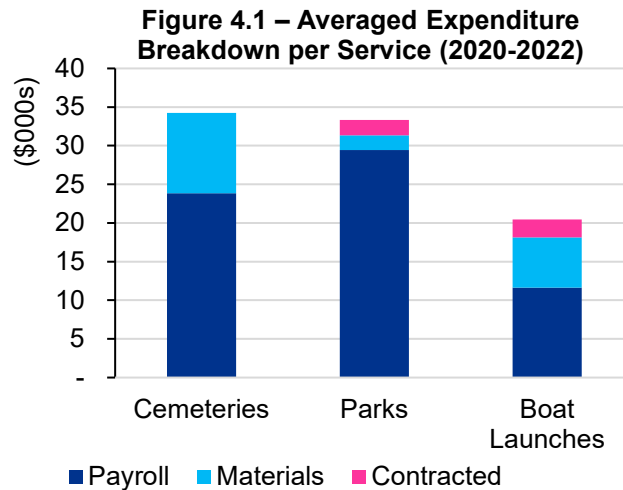
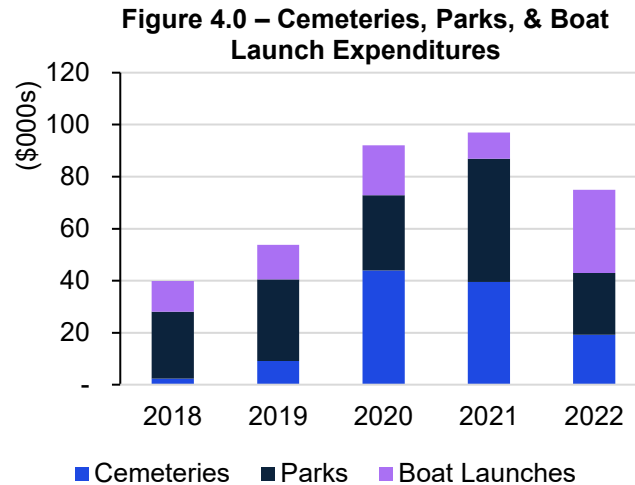
- 4x Rotary Mower
- 3x Zero-turn mower
- Trimmer/weed whackers
- Leaf blowers

Resourcing

- Foreman
- Building Maintenance Labourer
- Operator I
- Operator II
- Labourers / Green Team Students

Staffing Totals

- Permanent = 6
- Season = 17



Observations

- In 2022, parks, cemeteries, and boat launch services required approximately 2,100 hours of effort, equivalent to approximately 1.0 FTEs.
- In 2020, the Transportation took back the responsibility of maintaining cemeteries, resulting in a significant increase in spending in that area caused by purchasing capital. In 2022, expenditures reduced to reflect normal cemetery operating expenditures.
- Year-over-year variability of park expenditures is caused by seasonal weather conditions; dryer seasons require significantly less groundskeeping.
- In 2022, total expenditure of cemeteries, parks, and boat launches were approximately \$19,000, \$23,800, and \$32,000, respectively.
- Payroll makes up the majority of each of the three services costs where cemeteries, parks, and boat launches total 70%, 88%, and 57%, respectively.

Assumptions

- 2018 and 2019 material costs were not available for cemeteries and boat launches, so averages and numbers given for Figure 4.0 are supported from 2020-2022.

Source: Derived from information provided by the RM of Lac du Bonnet.

Street Lighting & Signage

Overview

Transportation services design, install, and maintain street and traffic signs to ensure safe and effective use for the community and travelers. Additionally, Transportation funds the electricity costs as per their Hydro Agreement.

Service Delivery Method

- Manitoba Hydro performs all lighting installations, and operates and maintains all street lighting.
- The installation, design, and maintenance of signage is completed in-house.
- The installation and maintenance of civic addressing is completed in-house.

Service	Service Delivery
Signage	<ul style="list-style-type: none"> • The types of signs which are installed and maintained by Transportation Services include street signs, traffic signals, Vessel Operation Restriction Regulation signs, and other visual aids. • Civic addressing is installed and maintained by labourers which include home and street addresses.
Street Lighting	<ul style="list-style-type: none"> • Fund hydro costs.

Source: Derived from information provided by the RM of Lac du Bonnet.

Street Lighting & Signage

Assets to Maintain

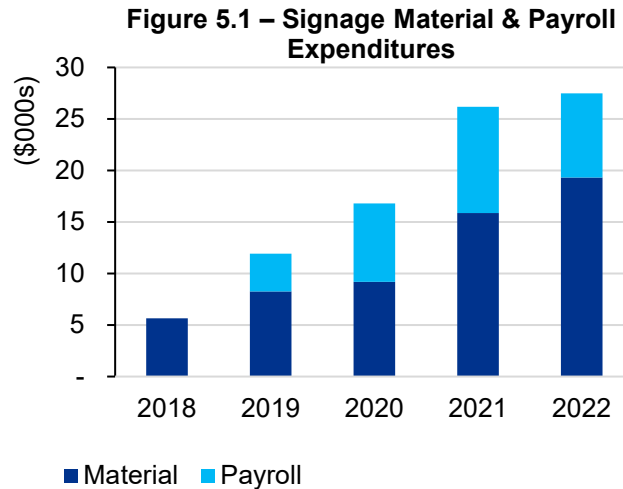
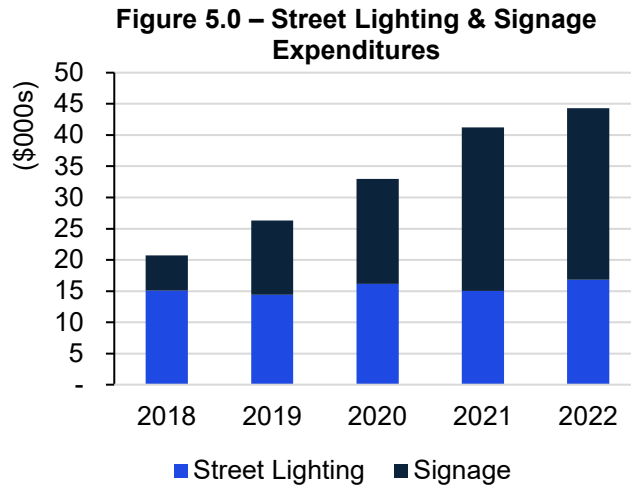
- All road and street signage
- Posts for all signage
- Civic addressing (building numbers, street names)

Resourcing

- Civic Engineering Technician (CET)
- Labourers/Green Team
- Building Maintenance Labourer
- Operator I
- Operator II

Staffing Totals

- Seasonal = 18
- Permanent = 6



Observations

- In 2022, signage services required approximately 400 hours of effort, equivalent to 0.2 FTEs.
- Street lighting services has a consistent cost of approximately \$15,500 annually.
- Signage costs has seen an annual increase of approximately 23% per year. Inflation has significantly increased the prices of raw materials, which, in turn, has raised the cost of signage due to higher material costs.
- On average, annual street lighting and signage costs have been approximately even.
- Material costs have seen an approximate 28% annual increase where costs have grown steadily each year from \$5,600 in 2018 to \$19,300 in 2022 (Figure 5.1).

Assumptions

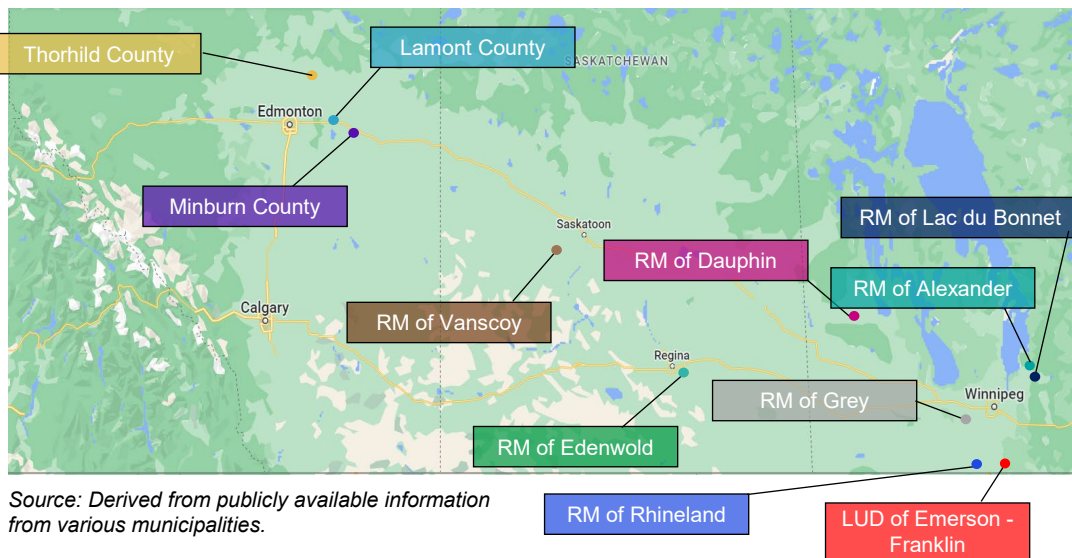
- In the absence of the required data, some payroll costs for 2018-2019 (completely for 2018) were unable to be isolated from other activities.

Source: Derived from information provided by the RM of Lac du Bonnet.

Municipal Benchmarking

Overview – Comparable Rural Municipalities

Ten comparable rural municipalities were selected as part of the benchmarking peer group of the Public Works/Transportation Services. These comparable rural municipalities were chosen based on the similarity of their populations sizes, rural service area, and population densities to that of the Rural Municipality of Lac du Bonnet. The smallest population in the peer group was 2,136 residents (i.e., Rural Municipality of Dauphin) and the largest population in the peer group was approximately 5,819 residents (i.e., Rural Municipality of Rhineland). The average population and service area of the peer group is 3,480 and 1,549 sq.km., respectively.



#	Rural Municipality	Population	Service Area (sq.km.)
1	RM of Lac du Bonnet, MB	3,563	1,098
2	RM of Rhineland, MB	5,819	958
3	RM of Edenwold, SK	4,490	849
4	RM of Alexander, MB	3,854	1,560
5	Lamont County, AB	3,754	2,386
6	Thorhild County, AB	3,042	1,997
7	Minburn County, AB	3,014	2,850
8	RM of Vanscoy, SK	2,799	861
9	RM of Grey, MB	2,517	969
10	LUD of Emerson – Franklin, MB	2,437	970
11	RM of Dauphin, MB	2,136	1,513
Average		3,400	1,455

Services Offered

A high-level comparison of Transportation’s services is provided for select rural municipalities. The solid, coloured boxes depict if the service is provided by the rural municipality’s Public Works, while, striped boxes indicate that the service is offered but outsourced or contracted. Striped boxes signify that the corresponding service is a mix of contracted and non-contracted provisions. For example, the RM of Edenwold handles grading internally, while major road reconstruction, dust control, and gravel crushing and hauling are contracted.

Province	Alberta			Saskatchewan	Manitoba						
Service	Lamont County	Thorhild County	Minburn County	RM of Vanscoy	RM of Edenwold	LUD of Emerson - Franklin	RM of Rhineland	RM of Dauphin	RM of Grey	RM of Alexander	RM of Lac du Bonnet
Roadways	Diagonal Stripes	Diagonal Stripes	Solid Purple	Solid Brown	Diagonal Stripes	Solid Red	Solid Blue	Solid Pink	Solid Grey	Solid Teal	Diagonal Stripes
Winter Operations	Solid Teal	Solid Yellow-Green	Solid Purple	Solid Brown	Diagonal Stripes	Solid Red	Solid Blue	Solid Pink	Diagonal Stripes	Solid Teal	Solid Dark Blue
Drainage	Diagonal Stripes	Solid Yellow-Green	Solid Grey	Solid Grey	Diagonal Stripes	Solid Grey	Solid Blue	Solid Pink	Diagonal Stripes	Diagonal Stripes	Solid Dark Blue
Street Lights & Signage	Solid Grey	Solid Grey	Solid Grey	Solid Brown	Solid Grey	Solid Grey	Solid Blue	Diagonal Stripes	Solid Grey	Solid Grey	Solid Dark Blue
Parks & Boat Launches	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Green	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Teal	Solid Dark Blue
Cemeteries	Solid Grey	Solid Yellow-Green	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Dark Blue
Transfer Stations	Solid Teal	Solid Yellow-Green	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Grey	Solid Dark Blue

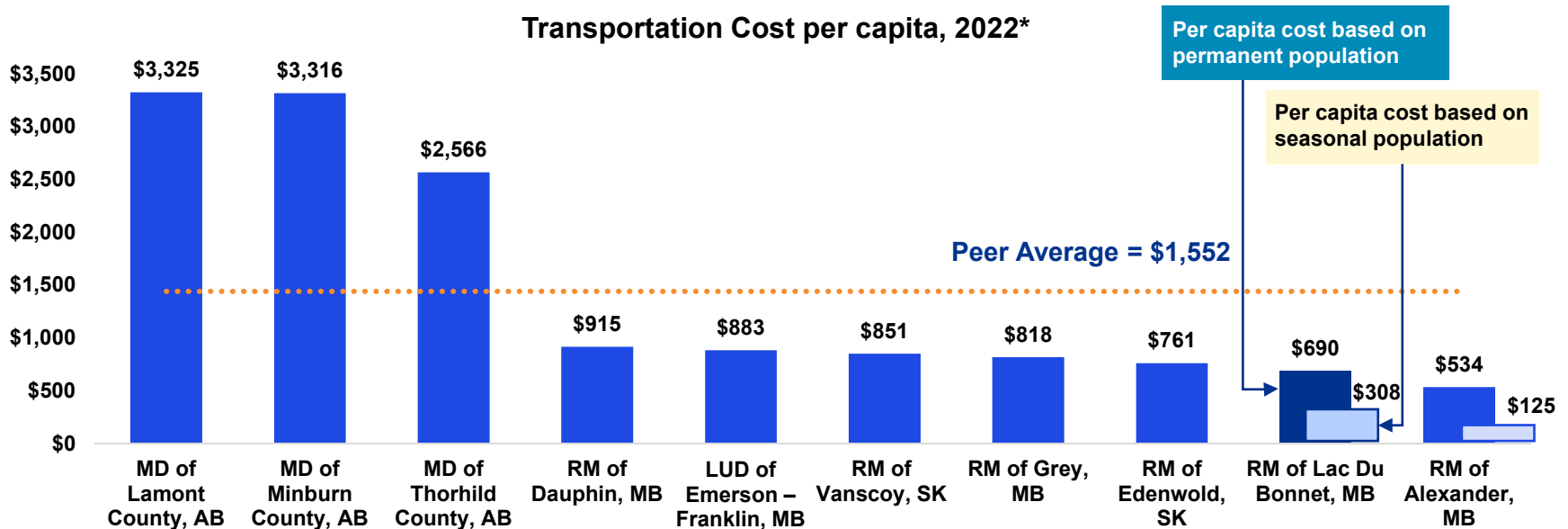
Source: Derived from annual reports provided by benchmarked municipalities, and data provided by the RM of Lac du Bonnet.

Note: Not all contacted municipalities were able to provide comprehensive data on all departmental services. Therefore, there may be services that are provided by some of the benchmarked municipalities without being reported here.

Departmental Expenditures (1/2)

Public Works net per capita transportation expenditures for nine municipalities were compared to Lac du Bonnet’s net Public Works transportation expenditures per capita. The RM compares favourably with the peer group, spending approximately \$690 per capita based on its permanent population to the peer average of approximately \$1,522. Lac du Bonnet is the second lowest among the selected peers, with the lowest being the RM of Alexander at \$534. It should be noted that Public Works departments across municipalities may vary in the services they provide, and in their approach to service delivery. Alberta rural municipalities have significantly higher costs mostly due to the larger service areas for all three compared rural municipalities along with smaller populations.

Between May and October, the RM Lac du Bonnet’s population increases to over 8,000 residents. Based on its seasonal population, Lac du Bonnet’s Transportation cost per capita lowers to \$308 per person. Comparator municipalities with seasonal differences are noted on the graph.



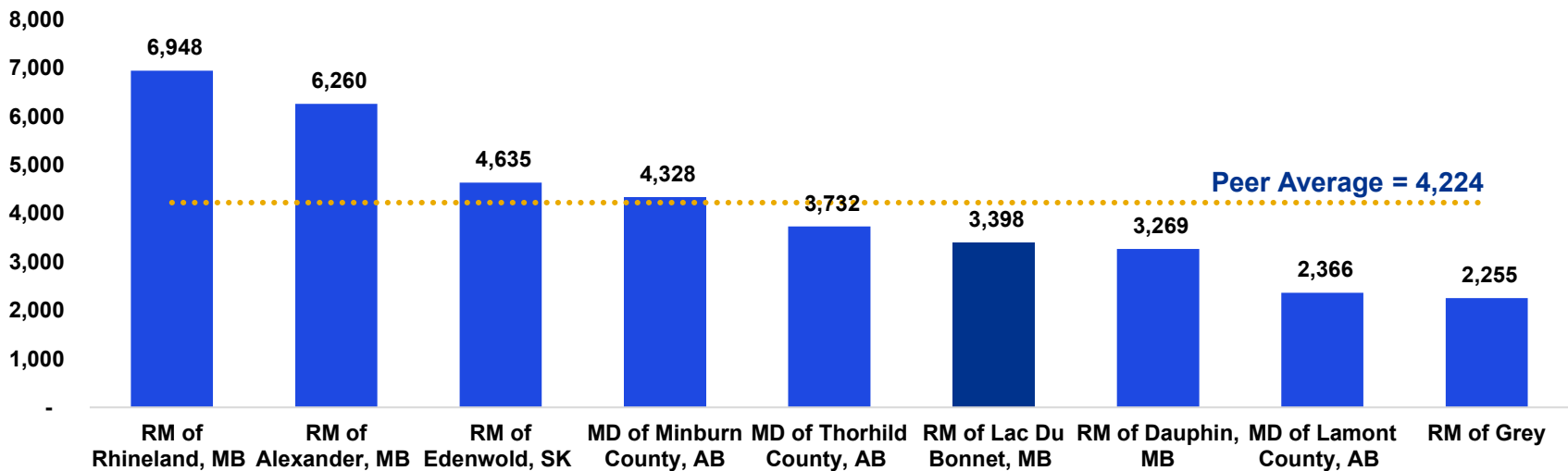
Source: Derived from annual reports or budgets for most recent year available from various municipalities. Data may not be strictly comparable due to differences in approaches to service delivery, as well as accounting and reporting differences.

*All expenditures shown in the chart are from 2022 financial statements, except the following RM's which use data from 2021: Edenwold, Vanscoy, and Dauphin.

Departmental Expenditures (2/2)

Eight municipalities were used to compare total net Public Works transportation expenditures per kilometer of gravel road maintained. Lac du Bonnet provides services at approximately \$3,398 per km, which is approximately 20% less than the peer average spend of \$4,224 per km.

Transportation Cost per KM of Gravel Road, 2022



Source: Derived from annual reports or budgets for most recent year available from various municipalities. Data may not be strictly comparable due to differences in approaches to service delivery, as well as accounting and reporting differences. Data was not available for the RM of Emerson-Franklin.

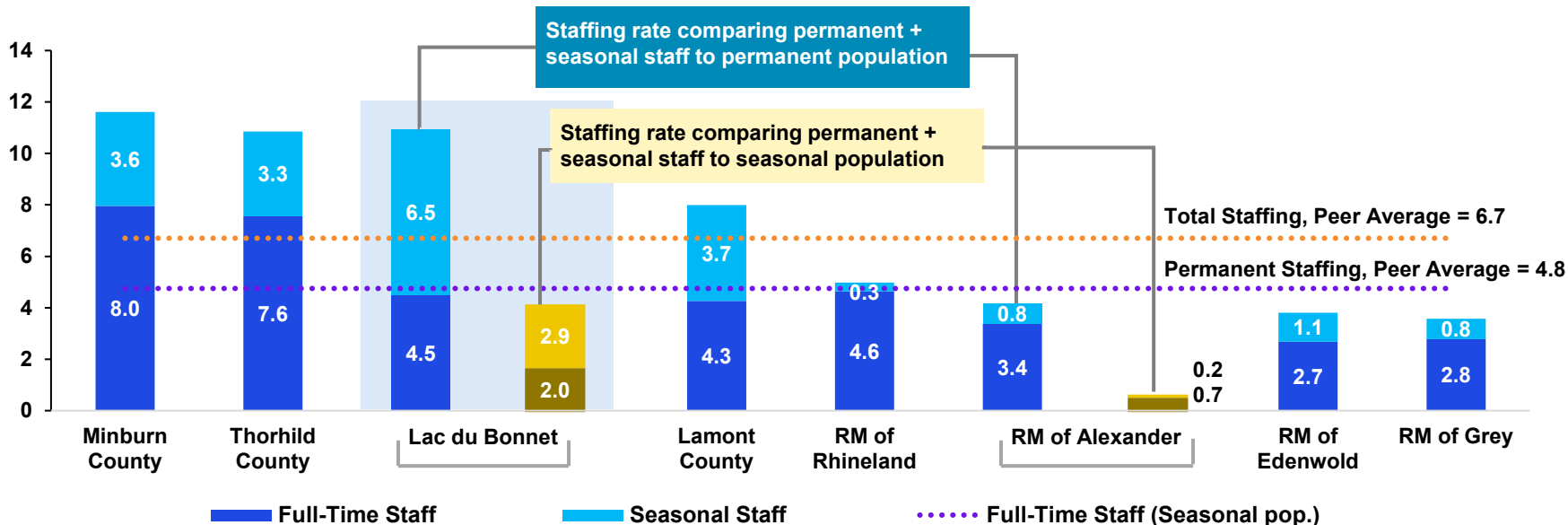
*All expenditures shown in the chart are from 2022 financial statements, except the following RM's which use data from 2021: Edenwold, Vanscoy, and Dauphin.

Staff Count

Eight municipalities were compared to the RM in terms of Public Works staff counts per 1,000 population. The RM of Lac du Bonnet has the third highest Public Works staff count per capita among the peer group with a staff count of 10.4 per 1,000 people. This is 44% higher than the peer group average of 7.2 Public Work employees per 1,000 population.

However, from May to October, the RM of Lac du Bonnet's Public Works staff count per 1,000 population drops to 4.9, as the population grows beyond 8,000*. Compared to the average of 7.2 per 1,000 people, Lac du Bonnet's Public Works staff count falls 32% below the peer average during this period. Similarly, the RM of Alexander experiences a boom in seasonal population growth of over 20,000 people, which drastically lowers their seasonal population staff count per 1,000 below the peer average.

Public Works Staff Count per 1,000 population, 2022



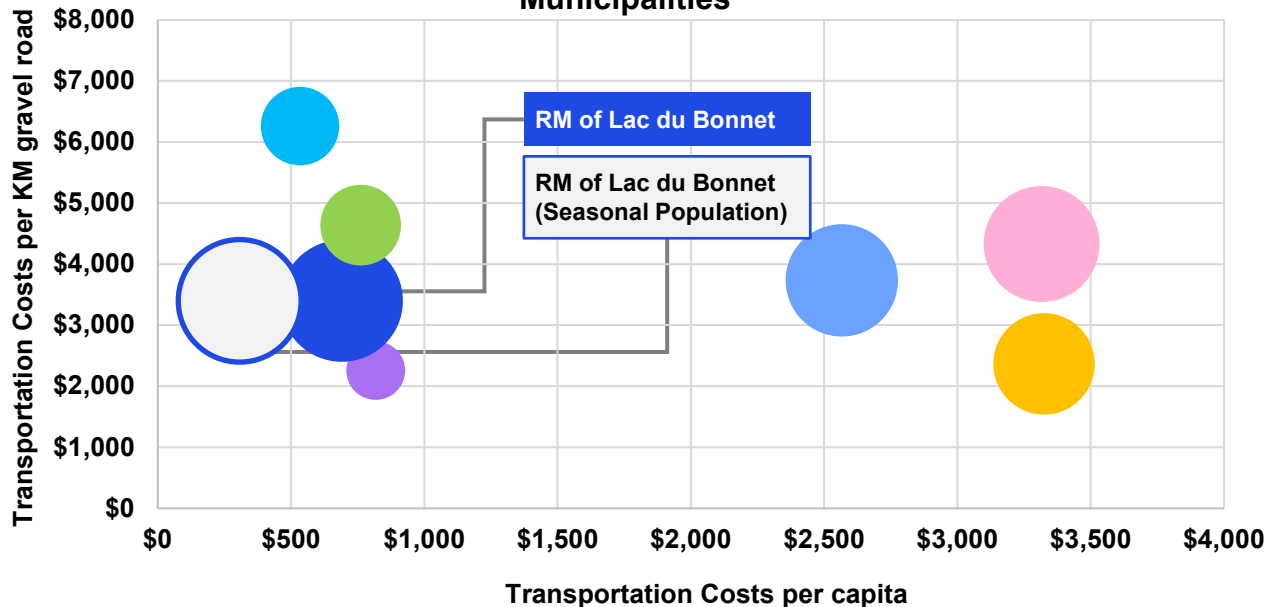
Source: Derived from annual reports provided by benchmarked municipalities, and data provided by the RM of Lac du Bonnet. Data may not be strictly comparable due to differences in approaches to service delivery, as well as accounting and reporting differences.

*The large increase in seasonal population is due to the cottagers. All other benchmarked municipalities do not have large bodies of water close to them except for Alexander.

Service Efficiency Indicator

An alternative method for assessing the overall expenses of the RM is by examining the relationship between the staff count, transportation costs per capita, and transportation costs per KM of gravel road. The size of the spheres reflect the staff count of the rural municipality's Public Works department. Assuming all other factors remain equal, a lower ratio indicates greater efficiency in service delivery by the RM. It is essential to note that staffing levels in comparable jurisdictions may differ based on geographic location, service offerings, overall population size, and the utilization of alternative service delivery options such as contracting.

Transportation Costs and Staffing Levels in Select Rural Municipalities



Legend:

- MD of Minburn County, AB
- MD of Thorhild County, AB
- MD of Lamont County, AB
- RM of Grey, MB
- RM of Edenwold, SK
- RM of Lac du Bonnet, MB**
- RM of Alexander, MB
- RM of Lac du Bonnet, MB (seasonal population)**



Source: Derived from annual reports provided by benchmarked municipalities, and data provided by the RM of Lac du Bonnet.

Fleet & Equipment

Six municipalities provided data on their fleet counts. Light equipment was not available for all municipalities, if they were, the count was limited to riding mowers for consistency.

Vehicle/ Equipment Category	RM of Lac du Bonnet	RM of Alexander	RM of Grey	Lamont County	RM of Rhineland	RM of Minburn	Thorhild County
Population	3,563	3,854	2,517	3,754	5,819	3,014	3,042
Staff Count	39	16	9	30	29	35	33
Area (sq.km)	1,098	1,560	969	2,386	958	2,850	1,997
Gravel Road (km)	724	400	1,448	1,931	365	2,309	2,092
Heavy Equipment	3 Grader 3 Tractor 2 Loader 2 Excavator 2 Semi-truck	3 Grader 3 Tractor 1 Loader 2 Backhoe	4 Grader 2 Tractor 2 Excavator 2 Backhoe	12 Grader 4 Tractor 4 Loader 3 Excavator 1 Backhoe 2 Scrapers	4 Grader 2 Excavator 3 Tractor 1 Backhoe	14 Grader 4 Loader 2 Backhoe 1 Compactor	8 Grader 11 Tractor 4 Loader
Total	12	9	10	26	13	21	23
Light Vehicles	12 Truck 7 Trailer 1 Dozer 2 Tandem	12 Truck 2 Tandem 4 Trailer	2 Dozer	3 Truck 4 Semi-Truck 2 Dozer 2 Plow Truck 2 Rock Truck	1 Semi 2 Tandem 1 Water Truck 1 Plow Truck	12 Truck 2 Tractor 2 Dozer 2 Bobcats	39 Truck 12 Dozer 1 Bobcat
Total	22	18	2	13	5	18	51
Light Equipment (Mowers)	3 Zero-Turn 3 Pull-behind mowers	5 Mower	NA	NA	NA	NA	10 Mower
Total	6	5					10
Total Heavy+Light	34	27	12	39	18	39	74
Grand Total	40	32	12	39	18	39	84

Resource-Sharing

The table below and on the proceeding page list the resources shared by six benchmarked municipalities. All but one municipality engaged in some form of emergency response service sharing across multiple neighbouring municipalities.

Rural Municipality	Resource or Services Shared
RM of Alexander	Emergency response services.
RM of Edenwold	<ul style="list-style-type: none"> – Emergency Measures Office: 5 municipalities pooling resources for improved emergency response – Emergency Water Agreement: Metered connection with neighboring town for emergency water supply – Community Safety Officer Program: CSOs employed by RM, serving 4 other municipalities – Bylaw Court: Accessible to other municipalities – Development Appeals Board and Board of Revision: Accessible to 5 other municipalities – Fire Protection: <ul style="list-style-type: none"> i. Neighboring departments' response agreement with flat fee. ii. Mutual aid agreement for no charge support. iii. Secondary fire agreement with City of Regina. iv. Custom work: RM provides road grading, road access, etc. upon request.
RM of Grey	None.
Lamont County	Emergency response services.
Thorhild County	<ul style="list-style-type: none"> – Memorandum of understand (MOU): Established with emergency services response. Rates would follow Alberta Road builders' rates for local contractor assistance. – Road maintenance agreements: Cost-free grading assistance between municipalities when roads are closer to the neighbouring municipality. Repairs and culverts billed separately

Source: Derived from surveyed municipalities.




Resource-Sharing

Rural Municipality	Resource-Shared
RM of Minburn	<p>Emergency Services:</p> <ul style="list-style-type: none"> – MOU with Mannville Innisfree and Vegreville for emergency response other than fire. – Recovery of equipment and material costs: rate schedule published by Alberta's Ministries of Infrastructure and Transportation. – Recovery of personnel costs: positions rate of pay. The assisting party may waive full or partial reimbursement of costs of resources, and/or personnel. – Fire response arrangements: <ul style="list-style-type: none"> i. Town of Veg: \$350/hr per apparatus (includes personnel) ii. County of Vermilion River: \$250/hr per apparatus plus \$25/hr for personnel exceeding 4 members per apparatus. iii. County of Beaver, Lamont, Two Hill, MD of Wainwright: Alberta Transportation Rates \$650 per hour per apparatus. <p>Waste Management:</p> <p>There is an agreement between the County, and Villages of Mannville and Innisfree for a shared service. Two waste transfer sites are shared at an allocation as follows: (cost are calculated per tonne, \$190/tonne, an average of 315 tonnes annually)</p> <ul style="list-style-type: none"> i. Mannville: (48.2%) ii. Innisfree: (11.5%) iii. County: (40.3%).

Source: Derived from surveyed municipalities.

Peer Comparison Summary

Comparison of Lac du Bonnet to the selected municipal comparators revealed a number of key themes.

	<u>Peer Observations</u>	<u>RM of Lac du Bonnet</u>
Assets Roads, heavy equipment, etc. 	<ul style="list-style-type: none"> The Alberta municipalities considered had 2-3 times the amount of gravel roads as Lac du Bonnet, as well as double the amount of heavy equipment. 	<ul style="list-style-type: none"> Less than 50% of the RM's land is dedicated to agricultural use, resulting in Lac du Bonnet having less roads than its peers.
Levels of Service Services offered, service standards, etc. 	<ul style="list-style-type: none"> Most of the peer municipalities considered have standing resource-sharing arrangements for emergency services. 	<ul style="list-style-type: none"> Lac du Bonnet is unique in having a significant cottage population and related traffic. This results in comparatively higher levels of road maintenance, more seasonal staff, and more light trucks for staff use. The RM trades boundary roads with neighbouring municipalities for service delivery.
Cost of Service Cost per capita, cost per km of road, etc. 	<ul style="list-style-type: none"> The selected Alberta municipalities have a larger land area, or lower population density, resulting in higher per capita costs. 	<ul style="list-style-type: none"> Lac du Bonnet's operating cost per km of road is below the peer average. It also has a higher population density, also resulting in a lower cost per capita.

Leading Practices

Asset Management for Rural Municipalities

Providing Value with Limited Resources

The RM of Lac du Bonnet strives to provide value for its residents and visitors by making effective use of public dollars. Having clear and effective strategies and communications that are understood among front-line staff in the Public Works department, Administration, and Council can help all parts of municipal government work together to effectively meet their community's public service needs.

Improving communications within municipal government can come through developing systems toward a targeted operating framework. This can ensure that important information is available when needed to set priorities. An effective internal management system can help teams document the work they do and provide officials with the information they need to make decisions. Work order management, complete asset inventory and condition assessments, and long-term financial plans are all part of an effective asset management system.

Leading Practices in Rural Municipalities

The leading practices described in the following pages offer approaches to managing asset information, to improve communication between municipal functions and improve the overall quality of service provided for residents, through effective decision-making and efficient operations. These leading practices provide “line of sight” between departments, to make decisions more transparent, more understandable, and more impactful use of public funds. Leading practices that Lac du Bonnet would benefit from considering include:

1. **Continuous improvement of asset condition data describing roads and culverts.**
2. **Providing asset management training for members of Council and staff.**
3. **Utilizing existing asset management software**
4. **Proactively addressing flood risks, and in the longer-term, engaging in natural asset planning.**
5. **Comparing road maintenance standards with other jurisdictions.**
6. **Planning, budgeting, and utilization.**
7. **Succession planning to support service continuity.**

Transportation Asset Condition Assessments

Roadway Condition and Use Assessments

A leading practice is to maintain current condition information of all municipal roadways in regular use. Assessments may be completed in-house by qualified staff or offered by service providers, priced per kilometer. The road network is mapped in GIS and gravel road condition ratings, from excellent to poor or failed, are ascribed to critical aspects of each road segment with photographic evidence linked.

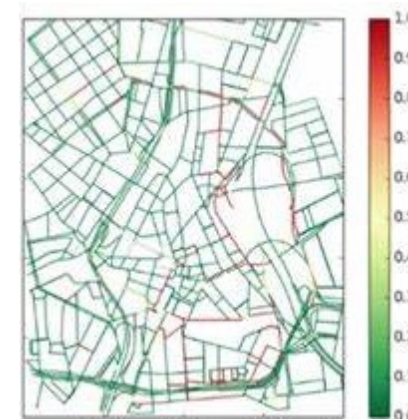
Changes to roadway conditions over time, as well as detailed investigations into gravel roadway structure, can help inform estimates of the remaining service life of each road segment. These condition ratings help identify immediate areas of concern, but also establish trends that can help predict problem areas that will need further action.

A secondary study from a qualified provider, or with in-house resources if available, to count traffic numbers and vehicle types on major roadways would help to identify the roads that see the greatest (and heaviest) traffic. The information collected can be used to document roads that see different traffic types and different rates of degradation, and categorize roads according to their use and criticality within the municipal transportation network. This asset condition and use information can be used to plan long-term capital investments and adjust operations. The information helps plan for work and ensure that resources are being distributed appropriately over time, to meet levels of service for all residents and businesses.

Comprehensive Culvert Condition Assessment

To better plan maintenance activities, a leading practice among large rural municipalities is to conduct regular condition assessments of all municipally-owned culverts, on a multi-year basis. Condition assessment criteria typically include reviews of inverts for silting, blockage, misalignments, as well as material condition and expected remaining service life. Maintaining culverts is a critical component of effective stormwater management, and a proactive culvert repair and replacement program can significantly reduce the risks of road failure due to flooding, causing interruptions to road service with expensive repairs and remediation.

A community-wide culvert condition assessment program would typically be developed by public works management and completed by summer staff, or by regular staff during a period of lower summer activity. Culvert inspections should be completed every two to five years or on an ongoing basis, such that an updated condition rating is provided for every culvert at least every five years.



A roadway condition map may reveal problem areas that need attention and can be linked with work orders to stay current. Image: ©SpringerOpen

Provide Asset Management Training

Asset Management Training for Council and Staff

Infrastructure is critical for providing services like transportation to residents and visitors. Informed planning uses the right information to make decisions about maintaining, repairing, and replacing infrastructure assets like roads, culverts, and pipes, in a timely and cost-effective way. Asset management provides a system to ensure those infrastructure assets are kept in service and that quality is maintained to meet community expectations.

To implement good asset management practices, Council, leadership and staff of municipalities of all sizes benefit from training opportunities. These may be in-house, to make asset management principles relevant with Town data, or external to establish asset management principles.

Modules for training might include the following:

Asset Management Course Options

- Introduction to Asset Management – selected council and staff members
 - Canadian Network of Asset Managers, Asset Management 101: \$45, 3 hours
 - <https://cnam.ca/am101-elearning/>
- Develop your asset register and condition assessments – senior staff member
 - Asset Management Saskatchewan, The Asset Register and Initial State of the Infrastructure Report: \$157.50, 9 modules
 - <https://learn.assetmanagementsk.ca/courses/the-asset-register-initial-state-of-the-infrastructure-report>
- Consider the Canada-Manitoba Job Grant for advanced training – senior staff member
 - PEMAC Asset Management Program: offered through Northern Lakes College
 - [Get Started with Asset Management Program | PEMAC](#)



Utilizing Asset Management Software

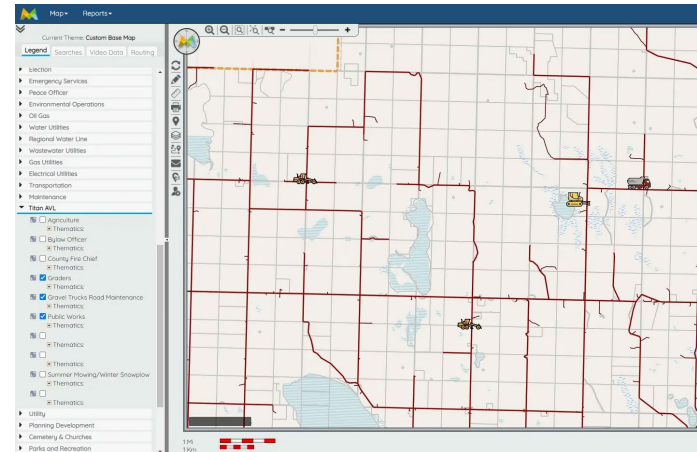
Develop the functionalities of your existing Asset Management Software

The RM uses the Catalis™ MuniSight asset management suite. MuniSight includes functions, such as WebMap and AMP, that are designed to assist with municipal operations and support effective capital investment planning.

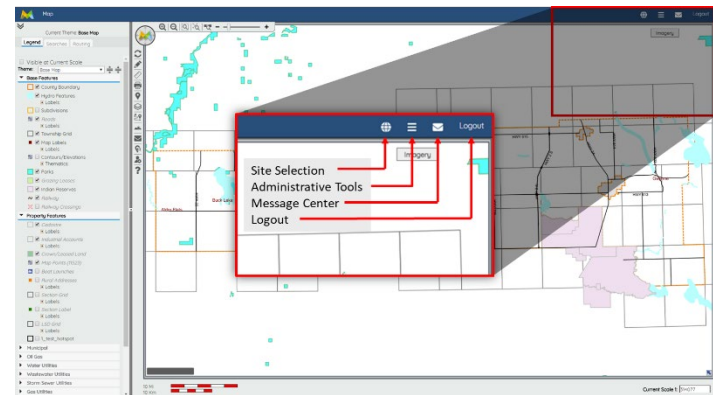
A primary benefit of effective use of asset management tools is increased transparency and reliability of decisions. With asset management reporting, capital and operational activities are justified and documented, to give confidence to management and council when making investment decisions.

- **MuniSight WebMap** offers a platform to integrate asset data, including asset condition and operations data. This allows the municipality to keep updated records on public works activities and identify priority assets, such as roadways and ditches, that may need attention.
- **MuniSight AMP** includes functions like work order requests and maintenance tracking that are integrated with WebMap.

Effective use of these tools over time may lead to long-term cost savings through operational efficiencies. The tools assist the Public Works and RM administration to optimize the timing and scope of maintenance and capital works. They also provide clear systems for work order management, which may reduce paperwork and streamline time and resource management processes.



MuniSight™ WebMap offers methods to track public works activities and automate workflows, to ensure expenses are documented and accessible to council. Image ©Catalis



Flood Management and Climate Resilience

It is understood the RM is in discussions with surrounding municipalities and the Province on developing a coordinated water conservation approach to the management of the many lakes and water courses that run throughout the RM. This work will be vital to the long term management of these vital natural assets. The following should be considered alongside and as part of the discussions.

Develop Drainage and Flood Risk Maps

Drainage and flood risk maps as layers in your GIS can support effective management of drainage infrastructure and reduce risks of flooding. Flood risk mapping is a leading practice among municipalities who face regular interruptions to service, including road washouts, due to localized flooding. The ultimate outcome is reduced risk and costs from flood events and extending the life of flood-prone assets like roads.

A flood risk map utilizes topographic data, regional flood maps, and historical data to develop a localized flood risk assessment across the municipality. A drainage map assists in identifying locations where culvert and ditch infrastructure may require upsizing or reconditioning to reduce risks to public and private property. These may also inform other policies and programs, such as floodplain development bylaws that may be researched, discussed, and approved by council.

Develop a Natural Asset Management Plan

As a longer-term plan, to reduce risks to infrastructure systems, a leading practice is to develop a natural asset management plan, which may be developed in coordination with surrounding municipalities. These plans evaluate natural systems, especially watersheds, for their impact on public services. Assets including waterbodies, streams, open spaces, forests, and fields, are evaluated to identify risks and criticalities within these natural systems that may affect the municipality's long-term ability to serve its residents.

These natural assets can support reduced risks due to natural disasters such as fires and floods, by managing water flows and mitigating fire spread. Understanding these assets' capacity, constraints, risks, and mitigation measures would help ensure their continued functioning. A natural asset management plan provides strategies to reduce risks associated with natural assets, for example, limiting planned discharges into natural streams with limited downstream capacity. Such a plan may call for specific activities, such as commissioning a wildland fire management strategy, and it may also identify co-benefits that could support such activities, for example installing a sports field or park that also serves as a fire break.



Lac du Bonnet's identity is rooted in its natural assets. These assets add social value and provide critical services like water and drainage, but also increase the risk of fires or floods. Image: ©RM of LdB

Road Maintenance Standards

The **Ontario Minimum Maintenance Standards for Municipal Highways (MMS) (O. Reg. 239/02)** establishes the minimum criteria for maintaining roads in all municipalities. The classification of roadways under the MMS is determined by their average daily traffic and speed limits. The level of maintenance required for each road is determined by its classification, with Class 1 roads needing the most comprehensive level of service. Currently, the RM of Lac du Bonnet's service level is close to Ontario's Class 5 in that the RM clears snow upon 10 cm of snow accumulation. It targets clearing all roads within the RM within 2.5 days. Lac du Bonnet does not commit to a patrol frequency.

Below is a summary of each road classification and the MMS service requirements for typical rural municipality road services.

Road Class 1	Road Class 2	Road Class 3	Road Class 4	Road Class 5
<ol style="list-style-type: none"> Patrol frequency: 3 times every 7 days Winter maintenance: 2.5 cm accumulation cleared within 4 hours Potholes: 600 cm² and 8 cm deep repaired within 4 days Cracks: Repaired within 30 days 	<ol style="list-style-type: none"> Patrol frequency: 2 times every 7 days Winter maintenance: 5 cm accumulation cleared within 6 hours Potholes: 800 cm² and 8 cm deep repaired within 4 days Cracks: Repaired within 30 days 	<ol style="list-style-type: none"> Patrol frequency: once every 7 days Winter maintenance: 8 cm cleared within 12 hours Potholes: 1000 cm² and 8 cm deep repaired within 7 days Cracks: Repaired within 60 days 	<ol style="list-style-type: none"> Patrol frequency: once every 14 days Winter maintenance: 8 cm cleared within 16 hours Potholes: 1000 cm² and 8 cm deep repaired within 14 days Cracks: Repaired within 180 days 	<ol style="list-style-type: none"> Patrol frequency: once every 30 days Winter maintenance: 10 cm cleared within 24 hours Potholes: 1000 cm² and 8 cm deep repaired within 30 days Cracks: Repaired within 180 days

Source: Derived from O. Reg. 239/02: MINIMUM MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS.

Planning, Budgeting, & Utilization

Planning and Budget

In transportation fleet planning and budgeting, best practices aim to strike a balance between thorough analysis and practicality, in order to establish the transparency and defensibility necessary for effective expenditure management. The following are widely recognized as leading practices within the industry:

- Establishing planning and budget cycles with defined tasks, timelines, and assignments.
- Linking plans and priorities to organizational and customer objectives, which should be clearly defined, documented, and approved by RM leadership.
- Maintaining a transparent planning and budgeting process that incorporates input from all key stakeholders and is effectively communicated.
- Maintaining strong long-term financial planning capabilities that consider strategies for adapting to changes in funding levels and service demand.
- Regularly analyzing portions of the service delivery model, such as the use of outsourced services, to ensure effective and efficient service provision.
- Implementing appropriate policies, procedures, and internal controls for the accounting of charge-backs, revenues and expenses.

Utilization

Optimal utilization of staff and asset resources is ensured through effective allocation and alignment in providing frontline services. This involves purposeful tracking and analysis to determine the ideal type and configuration of equipment based on customer needs and availability. The following are widely recognized as leading practices within the industry:

- A centralized planning and rationalization of equipment selection and allocation, implemented with supporting technologies in place to capture and analyze vehicle utilization and requirements information.
- Regularly conducting evaluations of fleet allocation effectiveness and efficiency, reviewing selection and allocation criteria, utilization rates, and latent availability. The results of these evaluations, including cost implications, are communicated to management on a regular basis. Clear delineation of tasks and timelines necessary for effective deployment of vehicles and equipment is also done, including an evaluation of necessary staffing resources and demand for resources and maintenance.

Succession Planning

A set of procedures targeted at facilitating Succession Planning Strategy would comprise of the following steps. These steps could be efficiently organized and managed using HR technologies designed for this purpose. Inputs to each stage are listed by category.



Inputs:

- Worker Profile
- Job Descriptions
- Talent Review
- Talent Search
- Talent Pool Profiles
- Talent Dashboard & Worklet
- Compare Workers
- Competency Library
- Job Competency Models
- Surveys

Inputs:

- Performance Reviews
- Online Appraisals for Employees & Managers
- Goal Management
- Cascading Goals
- Anytime Feedback
- Multi-source Rating Feedback
- Disciplinary Actions
- Pay for Performance
- Performance Calibration

Inputs:

- Potential / Readiness Identification
- Talent Matrix
- Succession Plan
- Talent Review
- Talent Pool Management
- Annual Talent Calibration












Inputs:

- Talent Review
- Career Discovery
- Development Plans
- Personal Skills and Competencies Management
- Job Competency Models
- Talent Pool Management
- Mentorship

Key Findings

Overview of Service Delivery Key Findings

A key objective of the review was to evaluate the extent to which Transportation Services has sufficient resources to meet Level of Service (LOS) expectations. The following chart summarizes its success in meeting service expectations.

Service Area	Service	Priority	Are LOS Expectations Met?	Level of Service Delivered
Roadways	Inspections	High		Roads are regularly inspected and requests from the public are responded to.
Roadways	Seasonal Grading			All roads are graded twice per year.
Roadways	Maintenance Grading			Priority high-traffic routes are maintained consistently. Some heavy equipment routes require significant, regular maintenance, resulting in some routes receiving less attention. Transportation is not currently able to maintain all roads to the desired standard.
Roadways	Dust Control			Dust control solutions are applied to all gravel roads on a 2-year rotation. Extra applications are made as needed.
Winter Operations	Snow Clearing at the Airport			Runway and supporting roads are cleared daily as needed.
Winter Operations	Snow Clearing on Roads			Snow accumulation of 10cm is cleared within 2.5 days as per policy.
Drainage	Culvert Maintenance/Steaming		Medium	
Drainage	Drainage Network Maintenance			Planned culvert replacements are completed, though there are unaddressed drainage network challenges.
Drainage	Brushing	Low		A large portion of roads are not being brushed due to being a relatively lower priority.
Parks, Cemeteries, & Boat Launches	Grounds Keeping, Marking, & Repair			Seasonal staff consistently maintain parks and grounds. No concerns noted in this area.
Street Lighting & Signage	Installation of Signage & Civic Addressing			Signage and civic addressing is consistently updated and maintained.

Summary of Challenges & Gaps

The assessment of Transportation Services has revealed a number of key areas where the RM is faced with challenges and gaps in delivering against its goals of efficient and effective service delivery. These are listed below along with actions that the RM can take to make improvements.

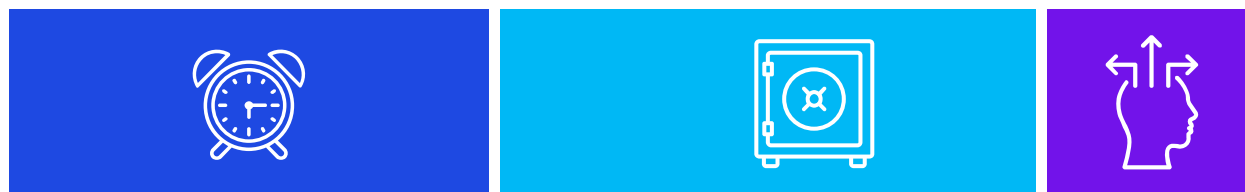
Area of Issue	Description of Challenge or Gap	Opportunity to Bridge the Gap	Action
Excessive condition decay on some roads	Many road sections are impacted by semi-truck and heavy equipment traffic. This has resulted in much higher levels of maintenance.	1. Redevelop Select Heavy Equipment routes	Develop a cost-benefit framework to evaluate the potential long-term benefits of reconstruction.
Service Standards & Tracking Resourcing	Transportation lacks a summary level view of the annual work it performs, making annual work planning less efficient.	2. Enhance Work Planning & Management	Create a work plan that measures whether services are being accomplished within their planned timeframe.
Asset Management	The RM has not yet collected asset data for some asset types to better manage and maintain those assets.	3. Expanding & Maintaining Asset Data	Enhance data accuracy for improved representation of current conditions and extend asset data collection across all service areas.
Fleet	A few vehicles have relatively low utilization. Also, excessive supply chain delays kept one grader out-of-service for a number of months.	4. Critical Spares Inventory	Consider avenues to navigate around supply chain challenges and ensure higher equipment up-time.
Resource Efficiency	Benchmarking highlighted that many rural municipalities of similar size utilize resource-sharing agreements to find efficiencies.	5. Inter-Municipal Cooperation	Identify where service standards can be improved by engaging in resource-sharing relationships with neighbouring municipalities.
Administration	There are gaps in administrative effectiveness in the RM's service tracker capabilities, and financial approval limits.	6. Administrative Improvements	Add features to improve the service tracker, and consider raising designated officers' approval limit.
Staffing	Transportation has difficulty recruiting and keeping talent as exhibited by the high turnover of staff.	7. Enhance Recruitment & Retention	Consider new avenues to recruit talent and lower turnover by enhancing training and performance management practices.
Unrecovered Costs	There are some areas where Transportation does not recover the costs it takes to provide select services.	8. Improved Cost Recovery	Consider the lifetime and real costs of providing Cemeteries and grading of private roads.
Fleet	Leading practice suggests that Transportation expand the fleet data it collects to better manage assets.	9. Fleet Operations Dashboard	Build a fleet operations dashboard to monitor and manage fleet operations in real-time.

Improvement Opportunities

Opportunities Overview – Legend

The legend below illustrates a high-level evaluation of each opportunity based on the following parameters

Legend



Criteria	Implementation			Benefit			Level of Decision	
	Cost	Time	Risk	Efficiency	Effectiveness	Service		
Ratings Applied to Opportunities	Low	Investment of less than \$15,000 ("L")	Short (<18 months) ("L")	Low ("L")	Neutral ("o") or negative impact ("-")			Transportation
	Medium	Investment of \$15,000 to \$100,000 ("M")	Medium (18-36 months) ("M")	Medium (Moderate) ("M")	Moderate improvement from current state ("+")			Senior Leadership
	High	Investment of >\$100,000 ("H")	Long (>3 years) ("H")	High (Complex) ("H")	Significant improvement from current state ("++")			Council

Opportunities Overview



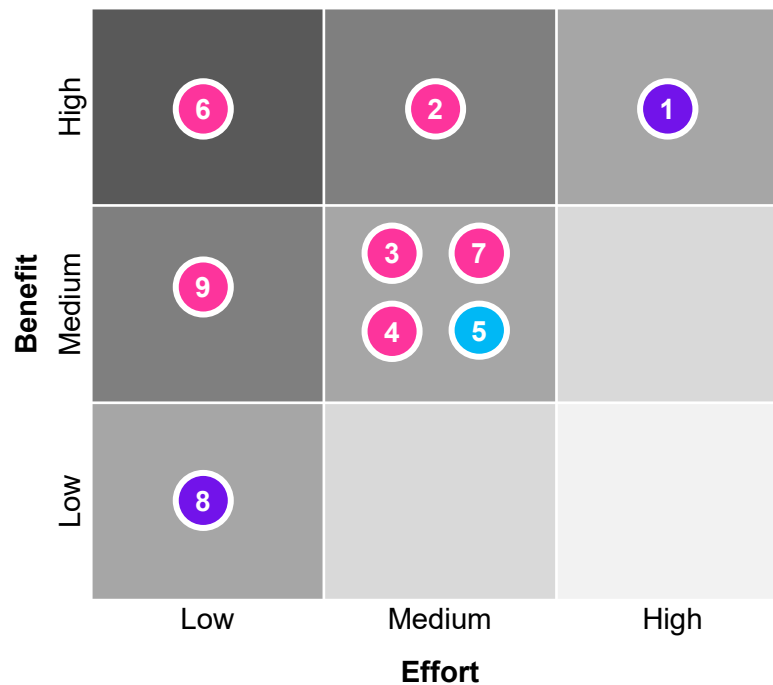
	Implementation			Benefit			Level of Decision
	Cost	Time	Risk	Efficiency	Effectiveness	Service	
1 Redevelop Select Heavy Equipment Routes	H	H	L	+	+	o	Council
2 Enhance Work Planning & Management	L	M	L	+	++	+	Transportation
3 Expanding & Maintaining Asset Data	M	M	L	o	+	+	Transportation
4 Critical Spares Inventory	M	L	M	+	o	+	Senior Leadership
5 Expand Inter-Municipal Cooperation	L	L	L	+	+	+	Council
6 Administrative Improvements	L	M	L	+	++	+	Council
7 Enhance Recruitment & Retention Practices	L	L	L	+	+	o	Council
8 Improve Cost Recovery	L	L	L	+	o	o	Council
9 Implement a Fleet Operations Dashboard	L	L	L	o	+	o	Transportation

The above table lists the suggested opportunities for improvement along with a high-level assessment of their potential time to implement, and the relative degree to which they satisfy the evaluation criteria for prioritizing opportunities.

Opportunity Assessment

The following high level summary compares the relative benefit and effort for each identified opportunity. This assessment suggests that those opportunities in the top-left should be prioritized based on a return on effort cost-benefit assessment. Opportunities have been aligned to key areas of strategic focus.

ID	Name	Effort	Benefit	Strategy
1	Redevelop Select Heavy Equipment Routes	High	High	B
2	Enhance Work Planning & Management	Medium	High	C
3	Expanding & Maintaining Asset Data	Medium	Medium	C
4	Critical Spares Inventory	Medium	Medium	C
5	Expand Cooperation	Medium	Medium	A
6	Administrative Improvements	Low	High	C
7	Enhance Recruitment & Retention Practices	Medium	Medium	C
8	Improve Cost Recovery	Low	Low	B
9	Implement a Fleet Operations Dashboard	Low	Medium	C



Strategic Category Legend
A. Enhanced Cooperation
B. Better Infrastructure Management
C. Improved Admin Support Systems

Opportunity 1 – Redevelop Select Heavy Equipment Routes

Context

The RM has a list of roads which experience higher traffic volumes and use by heavier equipment than they were originally designed to serve – specifically, there are semi-trucks and larger agricultural implements causing damage to some roads. Users have been asked to use truck routes, but the RM is currently unable to enforce road restrictions. At this time, Transportation maintains high-traffic routes weekly, compared to twice annually for low-traffic routes.

It should also be noted that the population more than doubles between winter and summer, going from approximately 3,000 in winter to over 8,000 people between May and October.

Description

The RM could consider rebuilding these specific road sections to a higher construction standard to cut down on recurring maintenance. A business case for this initiative would evaluate the relative costs of maintaining routes used by heavy equipment versus regular routes, and compare it against the cost to rebuild these gravel roads. This opportunity will present a cost-benefit framework to evaluate the potential long-term benefits of reconstructing specific roads.

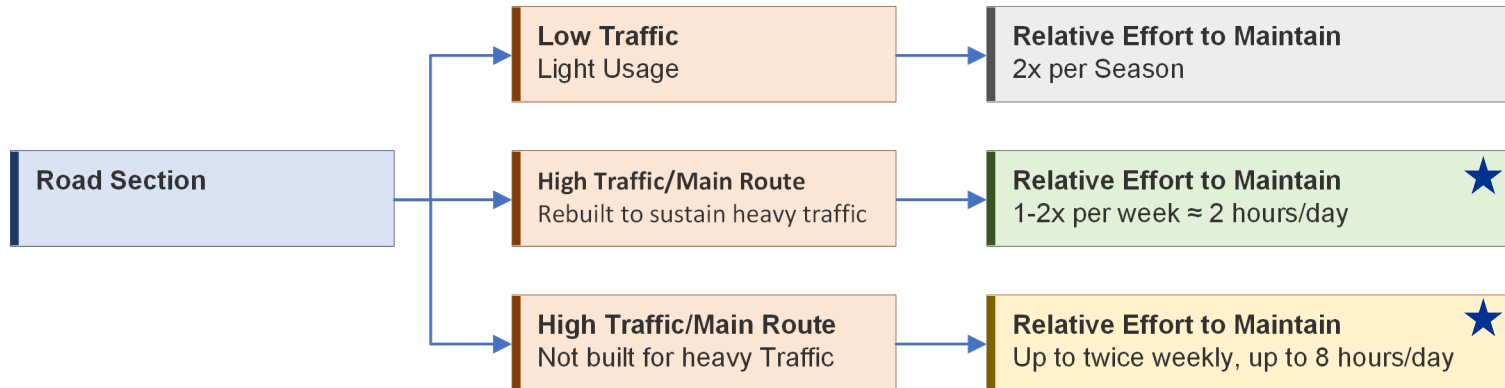
Management is also of the mindset that there is also a benefit to the RM that operators and equipment would have greater availability for other Transportation projects.

Benefits	Description
1. Reduce Lifecycle Maintenance Costs	Raising the construction standard of the roads that require frequent maintenance will reduce maintenance costs over the long-term.
2. Opportunity to Redeploy Staff on Other Projects	Raising the construction standard would free up operators to focus on grading other roads in need of more attention.

Method & Implementation

Reconstruction versus Maintenance

- At a high-level, the decision tree below represents how Transportation determines the amount of grading each road section receives:



- The level of maintenance effort for each road section depends on its usage. Lightly-used road sections receive grading twice per season, while heavily-used main routes require grading one to two times per week, for up to eight hours, depending on daily deterioration.
- When deciding whether to rebuild a road section or continue with high-maintenance, a cost-benefit analysis should compare the two scenarios marked with stars. Specifically, it should assess the difference between grading the road section if it is reconstructed (green box) and grading the road section if it is not reconstructed (yellow box). Determining the cost difference between these levels of effort will provide evidence for making more informed reconstruction decisions
- The following page will provide a step-by-step method to help determine if a heavy usage road section requiring high levels of maintenance should be reconstructed or continue its maintenance.

Method & Implementation

Reconstruction versus Maintenance

The method below can help decide whether it is cost-efficient to rebuild any given length of road. The partial reconstruction of Wendigo Road in the summer of 2022 will be used as an demonstrative example. Assumptions and equations on how to calculate each cost are found in Appendix D.

Steps	Quantities
1. Determine the difference in total hours grading per week. The table below illustrates that the difference amounts to one additional day per week of eight hours, and six additional hours on the same day.	14 hours
2. Total amount of weeks. Assume from May to early September the road section will receive grading.	18 weeks
3. Calculate Yearly Operating Costs: These include the wage of the operator, fuel, maintenance and repairs, and overhead. First, find the hourly operating costs, then convert these to yearly by multiplying by the grading hours per week (14), and then the total weeks per year grading.	\$18,500
4. Calculate Yearly Equipment Depreciation Cost: This is found by dividing the initial capital cost of the asset divided by its estimated lifespan. In this example, a John Deere 770 GP Grader is used.	\$1,000
5. Calculate the Annual Maintenance Cost per Year: The sum of yearly operating and depreciation costs.	\$19,500
6. Estimate the Reconstruction Cost: Since this road section only required a partial reconstruction, the cost to complete was dramatically lower than the average cost to rebuild a road section (i.e., approximately \$350,000/km, see Appendix D).	\$60,000
7. Calculate the Payback Period: The payback period is the number of years required for the cost savings from reduced maintenance to offset the initial expense of reconstructing the road. It is found by dividing the reconstruction cost by the annual maintenance cost per year.	3.1 years













Decision: The calculation indicates it will take approximately 3.1 years to recover the cost of the capital project. KPMG suggests using a 10-20 year payback period as guide to determine whether or not to rebuild. Therefore, $3.1 < 10$, so it would be cost-effective to rebuild.

Road	Length (km)	Traffic Level	# of Grades per Week	Approximate Effort (hours/day)	Total Effort per Week (hours)	Weeks per Year	Annual Level of Effort to Maintain (hours)
Wendigo Road Heavy Maintenance	1.3	Heavy	2	8	16	18	288
Wendigo Road Reconstructed	1.3	Heavy	1	2	2	18	36

Risks & Challenges, Timeline

The following risks and challenges are noted for the RM's consideration when evaluating this opportunity, and execution of the opportunity could proceed on a timeline similar to that described below.

Risks & Challenges		Description	Probability	Impact
1.	Low Reconstruction Estimates	The estimate to reconstruct a section of road may be low. Total reconstruction costs may be much larger than anticipated, which can push the payback period past the 10-20 year threshold.	Medium	High
2.	Capturing Operating Costs	It can be difficult to accurately capture all the operating costs involved in the hourly maintenance of a gravel road. Enhanced resource tracking can mitigate this challenge.	Medium	Medium

Timeline for Next Steps		2023	2024	2025	2026	2027
1.	Begin enhanced tracking of the grading of high-maintenance sections on timesheets.					
2.	Execute on 2023 road reconstruction projects as planned.					
3.	Consider next priorities for road reconstruction and use the proposed methodology to evaluate the cost-benefit of rebuilding those sections.					
4.	Evaluate level of maintenance effort required for rebuilt sections to validate improvements.					
5.	Council to approve next priorities as capital projects during budget process.					
6.	Execute on next priorities.					

Opportunity 2 – Enhance Work Planning & Management

Context

Transportation is periodically asked to consider the impacts of changes to public services. For example, Transportation was recently directed to take responsibility for airport runway maintenance. Runway maintenance, particularly during winter, can be required daily and it has been made a top priority for Transportation. A second example is that it's possible that multiple provincial roads will be transferred to RM ownership. In these or other changes affecting service delivery, Transportation is limited in its tools used to monitor service provision at a high-level in a way that allows it to respond to additional requests for services.

Description

Transportation needs to develop a tool that captures its annual and seasonal workplans. In short, Transportation needs to be able to describe the demand and supply equations of service delivery. It needs to define the demand side – how much effort is required to maintain assets to the required Level of Service standard – and also the supply side – how much staff capacity is available to deliver on expectations.

The results of this comparison should also highlight the areas where there is insufficient capacity to deliver services, or that Levels of Service are either over or under-achieved. The work that goes into making work estimates will help identify the level of effort required to close the gap between current service provision and the desired standards. Once the gaps have been identified, Transportation can provide evidence to Council regarding its current resource situation and communicate what resources it requires to accomplish Council objectives.

Benefits	Description
1. Identify Resourcing Surpluses & Deficits	By tracking resource allocation more carefully, Transportation can identify areas where resources are being over-allocated and where too little effort is being allocated, thereby enabling the redistribution of resources to other service areas in need.
2. Future Planning	Tracking resource allocation can inform decision-making on future projects or newly-endowed tasks. By utilizing previous and current data, Transportation can determine whether the new project or task can be accommodated within existing resource allocation, or whether additional resources will be required.
3. Increase Accountability	By tracking resource allocation, Transportation can increase accountability among stakeholders by providing clear insights into whether new responsibilities can be accommodated within the existing resource constraints. This approach helps to alleviate pressure on Transportation to take on tasks beyond their capacity, making stakeholders more accountable for determining which responsibilities should be altered or whether additional resources need to be acquired. Ultimately, this can lead to reduced burnout and improved overall service quality.
4. Optimize Resource Allocation	By enhancing tracking efforts, Transportation can further optimize resource allocation and provide better services to the community.

Method & Implementation

Guidelines for Implementation

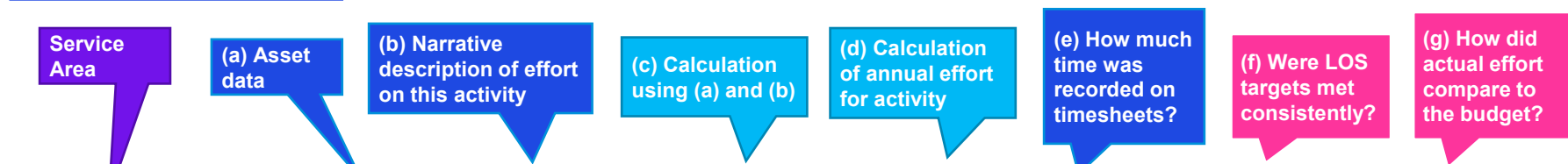
The table below and continued on the following page serves as an example for setting up and organizing an annual workplan. While the numbers provided for each service area are not actual figures, they help illustrate the table's functionality. The primary goal of this table is to compare the estimated effort required to complete a service with the actual effort expended, thereby identifying which services are being completed and where gaps exist. "Hours of effort" functions as the KPI for comparing estimates and actuals.

In this example, the "Meeting LOS Targets" column indicates whether the quantitative estimate of work (column f) was met, followed by a variance percentage that calculates the difference between estimated and actual effort.

Once the appropriate KPIs are determined to track resourcing efforts, an annual workplan can be built. For guidelines to improve how resourcing levels are tracked, see Appendix E.

Based on the data in this table, key insights may include that a higher recorded maintenance grading time can indicate the need for road reconstruction. The workplan can be presented to Council to aid in ensuring the necessary adjustments for accommodating new responsibilities are met.

Illustrative Example



Service	Estimate of Assets	Estimated Time	Productivity Rate	Budgeted Annual Effort	Actual Time	Meeting LOS Targets*	Variance (%)
Road Inspections	700 km (all roads once)	40 hours	15-20 km/hr	40 hours	30 hours	✓	-10 hours (-25%)
Initial Spring Grading	700 km (all roads once)	180-240 hours over 3 weeks	1.5 – 2.0 km/hour	720 hours	730 hours	✓	+10 hours (+1.4%)

*Note: This rating is intended to capture whether the whole body of work is completed to the desired LOS standard.

Method & Implementation

Illustrative Example











Service	Estimate of Assets	Estimated Time	Productivity Rate	Budgeted Annual Effort	Actual Time	Meeting LOS Targets*	Variance (%)
Maintenance Grading (Low traffic routes)	640 km (done by request after spring grading)	40-80 hours per year	n/a	80 hours	90 hours	✓	+10 hours (+13%)
Maintenance Grading (Heavy traffic routes, low specification)	35 km	80-120 hours per week (20 weeks per year)	0.3 – 0.4 km/hour	2,400 hours	2,600 hours	→	+200 hours (+8.3%)
Maintenance Grading (Heavy traffic routes, high specification)	25 km	20-30 hours per week (20 weeks per year)	0.8 – 1.3 km/hour	600 hours	550 hours	✓	-50 hours (-8.3%)
Airport Runway & Road Maintenance	Not available	Not available	Not available	Not available	Not available	✗	n/a
Graveling (once every 3 years)	700 km (all roads once)	700 hours	1.0 km/hour	Not this year	Not this year	n/a	n/a
Dust Control (once every 2 years)	700 km (all roads once)	1,400 hours	2 hours / km	Not this year	Not this year	✓	n/a
Snow Clearing	700 km	80 hours per week (12 weeks per year)	2 – 3 km / hour	960 hours	900 hours	✗	-60 hours (-6.3%)
Brushing	200 km	1,000 hours	0.2 km / hour	500 hours	200 hours	✓	-300 hours (-60%)
Culvert Replacement	8 Culverts	160 hours	20 hours / culvert	160 hours	180 hours	→	+20 hours (+12.5%)
Other services...	--	--	--	--	--	--	--
Total	--	--	--	Total TBD	Total TBD	--	Total TBD

*Note: This rating is intended to capture whether the whole body of work is completed to the desired LOS standard.

Risks & Challenges, Timeline

The following risks and challenges are noted for the RM’s consideration when evaluating this opportunity, and execution of the opportunity could proceed on a timeline similar to that described below.

Risks & Challenges	Description	Probability	Impact
1. Difficulty in Measuring Certain Metrics	While time is a common metric for resource tracking, it may not always be the most appropriate or useful metric for certain tasks or projects.	Medium	Medium
2. Data Accuracy Concerns	There may be concerns about the accuracy of the data collected through the resource tracking system, especially if it relies on manual data entry or input from multiple sources.	Low	Low
3. Correlation vs. Causation	It is important to thoroughly investigate inferences made when reviewing gaps between estimated and recorded hours for a service. There are likely multiple factors influencing the gap, and attributing the discrepancy to a single factor can be costly.	Medium	Low

Timetable for Next Steps		2023	2024	2025	2026	2027
1.	Develop a list of service areas, aligned to asset data and timesheet categories for tracking					
2.	Perform calculations (Productivity and Annual Budget of Effort)					
3.	Input timesheet data at an appropriate frequency (Monthly, Quarterly, or Annually)					
4.	Review the Annual Workplan Review the annual workplan to identify what is or is not being completed, and if additional resourcing or reallocation is necessary to complete work and meet standards of service.					

Opportunity 3 – Expanding & Maintaining Asset Data

Context

Like many Manitoba municipalities, Lac du Bonnet is developing its asset management capabilities. These capabilities include having accurate data to describe the assets used by the RM in service delivery. For example, this would mean going from knowing there are 724 km of municipal roads to knowing the condition, maintenance data, and work order/complaint history of a road section. The same could be done to other asset classes – e.g. fleet, traffic signs, drainage ditches, parks, cemeteries, and boat launches

Description

Lac du Bonnet would benefit from completing its asset database to support improved decision-making and cost efficiency. Enhancing the data quality of the RM's assets can facilitate better-informed and cost-effective decision-making.

Supporting this goal, the RM could improve the efficiency of data collection by: 1) purchasing tablets and setting up data collection tools to reduce data entry; and/or 2) hire engineering summer students to collect data.

Benefits	Description
1. Effective Asset Management	Detailed asset data is essential for effective asset management. Improved record keeping allows the municipality to optimize asset use, reduce downtime, and avoid unnecessary maintenance expenses.
2. Improved Planning	Improving the accuracy of asset data enables Transportation to better plan for current and future acquisitions and replacements, supporting maintenance and construction projects.
3. Improved Budgeting	Higher quality asset data can help improve budgeting processes. With accurate asset data, the municipality can better forecast maintenance and replacement costs, and plan accordingly.
4. Decision Justification	With a more complete picture of its assets, Transportation can make more informed decisions regarding its resources. If new service expectations are passed down from the Province or Council, Transportation can determine whether adopting new responsibilities requires additional assets or a reallocation of assets and effort.

Method & Implementation

Defining Areas of Improvement

The outcomes of maintaining accurate and useful asset inventory data are:

- Ability to efficiently provide **high-level summary information** to describe pertinent asset characteristics (quantity, condition, etc) and costs associated with owning these assets.
- **Access to historical information** related to the assets – e.g., the data on which the asset was constructed or installed, materials of construction, dimensions or measurements, cost to install work order history, etc.
- Using **condition data** to inform work plans and budgets. This requires that there is a process for assessing asset condition and maintaining asset data, roles responsibilities are defined, and data is updated at appropriate frequencies.

With these goals in mind, the RM can:

1. Collect data to fill asset data gaps.
2. Build routines or processes to inspect assets at appropriate frequencies and update centralized data to support decision-making.

Category of Assets	Summary Level Data	Inventory Data	Historical Information	Regularly Maintained Condition Data
Roads	✓	✓	✓	✓
Culverts	✓	✓	✓	✓
Drainage	✓	✓	✓	🔍
Signage	✓	✓	✓	✓
Cemeteries	✓	✓	✓	🔍
Parks	✓	🔍	🔍	🔍
Buried Fiber-optic Cable*	🔍	🔍	🔍	🔍

Legend:







- ✓ Data is collected in AM systems
- 🔍 Further effort is required

*Note: Lac du Bonnet does not own these assets, but values tracking these for Right-of-Way management.

Risks & Challenges, Timeline

The following risks and challenges are noted for the RM’s consideration when evaluating this opportunity, and execution of the opportunity could proceed on a timeline similar to that described below.

Risks & Challenges	Description	Probability	Impact
1. Time-consuming	Collecting additional information on assets can be time-consuming, potentially leading to delays or reduced service quality if staff resources are diverted from other pertinent tasks. Refining data recording techniques can help mitigate the risk of potential delays or reduced service quality or bringing on more resources.	Low	Medium
2. Data Accuracy	The quality of asset inventory data is subject to its accuracy. Inaccurate or incomplete data can lead to poor decision-making and wasted resources. Limited resources and capacity may pose challenges to accurately collecting and maintaining data.	Low	Low
3. Opportunity Cost	Collecting and maintaining asset inventory data can be expensive, as the cost of acquiring hardware or software programs can be a financial burden. In the RM's case, software has already been purchased, but further effort is needed to train employees in its use.	Low	High

Timeline for Next Steps		2023	2024	2025	2026	2027
1.	Confirm data gaps					
2.	Standards & Funding Set standards for asset data collection (frequency, accuracy) and develop and secure funding for an assessment program					
3.	Collect information to fill data gaps. Identify frequencies for asset condition inspections					
4.	Refresh asset data.					

Opportunity 4 – Critical Spares Inventory

Context

The state of the supply chain has made the procurement of certain parts difficult, with waiting times exceeding one year in some cases. This has directly impacted Transportation services at the RM. In one case, a grader was out of service for months due to the unavailability of two replacement parts. The RM recently chose to trade in the grader for a new unit in response. It is important that the RM explore solutions to improve equipment up-time and prevent key equipment from being out-of-service. Transportation Services could give consideration to developing a critical spares inventory.

Description

Identify a list of spare parts that should be available at all times. All critical parts should be readily available from a nearby vendor or be stocked by the RM. A critical spare part can be defined as a component within critical equipment such that its failure removes a vehicle from service. By identifying which components are critical to Transportation's operations, inventory can be properly stocked to maximize availability and utilization of Transportation's fleet assets throughout the year.

Benefits	Description
1. Reduced Downtime	If a critical component fails, having the spare on hand will allow for quicker repair and minimize the time the equipment is out of service.
2. Minimize Disruption	If a critical component fails and is not readily available, there is a higher likelihood of service disruption.
3. Cost Savings	Creating and maintaining a critical spares inventory can help save costs in the long-run. By having spare parts on hand, Transportation Services can avoid rush orders and expedited shipping costs associated with emergency repairs. As there are no contractors locally with graders, if a critical piece of equipment fails, the RM's ability to deliver services could be severely disrupted.
4. Simplified Procurement	Keeping a critical spares inventory can simplify procurement processes. Instead of having to search for and order parts on a case-by-case basis, Transportation can purchase and maintain a set inventory of critical spares, reducing the time and resources needed to procure parts.
5. Better Planning	Building a critical spares inventory or list requires Transportation Services to identify critical components and assess their reliability. This process can help identify potential failure modes and allow for better planning for maintenance and replacement schedules.
6. Improved Safety	Ensuring that critical spares are readily available can help improve safety for operators and mechanics. If a safety-critical component fails, since the part is available, the repair could be performed more quickly. This could avoid operators taking a risk by operating equipment in an unsafe condition or experiencing failures in remote locations.

Method & Implementation

Method of Determining Criticality

There are a number of methods for determining the criticality of parts. The following is a simplified version of the Analytical Hierarchy Process. The recommended process identifies: 1) the goals of the process; 2) the responsibilities of the participants; and 3) factors for selecting parts to be listed in the inventory. For other methods of determining criticality, see Appendix F.



Steps	Description
1. Define the Objective	The objective of the exercise is to determine a list of critical spare parts for Transportation Services.
2. Clarify Roles	Identify the roles required to support the process. <ul style="list-style-type: none"> a) Lead mechanic: Develop a draft parts list along with an estimated cost to purchase these items. b) Foreman/Public Works Deputy Manager: Review the draft parts list and priority equipment, revise as needed. c) Public Works Manager: Review and approve the list.
3. Key Equipment	Identify the list of equipment/assets. It is anticipated that the RM's heavy equipment will be the primary focus.
4. Selection	Define the criteria necessary for determining the critical spare parts. Selection criteria could include: <ul style="list-style-type: none"> – Frequency of component breakdown. – Local availability or unavailability of the part. – Lead time for procurement and delivery. – Reliability of the supplier. – Cost of the spare part. – Quality of the spare part.

Method & Implementation

Steps	Description
5. Review Process	The Public Works manager is to review and approve the proposed part list.
6. Inventory Review	The Public Works manager or designate could conduct an inventory of the critical parts inventory at least twice annually.
7. Annual Review	The Public Works manager or designate should review the program against expectations after one year.

The process described is expected to result in an inventory of parts available to limit equipment downtime upon failure.

Other Considerations

Senior Leadership and Public Works leadership are encouraged to coordinate to examine:

- An appropriate upper limit for the overall value of the inventory.
- Potential for long-term vendor relationships. The parts inventory is intended to act as a kind of insurance for Public Works. Public Works may find that there are parts that it uses infrequently. The RM will need to have a comfort level for what inventory it maintains. There may be potential to develop a vendor relationship where the vendor manages the parts inventory, similar to what is done in the manufacturing sector.

Resource-Sharing with Other Municipalities

Inventorying critical spares can be costly. To limit this to an acceptable cost of inventory, the RM may wish to pool resources across neighbouring municipalities by building a shared inventory of critical spares. This could proceed as follows:

1. Identify any equipment models that the partner municipalities own that Lac du Bonnet also owns.
2. The partnering municipality identifies any additions to an inventory list and contributes a portion of the inventory purchase cost to a Shared Inventory Fund.
3. Lac du Bonnet manages and replenishes the inventory as parts are drawn from it.
4. The partnering municipality is responsible to pick up the parts from Lac du Bonnet.



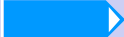



Risks & Challenges

The following risks and challenges are noted for the RM's consideration when evaluating this opportunity.

Risks & Challenges		Description	Probability	Impact
1.	Cost and Budgeting	Creating a critical spare parts inventory may be costly. The cost of inventory includes not only the cost of purchasing the parts but also the cost of storing, managing, and tracking the inventory.	Medium	Medium
2.	Obsolescence	Another risk of creating a critical spare parts inventory is the possibility of obsolescence. As technology and equipment change, some spare parts may become obsolete and no longer needed. If Transportation is not aware of these changes, it may continue to stock parts that are no longer needed, leading to unnecessary costs and waste. The RM should manage the inventory together with plans to replace any equipment models.	Low	Medium
3.	Poor Record-keeping	Effective record-keeping is essential for managing a spare parts inventory. Without accurate and up-to-date records, it can be challenging to track inventory levels, identify obsolete parts, and ensure that the inventory is being managed effectively.	Low	Medium
4.	Opportunity Cost	The funding allocated to the procurement of a critical spares inventory is funding not available for use in other service areas that may be in need of support. Selecting risk-based long-term investments over short-term problems is a trade-off administration will have to navigate.	Medium	Low
5.	Overstocking or Understocking	One of the main risks of creating a critical spare parts inventory is the possibility of overstocking or understocking. Overstocking can lead to unnecessary expenses in purchasing, storing, and managing excess inventory. Understocking, on the other hand, can lead to delays in repairs and downtime.	Low	Medium

Timeline

Implementation of the opportunity could proceed on a timeline similar to that described below.

Timeline for Next Steps		2023	2024	2025	2026	2027
1.	Develop and Refine Critical Parts List.					
2.	Council Approval Present the required reasoning and funding to Council to procure these spares.					
3.	Order Parts, Extend Contractors, & Create Inventory Initiate the ordering of parts and consider extending the pre-approved contractor list to ensure availability of necessary inventory.					
4.	Review & Maintain Inventory.					

Opportunity 5 – Expand Inter-Municipal Cooperation

Context

Most municipalities operate at close to their capacity, making them vulnerable to short-term disruption. With the goal of seeking operating efficiencies and flexibility, it is suggested that Lac du Bonnet pursue avenues of resource-sharing with neighbouring municipalities.

Description

Lac du Bonnet could pursue efficiencies through two specific ways:

- 1. Consider trading road maintenance responsibilities with neighbouring municipalities.** The RM already has in-place the practice of trading road maintenance responsibilities for isolated road sections. These are roads where the RM would have to drive extra distance through either the RM of Alexander or others to reach isolated roads within the RM of Lac du Bonnet. The RM could pursue options with neighbouring municipalities to expand this approach.
- 2. Consider developing agreements to provide services to neighbouring municipalities** in the case of extreme emergencies, or conversely, receive emergency assistance. The benchmarking analysis found a majority of comparable rural municipalities engage in some form of emergency resource-sharing. The key circumstances that may call for such assistance could include: 1) providing a grader and operator during an extreme weather event; or, 2) providing emergency maintenance or parts for broken-down equipment.

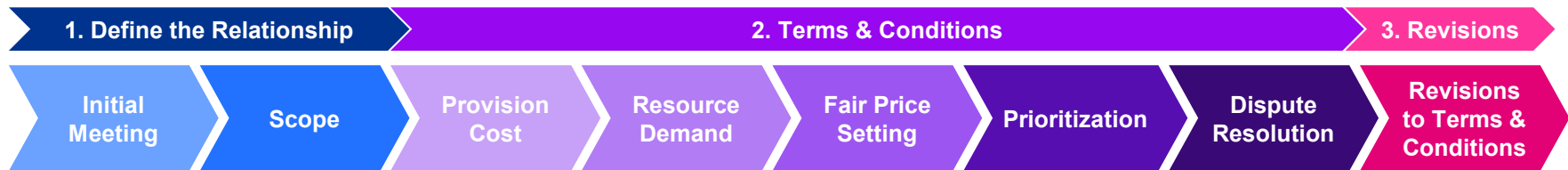
Benefits	Description
1. Collaboration and Networking	Resource-sharing can foster collaboration and networking between municipalities, leading to new opportunities for joint initiatives and partnerships.
2. Cost Savings	By sharing resources with neighboring municipalities, Transportation can reduce its operating costs by avoiding duplication of services and equipment purchases.
3. Emergency Services	In the event a key piece of equipment breaks down which is essential to the safe functioning of transportation, resource-sharing may be the only way to swiftly respond to such events. Further, in the event of a natural disaster or other emergency, resource-sharing can ensure that emergency services such as police, fire, and medical personnel are available to respond quickly.
4. Improved Service Delivery	Resource-sharing can improve the quality of services provided by municipalities by allowing them to leverage each other's expertise and resources.
5. Risk Reduction	Resource-sharing can help municipalities mitigate risks by sharing the cost and responsibility of providing services or equipment.

Method & Implementation

Forming an Agreement

In order to set the RM for a successful working relationship with other municipalities, it is necessary to establish a service agreement that defines the terms of reference. This holds true for services required in emergency, project-based, or recurring situations. The following method provides a guide in developing such an agreement.

The agreement process is divided into three sections: 1) the initial conversation and negotiation before the agreement is made; 2) the development of the terms and conditions of the agreement; and, 3) how the partners will review and refine the agreement after a period of time.



Steps	Description
Define the Relationship	
1. Initial Meeting	<p>Begin conversations with the appropriate representatives:</p> <ul style="list-style-type: none"> – Identify the neighbouring municipalities that are interested in forming a resource-sharing relationship. – Have the appropriate persons meet and discuss their current resourcing situations. Use identified surpluses and shortages in service provision to get an idea of where sharing opportunities exist.
2. Scope	<p>Define the scope of the relationship and opportunity:</p> <ul style="list-style-type: none"> – Once service areas of interest are identified, municipalities can begin defining the scope of the relationship. – This involves defining what specific resources and being shared for what purpose/service.

Service Agreement Development Process

Steps	Description
Terms & Conditions	
3. Provision Cost	<p>Identify the direct and opportunity costs of providing the resource:</p> <ul style="list-style-type: none"> – Begin with calculating the direct costs of providing the resource, including any fixed costs (such as capital expenditures or maintenance costs) and variable costs (such as labour or materials). – Next, identify and calculate the opportunity costs of not pursuing the alternative. In this scenario, the primary factor to consider is the opportunity cost of potentially neglecting local service standards in favor of contracted work. – By assessing these costs, a baseline for determining the necessary amount to cover Transportation's expenses will be established. Identify assumptions when providing services – e.g., the supplying partner and equipment operator is responsible for any damage done to property and related equipment insurance costs.
4. Resource Demand	<p>Consider the demand for the resource:</p> <ul style="list-style-type: none"> – Transportation should consider how much demand there is for the resource, and how much it can reasonably charge for access to it. This will depend on factors such as the size of the resource, the level of competition in the area, and the willingness of other municipalities to pay. – Conversely, if the resource being provided is in high demand in its own municipality, then pricing may be adjusted appropriately. If the resource is unavailable, a municipality is also under no obligation to provide it.
5. Price Setting	<p>Set a price that is fair and sustainable:</p> <ul style="list-style-type: none"> – Having gathered information on the costs and demand of the resource in question, Transportation needs to decide on the principles that define what a fair price is to them. <ul style="list-style-type: none"> – For example, if the principle was to have a full cost recovery, then the fair price would reflect the reimbursement of all costs associated from providing the service (labour and non-labour). – One principle to consider, which can satisfy the next step (Prioritization), is to ensure that RM's own service standards are not compromised or lowered. If agreeing to the terms of the agreement would result in a reduction in the quality of service provided by RM, then it may not be a feasible option, even if the price or benefits appear to be attractive. – The cost itself may take the form of a fixed fee or a usage-based fee. Conversely, the price could be an exchange of services. In this case, the value of the service being received (exchanged) can be priced similarly by using steps 1 & 2.

Service Agreement Development Process

Steps	Description
Terms & Conditions	
6. Prioritization	<p>Define service provision priorities:</p> <ul style="list-style-type: none"> – If prioritization is not reflected or determined in the fair price step, then there needs to be guidelines stating the order of operations in the case of both parties requiring the shared service simultaneously. – Depending on the nature of the service being shared, prioritization problems may not arise or are easily dealt with. <ul style="list-style-type: none"> – For example, If the nature of the service is not dependent on the weather or events with higher uncertainty, rotations can be implemented as an effective means to ensure the resources usage is spaced and not overlapping between municipalities. – If the nature of the service has a higher degree of uncertainty, then priorities need to be discussed and agreed upon between municipalities.
7. Dispute Resolution	<p>Include provisions for dispute resolution:</p> <ul style="list-style-type: none"> – Transportation may consider provisions for dispute resolution in any agreement, in case issues arise during the course of the resource-sharing arrangement. This may involve specifying a process for resolving disputes, or appointing a neutral third party to mediate any conflicts that may arise.
Revisions	
8. Revisions to Terms & Conditions	<p>Regularly review resource-sharing activities and make necessary refinements:</p> <ul style="list-style-type: none"> – Monitor pricing and adjust it as needed to ensure that it remains fair and sustainable over time. This may involve an annual review of costs, demand, and inflation, and adjusting pricing accordingly. – If there are changes in the standards of service for either municipality due to new responsibilities assigned by Council or similar reasons, the agreement will need to be revised through discussion. In case the two or more parties cannot agree on the revisions, having dispute resolution provisions in place can help to resolve any disputes and continue the relationship.

Terms & Conditions

Framework for Service Level Agreements

Service Level Agreements (SLA) are contractual documents – some of which are legally binding and others, not binding – to define a relationship between organizations and set performance expectations. To guide the RM in developing a SLA the following framework is presented for directional and illustrative purposes.

Mechanism	Description
Objective	– The reason for measuring the service level.
Definition	– A specific description of the service level and its importance to the program.
Method	– A description of how the achievement of the service level will be measured; which performance and user satisfaction measures will be used; which data sources will be used; and how the data will be captured.
Service Level Targets	– A set of values that define minimally acceptable operational performance and user satisfaction for the program. Service provider’s performance will be compared against these values to decide compliance.
Responsibility	– Set out who is primarily accountable for performing the tasks necessary to meet service levels.
Period	– The time over which performance will be validated against the service level.
Limitations	– The limitations and conditions under which the service level can be applied.
Reporting	– A sample report or layout used as a reference for how the service levels will be presented. Discuss getting direct access to service provider information systems.
Continuous Improvement Targets	– Any performance targets to which the service manager and service provider agree. Also include industry standards, or organizations to compare service levels against.
Action	– Definition of what happens when service levels are not met. If penalties to the service provider are to be imposed, then identify the amounts, calculations, and processes involved.
Review	– Date when SLA is to be reviewed or renegotiated.

Terms & Conditions

Terms and Conditions

The articulation of requirements, gaps, expectations, and degree of risk (legal and otherwise) form the basis of the service relationship while the governance and operational structures and processes form the basis of the operational relationship. Important elements of the service relationship, particularly the commitments made by each party to the other, should be included in the service agreement.

Key elements of a service relationship that are typically covered in a service agreement include:

- **Scope:** Identification of the services covered by the relationship and often expressed in terms of functions, processes, activities, or projects.
- **Governance:** Questions of “Why”, “Who does what?”, “Who decides what?”, and “Who answers for results?”
- **Operations:** Day-to-day activities related to the provider's delivery of the service.
- **Finances:** The fee structure or resource pooling arrangements, cost transparency, variances and adjustments, and settlement arrangements.
- **Performance:** Identification of outputs and outcomes the parties expect to achieve from the arrangement.
- **Implementation:** The activities involved in implementing the services, the support offered by the service provider, the typical timelines and level of effort required, the responsibilities of each party, the key risks, accountabilities, and processes / measures to address / remediate cases of material non-performance.

Risks & Challenges

The following risks and challenges are noted for the RM's consideration when evaluating this opportunity.

Risks & Challenges		Description	Probability	Impact
1.	Quality and Reliability of the Shared Resource	The quality and reliability of the shared resource may be of concern. The partner municipalities may have differing oversight standards for the service provided, or may have different maintenance practices, skills, or equipment that could impact the quality or reliability of the resource.	Medium	Medium
2.	Changes in Demand or Availability	Delivery on resource-sharing arrangements may be impacted by changes in demand or availability – i.e., the supplying partner may be simultaneously short on capacity.	Medium	High
3.	Operational and Management Issues	Resource-sharing arrangements require effective coordination and communication between municipalities. If there are operational or management issues, such as a lack of clear protocols or difficulties in coordination, this could lead to delays or disruptions in accessing the shared resource.	Medium	Medium
4.	Gaps in Agreement Terms	There may be expectations not identified during the initial development of terms and conditions. – For example, if a grader and operator are used to support a municipal partner in need, there could be an incidence of property damage. Clarifying relevant terms (liability and insurance coverage, in this case) in advance is supportive of avoiding disputes and ensuring that all parties are protected.	Medium	Low

Timeline

Execution of the opportunity could proceed on a timeline similar to that described below.

Timeline for Next Steps		2023	2024	2025	2026	2027
1.	Identify Partnerships Begin initiating discussions with neighboring municipalities.					
2.	Develop the Agreement Use the steps provided to determine the terms and conditions of the partnership.					
3.	Maintain and Re-evaluate Contracts Assess whether the existing resource-sharing arrangements are meeting the needs of the RM.					
4.	Expand the Scope of the Shared-Resources Discuss with partnerships about expanding the resources currently shared and continue to look for new opportunities.					

Opportunity 6 – Administrative Improvements

Context

Transportation managers deal with a multitude of responsibilities, including coordinating and supervising work assignments, implementing safe and efficient management practices, monitoring budgets, staying up-to-date with internal maintenance needs, and maintaining compliance with various pieces of legislation. A handful of specific areas were identified for consideration to provide administrative improvement.

Description

In pursuing its goal of effective and efficient public services, the RM could consider the following opportunities:

- 1. Raise the purchasing limits for financial approvals for the Public Works Manager and CAO.** At present, for any purchase exceeding \$5,000, including budgeted expenses, Council must approve the expense. This limit is very low and makes the transaction approval processes unwieldy and unnecessarily slow. The purchasing procedure, including purchasing limits, could be improved to allow more efficient and less time consuming purchases, while at the same time ensuring appropriate Council oversight, accountability, and transparency in the spending of public funds.
- 2. Improve the communication and capabilities around service requests from the public.** There is an opportunity to improve how citizens report and receive information about issues to Transportation.
- 3. Review role responsibilities between the Manager and Assistant Manager.** There are some apparent areas of overlap that could be clarified.

#	Benefits	Description
1.	Cost savings	By streamlining transportation administration processes, there can be significant cost savings in areas such as staffing and project planning/execution.
2.	Improved service delivery	Efficient transportation administration can lead to better planning, scheduling, and routing, resulting in improved service delivery to residents. This can help increase resident satisfaction and reduce complaints.
3.	Increased capacity	When transportation administration is streamlined, it can lead to increased capacity, allowing the transportation service to handle more responsibilities and respond quicker to service requests.
4.	Enhanced safety	Improved transportation administration can result in better monitoring of transportation infrastructure conditions leading to increased travel safety. This can also help reduce the risk of accidents and potential liabilities.
5.	Better decision-making	Streamlined transportation administration can provide better visibility into key performance metrics, enabling management to make more informed decisions. This can help the service to identify areas of improvement and optimize decision making.

Methods & Implementation

KPMG has identified several options that can potentially help improve administrative efficiency:

Options	Description
<p>1. Raise Limits of Financial Delegations</p>	<p>The RM could consider increasing the approval limits for <u>budgeted</u> goods and services for Designated Officers. The following changes of policy are proposed:</p> <ol style="list-style-type: none"> 1) For Public Works, increase the Manager’s approval limit from \$5,000 to \$15,000. 2) For the CAO, do not require approvals for budgeted items. For budget reallocations, increase the CAO’s approval limit from \$5,000 to \$100,000. <p>Here are other ways of potentially handling oversight and control of procurement:</p> <ul style="list-style-type: none"> – Create an emergency procurement policy: Develop a streamlined but appropriately de-risked emergency procurement process for urgent purchases that cannot wait for regular approval procedures. – Separate authorities: Institute a two person sign-off expectation in the approval process. The CAO could review and sign off on all PW manager purchases.
<p>2. Enhance Service Tracker</p>	<p>Public Works employs a web-based service tracker that enables residents to request services. The service tracker has fields to take in the following information to define the nature of the request: 1) the municipal department affected, the relevant service area, and other request details. The following improvements could lead to greater communication and efficiency:</p> <ol style="list-style-type: none"> 1) Add capability to submit images, video and locations: The current process requires Transportation staff to visit the site to evaluate the requested service. Adding a capability to submit images or videos could allow Transportation to evaluate the issue without a site visit. Further, adding a map-based interface to pinpoint the exact location of the issue would make it easier for staff to locate and address the problem. 2) Enhance communication with progress updates: At a high-level, the RM could communicate with service requestors: <ul style="list-style-type: none"> – For clarity during the review of a request or issue. – Upon completion of review, define what action will be performed with typical timelines to resolution (e.g., 1-2 weeks). – Upon resolution of the request or issue. 3) Analytics and reporting: The RM could collect data from service requests to be analyzed to identify patterns and trends, and periodically use this information to improve service delivery and resource allocation. Implementation could include: <ul style="list-style-type: none"> – Key performance indicators (KPIs): Identify a shortlist of metrics to track, such as average resolution time. – Identify trends and consider resolutions: The KPIs provide a means to identify trends, which can then be leveraged to identify and optimize future resource allocation. – Data collection: Unless the current volume of requests increases significantly from historical trends, it is not necessary to invest in a new automated system that records and manages data. Instead, relevant data such as date, location, request type, and selected KPIs can be recorded onto an Excel spreadsheet.
<p>3. Review Management Job Descriptions</p>	<p>Upon review of job descriptions for the PW Manager and Assistant Manager, it seems that there are a few overlapping responsibilities (see Appendix G). These could be reviewed and delineated, for example clearer lines between strategic and tactical responsibilities.</p>

















Risks & Challenges

The following risks and challenges are noted for the RM’s consideration when evaluating this opportunity.

Risks & Challenges	Description	Probability	Impact
1. Costs & Performance (Multimedia Support)	<ul style="list-style-type: none"> – Storage and bandwidth costs: Uploading and storing multimedia files (especially high-resolution images and videos) can consume storage space and bandwidth, increasing server costs. – Load times and performance: Larger multimedia files can negatively impact the platform's performance and load times, leading to a less-responsive user experience. 	Low	Low
2. Privacy Concerns & Dependence (Geolocation)	<ul style="list-style-type: none"> – Dependence on third-party services: Relying on third-party mapping APIs (e.g., Google Maps, OpenStreetMap) can create a dependency on external services, which may have associated costs or change their terms of service over time. 	Low	Low
3. User Expectations (Progress Updates & Response Times)	<ul style="list-style-type: none"> – User expectations: Providing progress updates can raise user expectations, leading to disappointment or dissatisfaction if Transportation is unable to resolve issues as quickly as anticipated. Setting a range of typical resolution times will be informative to the public. 	Medium	Low

Timeline

Execution of the opportunity could proceed on a timeline similar to that described below.

Timetable for Next Steps						
Options	Steps	2023	2024	2025	2026	2027
Approval Limit	1. Formulate the report and justification.					
	2. Present to Council for approval.					
	3. Implement new limits/policy.					
	4. Evaluate in impacts annually.					
Resident Communication (Service Tracker)	1. Determine Features Evaluate and prioritize potential improvements.					
	2. Feature Addition – Third-Party Decide on a third-party to program these changes.					
	3. Continuous Improvement Review whether the added functionality to the service tracker has improved operations and consider other improvements.					
Review Job Descriptions	1. Identify unique and shared tasks between the assistant PW manager and the PW manager.					
	2. Separate shared responsibilities as appropriate. Assign each shared task to either the assistant or PW manager after clearly defining responsibilities.					
	3. Annual Review of Changes Determine if the division and redefining of roles led to more efficient operations and better service delivery.					

Opportunity 7 – Enhance Recruitment & Retention Practices

Context

The RM periodically face challenges attracting and retaining staff, including technical and management staff. Transportation Services may wish to consider exploring solutions to address staffing challenges.

Description

Review of select areas of HR talent attraction and retention practices could support improved retention through improved morale and performance.

Areas of Consideration	Description
1. Review of Recruitment & Retention Practices	Evaluate current recruitment strategies for Public Works Transportation Services and explore potential new approaches to attract and retain talent effectively. Consider flexible work arrangements.
2. Enhancing Performance Management Practices	Evaluate and refine how performance standards are managed at the departmental, individual, and equipment level.
3. Enhancing Training Programs	Opportunities to enhance current training programs will be explored both internally within Transportation and externally.

Method & Implementation – Recruitment & Retention Improvements

KPMG has identified the following three areas to help alleviate employee resourcing stress.

1. Review of Recruitment Practices

Rural municipalities often struggle with finding new talent. The following items may help in the recruiting process:

Topic	Description
1. Competitive Compensation and Benefits	– Ensure competitive salaries and benefits packages are available to attract and retain skilled workers. This should involve researching wage levels in nearby and/or comparable municipalities to ensure that the RM's compensation is comparable.
2. Training and Development Programs	– Increase investment in training and development opportunities for employees, such as offering tuition reimbursement, sponsoring certifications, or providing on-the-job training.
3. Targeted Marketing and Advertising	– Use targeted marketing and advertising strategies, such as social media campaigns or job boards to reach potential applicants in the community and beyond. This could be done through an external recruiter or social marketing firm.
4. Relocation Assistance	– Offer relocation assistance to attract candidates from outside the local area. This could include covering moving expenses or providing temporary housing for new employees.
5. Flexibility and Work-Life Balance	– Organizations are constantly exploring ways to attract and retain employees. Some options include: <ul style="list-style-type: none"> – Days off during summer months or long weekends – Providing a more flexible schedule during non-busy times of the year. – Expanding the use of banked-time arrangements.

Method & Implementation – Performance Management

2. Enhancing Performance Management Practices

Performance standards are clear guidelines that outline an organization's expectations for employee performance. They should be specific, measurable, and easy to understand, providing employees with a framework for achieving success in their roles.

Once performance standards have been clearly defined, managing and monitoring them can enhance individual and group productivity. The following are components of a robust performance management system:

Component	Level	Description
1. Key Performance Indicators (KPIs)	Departmental / Functional Group	– Defines metrics such as response time to requests for service, percentage of work orders completed on time, or number of complaints received and or addressed to measure the performance of Transportation's staff.
2. Regular Review and Update of Performance Standards	Departmental / Functional Group	– Performance standards should be reviewed periodically to ensure that they are still relevant and effective. Updates may be necessary based on changes in job responsibilities, technology, or other factors.
3. Employee Involvement in Setting Performance Standards	Individual	– Employees are best positioned to provide input on what performance standards could be as they have a deep understanding of their job responsibilities and the challenges they face. Involving employees in setting performance standards can help to ensure that the standards are relevant and achievable.
4. Ongoing Feedback and Coaching	Individual	– Use performance standards as a basis for ongoing feedback and coaching. Regular check-ins with employees can help identify areas where they excel and areas where they may need additional support or training.
5. Recognize & Reward Good Performance	Individual	– Employees who meet or exceed performance standards should be recognized and rewarded for their efforts. This can help to build morale and motivation among employees and encourage continued high performance. As mentioned in the operational review, for example, even if an operators job is never finished, recognizing their past work can help motivate and potentially reduce turnover.

Method & Implementation – Performance Management

Component	Level	Description
6. Technology to Track Performance Metrics	Equipment	<ul style="list-style-type: none"> – Technology can be a powerful tool for tracking performance metrics to identify areas where employees may be struggling. By leveraging technology, administration can gain deeper insights into employee performance and make more informed decisions about how to address any issues. Listed below are suggestions on how to measure performance with technology: <ul style="list-style-type: none"> a) GPS Tracking: GPS technology can be used to track the location and movement of vehicles and equipment, providing real-time data on work activities, travel routes, and task completion. b) Vehicle Maintenance Software: Maintenance software can be used to track the maintenance schedules and repair history of vehicles and equipment, ensuring that they are well-maintained and functioning properly. c) Electronic Logging Devices (ELDs): ELDs have a more comprehensive functionality than GPS trackers, as they can be used to track driver hours of service, ensuring that drivers are compliant with any regulations. ELDs can also provide real-time data on driver location, vehicle status, and other factors that can impact driver safety and efficiency. Additionally, by tracking asset utilization, they offer insights into how frequently equipment is being used and whether it is meeting operational needs. This information can help determine whether new assets need to be procured to meet increasing demand or if existing assets can be better utilized to improve efficiency. d) Fleet Management Software: Fleet management software can be used to track vehicle performance, maintenance schedules, fuel consumption, and other metrics that can impact department productivity and efficiency.
7. Tracking Contractor Performance	Contracted Services	<ul style="list-style-type: none"> – As mentioned before, define the appropriate KPIs to measure contractor performance. – Regular Progress Reports: Require contractors to submit detailed progress reports at predefined intervals. This will enable Transportation to monitor project milestones, assess the contractor's performance, and identify any potential issues or delays. – Benchmarking: Compare the performance of contractors against industry benchmarks or the performance of similar RMs to identify areas of improvement and set realistic expectations for future projects. – Site Inspections: Conduct periodic on-site inspections to verify the quality of work, adherence to safety standards, and compliance with contract specifications.

Method & Implementation - Training

3. Enhancing Training Programs

KPMG has identified the following actions that could assist in employee skill development and training for Transportation employees.

Topic	Description
1. Online Training Modules	– Transportation Services could source online training modules that employees can complete during less busy times. This would provide flexibility for employees to learn at their own pace, without needing to be away from work for extended periods.
2. Create a Working Group	– A working group is a team of employees who are tasked with addressing specific issues or challenges within the organization, and who work together to find and implement improvements. By creating a working group focused on employee training and skill development, Transportation can bring together employees with different levels of expertise and experience, and provide a forum for sharing knowledge and best practices. The group can identify areas where training is needed, research training options, and make recommendations for how to implement new training programs or initiatives. This can be challenging with the existing constraint on employee time. The group needs to be carefully selected with clear goals and objectives in mind with meetings scheduled to best fit downtime. Technology may assist in facilitating these meetings as well as making it easier to stay connected and ask questions without the need of formal meetings.
3. Training Partnerships	– Collaborate with post-secondary institutions or other training providers to access training resources and expertise. This can help avoid the time and cost burden of developing training programs internally. There may also be opportunity to partner with nearby municipalities in course delivery.
4. Inter-Municipal Work Placements	– Create opportunities for employees to complete short-term work placements or job exchanges in neighboring municipalities. This can help expose them to different practices and approaches, while also fostering collaboration and knowledge-sharing.

Risks & Challenges

The following risks and challenges are noted for the RM's consideration when evaluating this opportunity.

Risks & Challenges		Description	Probability	Impact
1.	Coordination Challenges (Resource-Sharing)	– Collaborating with other municipalities may require additional coordination and communication efforts to ensure that training program objectives and content are aligned and schedules are compatible.	Low	Low
2.	Overemphasis on Metrics (Performance Standards)	– Focusing too heavily on quantitative performance metrics could lead to neglect of important qualitative factors that contribute to overall employee performance and success. Additionally, if these metrics are to overbearing, it could discourage employee moral and increase turnover.	Low	Low
3.	Time Constraints (Performance Standards)	– Implementing performance management and standards can be time-intensive.	Low	Low

Timeline

Execution of the opportunity could proceed on a timeline similar to that described below.

Timetable for Next Steps						
Options	Steps	2023	2024	2025	2026	2027
Recruitment & Retention	1. Research Recruitment Items Research wages and benefits offered by municipalities, allocate a budget, and explore advertising and training opportunities.					
	2. Formally adjust planned strategies					
	3. Implement Recruitment Strategies Commence training and marketing programs, etc.					
	4. Review Chosen Strategies Annually Review the success of strategies and make adjustments.					
Performance Standards	1. Decide on how and at what level to enhance performance standards					
	2. Implement the enhancement opportunity					
	3. Annual Review					
Performance Standards (Technology)	1. Identify Support Technologies Determine which types of technology can be used to support your chosen KPIs and performance management.					
	2. Procure the Support Technologies					
	3. Installation & Learning Install and set-up the acquired technologies. Understand and test how the technology works.					
	4. Data Storage Determine where collected data from the technology is stored.					
	5. Annual review Assess staff performance through quality checks, interviews, and performance standards reviews, refine if necessary.					

Timeline

Execution of the opportunity could proceed on a timeline similar to that described below.

Timetable for Next Steps						
Options	Steps	2023	2024	2025	2026	2027
Training	1. Communicate with Parties of Interest Initiate talks with educational institutions, neighbouring municipalities, and companies providing platforms for online training.					
	2. Agreement & Terms of Conditions Clearly define the shared training arrangement and the expectations for each party, and begin training.					
	3. Initiate Training Opportunity					
	4. Review & Refine Assess staff performance through quality checks, interviews, and performance standards reviews, refine if necessary.					

Opportunity 8 – Improve Cost Recovery

Context

From reviewing Transportation’s financial statements, documents, and information gathered through interviews, there are maintenance activities and operations of which their costs are not recovered.

Description

A general goal in the public sector is to target goals of operating efficiency and, to the extent possible, to charge fees representative of the costs incurred by the municipality to deliver services.

By increasing revenue, Transportation Services can effectively address and enhance specific areas of service that require improvement, particularly where alternative solutions are challenging to implement. Furthermore, the additional revenue can be utilized to put into action one of the suggested opportunities outlined in this report. For instance, the extra funds could be allocated to expand the critical spare budget, enabling the procurement of additional essential components.

Benefits		Description
1.	Increased Revenue	By exploring new revenue streams, Transportation Services can generate additional income that can be used to improve and maintain its operations. This revenue can help to cover the cost of new equipment, maintenance, and repair work, as well as hire new staff and improve the overall quality of service.
2.	Diversification of Revenue	Relying solely on tax levy funding for Transportation Services can be challenging, especially for a rural municipality with a limited budget. Exploring new revenue streams can help to diversify the RM’s revenue sources, reducing their reliance on taxation.

Method & Implementation

KPMG has identified the following suggestions to help generate revenue:

1. Enforcing Development Recovery Fees

- The Fee for Services Bylaw (No. 6-16) Schedule A outlines the fee schedule for services rendered by officers and employees of the municipality, which apply to Transportation staff. The outlined services include building permits, lot grading, culverts, civic address, development fees, among others.
- Based on interviews with Transportation's administration and an analysis of financial statements, it appears that Transportation does not fully recover its costs when providing services for development projects. This shortfall may be due to bylaws that include only administration fees, rather than other services. This approach makes sense since development projects can have varying costs. However, to help recover the full cost of services, the following steps can be used as guidelines when creating a framework for determining recovery fees for each service area:

1. Cost Analysis	Conduct a thorough cost analysis to identify the actual costs associated with each development support service provided. This includes direct costs (labor, materials, equipment) and indirect costs (administration, overheads, maintenance). Similar past projects can be helpful in determining common elements for the type of service.
2. Pricing Strategy	Based on the cost analysis, develop a pricing strategy that accurately reflects the actual costs associated with providing the development support services.
3. Transparent Fee Structure	Create a clear and transparent fee structure for development support services that is easy for developers to understand. This could involve itemizing the fees for each service, providing explanations for each fee, and making the fee structure readily accessible to the public.
4. Regular Reviews	Regularly review and update the fees and charges to ensure they continue to reflect the actual costs of providing development support services. This may involve adjusting fees for inflation, incorporating new technologies, or updating administrative processes.

2. Private Grading

- In addition to recovering costs, the RM may wish to explore charging fees for grading lanes and private roads, which can be extended to snow clearing. Depending on the demand and relative grader availability, this can serve as an additional revenue-generating opportunity.
- In comparison, the RM of Edenwold, Saskatchewan, charges \$225 per hour for grading lanes during summer months. Furthermore, non-ratepayers can request custom grading services with a minimum hourly rate of \$112.50 up to \$225 per hour, plus applicable taxes, subject to Council's approval.

Method & Implementation

3. Cemetery Plot Sales

- While benchmarking plot pricing against other rural municipalities can be a useful practice, it is important to take into account the lifetime maintenance costs associated with each plot. Total maintenance costs encompass not only the initial cost of the land on which the plot is situated, but also the lifetime expenses for groundskeeping, as well as equipment, monument and headstone maintenance and repair.
- By analyzing timesheets and financial data, a low and high end estimate of the lifetime cost to maintain a single cemetery plot for Lac du Bonnet Cemetery was derived. The table below presents a summarized version of the data, with more detailed information in Appendix H.

Cost Type	Low	High
Labour	\$5,000	\$10,000
Material	\$5,000	\$10,000
Equipment Depreciation	\$2,000	\$4,000
Typical Range of Cost per Year for Lac du Bonnet Cemetery	\$12,000	\$24,000
Number of Plots	728	728
Estimated Total Cost per Plot (per year)	\$16.50	\$33.00
Estimated Cost per Plot over 100 years	\$1,650	\$3,300

- The following steps were used to estimate the lifetime cost per plot:
 1. Estimate a typical range of labour costs for maintaining Lac du Bonnet cemetery.
 2. From the material costs provided on financial statements, estimate a range of annual cost.
 3. Estimate equipment depreciation by estimating the bundle of cemetery assets that will need to be replaced, on average, every 10 years.
 4. Calculate a total cost per year for the cemetery was divided by the number of plots at Lac du Bonnet Cemetery to get a range of annual cost per plot.
 5. The annual maintenance cost for each cemetery plot is estimated to be between \$16.50 and \$33.00. When these costs are projected over a 100-year period, the estimated lifetime cost to maintain a single cemetery plot ranges from approximately \$1,650 to \$3,300.
- Based on a cost of \$1,650 per plot on the low-end, the RM's current fees of \$750 and \$1,000 per plot are approximately \$900 and \$650 below cost, respectively. Using the high-end estimate of \$3,300 per plot, the RM's current prices of \$750 and \$1000 per plot are \$2,550 and \$2,300 lower, respectively.
- The analysis, based on the Lac du Bonnet Cemetery, can be applied to all owned plots. The numbers used are relatively conservative. Approximately 25% of the recorded student hours were not tracked to a project number. It may be that more time was spent servicing cemeteries. However, there are also other factors that contribute to these estimates being conservative, which will be stated in the assumptions
- Assumptions for the calculations will be provided on the next page.

Method & Implementation

- For reference, the table below benchmarks the RM's pricing against three public cemeteries from Winnipeg, and one from Brandon (MB). Brandon charges \$1,450 more than Lac du Bonnet for a traditional plot. Brookside, St. Vital, and Transcona charge \$1,490 more than the RM. When comparing Columbarium Niche pricing, the three Winnipeg cemeteries and Brandon charge approximately \$3,540 and \$3,350 more, respectively.

Cemetery Location →	RM of Lac du Bonnet		Brookside (Wpg)	St. Vital (Wpg)	Transcona (Wpg)	Brandon (MB)
Description ↓	Resident Cost	Non-Resident Cost	Both	Both	Both	Both
Traditional Cemetery Plot	\$750	\$1,000				\$2,150
Flat Marker Plot			\$2,240	\$2,240	\$2,240	
Continuous Foundation Plot			\$2,810		\$2,810	
Columbarium Niche	\$750	\$1,000	\$4,290	\$4,290	\$4,290	\$4,100

Assumptions:

- *Between two pieces of equipment are purchased on average over 10 years.*
- *There were no adjustments for inflation.*
- *Fuel costs were not included.*
- *No cemetery upgrade costs were included.*
- *Effort spent maintaining the grounds varies based on annual rainfall and weather.*
- *Only time logged to cemetery project numbers were used.*

Risks & Challenges

The following risks and challenges are noted for the RM’s consideration when evaluating this opportunity.

Risks & Challenges		Description	Probability	Impact
1.	Decreased Demand (Cemetery)	Increasing the cost of cemetery plots and niches to cover lifetime maintenance costs may lead to decreased demand from residents who find the higher prices unaffordable or unreasonable.	Low	Low
2.	Improper Pricing Estimation (Development Fees)	Estimating the recovery cost of development projects can be difficult, which can result in a pricing strategy that is not reflective of the true development cost. If fees are set above the actual recovery cost (only in the case that they are determined beforehand), then this may deter developers from taking on projects. Conversely, if costs are too low, Transportation will be effectively subsidizing development.	Low	Low

Timeline

Execution of the opportunity could proceed on a timeline similar to that described below.

Timetable for Next Steps						
Options	Steps	2023	2024	2025	2026	2027
Development Recovery Fees	1. Determine Costs Using historical records, find the costs associated with each service area.					
	2. Create a Recovery Fee Structure Determine the fees to be charged for each service in an accessible format to developers.					
	3. Review Recovery Fees Update fees according to inflation, new technologies, etc.					
Private Grading	1. Determine an hourly rate for grading services.					
	2. Present the opportunity to Council for approval.					
	3. Have a policy created for private/custom grading.					
	4. Review the hourly Rate.					
Cemetery Plot Sales	1. Review and Approve Plot Pricing Using the information provided in this report, change the pricing of plots.					
	2. Communicate Pricing Changes & Date Provide the effective date pricing will be changed, and reasoning behind the changes to residents through the RM's website.					
	3. Monitor & Refine Adjust pricing as needed subject to inflation taking into account the relative inelasticity of cemetery plots.					

Opportunity 9 – Implement a Fleet Operations Dashboard

Context

There is an opportunity to reap benefits and insights from data analytics to optimize operations. Data could be used to provide insight into performance issues, bottle necks and cost drivers. The overall goal of data analytics is to collect and communicate the right data needed to enable leaders to make effective decision-making and to answer the question, “Are things going well or not, how do we know, and how could we see that things could be better?”

Effective data analytics provides a baseline of how a system is performing against how it is intended to perform. This allows for relatively unbiased confirmation of the success of change initiatives and improvements, as well as policies and procedures, intended to improve the performance of a system. Consistent data quality, supported by consistent data monitoring and collection, is key in developing effective analytics so as to build trust in the system of analytics tools.

Description

An operations dashboard is a visual representation of Key Performance Indicators (KPIs) and metrics that allows the user to monitor and manage their operations in real-time. It provides a quick, at-a-glance view of the performance, efficiency, and effectiveness of processes, departments, or teams within an organization. By consolidating relevant data from multiple sources into a single, easily accessible location, operations dashboards have the following benefits:

Benefits	Description
1. Monitor Performance	Track progress towards operational goals and targets.
2. Identify Trends	Spot patterns and trends that can inform strategic decisions and drive continuous improvement.
3. Detect Issues	Quickly identify and address potential problems or bottlenecks before they escalate.
4. Improve Communication	Share relevant information with team members, fostering collaboration and promoting a data-driven culture.
5. Enhance Decision-making	Provide decision-makers with the data they need to make informed, data-driven decisions.

Guidelines & Suggested Dashboard Elements

Guidelines

Guidelines for creating an operations dashboard are provided below:

Step	Description
1. Determine KPIs	– Identify which key performance indicators you wish to see on the operations dashboard. In the case of a fleet operations dashboard, suggested KPIs have been provided in Appendix I as well as sample calculations.
2. Set-up Database	– Decide on where to track and store the data for easy access to update the dashboard. Samples of spreadsheet layouts have been provided in Appendix I.
3. Refresh Data	– Continue to update KPIs at an appropriate frequency (e.g., weekly, monthly, or quarterly). Note: Not all KPIs must be updated within the same time interval.
4. Annual Review	– Review and determine the effectiveness of the KPIs used, and make adjustments as necessary.



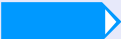



Suggested & Sample KPIs

Appendix I provides examples of visuals that can be included in an operations dashboard, with a focus on fleet management. However, the same principles, metrics, and styles can be adapted to other areas. The key performance indicators included in the tables are some suggested metrics to track.

Risks & Challenges, Timeline

The following risks and challenges are noted for the RM’s consideration when evaluating this opportunity, and execution of the opportunity could proceed on a timeline similar to that described below.

Risks & Challenges	Description	Probability	Impact
1. Data Quality & Availability	Transportation may face challenges in accessing and collecting relevant data due to limited data availability and quality issues. It can also be challenging to integrate data from different sources, making it difficult to obtain a complete and accurate picture of the fleet’s utilization and metrics.	Medium	Medium
2. Building Consistency	It may require some managerial effort to institute routines to gather the required data consistently.	Medium	Low

Timetable for Next Steps					
Steps	2023	2024	2025	2026	2027
1. Determine KPIs Confirm KPIs, goals and outcomes of data and analytics.					
2. Delegation Delegate development or integration of system to track data and generate related reporting (internal or external).					
3. Implement Implement system into working practices, role responsibilities and reporting.					
4. Review Review and determine the effectiveness of the KPIs used, and make adjustments as necessary.					

Appendices

Equipment Purchases

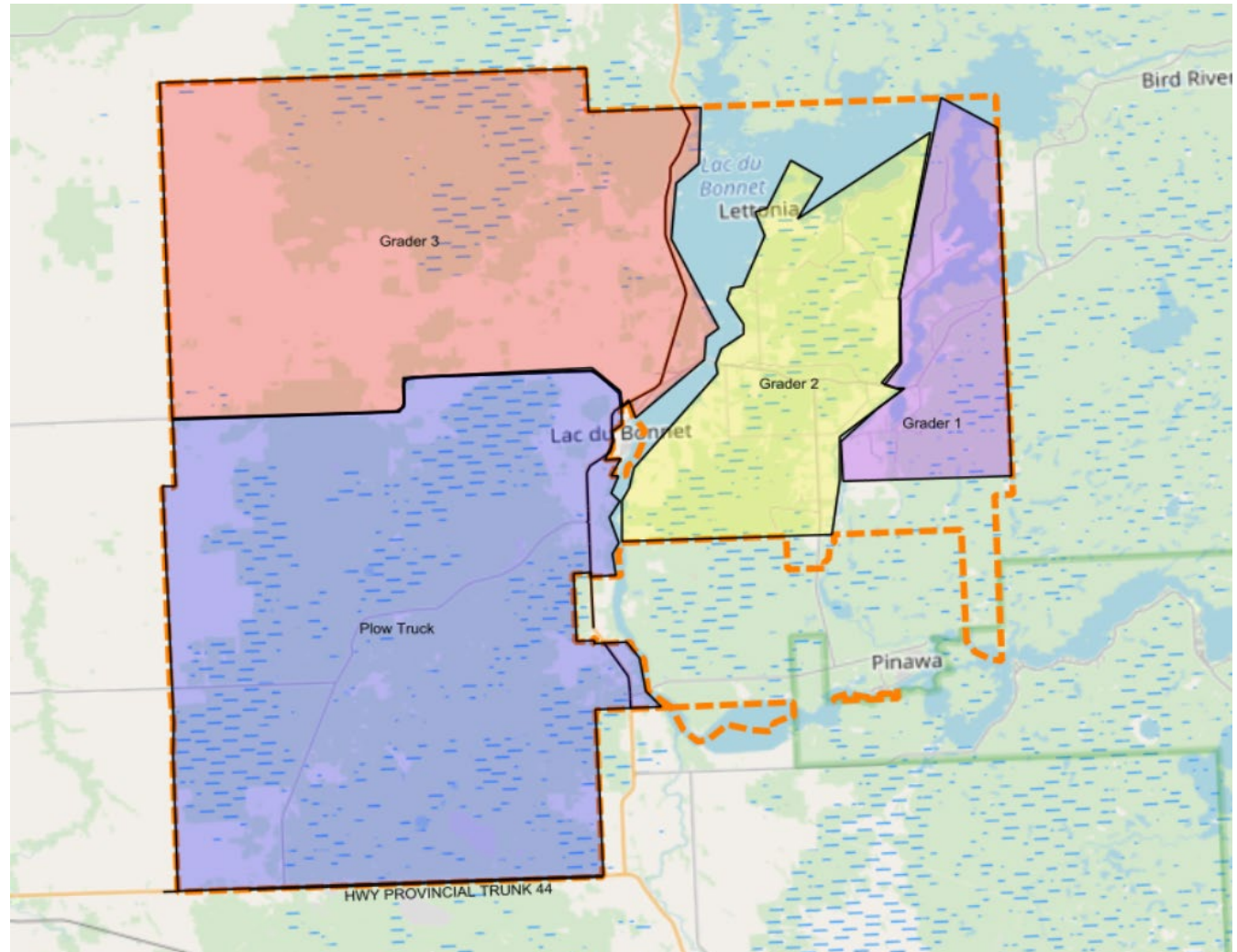
Date	Asset Name	Type	Amount
2018	2016 Western Star Semi Truck	Light Vehicle	\$146,844
2018	2017 Dodge Ram 1500 Slit	Light Vehicle	\$39,117
2018	Cando Heavy Duty Scan Tool	Light Equipment	\$4,737
2018	2018 John Deere Excavator 135 GLC	Heavy Equipment	\$285,040
2018	Leica Cla Ckx600 Single Slop Grader Laser	Light Equipment	\$4,347
2019	2018 John Deere 770g Motor Grader	Heavy Equipment	\$346,789
2019	Hydraulic Feeder Screen 1987 Finlay 4030	Heavy Equipment	\$36,671
2020	2020 72" Exmark Mower Zero Turn	Light Equipment	\$16,264
2020	Maintenance Equipment Mower/trimmer/blower	Light Equipment	\$3,382
2020	2017 GMC Sierra Crew Cab	Light Vehicle	\$30,495
2020	2021 Freightliner 114 Sd	Heavy Equipment	\$210,273
2021	Scan Tool	Light Equipment	\$12,835
2021	Post Hole Auger 3-point Hitch	Light Equipment	\$695
2021	2018 Wobbly Packer	Light Equipment	\$21,377
2021	2018 Ram 1500 Sxt Crew 1500	Vehicle	\$34,764
2021	Shop Hoist For Transport Trucks	Light Equipment	\$43,677
2021	2019 Brushmower	Light Equipment	\$27,820
2021	GPS Equipment	Light Equipment	\$4,0767
2022	Pressure Washer	Light Equipment	\$3,932
2022	2021 John Deere 770 Gp Grader	Heavy Equipment	\$475,130
2022	Dust Control Trailer With Tanks	Light Equipment	\$57,274
2022	2022 Handy Hitch Packer 90"	Light Equipment	\$35,845
2022	2022 John Deere Skid Steer 325g	Heavy Equipment	\$94,160

Source: Derived from information provided by the RM of Lac du Bonnet.

Snow Clearing Routes

The following Municipal roads are identified as main feeder routes:

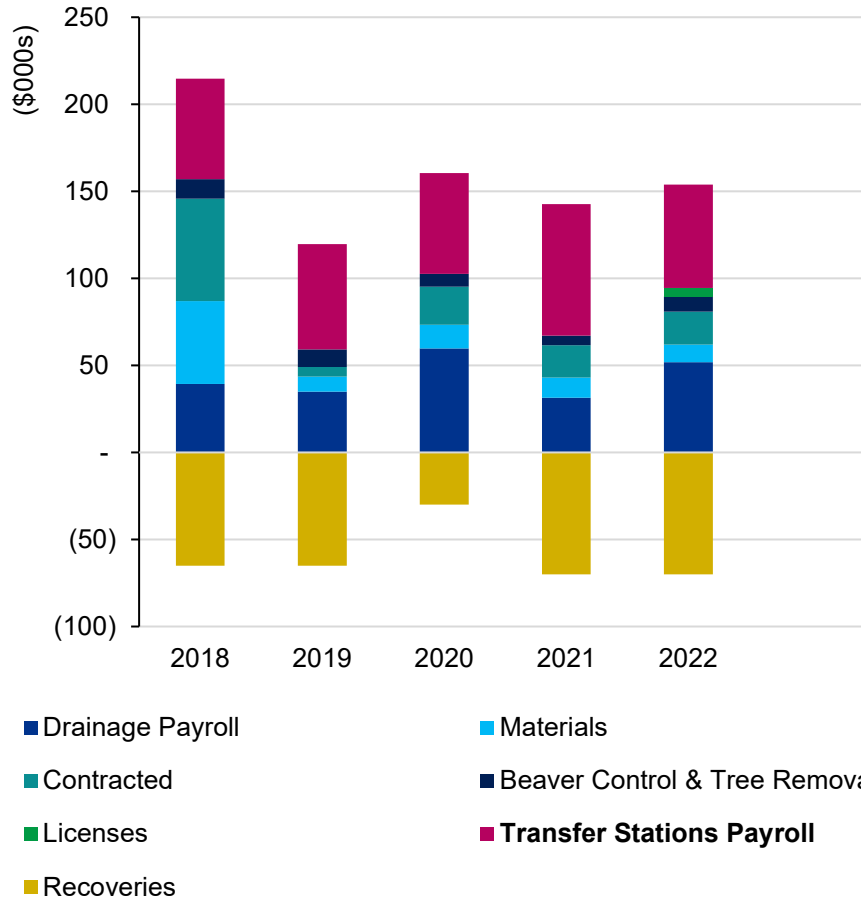
- Bilan Road
- Maple Creek Road
- Woodrow Road
- Red Deer Road
- Landerville Road
- Springwell Road
- Allegra Road
- McArthur Road
- Riverland Road
- Urban Road
- Belluk Road
- Channel Drive
- Wendigo Road
- Lee River Road
- Cape Coppermine Road



Source: Derived from information provided by the RM of Lac du Bonnet.

Cost of Transfer Stations

Figure 3 – Drainage Expenditure Breakdown



Source: Derived from information provided by the RM of Lac du Bonnet.

Equations

The following equations are used to calculate the corresponding steps in the cost-benefit analysis.

$$\text{Hourly Fuel Cost} = \frac{\text{Grader Fuel Consumption (L/HR)}}{\text{Price of Dyed Fuel (\$/L)}}$$

$$\text{Hourly Wage \& Overhead Cost} = \text{Wage} \times \text{Benfits} \times \text{Overhead}$$

$$\text{Hourly Depreciation Rate} = \frac{\text{Initial Capital Cost (\$)}}{\text{Lifespan (hours)}}$$

$$\text{Yearly Fuel Cost} = \text{Hourly Fuel Cost} \times \text{Grading HR/Week} \times \text{Total Weeks Grading}$$

$$\text{Yearly Wage \& Overhead Cost} = \text{Hourly Wage \& Overhead Cost} \times \text{Grading HR/Week} \times \text{Total Weeks Grading}$$

$$\text{Yearly Maintenance \& Repair Cost} = \text{Initial Capital Cost (\$)} \times \% \text{ of Initial Capital Cost}$$

$$\text{Yearly Depreciate Rate} = \text{Hourly Depreciation Rate} \times \text{Grading HR/Week} \times \text{Total Weeks Grading}$$

$$\text{Total Maintenance Cost per Year} = \sum_{\{i=1\}}^4 x_i \text{ (Yearly costs)}$$

$$\text{Payback Period} = \frac{\text{Reconstruction Cost}}{\text{Total Maintenance Cost per Year}}$$

Calculations & Assumptions

The equations on the previous page were used to calculate the corresponding values on the tables below.

Operating Costs: Fuel								
Year	Total Dyed	Total Hours Graders	Total Hours Excavators	Total Hours Tractor	% Grader	Grader (L/Hour)	Dyed Price (\$/L)	Fuel Cost (\$/HR)
2022	105,985.40	4,404.5	763	568	77%	18.48	1.56	28.83

Operating Costs: Maintenance & Repair						
Capital Cost (\$)	Rule of thumb, Annual Cost of Maintenance	Estimate of Annual Maintenance & Repair Cost (\$/Year)	Total Grader Hours 2022	Hours on Road Section	% of Total Grader Hours on Road Section	Estimate of Annual Maintenance & Repair Cost (\$/Year) on Road Section
475,000	2% of Replacement Value	$475,000 * 0.02 = 10,000$	2,472	14 hours/week x 18 weeks = 252 hours	$252 \div 2,472 = 0.10$	$10,000 * 0.10 = 1,000$

Depreciation Cost						
Capital Cost (\$)	Lifespan (Hours)	Depreciation (\$/HR)	Total Grader Hours 2022	Hours on Road Section	% of Total Grader Hours on Road Section	Depreciation (\$/HR) on Road Section
475,000	12,000	39.60	2,472	14 hours/week x 18 weeks = 252 hours	$252 \div 2,472 = 0.10$	$39.60 * 0.10 = 4.00$

Operating Costs: Wage & Overhead			
Wage	Benefits	Overhead	Total \$/HR
28.14	1.15	1.25	40.45

Assumptions:

- The dyed price (\$/L) was an average of recorded monthly diesel prices for 2022.
- An overhead rate of 25% was applied.
- % of initial purchase for maintenance & repair was found using www.upkeep.com.
- 12,000 Lifespan (hours) for the grader were found by contacting a Brandt representative.
- Hours on road section were estimates confirmed by Public Works.

Source: Derived from information provided by the RM of Lac du Bonnet, Brandt, and www.upkeep.com.

Calculations & Assumptions

The equations on the previous page were used to calculate the corresponding values on the tables below.

Maintenance Costs per Year				
Type of Cost	Cost (\$/Hour)	Grading HR/Week	Total Weeks Grading	Cost (\$/Year)
Fuel	28.83	14	18	7,300
Wage & Overhead	40.45	14	18	10,200
Maintenance & Repair	N/A	14	18	1,000
Depreciation	4.00	14	18	1,000
Total Operating Cost per Year				18,500
Total Maintenance Cost per Year				19,500

Source: Derived from information provided by the RM of Lac du Bonnet.

Project List & Average

5-10 Year Road Reconstruction Plan		
Street Name	Length (km)	2023 Rebuilding Plan Approval
McArthur Avenue	1.25	Yes
Apsit Rd	0.50	Yes
Edward Cresc	8.75	Yes
Westview Drive	1.00	Yes
Maple Creek Rd	2.00	No
Berryland Rd	1.63	No
Red Deer Rd	3.20	No
Reed Deer Rd	1.63	No
Overwater Rd	3.20	No
Zolondek Rd	4.83	No
Anderson Way	0.70	No
Riverland Rd	0.80	No
Wendigo Rd	0.80	No
Blueberry Rock Rd	2.00	No
Hard Rock Road	0.65	No
Channel Dr	0.50	No
Cape Coppermine Rd	0.50	No
Cape Coppermine Rd	0.40	No
Tower Road	1.50	No
Total 2023 Approved	11.50	
Total	35.84	

Road	Type	Length (km)	Cost (\$)	(\$/km)
Hobo Lane	Gravel	1.00	312,978	313,000
Lavoie Road	Gravel	0.14	53,106	387,000
Airport Road	Gravel	0.27	232,524	872,000
Average (Excluding Airport)				350,000
Average (Including Airport)				524,000

Source: Derived from information provided by the RM of Lac du Bonnet.

Resource-Tracking

Guidelines for Implementation

Below is a list of guidelines to improve resource-tracking:

Guidelines	Description
1. Establish a Framework	<ul style="list-style-type: none"> – Establish a framework for tracking resource allocation, outlining key performance indicators (KPIs) to track. The framework can be simplified by focusing on time as the sole KPI. While there are other metrics, such as cost or personnel, that track resource allocation, focusing on time allows Transportation to streamline its tracking efforts. This approach quickly identifies areas for improvement, as there is existing data on tracked time. – It is important that all resourcing is tracked using the same KPIs.
2. Use Technology	<ul style="list-style-type: none"> – Transportation can leverage technology to improve its resourcing tracking efforts. A well-defined framework for resource tracking, coupled with the use of a spreadsheet to record metrics, can be an effective solution. While more advanced software options may offer additional features and capabilities, spreadsheets can provide a simple and cost-effective way to track resource allocation using tools like pivot tables. If the need arises for a more comprehensive approach, Transportation can re-evaluate its tracking approach and consider more advanced/specialized software options if necessary.
4. Annual Review/Refinement	<ul style="list-style-type: none"> – After a set period of time, such as annually, review and analyze the effectiveness of the recorded data in alleviating resourcing pressures. If the review indicates improved resource allocation due to current KPIs, consider expanding tracking efforts. Conversely, if the review finds that the recorded KPIs led to ineffective courses of action, reevaluate the KPIs' reliability and consider alternative metrics to track. Regardless of the outcome, the review will help refine and inform future decision-making.

Sample Evaluation

Objective Evaluation (Weighted)

With clarified roles and an established hierarchy, the final step is the evaluation as stated in step 7. Below is the evaluation of the parts, first completed with weights. If the previous weights have been chosen for each criterion, each criterion will be assigned a subjective score out of five e.g., 5/5 for importance of equipment indicates that the asset using the broken part is pivotal to operations.

Transmission

Rank	Criterion	Weight	Score (out of 5)*	Final Score
1	Importance of equipment	0.40	5.00	2.00
2	Frequency of breakdown	0.25	1.50	0.38
3	Local part availability	0.15	5.00	0.75
4	Cost of the spare part	0.10	3.00	0.30
5	Lead time for procurement	0.10	5.00	0.50
Total				3.93

Belt

Rank	Criterion	Weight	Score (out of 5)*	Final Score
1	Importance of equipment	0.40	5.00	2.00
2	Frequency of breakdown	0.25	3.00	0.75
3	Local part availability	0.15	2.00	0.30
4	Cost of the spare part	0.10	2.00	0.20
5	Lead time for procurement	0.10	1.50	0.15
Total				3.40

- There are two ways to use this final score. One is to determine a minimum criticality score where any part with a score greater than or equal to the minimum is considered critical. For example, if the criticality determiner is set at 3.50, the transmission in our example would be considered a critical spare, while the belt would not be, as it falls below the minimum score (see *).
- Another way to evaluate your parts using the weighted method is to rank them in ascending order and select as many parts as your budget allows (see **). For instance, if you have 10 parts with assigned weights and you need to select some parts within your budget, you could rank them in the following order:

Spare	Score
Part 1	4.40
Part 2	4.10
Transmission	3.93
Part 4	3.70
Part 5	3.50
Belt	3.40
Part 7	3.30
Part 8	3.00
Part 9	2.00
Part 10	1.00

← **In this case, the budget may allow for up to part 7. Administration would then decide whether to purchase all seven parts.

← *If the minimum criticality score was used on this list, parts 1-5 would be purchased.

*A higher number in this context always represents a negative interpretation. For instance, a higher score for local part availability refers to a lack of availability, and a high score for lead time in procurement refers to longer procurement times.

Sample Evaluation

Objective Evaluation (Evenly-Weighted)

With clarified roles and an established hierarchy, the final step is the evaluation as stated in step 7. For an unweighted evaluation, everything is the same except the weight is 1/n where n is the number of criterion used. In this example there are five, so n=5 and 1/n=0.20.

Transmission

Rank	Criterion	Weight	Score (out of 5)*	Final Score
1	Importance of equipment	0.20	5.00	1.00
2	Frequency of breakdown	0.20	1.50	0.30
3	Local part availability	0.20	5.00	1.00
4	Cost of the spare part	0.20	3.00	0.60
5	Lead time for procurement	0.20	5.00	1.00
Total				3.90

- Similarly to before, there are two ways to use this final score. One is to determine a minimum criticality score where any part with a score greater than or equal to the minimum is considered critical. For example, if the criticality determiner is set at 3.50, the transmission in our example would be considered a critical spare, while the belt would not be, as it falls below the minimum score (see *).
- Another way to evaluate your parts using the evenly-weighted method is to rank them in ascending order and select as many parts as your budget allows (see **). For instance, if you have 10 parts with assigned weights and you need to select some parts within your budget, you could rank them in the following order:

Belt

Rank	Criterion	Weight	Score (out of 5)*	Final Score
1	Importance of equipment	0.20	5.00	1.00
2	Frequency of breakdown	0.20	3.00	0.60
3	Local part availability	0.20	2.00	0.40
4	Cost of the spare part	0.20	2.00	0.40
5	Lead time for procurement	0.20	1.50	0.30
Total				2.70

Spare	Score
Part 1	4.40
Part 2	4.10
Transmission	3.90
Part 4	3.70
Part 5	3.50
Part 6	3.35
Part 7	3.30
Belt	2.70
Part 9	2.00
Part 10	1.00

- ← **In this case, the budget may allow for up to part 6. Administration would then decide whether to purchase all seven parts.
- ← *If the minimum criticality score was used on this list, parts 1-5 would be purchased.

*A higher number in this context always represents a negative interpretation. For instance, a higher score for local part availability refers to a lack of availability, and a high score for lead time in procurement refers to longer procurement times

Alternative Methods, Risks & Challenges

Other Criticality Methods

If a more detailed method for determining part criticality is desired, software solutions offered by companies can perform analyses and create risk matrices to aid in decision-making. Listed below are different approaches that are used to determine part criticality, and which are also included in the aforementioned company software:

- 1) Risk-Based Approach
- 2) Analytic Hierarchy Process (AHP)
- 3) Total Defect and Failure Cost (TDAF) or Failure Mode and Effect Analysis (FMEA).

Each of these methods can be adjusted to accommodate different levels of detail as demonstrated from the AHP provided in the main report and this appendix.

Comparison of Job Descriptions

Highlighted text are duties that potentially overlap.

Shared Responsibilities/Tasks	Public Works Manager Unique Responsibilities/Tasks	Public Works Assistant Manager Unique Responsibilities/Tasks
Strategic direction and leadership	Change management processes and corporate process improvement initiatives	Assist with the planning and monitoring of the Public Works Department Budget
Supervision of staff	Develop and implement departmental operating budget	Assume the role of the Public Works Manager as required.
Performance evaluation and planning	Monitor costs to maintain budget integrity	Work with corporate to implement, oversee, and recommend changes in various corporate software programs
Ensure compliance with laws, regulations, and policies	Manage recruitment, training, motivation, and evaluation of employees	Plan projects, including project costing, prioritizing tasks, tendering, and scheduling both external and internal work plans
Respond to emergencies	Observe and keep abreast of changes in provincial legislation and regulations, municipal policies, and procedures, and by-laws	Supervise the execution of projects, ensuring compliance with occupational health and safety policies
Maintain a safe, healthy, and positive work environment	Assist in the development of plans, policies, by-laws, procedures, programs, and standards for municipal services and infrastructure	Foster a positive cultural environment
Prepare reports and attend meetings	Establish and maintain detailed daily records of work assignments, accomplishments, and achievements	Develop a constructive and trusting partnership with Council, CAO, Public Works Manager, and Senior Management
Implement, conduct, and ensure due diligence of health and safety matters	Prepare and submit annual capital and operating budget for the Public Works Department	Oversee and respond to service requests, verbal and written inquiries from the public and other government bodies
--	Coordinate with the Transfer Station Manager for budget development and submission	Formulate recommendations, preparing reports, and attending Public Works Committee, Council, and other meetings and functions
--	Prepare applications and submissions for cost and revenue sharing grants	Develop and recommend new public works policies and changes to existing policies, operating procedures, work systems, etc.
--	Represent the municipality before the public and in legal proceedings	Develop, manage, and monitor complex departmental capital and operating budgets, manage variances
--	Participate in contract negotiations	Implement corrective actions on Public Work Department performance
--	Act as a liaison with local officials of various Ministries, Crown Corporations, and government agencies	Prepare and participate in meetings with project teams, consultants, and subcontractors

Cemetery Estimated Expenses

The tables that follow provide an estimate of the annual depreciation cost associated with replacing Transportation's mowers and miscellaneous equipment, such as trimmers, blowers, and push mowers

Year	Position	Service Area	Wage	Hours Recorded to LDB Cemetery	Benefits	Total (\$)
2020	Student	Cemetery	18.54	470	1.16	10,100
2020	Materials					10,400
Total						20,500
2021	Student	Cemetery	18.87	225	1.17	5,000
2021	Operator 2	Cemetery	23.95	6	1.17	200
2021	Materials					18,500
Total						23,600
2022	Student	Cemetery	21.75	342	1.16	8,600
2022	Operator 1	Cemetery	24.19	3	1.20	100
2022	Operator 2	Cemetery	27.46	3	1.20	100
2022	Materials					2,300
Total						13,400
Average Annual Spend						19,200

Source: Derived from information provided by the RM of Lac du Bonnet.

Benefit percentages were derived from RM financial statements.

Cemetery Estimated Expenses

The following tables provide an estimate of the annual depreciation cost associated with replacing Transportation's riding mowers and miscellaneous equipment, such as trimmers, blowers, and push mowers.

Asset	Quantity	Initial Capital Cost	Total Capital Cost	Approx. Lifespan (years)	Annual Depreciation Expense (\$)
72" Exmark Mower Zero Turn	2	\$19,300	\$38,600	10	\$3,900.00
Maintenance Equipment Mower/Trimmer/Blower	1	\$3,400	\$3,400	10	\$300.00
Total 10-year Equipment Cost					\$4,200.00

Cemetery	Acres	% Developed	Area Maintained (acres)	% of Total Area	Equipment Depreciation Applied to Cemeteries
Lac du Bonnet	7.00	100%	7.00	50%	\$2,100.00
Riverland	4.00	50%	2.00	14%	\$600.00
Lee River	0.78	100%	0.78	5%	\$200.00
Red Deer	1.10	100%	1.10	8%	\$300.00
St. Mary's RC	3.00	25%	0.74	5%	\$200.00
St. Mary's Polish C	Neg.	Neg.	0.00	0%	\$0.00
Lowland	0.51	100%	0.51	4%	\$200.00
Brightstone	1.75	100%	1.75	12%	\$500.00
Lettonia	0.35	100%	0.35	2%	\$100.00
Total	18.49		14.23	100%	\$4,200.00

Source: Derived from information provided by the RM of Lac du Bonnet.

Guidelines & Suggested Dashboard Elements

Suggested & Sample KPIs

The tables below provide examples of visuals that can be included in an operations dashboard with a focus on fleet management. The key performance indicators included in the tables are some suggested metrics to track. Note: The equations to calculate some of the recommended KPIs are included in this appendix.

Fuel KPIs	Total Fuel Cost (\$)			Total Fuel Consumption (L)			Fuel Efficiency by Class (L/km)		
Period	Current Period	Last Period	Current Period Last Year	Current Period	Last Period	Current Period Last Year	Current Period	Last Period	Current Period Last Year
Total Assets							n/a	n/a	n/a
Heavy Vehicles									
Light Vehicles									
Light Equipment									

Fleet Usage KPIs	Vehicle Up-Time (%)			Vehicle Utilization (%)		
Metric	Current Period	Last Period	Current Period Last Year	Current Period	Last Period	Current Period Last Year
Total Assets						
Heavy Vehicles						
Light Vehicles						
Light Equipment						

Legend:

Status	Symbol	Trend	Symbol
Good		Improving	+
Caution		Flat	0
Warning		Declining	-

Fleet KPI	Current Period	Last Period	Last Year	Status/Trend
Total number of vehicles by class				
Heavy vehicles with low usage (# out of total #)				
Light vehicles with low usage (# out of total #)				
Light equipment with low usage (# out of total #)				
Average Fleet Age (years)				
Total Fleet Maintenance Cost (\$)				
# of Vehicles Disposed				
# of Vehicle Incident Reports				

Fleet Dashboard – KPI Equations

The following equations show how to calculate some of the suggested KPIs:

$$\text{Vehicle Availability} = \frac{\text{\# of Operational Vehicles}}{\text{Total Vehicles in Fleet}} \times 100$$

$$\text{Vehicle Utilization} = \frac{\text{Number of Vehicles in Use}}{\text{Total Vehicles in Fleet}} \times 100$$

$$\text{Vehicle Downtime (days)} = \frac{\text{Total Downtime (days)}}{\text{Number of Vehicles}}$$

$$\text{Maintenance Costs (\$)} = \frac{\text{Total Maintenance Costs}}{\text{Number of Vehicles}}$$

$$\text{Fleet Age (years)} = \frac{\text{Total Age of Vehicles}}{\text{Number of Vehicles}}$$

$$\text{Cost Per km} = \frac{\text{Total Fleet Operational Costs}}{\text{Total km Driven}}$$

Fleet Dashboard – Large Table

Here is an example of how a large table can be used in a dashboard to display multiple data points effectively

Metric	Overall			Heavy Equipment			Light Equipment			Light Vehicles		
	Current Period	Last Period	Current Period, Last Year	Current Period	Last Period	Current Period, Last Year	Current Period	Last Period	Current Period, Last Year	Current Period	Last Period	Current Period, Last Year
Fleet size												
Vehicle Up-Time (%)												
Vehicle utilization (%)												
Total Fleet Maintenance Cost (\$)												
Total Fuel consumption (L)												
Total Fuel costs (\$)												
Average Fleet Age (years)												
# of Vehicles Disposed												
# of Vehicle Incident reports												
Average Driver Performance Rating												
Operating Cost per km (\$)												
Equipment/vehicle below expected usage (# out of total #)												

Fleet Data Table

This table is an example of how the data source for the fleet dashboard could look. It includes information on individual assets and their corresponding metrics, with the total values displayed in the bottom row for use on the dashboard.

ID No.	Recording Period	Year	Make	Vehicle Usage (km or hours)	Vehicle Downtime (days)	Fuel Consumption (L)	Fuel Cost (\$ / L)	Fuel Cost (\$)	Preventative Maintenance Cost (\$)	Breakdown Maintenance Cost (\$)	Registration & Insurance Cost (\$)
		:	:	:	:	:		:			:
		2011	Chev Silverado 1500 LT								
		2012	Chev Silverado 2500 HD LT Ext								
		2014	Chev Silverado 1500 WT								
		2015	Dodge Ram 1500								
		2015	Karavan Trailer								
		2015	Redwestrstar 4700SF								
		2016	Western Star Semi Truck								
		2017	Dodge Ram 1500 SLT								
		2017	Dodge Ram 1500 ST 4WD								
		2017	GMC Sierra Crew Cab								
		:	:	:	:	:		:			:
		Totals		x	y



[kpmg.ca](https://www.kpmg.ca)

This report (the “Report”) by KPMG LLP (“KPMG”) is provided to the Rural Municipality of Lac du Bonnet (“the RM” or “Lac du Bonnet”) pursuant to the agreement for professional services between the Government of Manitoba Municipal Relations and KPMG dated December 3rd, 2022, to conduct a review of Lac du Bonnet’s Public Works Transportation Services (the “Review”).

If this Report is received by anyone other than Lac du Bonnet or the Government of Manitoba, the recipient is placed on notice that the attached Report has been prepared solely for Lac du Bonnet for its own internal use and this Report and its contents may not be shared with or disclosed to anyone by the recipient without the express written consent of KPMG and Lac du Bonnet. KPMG does not accept any liability or responsibility to any third party who may use or place reliance on the Report.

The intention of the Report is to conduct an assessment of Lac du Bonnet’s Public Works Transportation Services and to identify potential areas of opportunities for efficiencies, cost improvement, innovation and reinvestment. The procedures we performed were limited in nature and extent, and those procedures will not necessarily disclose all matters about a business unit’s functions, policies and operations, or reveal errors in the underlying information. Our procedures consisted of inquiry, observation, comparison and analysis of data and information provided by the RM. In addition, we considered comparisons to select municipalities and leading practices.

The procedures we performed do not constitute an audit, examination or review in accordance with standards established by the Chartered Professional Accountants of Canada, and we have not otherwise verified the information we obtained or presented in this Report. We express no opinion or any form of assurance on the information presented in the Report, and make no representations concerning its accuracy or completeness. The RM is responsible for their decisions to implement any opportunities/options and for considering their impact. Implementation will require the RM to plan and test any changes to ensure that the RM will realize satisfactory results.