



THE RURAL MUNICIPALITY OF LAC DU BONNET POLICY & PROCEDURES

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POLICY STATEMENT

The RM of Lac du Bonnet recognizes the importance of providing a consistent level of service for the maintenance of local roads. Consistent maintenance will ensure safe travelling conditions for vehicular traffic using efficient methods of grading, gravelling, dust suppression, and roadside mowing. This Policy is in addition to the Snow & Ice Control Policy approved as Resolution No. 2019 0391. All maintenance activities shall be conducted in adherence to the *Highway Traffic Act* and *Motor Transport Act* and regulations enacted thereunder.

DEFINITIONS

Municipality Shall mean the Rural Municipality of Lac du Bonnet

Crown Describes the cross-sectional shape of a roadway to promote drainage from the road surface. Typical road sections are either center-crowned or in-sloped and out-sloped

Grading Shall mean the work performed by a motor grader to restore the surface and shape and maintain a smooth and consistent travelling surface

Gravelling Shall mean the addition of traffic gravel to the travelling surface to correct an insufficient granular layer

Dust Suppression Shall mean the application of approved products to prevent the release of dust particles from the road surface into the air

Roadside Mowing Shall mean the cutting of vegetation alongside roadways for safety and maintenance purposes

PROCESSES:

1) Road Inspections:

The Municipality shall conduct annual spring road condition assessments on all municipally maintained gravel roads during and following the spring thaw period. Additional inspections shall be completed as required based on weather events, observed conditions, or resident concerns.

All inspections shall be completed by Public Works staff using a standardized gravel road assessment sheet to ensure consistent and objective evaluation of road conditions.

Assessments shall include documentation of:

- Road Attributes (classification, width & gravel type)
- Surface condition and visible distresses (e.g., potholes, rutting, corrugation, loose aggregate, dust, and frost-related issues)
- Road geometry and cross-section, including crown and corner conditions
- Drainage performance, including ditches, standing water, and related concerns
- Gravel thickness, quality, and distribution
- Applicable ownership and maintenance agreement information

Assessment results shall be used to guide maintenance planning, including grading, gravelling, and drainage improvements, as well as to support budgeting, resource allocation, and long-term tracking of road conditions.

2) Grading:

A. MAINTENANCE OVERVIEW:

The Municipality routinely grades gravel roads to correct surface defects and maintain drainage. Traffic, weather, and wear influence conditions, with issues like potholes and corrugation addressed by reshaping, redistributing gravel, and maintaining proper crown and shoulders. Grading is performed by trained Public Works operators. Road classifications and condition assessments guide prioritization and efficient resource use.

B. ROAD CLASSIFICATIONS & SERVICE LEVELS:

Grading frequency is determined by road classification, traffic volumes, weather conditions, and observed surface conditions. The Municipality follows a proactive approach while remaining responsive to changing conditions.

- **Collector & Feeder Roads** - These roads carry *higher* traffic volumes and connect local roads to provincial highways, communities, recreational areas, and emergency services. **Graded minimum 3 times per year**, with additional grading as required following adverse weather or heavy use.
- **Local Roads** - These roads provide access to residences and connect to other local or collector roads. Traffic volumes are generally *moderate*. **Graded minimum 2 times per year**, depending on seasonal conditions and traffic levels.
- **Agricultural Gravel Roads** - These roads provide access to agricultural lands and a limited number of residences and are not typically used as through routes. **Graded as required**, with priority given during peak agricultural periods and based on operational needs.
- **Undeveloped Agricultural Roads** - These are low-use field access roads that do not serve residences or connect to other roads. Graded on an as-needed basis or **upon request**, typically during seasonal use.

C. GRADING PROCEDURES:

Grading is performed to restore proper road shape, improve ride quality, and maintain effective surface drainage. Work is carried out using established best practices to ensure a safe, smooth, and durable driving surface while preserving the integrity of the gravel structure. Standard practices include:

- **Scarifying and reshaping the road surface** to loosen compacted material, eliminate surface defects such as potholes and corrugation, and restore the intended road profile.
- **Pulling and redistributing gravel from road edges** toward the center of the roadway, ensuring material is reused efficiently and free from contamination by soil or organic matter.
- **Maintaining a crowned surface (3–4% crossfall)** to promote proper drainage and prevent water from accumulating on the roadway surface.
- **Compacting the surface**, with the addition of moisture as required, to achieve adequate binding of materials and a stable travelling surface.
- **Maintaining proper superelevation on curves** to support vehicle control and safety, particularly on higher-speed or higher-traffic road segments.
- **Removing large rocks, debris, and other hazards** that may pose a risk to vehicle safety or interfere with grading operations.
- **Avoiding grading during excessively wet or dry conditions** where work may damage the road structure, cause material displacement, or result in poor compaction.
- **Blending new and existing material where applicable** to maintain a consistent surface and prevent segregation of coarse and fine particles.

D. MATERIAL MANAGEMENT:

Effective material management supports long-term road performance, cost efficiency, and the preservation of the roadway structure. Road condition assessments conducted during the annual spring inspection period, along with periodic monitoring of higher traffic roads, are used to identify areas where gravel is insufficient, contaminated, or has been displaced due to traffic or weather conditions. Existing gravel is reused and reworked where possible to maximize material efficiency, with new material added as required to maintain adequate surface thickness, proper crown, and effective drainage. Care is taken during maintenance activities to prevent contamination from underlying soils or organic material and to minimize the loss of gravel to ditches and adjacent areas. Gravel usage, placement locations, and related maintenance activities are tracked to support operational planning, budgeting, and long-term asset management.

E. RECORDS AND TRAINING:

The Municipality shall maintain records of grading activities completed throughout the season to support operational planning, accountability, and efficient use of resources. Records shall include, where practical, the road name or segment, date of grading, and type of work performed, and may also include operator or equipment details. This information shall be used to monitor service levels, support scheduling and prioritization of maintenance activities, assist in responding to public inquiries, and inform budgeting and long-term planning. The method of tracking shall be updated as operational needs and technology evolve.

F. SERVICE CONSIDERATIONS AND LIMITATIONS:

The Municipality applies the following general considerations when planning and delivering gravel road maintenance services:

- **Prioritization of Work:** Maintenance is prioritized based on road classification, traffic volume, and overall condition, with higher classification roads receiving priority.
- **Weather and Seasonal Conditions:** Maintenance scheduling is influenced by seasonal factors such as spring thaw, rainfall, and freeze-thaw cycles.
- **Moisture Conditions:** Grading is performed when adequate moisture is present to support proper shaping and compaction. Operations shall be deferred during excessively wet conditions to prevent rutting, material displacement, and damage to the road structure.
- **Condition-Based Response:** Roads with significant defects or drainage issues shall be prioritized outside regular schedules.
- **Operational Resources:** Service levels may vary based on available staffing, equipment, and operational demands.
- **Inspections and Monitoring:** Regular inspections, particularly on higher traffic roads, inform maintenance planning and early issue detection.
- **Emergency and Safety Considerations:** Roads posing immediate safety risks shall be addressed on a priority basis regardless of classification.

The Municipality strives to maintain gravel roads in a safe and passable condition; however, service levels may vary due to weather, available resources, and competing operational priorities. Residents may experience temporary surface irregularities, particularly during periods of extreme weather or seasonal transitions such as spring thaw.

G. PUBLIC COMMUNICATIONS:

Residents are encouraged to report road concerns to the Municipality by calling the office or submitting a service request through the online service tracker. All requests shall be reviewed and prioritized in accordance with this policy to ensure safe, passable roads and efficient use of resources.

3) Gravelling:

A: MAINTENANCE OVERVIEW:

The Public Works Department monitors the condition of all gravel roads and determines where additional traffic gravel is required to maintain safe, passable surfaces and support routine grading. Roads are reviewed annually to identify sections needing replenishment. Annual gravel applications are prioritized based on road classification, traffic volume, and overall condition to ensure resources are used effectively.

B: PROCEDURES:

The following steps outline the standard procedure for applying and integrating new gravel to maintain road structure, surface quality, and safe driving conditions:

- **Material Assessment:** Additional gravel is applied where existing material is insufficient, contains less than 10% fines or more than 30% fines, or has been contaminated with organic material.
- **Scarifying:** The road surface is scarified to the depth and width necessary to remove surface defects and prepare for new gravel.
- **Gravel Placement:** New traffic gravel is added to achieve a workable thickness over the roadway or as determined by road assessments and inspections.
- **Shaping:** The surface is shaped to maintain a crowned profile (3–4% crossfall) immediately after gravel placement.
- **Mixing:** Gravel is evenly mixed to prevent segregation of coarse material.
- **Compaction:** The road surface is compacted, with water added as necessary to achieve proper density and stability.
- **Dust Control Coordination:** If the road is scheduled for dust suppression, gravel placement is coordinated prior to the application of dust control measures.

C: FREQUENCY AND PRIORITIZATION:

Gravelling is scheduled based on road condition to maintain safe, passable surfaces and support routine grading. Annual spring inspections following snowmelt, along with periodic checks on high-traffic roads, identify areas where gravel is insufficient, contaminated, or displaced. Additional gravel is applied to restore adequate thickness, maintain proper crown and shoulders, and ensure proper drainage.

D: GENERAL CONSIDERATIONS:

Gravelling operations are coordinated with grading and dust suppression schedules to maximize effectiveness and shall be adjusted based on weather, material availability, or operational priorities. All activities are monitored and recorded to support planning, budgeting, and long-term asset management, ensuring safe and durable road surfaces while making efficient use of resources.

4) Dust Suppression:

4.1 MAINTENANCE OVERVIEW:

Dust suppression, when applied appropriately, reduces maintenance costs by minimizing material loss during dry conditions and decreasing the frequency of grading. This is achieved as the suppressant absorbs moisture from the air and/or road surface, forming a thin film around aggregate particles that prevents them from becoming airborne.

This process contributes to the formation of a durable surface crust, improving road stability and reducing maintenance requirements. The effectiveness and duration of treatment will vary depending on weather conditions, traffic volume, and traffic type.

4.2 EQUIPMENT:

The following equipment is required for dust suppression operations:

- Motor grader, preferably equipped with toothed blades
- Pneumatic (wobbly) rollers and tow tractor
- Water truck, as required
- Dust suppressant supplier equipment, including:
 - A distributor with a minimum capacity of 15,000 litres, equipped with:
 - A pressurized spray bar
 - A positive, instantaneous on/off valve
 - Capability to uniformly spray a minimum width of 3.0 m

- Spray nozzles configured to achieve at least 50% overlap between adjacent nozzles
- An electronic spray monitoring and automatic rate control system that:
 - Is calibrated for the product being applied
 - Is visible and accessible to the operator during operation

4.3 PROCEDURES:

The Municipality shall apply dust suppression using magnesium chloride (MgCl₂) standardized to a 30% concentration on designated gravel roads, subject to approved budget allocations. Alternative dust suppressants shall be used at the discretion of the Municipality.

A: Application Restrictions

Dust suppression will not be applied to:

- Private roads or roads not under municipal jurisdiction
- Roads scheduled for reconstruction or upgrade within one (1) year

B: Priority Locations

Dust suppression shall be prioritized in the following areas:

- Major intersections along collector and feeder roads, and locations with poor alignment where dust creates safety concerns
- Collector and feeder roads serving residential properties
- Reconstructed roads, on an as-needed basis
- Local roads: up to 45 m (150 ft) on either side of residences not protected by an adequate shelterbelt, at the discretion of the Public Works Department

C: Roadway Preparation

- The roadway shall be prepared in accordance with Section 3.3, including the addition of gravel where required
- The surface shall be lightly scarified immediately prior to application
- Surface material shall be in a moist condition; if dry, light watering shall be applied
- Overwatering or excessive rolling that brings fines to the surface shall be avoided

D: Application Rates

- Initial application: minimum rate of 1.5 L/m²
- Subsequent applications: 1.0 L/m², at the discretion of the Public Works Manager and subject to budget availability

E: Application and Compaction

- Allow a minimum of 30 minutes for penetration prior to compaction
- Compact the treated surface with one complete pass of a pneumatic (wobbly) roller to seal the surface

- Additional rolling is not recommended, as it may bring excessive fines to the surface

F: Post-Treatment Maintenance

- If grading is required after treatment, it shall be performed only when the surface is in a moist condition
- Moisture shall be achieved through rainfall or by use of a water truck

5) Roadside Mowing

5.1 MAINTENANCE OVERVIEW:

The Municipality shall conduct roadside mowing on all designated municipal road right-of-way to maintain visibility, control vegetation growth, and prevent encroachment onto the roadway.

5.2 PROCEDURES:

The following procedures establish the standards and practices for roadside mowing operations to ensure consistency, safety, and effective vegetation control across the maintained road network.

A: Mowing Frequency

- All municipal roads shall be mowed twice annually for the control of grass and light vegetation

B: Mowing Limits

- The first pass shall consist of a minimum seven-foot (2.1 m) cut from the road shoulder down the slope
- The second pass shall consist of a minimum ten-foot (3.0 m) cut from the road shoulder extending into the ditch

C: Exemptions

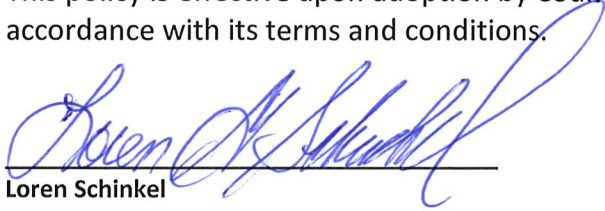
The following areas shall be excluded from mowing operations:

- Areas under approved hay permits
- Active major or minor road construction zones

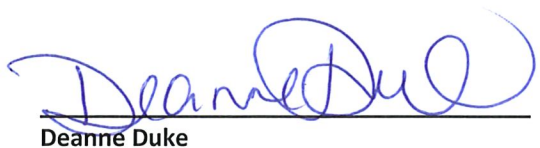
D: Additional Mowing

- Additional mowing shall be undertaken at the discretion of the Public Works Department where required for safety, drainage, or operational purposes.

This policy is effective upon adoption by Council and shall be enforced by municipal administration in accordance with its terms and conditions.

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Loren Schinkel
Reeve

A handwritten signature in blue ink, appearing to read "Deanne Duke", written over a horizontal line.

Deanne Duke
Chief Administrative Officer