

**CORPORATION OF THE TOWNSHIP  
OF SOUTH ALGONQUIN  
BY-LAW NO. 2023-773**

Being a By-Law to authorize the Mayor and CAO/Clerk-Treasurer  
To enter into and agreement with HIS MAJESTY THE KING, in Right of Ontario, as  
represented by the Minister of the Environment, Conservation and Parks

**WHEREAS** the Township of South Algonquin, deems expedient to enter into an  
agreement with HIS MAJESTY THE KING, in Right of Ontario, as represented by the  
Minister of the Environment, Conservation and Parks for the purpose of a road  
maintenance services agreement for roads contained within the Opeongo River and  
Upper Madawaska River Provincial Parks.

**NOW THEREFORE** the Municipal Council of The Corporation of the Township of  
South Algonquin enacts as follows:

1. **THAT** the Mayor and CAO/Clerk-Treasurer is hereby authorized to execute the  
Agreement in the form attached to this By-Law and affix the Corporate Seal on  
behalf of the municipality.
2. **THAT** this By-Law will come into force and take effect on the date of the final  
passing thereof.

**READ A FIRST AND SECOND TIME this 6th day of December 2023.**

\_\_\_\_\_  
Ethel LaValley, Mayor

\_\_\_\_\_  
Bryan Martin, CAO/ Clerk-Treasurer

**READ A THIRD TIME AND PASSED AND ENACTED this 6th day of December 2023.**

\_\_\_\_\_  
Ethel LaValley, Mayor

\_\_\_\_\_  
Bryan Martin, CAO/ Clerk-Treasurer

## ROAD MAINTENANCE SERVICES AGREEMENT

This **ROAD MAINTENANCE SERVICES AGREEMENT** (this “**Agreement**”) is effective as of the \_\_\_\_\_ day of \_\_\_\_\_, 2023 (the “**Effective Date**”),

BETWEEN:

**HIS MAJESTY THE KING in Right of Ontario, as represented by the Minister of the Environment, Conservation and Parks**

(hereinafter referred to as the "**Ministry**")

- and -

**The Corporation of the Township of South Algonquin**

(hereinafter referred to as the "**Township**")

### RECITALS:

- A. As a result of the establishment of the Opeongo River Provincial Park and the Upper Madawaska River Provincial Park (collectively, the “**Parks**”, each a “**Park**”), both non-operational provincial parks which are administered by the Ministry, a number of roads managed by the Township weave in and out of Park lands as shown in Schedule B – Location Map attached hereto.
- B. The Ministry is the owner of the portions of the roads that are contained within the Parks as shown in red on Schedule B – Location Map, a list of which is provided in Schedule A attached hereto (the “**Lands**”).
- C. The Ministry acknowledges that road maintenance is required to provide public access and emergency service access to the Lands, private property, and Algonquin Park.
- D. The Township has been carrying out road maintenance on these roads, including the Lands, and agrees to continue to do so pursuant to the terms and conditions contained within this Agreement.
- E. The Township has passed By-law No. 2023-762 (attached as Schedule D) which indicates the current level of service of road maintenance on the highways specified therein, which include the Lands.

- F. The Ministry agrees to retain the Township and its employees, servants, agents, consultants and contractors (collectively, the “**Township’s Representatives**”) to enter upon the Lands to perform the following specific road maintenance services as outlined within the most current level of service by-law for The Township of South Algonquin (currently By-law 2023-762): road patrols, sign repairs, debris pick-up, pothole repairs, winter maintenance, winter sand sweeping, beaver control, noxious weed control, roadside mowing, dust control, and such other activities as are necessary to ensure the safety of the public (collectively, the “**Services**”), subject to the terms and conditions of this Agreement.

**NOW THEREFORE**, in consideration of the foregoing, the payment of the service delivery fee and the mutual covenants and undertakings herein contained and expressed, it is agreed among the parties as follows:

### **TERM AND RENEWAL**

1. This Agreement shall commence on the Effective Date and shall expire on the tenth anniversary of the Effective Date (the “**Term**”) subject to any renewal which shall be at the Ministry’s option.
2. In the event the Ministry wants to renew this Agreement, the Ministry shall give the Township 60 days prior written notice of its decision to renew, which shall be on the same terms and conditions; the notice shall also indicate the term of the renewal which shall be up to 10 years.

### **SERVICES**

3. The Ministry retains the Township to perform the Services (defined in Recital F) in accordance with this Agreement.
4. The Services shall be undertaken by the Township:
  - (a) in a good and workmanlike manner,
  - (b) by good and reputable contractors and workers,
  - (c) in accordance with the most current level of service by-law for The Township of South Algonquin, which, as of the Effective Date, is By-law 2023-762 provided in Schedule D,
  - (d) in accordance with the mitigation measures set out in Schedule C,
  - (e) and in accordance with the Clean Equipment Protocol set out in Schedule E.
5. The Parties agree that the physical limits of the Lands for purposes of this Agreement extends thirty-three (33) feet from the centerline of the travelled portion of the roads.

6. The Township shall repair, at its sole expense, any damage or disturbance to the Lands arising out of or relating to the performance of the Services.
7. Except as indicated in Schedule C, the Services do not include replacement or repair or maintenance of any water crossing, including without limitation any culvert or bridge. Except as indicated in Schedule C, the Ministry retains full responsibility for all maintenance and repair of water crossings and acknowledges that the definition of Services in this Agreement does not include any such structures.
8. The Ministry acknowledges and agrees that the Services may require the removal of trees or other vegetation and the Township is hereby authorized to undertake such actions where necessary to facilitate the Services. The Township shall not be required to obtain a permit or advance permission from the Ministry or any other authority having jurisdiction for vegetation removal that occurs incidental to the Services.
9. Within the Lands and in accordance with Schedule C, the Township is also hereby authorized to undertake all Services necessary to manage nuisance beavers and to remove dams or obstructions that have the potential, in the Townships' exclusive opinion, to create a risk to users of the road or the integrity of the Lands. If dam removal is required that is within the Park and not on the Lands, the Township shall discuss next steps with the Ministry.
10. For the purposes of section 22 of the *Provincial Parks and Conservation Reserve Act, 2006*, S.O. 2006, c. 12, this Agreement constitutes a work permit for the Township to undertake the Services on the Lands as long as such work is in accordance with Schedules C and D attached hereto.
11. The Township will report to the Ministry any significant infrastructure damage on the Lands that requires maintenance beyond the Services and the Ministry shall then endeavour to obtain funding to carry out such repairs. In the event that the road condition on the Lands poses an immediate hazard, the Township shall sign and barricade such road and remove such signage and barricades when the road has been made safe for staff and equipment.

## LICENCE

12. The Ministry hereby grants to the Township, together with the Township's Representatives, a licence (the "**Licence**") to enter upon the Lands with supplies, materials, and equipment for the purpose of performing the Services (as defined above in recital F).
13. The Ministry warrants that it owns the Lands and has the right to grant the Licence and retain the Township's services.

## OCCUPATIONAL HEALTH AND SAFETY

14. The Township shall have a written occupational health and safety policy and maintain a program to implement that policy as required by clause 25(2)(j) of the *Occupational Health and Safety Act*, R.S.O. 1990, c. O.1, as amended (the “**OHSA**”).
15. The Township shall:
  - (a) fulfill all of the Employer obligations under the OHSA and ensure that all work is carried in accordance with the OHSA and its regulations;
  - (b) appoint and ensure an adequate number of supervisors are provided for the work and that they all satisfy the definition of “competent” as prescribed in the OHSA;
  - (c) identify any hazards associated with the work, assess the risks and develop appropriate control measures to protect worker safety;
  - (d) provide information, instruction and supervision to all workers to ensure they are informed of the hazards inherent to the work and understand the procedures for minimizing the risk of injury or illness;
  - (e) ensure that workers and supervisors have completed mandatory health and safety awareness training in accordance with O. Reg. 297/13;
  - (f) ensure that any and all equipment used in connection with the Deliverables under the Contract will at all times be properly and safely maintained by duly qualified personnel and in good working order;
  - (g) notify the Ministry of the occurrence of all work-related health and safety incidents and Ministry of Labour investigations or orders and provide a copy to the Ministry of all correspondence to or from the Ministry of Labour with respect to the work undertaken under this Agreement;
  - (h) ensure appropriate emergency management procedures and response in the event of an accident or fire, including an emergency evacuation plan that accommodates for persons with disabilities (in accordance with section 27 of the Integrated Accessibility Standard Regulation, *Accessibility for Ontarians with Disabilities Act, 2005*; and
  - (i) take every precaution reasonable in the circumstances for the protection of worker health and safety, as required by the OHSA.
16. The Township shall ensure that any contractor hired by the Township to complete the Services works in accordance with the OHSA and its regulations. The Township acknowledges that it is the “employer”, as defined by the OHSA, of its contractors.

17. The Ministry may stop the work where the Township fails to comply with the OHS Act or its regulations and an immediate danger to worker health and safety is observed. Failure or refusal by the Township to correct the observed violation, or willful or repeated non-compliance may result in termination of the Agreement.

## **TOWNSHIP BY-LAW AND RISK**

18. At any time during the Term, in the event that the Township updates its level of service by-law, within 2 business days of approval of the revised by-law, the Township shall notify the Ministry by letter which shall reference this Agreement and attach a copy of such revised by-law, also indicating the date of the approval. Once received by the Ministry, the updated by-law shall represent the level of service by-law for the purpose of Section 4(c) of this Agreement.
19. The Township and the Township's Representatives and their respective property and equipment located at any time on the Lands, and all Services carried out by or on behalf of the Township or the Township's Representatives on the Lands, shall be at the sole risk of the Township.

## **INSURANCE**

20. The Township shall ensure that (i) the Township and the Township's Representatives (including all contractors and subcontractors which undertake the Services) obtain and maintain for the Term, at its own cost and expense, all the necessary and appropriate insurance that a prudent person would maintain in carrying out the Services, including but not limited to commercial general liability, and in each such case, naming "HIS MAJESTY THE KING in Right of Ontario, as represented by the Minister of the Environment, Conservation and Parks" as an additional insured with respect to liability arising in the course of performance of the Services; and (ii) copies of such certificate(s) of insurance are provided to the Ministry.

## **ANNUAL FEE AND PAYMENT**

21. In consideration of carrying out the Services, the Ministry shall pay to the Township an amount of **\$10,000** (the "Annual Fee") each fiscal year ending March 31 during the Term of this Agreement. The Annual Fee shall be increased annually by the Ontario Consumer Price Index for Ontario (All-Items) as published by Statistics Canada Ottawa for the preceding year.
22. Each fiscal year during the Term, the Township shall invoice the Ministry for the Annual Fee and the Ministry shall pay the Annual Fee within sixty (60) days of receipt of such invoice.

## TERMINATION

23. Either party may terminate this Agreement for any reason upon giving the other party 90 days prior written notice. If the effective date of the termination occurs before October 1 and the Ministry has paid the entire Annual Fee for that year, the Township shall reimburse half of the Annual Fee for that fiscal year.
24. In addition to all other rights of termination available under the Agreement, at law, in equity, or events of termination by operation of law, the Ministry may immediately terminate the Contract upon giving notice to the Township where the Township's acts or omissions constitute a substantial failure of performance.

## GENERAL

25. Any notice or document required under this Agreement is sufficiently given if delivered personally or if sent by registered mail or email addressed to the Ministry at:

Park Superintendent  
Algonquin Provincial Park  
Ministry of the Environment, Conservation and Parks  
Ontario Parks  
PO Box 219  
HWY 60  
East Gate Complex  
Whitney, ON K0J2M0  
Telephone: 613-637-2780  
Email: john.swick@ontario.ca

and to the Township at:

The Corporation of the Township of South Algonquin  
7 Third Ave.  
P.O. Box 217  
Whitney, Ont.  
K0J 2M0  
Bryan Martin, CAO/Clerk-Treasurer  
Telephone: 613-637-2650  
Email: clerk@southalgonquin.ca

or at such other addresses as the Ministry and the Township may designate from time to time. Any party may, at any time by notice given in writing to the other party, change the address for service of notice on it. Notices by registered mail shall be deemed to have been received on the fourth business day after the date of mailing. Notices by personal delivery or by email shall be deemed to have been received at the time of delivery or transmission unless

delivered or transmitted on a weekend or holiday, in which case such notice shall be deemed to have been received on the next business day. In the event of an interruption in postal service, notice shall be given by personal delivery or by email. For clarity, notice may not be given or received by telephone, despite the inclusion of a telephone number above.

26. All of the terms of this Agreement are severable from each other and will survive the invalidity of any other term of this Agreement.
27. This Agreement shall be construed and enforced in accordance with, and the rights of the parties shall be governed by, the laws of the Province of Ontario and the laws of Canada applicable therein and the parties hereto irrevocably attorn to the exclusive jurisdiction of the courts of the Province of Ontario in the event of a dispute hereunder. This Agreement constitutes the entire agreement between the parties and there is no representation, warranty, collateral agreement or condition affecting this Agreement other than expressed herein.
28. No modification of or amendment to this Agreement shall be valid or binding unless set forth in writing and duly executed by both parties hereto.
29. The Township acknowledges that this Agreement and any information or documents provided by it to the Ministry may be released pursuant to the provisions of the *Freedom of Information and Protection of Privacy Act*, R.S.O.1990, c. F. 31, as amended or replaced from time to time.
30. The Ministry acknowledges that this Agreement and any information or documents provided by it to the Township may be released pursuant to the provisions of the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O.1990, c. M. 56, as amended or replaced from time to time.
31. The parties hereby agree that they will act reasonably to settle any dispute, controversy or claim arising out of or relating to this Agreement, as amended or replaced from time to time, through good-faith negotiations.
32. This Agreement may be executed in separate counterparts, all of which will be considered one and the same Agreement. The parties agree that this Agreement may be delivered by electronic transmission of an electronically scanned original signature (such as PDF file format).
33. Each party shall from time to time execute and deliver all such further documents and instruments and do such acts as the other party may reasonably require to effectively carry out or better evidence the full intent and meaning of this Agreement



34. The Township shall indemnify and hold harmless the Ministry from and against all liabilities, costs, damages, expenses (including legal, expert and consulting fees), actions, claims, demands, lawsuits or other proceedings (each a "**Proceeding**"), by whomever made, sustained, incurred, brought or prosecuted, arising out of, or in connection with, any act or omission of the Township or the Township's Representatives in the course of the performance of the Services provided that such indemnity shall not apply to the extent that liability is found due to faulty road design in the Lands or inherent hazard in the road itself in the Lands. This section shall survive the termination or expiry of the Agreement.
35. The Ministry acknowledges and agrees that the Township does not have any property interest in the Lands..
36. The recitals to this Agreement form an integral part of this Agreement.

***[- SIGNATURE PAGE FOLLOWS -]***

**IN WITNESS WHEREOF** the parties hereto have executed this Agreement effective as of the date set out above.

**HIS MAJESTY THE KING in Right of Ontario,  
as represented by the Minister of the  
Environment, Conservation and Parks**

Per: \_\_\_\_\_  
Name: John Swick  
Title: Park Superintendent

**The Corporation of the Township of South  
Algonquin**

Per: Bryan Martin  
Name: Bryan Martin  
Title: CAO/Clerk-Treasurer

Per: \_\_\_\_\_  
Name: Ethel LaValley  
Title: Mayor

I/we have authority to bind the Corporation

*[signing page for Road Maintenance Services Agreement with the Township of South Algonquin]*

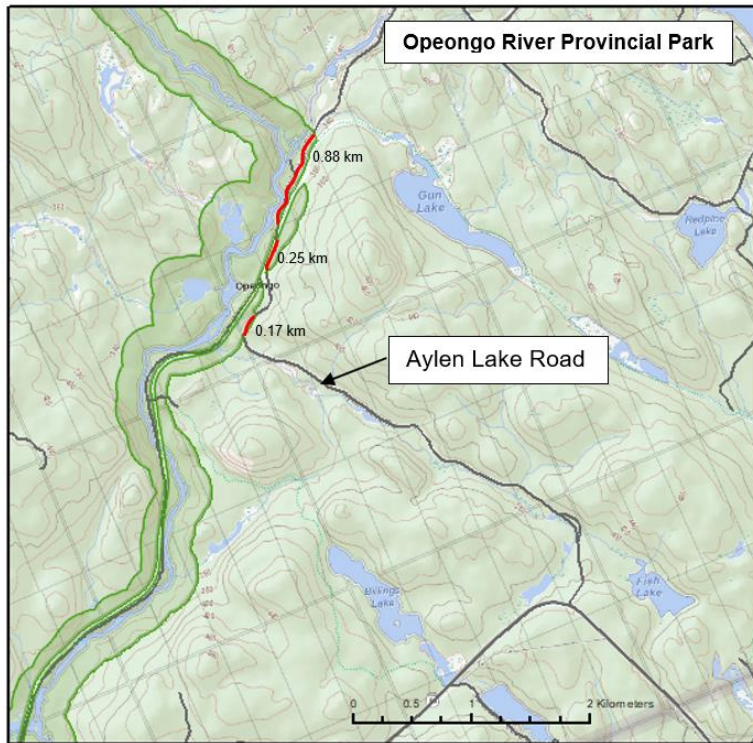
## SCHEDULE A

### List of the Lands

<b>Provincial Park</b>	<b>Lot/s</b>	<b>Concession</b>	<b>Geographic Township</b>	<b>Approximate Segment length</b>	<b>Notes</b>
Upper Madawaska River (UMR)	17	7	Murchison	0.46km	Victoria Lake Road Excludes Victoria Culvert crossing Bluesea Creek.
UMR	19, 20	6, 7	Murchison	0.83km	Victoria Lake Road
UMR	18, 19, 20	6	Murchison	1.05km	Major Lake Road Excludes Major Lake Bridge crossing Upper Madawaska River
UMR	18	6	Murchison	0.12km	Major Lake Road
UMR	16, 17	6	Murchison	0.75km	Major Lake Road
UMR	13, 14, 15	5	Murchison	0.73km	Major Lake Road
Opeongo River (OPR)	17, 18, 19	5, 6	Dickens	0.88km	Aylen Lake Road Excluding decommissioned railbed.
OPR	19	5	Dickens	0.25km	Aylen Lake Road. Excluding Decommissioned railbed.
OPR	29	5	Dickens	0.17km	Aylen Lake Road

# SCHEDULE B

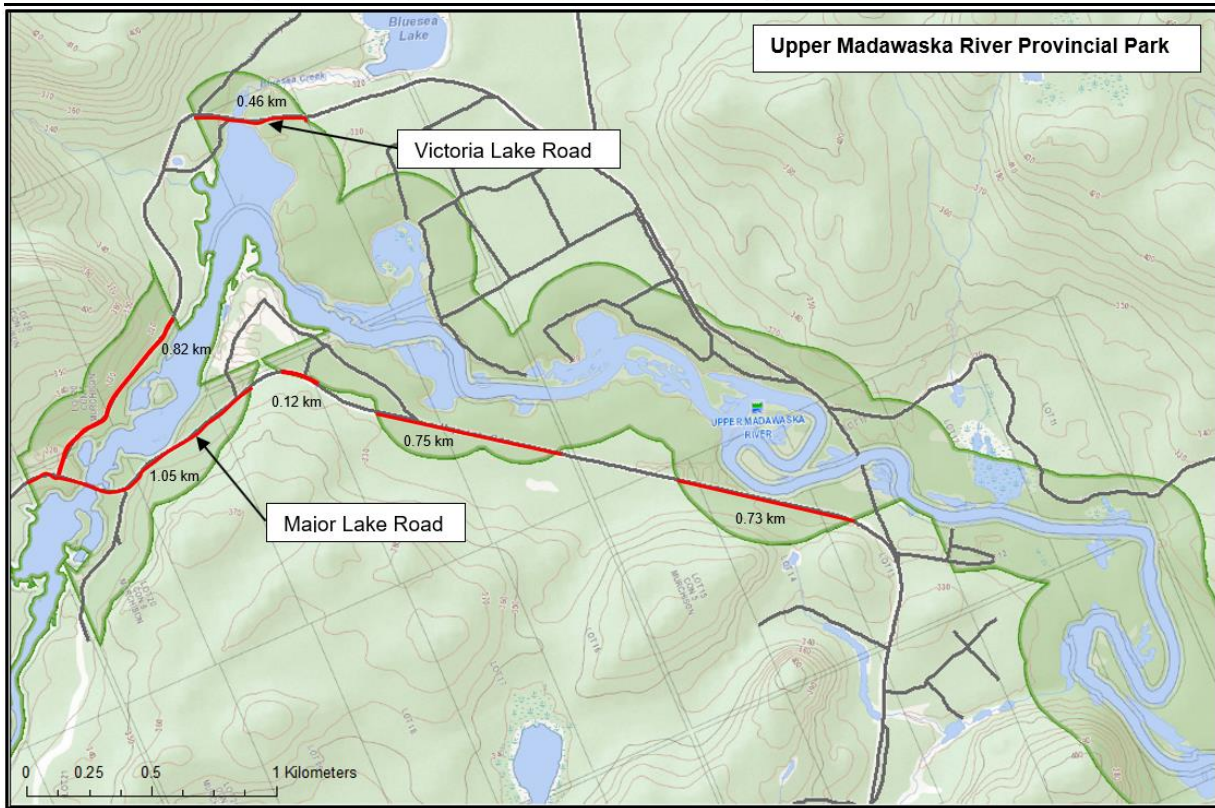
## Location Map



### Legend

- Geographic Township Improved Layer
- Provincial Park Regulated Boundary
- Roads
- Roads Subject to this Agreement

Coordinate System: NAD 1983 UTM Zone 17N  
Projection: Transverse Mercator  
Datum: North American 1983  
False Easting: 500,000.0000  
False Northing: 0.0000  
Central Meridian: -81.0000  
Scale Factor: 0.9996  
Latitude Of Origin: 0.0000  
Units: Meter



## SCHEDULE C – MITIGATION MEASURES

### Annual Work Schedule Mitigation Measures during Township of South Algonquin Road Maintenance

Prepared: October 12, 2022

Maintenance Required	Reason for Work	Frequency	Location	Timing Restrictions	Equipment*	Additional Requirements
Road Patrol	To monitor road and identify maintenance requirements.	As required	Entire road within the Lands	As needed	As needed	
Excavations	Including sign installation, ditch and road bank maintenance, etc...	As required	As required within the Lands	Excavations or ditching maintenance shall not occur within 100m of water between June 1 and October 15		<p>All equipment must adhere to the clean equipment protocol for the prevention of invasive species.</p> <p>Clean gravel, free of organic materials (seeds/soils, etc.), may be used for spot gravelling small section of travelled portion of the road. Gravel may be applied to individual potholes/wet spots along the trail.</p> <p>No sourcing of material off the road bed, the Lands, or within the provincial park. Using material from the ditch/adjacent lands is not permitted.</p> <p>Use of material from the traveled portion of the road may occur to repair the road.</p> <p>Larger scale work will require a separate work permit (addition of truckload of gravel etc.) If trail resurfacing is required, a separate Work Permit Application must be completed and reviewed by Ontario Parks.</p> <p>Excavations shall not occur within 100m of water between June 1 and October 15 for protection of known species at risk in the area.</p>

Maintenance Required	Reason for Work	Frequency	Location	Timing Restrictions	Equipment*	Additional Requirements
Sign Maintenance		As required	Entire road within the Lands	Post hole digging shall not occur within 100m of water between June 1 and October 15	As needed	Post hole digging shall not occur within 100m of water between June 1 and October 15 for protection of known species at risk in the area.
Debris Pick-up		As required	Entire road within the Lands	As needed	As needed	
Pothole Repairs		As required	As required within the Lands	Excavations shall not occur within 100m of water between June 1 and October 15	As needed	<p>All equipment must adhere to the clean equipment protocol.</p> <p>Clean gravel, free of organic materials (seeds/soils, etc.), may be used for spot gravelling small section of travelled portion of the road. Gravel may be applied to individual potholes/wet spots along the trail.</p> <p>No sourcing of material off the road bed, the Lands, or within the provincial park. Using material from the ditch/adjacent lands is not permitted.</p> <p>Use of material from the traveled portion of the road may occur to repair the road.</p> <p>Larger scale work will require a separate work permit (addition of truckload of gravel etc.) If trail resurfacing is required, a separate Work Permit Application must be completed and reviewed by Ontario Parks.</p> <p>Excavations shall not occur within 100m of water between June 1 and October 15 for protection of known species at risk in the area.</p>

Maintenance Required	Reason for Work	Frequency	Location	Timing Restrictions	Equipment*	Additional Requirements
Winter Maintenance		As required	Entire road within the Lands	As needed	As needed	All equipment must adhere to the clean equipment protocol.
Winter Sand Sweeping		Annual	Entire road within the Lands	Shall not occur within 100m of water between June 1 and October 15	As needed	All equipment must adhere to the clean equipment protocol.  Shall not occur within 100m of water between June 1 and October 15 for protection of known species at risk in the area
Nuisance beaver removal	Remove nuisance beaver(s) where deemed necessary to protect road and road use	As required	Entire road within the Lands	Shall not occur between October 15 and March 31 to adhere to normal trapping season.		Licensed trapper must be used.  Trapping of non-target species must be reported to Ontario Parks.
Beaver dam removal	Beaver activity occasionally affects water levels and or integrity of water crossings	Continually	Within the Lands	Shall not occur between September 30 and May 1	Hand tools.	Removal of the beaver dam must be done with hand tools only, and gradually. This will require several visits on consecutive days to the dam to remove a small part and allowing water to flow, but preventing large amounts of sediment to be washed down stream.  Silt fencing must be installed if gradual water release of the upstream pond cannot be guaranteed.  The final breach of the dam shall not exceed the width of the stream channel  The use of heavy machinery is not permitted.  Separate approval is required for any beaver dam removal Services beyond what is listed.  All equipment must adhere to the clean equipment protocol.

Maintenance Required	Reason for Work	Frequency	Location	Timing Restrictions	Equipment*	Additional Requirements
Invasive species	Control of invasive vegetation	As required	Within the Lands	NA	Hand tools	All conditions of chemical use, as prescribed by the manufacturer and/or regulator must be followed, including distance from water.  Only invasive species shall be controlled.
Roadside mowing and brushing	Cutting of vegetation from roadside	As required	Maximum 1 metre strip along both sides of the road.	Shall not occur between April 15 to September 15 of any year for protection of nesting birds and species at risk	As required	Mowing shall not cut vegetation lower than 1 metre for the protection of known species at risk in the area.  No mechanical grubbing, no excavation permitted.  No Herbicides permitted unless for noxious weeds.  All equipment must adhere to the clean equipment protocol.
Dust control	To control dust	As required	Roadbed only		As required	Shall not be applied to outer 1.5m of roadbed for protection of known species at risk in the area.
Hazard Tree Removal	Removal of any hazardous tree that may impact road safety	As required	Entire road within the Lands	Shall not occur between April 15 and August 15 of any year for protection of nesting birds.	Chainsaws Pole saws	Timing window applies unless the tree poses an immediate danger.  Removed trees are to be moved outside the Lands or to a safe location within the Lands as deemed by the Grantee's exclusive opinion.  Cutting of hazard trees (standing) shall not occur between April 15 <sup>th</sup> to August 15 <sup>th</sup> of any year for protection of migrating birds.  All equipment must adhere to the clean equipment protocol.
Fallen tree removal	Removal of trees that have fallen across or within the Lands and	As required	Entire road within the Lands	As needed	Chainsaws	Removed trees to be moved off the Lands and placed outside the Lands or in a safe location within the Lands as deemed by the Grantee's exclusive opinion.



Maintenance Required	Reason for Work	Frequency	Location	Timing Restrictions	Equipment*	Additional Requirements
	pose a risk to road use					Trees shall not be placed within a waterbody (including intermittent streams). All equipment must adhere to the clean equipment protocol.
Grading	Reduce ruts and improve road	As required	Entire road, excluding sections of trail that are located less than 10m from surface waters (lake, creek, river, etc.).	Shall not occur between May 15 and September 30 for protection of species at risk.	Grader	Timing window applies to the outer 1.5m of roadbed for protection of known species at risk in the area. Blade shall not direct material into a waterbody. All equipment must adhere to the clean equipment protocol.
Culvert debris removal	Remove debris from culvert openings to maintain proper draining across the road.	As Required	Entire road within the Lands	Shall not occur between September 30 and May 1 unless in accordance with the Additional Requirements.	Shovels, rakes	Effort should be made to minimize the amount of sediment entering the waterway when clearing culverts. All equipment must adhere to the clean equipment protocol. Removal of debris must be done with hand tools only, and gradually. This will require several visits on consecutive days to the dam to remove a small part and allowing water to flow, but preventing large amounts of sediment to be washed down stream. Silt fencing must be installed if gradual water release of the upstream pond cannot be guaranteed. The use of heavy machinery is only permitted in accordance with the following: - Between <b>July 15 and October 15</b> heavy machinery may be used only where hand tools will not achieve the desired

Maintenance Required	Reason for Work	Frequency	Location	Timing Restrictions	Equipment*	Additional Requirements
						<p>result. Equipment shall remain on the road bed; no disturbance to shoreline, or waterbody bed shall occur. Water levels shall be lowered gradually. This will likely require several visits on consecutive days to allow water to flow while preventing large amounts of sediment to be washed downstream and rapid changes in water level. All other conditions of culvert debris/beaver dam removal apply.</p> <ul style="list-style-type: none"> <li>- Between <b>October 15 and July 14</b> heavy machinery may be used only in imminent emergencies (i.e., to prevent imminent damage to road infrastructure or a threat to road user safety) <b>and</b> where hand tools will not achieve the desired result. Equipment shall remain on the road bed; no disturbance to shoreline, or waterbody bed shall occur. Water levels shall be lowered gradually. This will likely require several visits on consecutive days to allow water to flow while preventing large amounts of sediment to be washed downstream. All other conditions of culvert debris/beaver dam removal apply.</li> </ul> <p>Separate approval is required for any culvert debris removal Services beyond what is listed.</p>

**SCHEDULE D**

**Corporation of the Township of South Algonquin  
By-Law 2023-762**

(commences on the following page)

# THE CORPORATION OF THE TOWNSHIP OF SOUTH ALGONQUIN

## BY-LAW NO. 2023-762

### BEING A BY-LAW TO ADOPT MINIMUM MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS

**WHEREAS** Section 44(1) of the Municipal Act, R.S.O. 2001, states that municipalities shall keep all highways and bridges in a reasonable state to repair.

**AND WHEREAS** if a municipality defaults in complying with Section 44(1), then such municipality shall be liable under the *Negligence Act* for all damages any person sustains because of the default.

**AND WHEREAS** Section 44(4) provides that the Minister of Transportation may by regulation establish minimum standards of repair for highways and roads; classes of highways and roads; bridges; and classes of bridges.

**AND WHEREAS** the Township of South Algonquin desires to adopt and implement such minimum maintenance standards being Ontario Regulation 239/02 attached as policy PW23-01 hereto and forming part of this by-law.

**AND WHEREAS** all roads within the Township of South Algonquin are classified as per the regulation and attached as Appendix "A" hereto and forming part of this by-law.

**NOW THEREFORE**, the Council of the Corporation of the Township of South Algonquin enacts as follows:

1. THAT the standards herein, and amended from time to time, be hereby adopted and come into effect on the final date of passing of this by-law.
2. THAT in the South Algonquin, that Class 5 standards apply to all Class 6 roads under the jurisdiction of the Township.
3. THAT all operational activities of the municipal road department be directed to provide the desired roadway services as herein described where care is taken first to assure that the minimum standards are maintained, and second that such services are efficiently and effectively rendered.
4. THAT neither this corporation nor its officials make any promise or assurance that roadway services will be in excess of the minimum standard herein defined.
5. THAT these standards, and definitions of terminology, be made available to the ratepayers and users of this public municipal road system when requested. And that where exception is taken to standards stated herein, or interpretation of the same, such concern may be reviewed at a meeting of the Public Works Committee for that purpose, for consideration.
6. THAT where situations arise or applications be made which fall outside of the scope of these standards, the Works Superintendent shall respond as he/she may deem to be appropriate, with respect to budgetary constraint and reasonable practice.

7. AND THAT budgets and Council priorities shall be set on the basis of provision of roadway services to minimum standards.
8. That bylaw 16-512 is hereby repealed.

READ A FIRST AND SECOND TIME THIS 5<sup>th</sup> DAY OF JULY, 2023.

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Ethel LaValley, Mayor

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Bryan Martin, CAO/Clerk-Treasurer

READ A THIRD TIME AND PASSED THIS 5<sup>th</sup> DAY OF JULY, 2023.

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Ethel LaValley, Mayor

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Bryan Martin, CAO/Clerk-Treasurer

<b>Township of South Algonquin Corporate Policy</b>			
<b>DEPARTMENT:</b> Corporate Services			<b>POLICY #:</b> PW23-01
<b>POLICY:</b> Level of Service for Road Maintenance			
<b>DATE:</b> June /23	<b>REV. DATE:</b>	<b>COVERAGE</b> : Public Works Department	<b>PAGE #:</b> 1 of 16

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## **PURPOSE:**

It is the objective of the Township of South Algonquin to provide sufficient resources to meet the level of service set out in this policy for a low volume predominantly rural road system. The goal will be to provide a level of service that meets the requirements of Ontario Regulation 239/02 Minimum Maintenance Standards (MMS) for Municipal Highways as amended from time to time.

## **POLICY STATEMENT:**

The Township of South Algonquin promotes safety on all roads assumed and designated by the Township of South Algonquin. This policy was developed to help mitigate road related service, along with supporting the requirements of Ontario Regulation 239/02, as amended by 366/18 and other associated legislation and regulations.

## **SCOPE:**

This policy shall apply to all roads assumed and designated by the Township of South Algonquin as roads receiving maintenance. Notwithstanding the foregoing, neither the Township of South Algonquin nor its officials or employees shall make any promise, assurance or guarantee that the services provided by the Township of South Algonquin will be more than the MMS.

## **TITLE:**

This Policy shall be called the 'Level of Service for Road Maintenance Policy'.

## 1.0- Routine and Winter Patrolling

### 1.1 Introduction

The Township of South Algonquin Roads Department will provide a level of service for routine patrolling that meets the Minimum Maintenance Standards O. Reg. 366/18 Section 3, under the Municipal Act 2001. Road classifications are in accordance with O. Reg. 366/18. Please refer to the table below for a description of the Classification of Highways.

TABLE: CLASSIFICATION OF HIGHWAYS

### Average Annual Daily Traffic Traffic Posted or Statutory Speed Limit

Column 1 Average Daily Traffic (number of motor vehicles)	Column 2 91 - 100 km/h speed limit	Column 3 81 - 90 km/h speed limit	Column 4 71 - 80 km/h speed limit	Column 5 61 - 70 km/h speed limit	Column 6 51 - 60 km/h speed limit	Column 7 41 - 50 km/h speed limit	Column 8 1 - 40 km/h speed limit
(# of motor vehicles)	(Kilometers per hour)						
53,000 or more	1	1	1	1	1	1	1
23,000 - 52,999	1	1	1	2	2	2	2
15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
1,000 - 1,999	1	3	3	3	4	5	5
500 - 999	1	3	4	4	4	5	5
200 - 499	1	3	4	4	5	5	6
50 - 199	1	3	4	5	5	6	6
0 - 49	1	3	6	6	6	6	6

There are currently no Class 1, Class 2 or Class 3 highways within the Township of South Algonquin.

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

### 1.2 Definitions

- “day” means a 24-hour period.
- **As soon as practicable** - shall mean without undue delay, having regard to prevailing circumstances.
- **Bicycle Lane** - shall mean:
  - a portion of a roadway that has been designated by pavement markings or signage for the preferential or exclusive use of cyclists, or
  - a portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer.
- **Class** - shall mean the class of highway as determined in the Classification of Highways Table of the MMS.
- **GPS/AVL**- shall mean global positioning system, automated vehicle locating.
- **Highway** - shall include a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, any part of which is intended for or used by the public for the passage of vehicles and includes the

area between the lateral property lines thereof.

- **Ice** - shall mean all kinds of ice however formed.
- **Maintenance Class** - shall mean a Class 1, 2, 3, 4, 5 or 6 road designated as such by posted speed and traffic volume in accordance with Classification of Highways Table of the MMS.
- **MMS** - shall mean Ontario Regulation 239/02, Minimum Maintenance Standards for Municipal Highways as amended from time to time.
- **Operations** - shall mean those activities the Public Works Department performs to improve a condition or sustain a roadway standard. Public Works are normally defined by guidelines (not policy), with discretion of the Public Works Superintendent to choose various methods to achieve results cost-effectively.
- **Public Works Superintendent**- shall refer to a person, in the employ of, contracted by or appointed by the Township, who is accountable for the deployment of operations that impact on the condition or roadway services.
- **Patrol person** - shall mean a person who is either a dedicated winter patroller or a person whose duties include winter patrolling.
- **Roadway** - shall mean the part of the highway that is improved, designed, or ordinarily used for vehicular traffic, but does not include the shoulder, and, where a highway includes two or more separate roadways, the term "roadway" refers to any one roadway separately and not to all the roadways collectively.
- **Sidewalk** - shall mean the part of the highway specifically set aside or commonly understood to be for pedestrian use, typically consisting of a paved surface but does not include crosswalks, medians, boulevards, shoulders, or any part of the sidewalk where cleared snow has been deposited.
- **Significant Weather Event** - shall mean an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within a Township.
- **Snow Accumulation** - shall mean the natural accumulation of any of the following that, alone or together, covers more than half a lane width of roadway: 1) new fallen snow 2) windblown snow 3) slush.
- **Weather Hazard** - shall mean the weather hazards determined by Environment Canada as meeting the criteria for the issuance of an alert under its Public Weather Alerting Program.
- **Winter Event** - shall mean a weather condition affecting roads such as snowfall, wind- blown snow, sleet, freezing rain, frost, or ice, to which a winter event response is required.
- **Winter Event Response** - shall mean a series of winter control activities performed in response to a winter event.
- **Winter Patrol** - shall mean the field observation of weather and road conditions.
- **Winter Season** - shall mean that season when the Township normally performs winter highway maintenance as identified in this policy.

### 1.3 Operations Description

The Township of South Algonquin will routinely patrol highways at a frequency set out in Table 1A below.

Table 1A: Routine Patrolling Frequency

Class of Highway	Patrolling Frequency
3	Once every 7 days
4	Once every 14 days
5	Once every 30 days

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

- a) Routine Patrolling will be carried out by driving on the highway or by electronically monitoring the highway to check for conditions described in O. Reg. 239/02 as amended by 366/18 and this level of service policy.

- b) Routine Patrolling is not required between sunset and sunrise.
- c) Winter patrol operations will replace routine patrols during the season when the Township performs winter highway maintenance.
- d) Winter patrol routes will not operate when conditions have been identified throughout the Township that will require commencement of snowplowing or sanding operations. The patroller will then be reassigned to snowplowing roads. The winter patrol and winter maintenance activity are an interchangeable function.

## 2.0- Plowing and Sanding

### 2.1 Introduction

The Township of South Algonquin Roads Department will provide a level of service for Road Conditions that meets the Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18, under The Municipal Act 2001. Road classifications are in accordance with O. Reg. 239/02 as amended by 366/18. There are currently no Class 1, Class 2 or Class 3 highways within the jurisdiction of the Township of South Algonquin. The Township of South Algonquin recognizes that severe weather conditions may occur that could prevent the attainment of the Level of Service specified in this policy. The Roads Department must work within the available resources and in such a manner to protect the safety of employees and the public.

### 2.2 Definitions

- “Season when the Township performs winter highway maintenance” means that period from October 1 to April 30 of the following year in accordance with O. Reg. 239/02 as amended by 366/18. The Township of South Algonquin may extend the season to May 10 when weather conditions create a demand for additional winter maintenance.
- “highway” means a common and public highway maintained by the Township of South Algonquin and includes any bridge, trestle, viaduct or other structure forming part of the highway.
- “roadway” means the part of the highway that is improved, designed or ordinarily used for vehicular traffic, but does not include the shoulder.
- “Snow accumulation” means the natural accumulation of new fallen snow or windblown snow that covers more than half a lane width of a roadway.
- From May 1 to September 30, the standard is to monitor the weather, both current and forecast to occur in the next 24 hours, once per calendar day. O. Reg. 47/13, s. 3; O. Reg. 239/02 as amended by 366/18.

### 2.3 Operations Description

#### 2.3.1 Snow Plowing

Table 2A: Snow Accumulation shown below contains the minimum maintenance standards specified in O. Reg. 239/02 as amended by 366/18 under the Municipal Act.

Table 2A: Snow Accumulation

<b><u>SNOW</u></b>		
<b>Class of Highway</b>	<b>Depth</b>	<b>Time for Removal</b>
3	8 cm	12 hours
4	8 cm	16 hours
5	10 cm	24 hours

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

Table 2B: Icy Roadways

<b><u>ICY ROADWAYS</u></b>	
<b>Class of Highway</b>	<b>Time for Treatment</b>
3	8 hours
4	12 hours
5	16 hours

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

The Township treats icy roadways in accordance with Table 2B for vehicular traffic. Maintenance for pedestrian purposes is not performed on roadways. These requirements only apply to a Township during the season when the Township performs winter highway maintenance.

### **2.2.1 Sidewalk Maintenance**

- 2.3.2.1 The sidewalks will be cleared within 24 hours of when the snow accumulations reach a depth of 7.5 centimeters (3 inches).
- 2.2.1.2 Surfaces will be maintained in a snow packed condition during a storm.
- 2.2.1.3 Sidewalks will only be sanded when icy conditions create a hazard to pedestrians.
- 2.2.1.4 Sidewalks will generally be cleared and sanded in priority order. Priority will be given to school zones and then to commercial areas.

## **3.0 Road Surface Conditions**

### **3.1 Introduction**

The Township of South Algonquin Roads Department will provide a level of service for Road Surface Conditions that meets the Minimum Maintenance Standards O. Reg. 239/02 Section 6, 7, 8, 9 and 16(1) as amended by 366/18, under The Municipal Act 2001. Road classifications are in accordance with O. Reg. 239/02 as amended by 366/18. There are currently no Class 1, Class 2 or Class 3 roads within the jurisdiction of the Township of South Algonquin.

### **3.2 Definitions**

- “day” means a 24-hour period.
- “debris” means any material or object on a roadway, that is not an integral part of the roadway or has not been intentionally placed on the roadway by a Township, and that is reasonably likely to cause damage to a motor vehicle or to injure a person in a motor vehicle.
- “highway” means a common and public highway maintained by the Township of South Algonquin and includes any bridge, trestle, viaduct or other structure forming part of the highway.
- “roadway” means the part of the highway that is improved, designed or ordinarily used for vehicular traffic, but does not include the shoulder.
- “shoulder drop-off” means the vertical differential, where the paved surface of the roadway is higher than the surface of the shoulder, between the paved surface of the roadway and the paved or non paved surface of the shoulder.
- “surface discontinuity” means a vertical discontinuity creating a step formation at joints or cracks in the paved surface of the roadway, including bridge deck joints, expansion joints and approach slabs to bridge.

### 3.3 Operations Description

#### 3.3.1 Potholes

- a) Most pothole formations occur during the freeze/thaw cycles in spring and fall. Regular maintenance including patching and grading, is performed immediately following these cycles to prevent the formation of potholes.
- b) Potholes that are identified during routine patrols will be scheduled for repair as soon as practicable to prevent further degradation of the road surface structure and within the minimum maintenance standards detailed in sections c) and d) below.
- c) If a pothole exceeds both the surface area and depth set out in Table 3A, 3B, and 3C the Township of South Algonquin will repair the pothole within the time set out in Table 3A, 3B, or 3C as appropriate, after becoming aware of the condition.
- d) A pothole shall be deemed to be repaired if its surface area or depth is less than or equal to that set out in Table 3A, 3B, or 3C as appropriate.

Table 3A: Potholes on Paved Surface of Roadway

Class of Highway	Surface Area	Depth	Time for Completion of Repair
3	1000cm <sup>2</sup>	8cm	7 days
4	1000cm <sup>2</sup>	8cm	14 days
5	1000cm <sup>2</sup>	8cm	30 days

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

Table 3B: Potholes on Non-Paved Surface of Roadway

Class of Highway	Surface Area	Depth	Time for Completion of Repair
3	1500cm <sup>2</sup>	8cm	7 days
4	1500cm <sup>2</sup>	10cm	14 days
5	1500cm <sup>2</sup>	12cm	30 days

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

Table 3C: Potholes on Paved or Non-Paved Surface of Shoulder

Class of Highway	Surface Area	Depth	Time for Completion of Repair
3	1500cm <sup>2</sup>	8cm	14 days
4	1500cm <sup>2</sup>	10cm	30 days
5	1500cm <sup>2</sup>	12cm	60 days

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

### 3.3.2 Shoulder Drop-off

- a) Regular shoulder grading is performed during spring and fall, when time and resources permit, to prevent the formation of shoulder drop-off.
- b) Problem areas are identified through routine patrolling and historical data. Shoulder grading is performed in these areas at an increased frequency appropriate to the requirements of each area.
- c) A shoulder drop-off condition that is identified during routine patrols will be scheduled for grading as soon as practicable to prevent further degradation of the road surface structure and within the minimum maintenance standards detailed in sections d) and e) below.
- d) If a shoulder drop-off is deeper, for a continuous distance of 20 meters or more, than the depth set out in the table 3D, the Township of South Algonquin will repair the shoulder drop-off within the time set out in the Table after becoming aware of the condition.
- e) A shoulder drop-off shall be deemed to be repaired if its depth is less than or equal to that set out in Table 3D.

Table 3D: Shoulder Drop-offs

Class of Highway	Depth	Time for Completion of Repair
3	8cm	7 days
4	8cm	14 days
5	8cm	30 days

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

### 3.3.3 Cracks

- a) Most cracks occur during the freeze/thaw cycles in spring and fall. Regular maintenance including patching is performed immediately following these cycles to prevent the formation of cracks.
- b) Cracks that are identified during routine patrols will be scheduled for repair as soon as practicable to prevent further degradation of the road surface structure and within the minimum maintenance standards detailed in sections c) and d) below.
- c) If a crack on the paved surface of a roadway is greater, for a continuous distance of three meters or more, than both the width and depth set out in Table 3E the Township of South Algonquin will repair the crack within the time set out in the Table after becoming aware of the condition.
- d) A crack shall be deemed to be repaired if its width or depth is less than or equal to that set out in the Table.

Table 3E: Cracks

Class of Highway	Width	Depth	Time for Completion of Repair
3	5cm	5cm	60 days
4	5cm	5cm	180 days
5	5cm	5cm	180 days

### 3.3.4 Debris

- a) If there is debris on a roadway, the Township of South Algonquin will remove the debris as soon as practicable after becoming aware of the condition. Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.
- b) “Debris” means any material (except snow, slush or ice) or object on roadway.

- That is not integral part of the roadway or has not been intentionally placed on the roadway by a Township, and
- That is reasonably likely to cause damage to a motor vehicle or to injure a person in a motor vehicle. O. Reg. 239/02, s. 9(2); O. Reg. 47/18, s.9 as amended by 366/18.

### 3.4.5 Road Discontinuities

- Most road discontinuities occur during the freeze/thaw cycles in spring and fall. Most road discontinuities are temporary conditions, caused by frost heave. Road discontinuities found during the freeze/thaw cycle will be identified with a warning sign and monitored for potential repairs.
- Regular maintenance including patching and grading, is performed immediately following these cycles to repair and permanent surface discontinuities.
- Surface discontinuities that are identified during routine patrols will be scheduled for repair as soon as practicable to prevent further degradation of the road surface structure and within the minimum maintenance standards detailed in sections c) below.
- If a surface discontinuity, (other than a surface discontinuity on a bridge deck) exceeds the height set out in Table 3F, the Township of South Algonquin will repair the surface discontinuity within the time set out in the Table after becoming aware of the condition.

Table 3F: Surface Discontinuities

Class of Highway	Height	Time for Completion of Repair
3	5cm	7 days
4	5cm	21 days
5	5cm	21 days

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

### 3.4.6 Line Painting

- The line painting maintenance is completed in summer to replace existing lines worn away during the winter months.
- Line painting is completed on roads, sharp curves and steep that the Township deems necessary.

### 3.4.7 Dust Control

- Dust control is a regular treatment program applied annually to gravel and dirt roads.
- Due to the high cost of dust suppressants, the treatment is not repeated during the year so the application must be timed to provide optimum coverage for the season. The dust suppressants are generally applied in early summer.



## 4.0- Street Lights (Luminaires)

### 4.1 Introduction

The Township of South Algonquin Roads Department will provide a level of service for streetlights that meets the Minimum Maintenance Standards O. Reg. 239/02 Section 10 as amended by 366/18 under the Municipal Act 2001. Road classifications are in accordance with O. Reg. 239/02 as amended by 366/18. There are currently no Class 1, Class 2 or Class 3 roads within the jurisdiction of the Township of South Algonquin. The standard for the frequency of inspecting all luminaires to check to see that they are functioning is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 366/18, s.12

### 4.2 Definitions

- “day” means a 24-hour period.
- “highway” means a common and public highway maintained by the Township of South Algonquin and includes any bridge, trestle, viaduct or other structure forming part of the highway.
- “streetlight” means the complete lighting unit consisting of a lamp and the parts designed to distribute the light, to position or protect the lamp and to connect the lamp to the power supply. (Regulation 239/02 as amended by 366/18 uses the term Luminaires.)

### 4.3 Operations Description

- a) Streetlights will be scheduled for repair when the Township becomes aware that it is not functioning.
- b) Streetlights located in a high traffic area may be immediately scheduled for repair at the discretion of the Public Work Superintendent.
- c) In addition, the level of service specified in sections a) and b), streetlights will be repaired to the Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.

Table 4F: Luminaires

Class of Highway	Time for Completion of Repair
<b>3</b>	<b>7 days</b>
<b>4</b>	<b>21 days</b>
<b>5</b>	<b>21 days</b>

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

## 5.0- Signs and Traffic Signal Systems

### 5.1 Introduction

The Township of South Algonquin Roads Department will provide a level of service for Signs that meets the Minimum Maintenance Standards O. Reg. 239/02 Sections 11 and 12 as amended by 366/18 under the Municipal Act 2001. Road classifications are in accordance with O. Reg. 239/02 as amended by 366/18. There are currently no Class 1, Class 2 or Class 3 roads within the jurisdiction of the Township of South Algonquin. The Standard for the frequency of inspecting regulatory signs or warning signs to check to see that they meet the retro-reflectivity requirements of the Ontario Traffic Manual is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 23/10, s. 8; O. Reg. 47/13, s. 12(1); O. Reg. 239/02, s. 13 as amended by 366/18.

## 5.2 Definitions

- “day” means a 24-hour period.
- “highway” means a common and public highway maintained by the Township of South Algonquin and includes any bridge, trestle, viaduct or other structure forming part of the highway.
- “Regulatory sign” means a traffic sign advising drivers of action they should or must do (or not do), under a given set of circumstances.
- “Warning sign” means a sign which indicates conditions on or adjacent to a highway or street that is actually or potentially hazardous to traffic operations.

## 5.3 Operations Description

a) If any of the sign types listed below is illegible, improperly oriented or missing, the sign will be repaired or replaced as soon as practicable after becoming aware of the condition.

- Checkerboard
- Curve sign with advisory speed tab
- Do not enter.
- 1 Load Restricted Bridge
- One Way
- School Zone Speed Limit
- Stop, Stop Ahead, Stop Ahead New
- Traffic Signal Ahead, New
- Two Way Traffic Ahead
- Wrong Way
- Yield, Yield Ahead, Yield Ahead New
- Dead End Road
- No Exit
- Maintained Portion of Road Ends

b) Any sign that is found by the routine patrol to be illegible, improperly oriented or missing will be scheduled for repair or replacement as soon as practicable and within the minimum maintenance standards detailed in section c) below.

c) Any illegible, improperly oriented or missing regulatory/warning signs not found on the list above will be repaired or replaced within the time period set out in Table 5A.

Table 5A: Regulatory and Warning Signs

<b>Class of Highway</b>	<b>Time for Completion of Repair</b>
<b>3</b>	<b>21 days</b>
<b>4</b>	<b>30 days</b>
<b>5</b>	<b>30 days</b>

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

## 6.0- Bridges

### 6.1 Introduction

The Township of South Algonquin Roads Department will provide a level of service for Bridges that meets the Minimum Maintenance Standards O. Reg. 239/02 Sections 15 and 16 as amended by 366/18 under the Municipal Act 2001. Road classifications are in accordance with O. Reg. 239/02 as amended by 366/18. There are currently no Class 1, Class 2 or Class 3 roads within the jurisdiction of the Township of South Algonquin.

### 6.2 Definitions

- “Bridge deck spall” means a cavity left by one or more fragments detaching from the paved surface of the roadway or shoulder of a bridge.
- “day” means a 24-hour period.
- “highway” means a common and public highway maintained by the Township of South Algonquin and includes any bridge, trestle, viaduct or other structure forming part of the highway.
- “Surface discontinuity” means a vertical discontinuity creating a step formation at joints or cracks in the paved surface of the roadway, including bridge deck joints, expansion joints and approach slabs to bridge.

### 6.3 Operations Description

- Most bridge deck spalls occur during the freeze/thaw cycles in spring and fall. Regular maintenance including patching is performed immediately following these cycles to prevent the formation of spalls.
- Bridge deck spalls that are identified during routine patrols will be scheduled for repair as soon as practicable to prevent further degradation of the bridge surface structure and within the minimum maintenance standards detailed in sections c) below.
- If a bridge deck spall exceeds both the surface area and depth set out in Table 6A below, the spall will be repaired, within the time specified in Table A after becoming aware of the condition.

Table 6A: Bridge Deck Spalls

Class of Highway	Surface Area	Depth	Time for Completion of Repair
3	1,000 cm <sup>2</sup>	8 cm	7 days
4	1,000 cm <sup>2</sup>	8 cm	7 days
5	1,000 cm <sup>2</sup>	8 cm	7 days

*Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18.*

- The bridge deck spall will be considered repaired if its surface area or depth is less than or equal to that set out in Table 6A.
- If the surface discontinuity on a bridge deck exceeds 5 cm, the condition will be repaired as soon as practicable after becoming aware of the condition.

## **7.0- Drainage systems**

### **7.1 Introduction**

The Township of South Algonquin Roads Department will provide a level of service for Drainage Systems that protects the road infrastructure from damage due to water saturation and prevents flooding of the roadway and adjacent properties. Drainage systems are not included in the Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18 under the Municipal Act 2001.

### **7.2 Operations Description**

- a) Collapsed or excessively corroded culverts will be replaced.
- b) Culverts that have shifted in position and are no longer set to the proper grade due to frost heave or wear will be reset or replaced depending on the condition of the culvert.
- c) Culvert thawing will be performed seasonally, in accordance with the demand caused by weather conditions.
- d) Regular spring run-off maintenance will include the removal of snow from high volume ditching, and the clearing of each end of the culvert. The maintenance program is completed in order of priority, when time and weather conditions permit. A sudden onset of the spring melt may prevent the maintenance program from proceeding.
- e) Curb and gutter sections that have settled or heaved will be scheduled for repair.
- f) In specific areas of historical concern, catch basins are to be cleaned when required.
- g) Ditches in areas where problems are repetitive will be inspected annually and cleared as required.
- h) Catch basin tops and inlets will be cleaned when required.
- i) Ditches will be scheduled for clearing when problems are identified.
- j) Catch basin and ditch inlet frames and grates within a highway shall be inspected for road surface continuity. Adjustments of the frames and grates will be made as required in Table 3F Surface Discontinuities.

## **8.0- Trees and Brush**

### **8.1 Introduction**

The Township of South Algonquin Roads Department will provide a level of service for Trees and Brush that protects the health and safety of the public and maintains the natural surroundings.

Trees and brush are not included in the Minimum Maintenance Standards O. Reg. 239/02 as amended by 366/18 under the Municipal Act 2001. The Township follows the Municipal Act Section 62 (1) and 62 (2) which states:

62 (1) Entry on land, tree trimming- A Township may, at any reasonable time, enter upon land lying along any of its highways.

- a) To inspect trees and conduct tests on trees; and
- b) To remove decayed, damaged or dangerous trees or branches of trees if, in the opinion of the Township, the trees or branches pose a danger to the health or safety of any person using the highway.

62 (2) Immediate Danger- An employee or agent of the Township may remove a decayed, damaged or dangerous tree or branch of a tree immediately and without notice to the owner of the land upon which the tree is located if, in the opinion of the employee or agent, the tree or branch poses and immediate danger to the health or safety of any person using the highway.

The Township will also adhere to Section 62.1 (1) of the Municipal Act which states that a Township may apply to a judge of the Superior Court of Justice for an order requiring the owner of the land lying along the highway to remove or alter any vegetation, building or object on the land that may obstruct the vision of pedestrians or drivers of vehicles on the highway, cause the drifting or accumulation of snow or harm the highway if the Township is unable to enter into an agreement with the owner of the land to alter or remove the vegetation, building or object from the land.

## 9.0 Sidewalk surface discontinuities

The Standard for the frequency of inspecting sidewalks to check for surface discontinuity is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O.Reg.23/10, s.10; O.Reg.47/13, s16(1), O.Reg.239/02, s.13 as amended by 366/18.

A sidewalk that has been inspected in accordance with subsection (1) is deemed to be in a state of repair with respect to any surface discontinuity until the next inspection in accordance with that subsection, provided that the Township does not acquire actual knowledge of the presence of a surface discontinuity in excess of two centimeters. O. Reg. 47/13, s. 16 (2).

1. If a surface discontinuity on or within a sidewalk exceeds two centimeters, the standard is to treat the surface discontinuity within 14 days after acquiring actual knowledge of the fact. O. Reg. 239/02, s. 14 as amended by 366/18.
2. A surface discontinuity on or within a sidewalk is deemed to be in a state of repair if it is less than or equal to two centimeters. O. Reg. 239/02, s. 14 as amended by 366/18.
3. For the purpose of subsection (2), treating a surface discontinuity on or within a sidewalk means taking reasonable measures to protect users of the sidewalk from the discontinuity, including making permanent or temporary repairs, alerting users' attention to the discontinuity or preventing access to the area of discontinuity. O. Reg. 239/02, s.14 as amended by 366/18.

## 9.1 Encroachments, area adjacent to sidewalk

1. The standard for the frequency of inspecting an area adjacent to a sidewalk to check for encroachments is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 239/02, s. 15 as amended by 366/18.
2. For greater certainty, the area adjacent to a sidewalk begins at the outer edges of a sidewalk and ends at the lesser of the limit of the highway, the back edge of a curb if there is a curb and a maximum of 45cm. O. Reg. 239/02, s. 15 as amended by 366/18.
3. The area adjacent to a sidewalk is deemed to be in a state of repair in respect of any encroachment present unless the encroachment is determined by a Township to be highly unusual given its character and location or to constitute a significant hazard to pedestrians. O. Reg. 239/02, s. 15 as amended by 366/18.
4. For the purpose of subsection (4), treating an encroachment means taking reasonable measures to protect users, including making permanent or temporary repairs, alerting users' attention to the encroachment or preventing access to the area of the encroachment. O. Reg. 239/02, s. 15 as amended by 366/18.

## 9.2 Snow accumulation on sidewalks

- a) To reduce the snow to a depth less than or equal to 8 centimeters within 48 hours; and
- b) To provide a minimum sidewalk width of 1 meter. O. Reg. 239/02, s. 15 as amended by 366/18.

## 9.3 Ice formation on sidewalks and icy sidewalks

- a) If ice forms on a sidewalk even though the Township meets the standard set out, the sidewalk is deemed to be in a state of repair in respect of ice until 48 hours after the Township first becomes aware of the fact that the sidewalk is icy. O. Reg. 239/02, s.15 as amended by 366/18.
- b) The standard for treating icy sidewalks after the Township becomes aware of the fact that a sidewalk is icy is to treat the icy sidewalk within 48 hours, and an icy sidewalk is deemed to be in a state of repair for 48 hours after it has been treated. O. Reg. 239/02, s. 15 as amended by 366/18.
- c) For the purposes of this section, treating a sidewalk means applying materials including salt, sand or any combination of salt and sand to the sidewalk. O. Reg. 239/02, s. 15 as amended by 366/18.

#### **9.4 Icy sidewalks, significant weather event**

- 1) If a Township declares a significant weather event relating to ice, the standard for addressing ice formation or ice on sidewalks until the declaration of the end of the significant weather event is,
  - a) To monitor the weather in accordance with section 3.1; and
  - b) If deemed practicable by the Township, to deploy resources to treat the sidewalks to prevent ice formation or improve traction, or treat the icy sidewalks, starting from the time that the Township deems appropriate to do so. O. Reg. 239/02, s. 15 as amended by 366/18.

#### **9.5 Winter sidewalk patrol**

- 1) If it is determined by the Township that the weather monitoring referred to in section 3.1 indicates that there is a substantial probability of snow accumulation on sidewalks in excess of 8 cm, ice formation on sidewalks or icy sidewalks, the standard for patrolling sidewalks is to patrol sidewalks that the Township selects as representative of its sidewalks at intervals deemed necessary by the Township. O. Reg. 239/02, s. 15 as amended by 366/18.
- 2) Patrolling a sidewalk consists of visually observing the sidewalk, either by driving by the sidewalk on the adjacent roadway or by driving or walking on the sidewalk or by electronically monitoring the sidewalk and may be performed by persons responsible for patrolling roadways or sidewalks or by persons responsible for or performing roadway or sidewalk maintenance activities. O. Reg. 239/02, s. 15 as amended by 366/18.

# MMS Classification Schedule A

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>MMS Class</i>	<i>AADT</i>	<i>AADT Year</i>	<i>Speed Limit</i>
RD010	Airy Road	Highway 60	0.9km west of Highway 60	0.900	6	10	2021	50
RD020	Airy Road	0.9 km west of Highway 60	1.2 km west of Highway 60	0.300	6	10	2021	50
RD030	Galeairy Lake Road	Maple Drive (N)	Maple Drive (S)	0.440	6	318	2021	40
RD035	Galeairy Lake Road	Highway 60	Maple Drive (N)	0.250	6	318	2021	40
RD040	Maple Drive	Galeairy Lake Rd. N.	Galeairy Lake Rd. S.	0.850	5	300		50
RD050	Sunset Trail	Maple Drive	End	0.600	6	40		50
RD060	Birch Crescent	Maple Drive	End	0.150	6	20		50
RD070	Hemlock Crescent	Maple Drive	End	0.130	6	20		50
RD080	Galeairy Lake Crescent	Galeairy Lake Road	End	0.130	6	20		40
RD090	Fire Route-Dam	Galeairy Lake Road	End	0.050	6	5		50
RD100	Hay Creek Road (PA)	Highway 60	1.25 km South of Highway 60	1.250	5	638	2021	40
RD110	Hay Creek Road (UP)	1.25 km South of Ottawa Street	McCrae's Mill	0.750	5	638	2021	40
RD120	Dave Bowers Road	Hay Creek Road	0.1 km west of Hay Creek Road	0.100	6	20		50
RD130	Ottawa Street	First Avenue	Second Avenue	0.200	5	624	2021	50
RD135	Ottawa Street	Highway 60	First Avenue	0.400	5	624	2021	50
RD140	Lake Street	Third Avenue	Lakeshore Drive	0.250	6	156		50
RD145	Lake Street	Second Avenue	Third Avenue	0.300	6	156		50
RD150	Boat Launch Road	Ottawa Street	0.10 west of Ottawa Street	0.100	6	10		50
RD160	Lakeshore Avenue	Hay Creek Road	Third Street	0.600	6	30		50

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>MMS Class</i>	<i>AADT</i>	<i>AADT Year</i>	<i>Speed Limit</i>
RD170	First Avenue	Hay Creek Road	Ottawa Street	0.200	6	156		50
RD180	Second Avenue	Hay Creek Road	Ottawa Street	0.210	6	156		50
RD190	Third Avenue	Hay Creek Road	Lakeshore Drive	0.120	6	156		50
RD200	Mill Street	First Avenue	Second Avenue	0.200	6	156		50
RD220	Paradise Road	Highway 60	1.1 km south of Highway 60	1.100	6	195	2021	50
RD230	Paradise Road	1.1 km south of Highway 60	End	1.300	6	5	2021	50
RD240	Hilltop Crescent	Highway 60	End	0.360	6	50		50
RD250	Church Hill Street	Post Street	0.06 km South of Post Street	0.060	6	93		50
RD254	Church Hill Street	0.06 South of Post Street	300m North of Highway 60	0.380	6	93		50
RD258	Church Hill Street	300m North of Highway 60	Highway 60	0.300	6	93		50
RD260	Park Street	Highway 60	Paradise Rd.	0.245	6	93		50
RD280	Post Street	Highway 60	Medical Centre Road	0.270	5	371	2021	50
RD290	Post Street	Medical Centre Road	End	0.170	6	93		50
RD300	Medical Centre Road	Post Street	End	0.170	6	186		50
RD310	Madawaska Avenue	Post Street	Madawaska Street	0.050	6	0		50
RD320	Madawaska Street	Algonquin Street	End	1.000	6	40		50
RD330	Madawaska Street	Highway 60	Madawaska Avenue	0.100	6	25	2021	50
RD335	Madawaska Street	Madawaska Avenue	Algonquin Street	0.200	5	300		50
RD340	Algonquin Street	Madawaska Street	Algonquin Crescent	0.700	6	39	2021	50
RD340	Algonquin Street	Algonquin Crescent	End	0.210	6	39	2021	50
RD350	Algonquin Crescent	Highway 60	End	0.400	6	20		50



<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>MMS Class</i>	<i>AADT</i>	<i>AADT Year</i>	<i>Speed Limit</i>
RD360	Nipissing Road	Algonquin Street	0.6 km East of Algonquin Street	0.600	5	300		50
RD380	Nipissing Road	0.6 km East of Algonquin Street	2.3 km East of Algonquin Street	1.670	5	300		50
RD390	Old Highway 127	Highway 60	Highway 127	5.530	6	38	2021	80
RD400	Spectacle Lake Road	Highway 60	Dickens Township Boundary	1.380	6	62	2021	50
RD410	Aylen Lake Road	Highway 60	End	8.300	5	86	2021	60
RD420	Gaffney Road	Aylen Lake Road	Moonlight Road	0.810	6	21		80
RD424	Gaffney Road	Moonlight Bay Road	Burnt Depot Road	3.870	6	21		80
RD428	Gaffney Road	Burnt Depot Road	End	0.620	6	21		80
RD435	Burnt Depot Road	200m East of Gaffney Road	End	0.300	6	5		80
RD430	Burnt Depot Road	Gaffney Road	200m East of Gaffney Road	0.200	6	5		80
RD440	Moonlight Bay Road	Gaffney Road	End	2.200	6	5		80
RD450	Whites Road	Aylen Lake Road	End	0.700	6	5		80
RD460	North Aylen Lake Road	Aylen Lake	Chapel Lane	3.320	6	43		80
RD463	North Aylen Lake Road	Chapel Lane	Ferndale Lane	2.080	6	43		80
RD466	North Aylen Lake Road	Ferndale Lane	End	2.310	6	43		80
RD470	Pringles Road	North Aylen Lake Road	End	0.670	6	10		80
RD480	Shields Road	North Aylen Lake Road	End	0.160	6	10		80
RD490	Old Farm Road	Aylen Lake North Road	End	0.310	6	5		80
RD505	Paplinskie Road	Civic #221	End	1.100	6	39	2021	80
RD500	Paplinskie Road	Highway 60	Civic #221	1.000	6	39		80
RD510	Dunnes Road	Highway 60	End	2.100	6	10		80

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>MMS Class</i>	<i>AADT</i>	<i>AADT Year</i>	<i>Speed Limit</i>
RD520	Dawson Street	Highway 60 West	Highway 60 East	0.800	6	101		50
RD530	Merton Street	Murchison Road	Highway 60	0.610	6	101		50
RD540	Murchison Road	Dawson Street	End	0.240	6	101		50
RD550	Holstein Street	Merton Road	End	0.500	6	50		50
RD580	Victoria Street	Highway 60	Major Lake Road	0.400	6	79	2021	50
RD590	Fire Route - Pump House	Major Lake Road	End	0.150	6	20		50
RD600	Tom and Mick Murray Park Road	Highway 523	End	0.670	6	5		80
RD610	Major Lake Road	Highway 60	Victoria Street	0.700	5	209	2021	50
RD612	Major Lake Road	Victoria Street	4.7km North of Highway 60	4.000	4	209	2021	80
RD613	Major Lake Road	4.7km North of Highway 60	6km North of Highway 60	1.300	4	209	2021	80
RD614	Major Lake Road	6km North of Highway 60	Victoria Lake Road	2.000	4	209	2021	80
RD615	Major Lake Road	Victoria Lake Road	McCaulley Lake Road	3.100	4	209	2021	80
RD630	Victoria Lake Road	Major Lake Road	Civic #700	3.440	6	5		80
RD635	Victoria Lake Road	Civic #700	End	2.510	6	5		80
RD640	McCauley Lake Road	Major Lake Road	End	3.150	6	11	2021	80
RD660	Reids Road	Highway 523	End	0.100	6	20		80
RD670	Lyell Lake Landing Road	Highway 523	End	0.400	6	30		80
RD680	McGuey Road	Highway 127	Civic# 471	2.370	6	44	2021	80
RD685	McGuey Road	Civic #471	End	1.970	6	44	2021	80
RD690	McRae-Hay Lake Road (PA)	2.4km West of Highway 127 (Civic 510)	McRae-Hay Lake Road (UP)	2.000	6	19	2021	80

<i>Sec. #</i>	<i>Name</i>	<i>From</i>	<i>To</i>	<i>Length</i>	<i>MMS Class</i>	<i>AADT</i>	<i>AADT Year</i>	<i>Speed Limit</i>	
RD691	McRae-Hay Lake Road (PA)	Highway 127	2.4km West of Highway 127 (Civic 510)	2.400	6	19	2021	80	
RD700	McRae-Hay Lake Road (UP)	North Road	End	2.480	6	19		80	
RD710	Bennett Road	McRae-Hay Lake Road	End	2.360	6	5		80	
RD736	McKenzie Lake Road	South McKenzie Lake Road	Highway 127	1.560	6	45	2021	80	
RD730	McKenzie Lake Road	Highway 127	Proven Line	1.580	6	45	2021	80	
RD732	McKenzie Lake Road	Proven Line	North McKenzie Lake Road	2.460	6	45	2021	80	
RD734	McKenzie Lake Road	North McKenzie Lake Road	South McKenzie Lake Road	3.190	6	45	2021	80	
RD740	South McKenzie Lake Road	McKenzie Lake Road	End	2.600	6	5		80	
RD750	North McKenzie Lake Road	McKenzie Lake Rd.	Civic #681 (Moosemeat Archery)	3.410	6	36		80	
RD752	North McKenzie Lake Road	Civic #681 (Moosemeat Archery)	Henry Coglan Drive	2.800	6	36		80	
RD755	North McKenzie Lake Road	Henry Coglan Drive	End	2.310	6	36		80	
RD760	Henry Coglan Drive	North McKenzie Lake Road	End	1.900	6	5		80	
RD770	Proven Line	McKenzie Lake Road	Pastwa Lake Road	1.720	6	10		80	
RD780	Pastwa Lake Road	Proven Line	2.7 km East of Proven Line	2.400	6	10		80	
RD785	Pastwa Lake Road	2.7 km East of Proven Line	End	3.080	6	5		80	
RD790	Kuiack Road	Pastwa Lake Road	End	0.500	6	1		80	
RD791	Kenny Road	Paradise	End	0.200	6	25		50	
				122.085					

## Winter Road Closures

### Airy Ward:

<u>Road Name</u>	<u>Particulars</u>
Lakeshore Drive	From Change Room to Third Avenue
Boat Launch Road – Galeairy Lake	Entire length

### Dickens Ward:

<u>Road Name</u>	<u>Particulars</u>
Burnt Depot Road	From 0.25 km to end of road
Shields Road	Entire length
Old Farm Road	Entire length

### Murchison/Lyell Wards:

<u>Road Name</u>	<u>Particulars</u>
Dunnes Road	From 183 Dunnes Rd. to end
Lyell Lake Landing Road	Top of the hill to the boat launch
Tom & Mick Murray Park	Boat Launch turn to Tom & Mick Murray Park

**Sabine Ward:**

<b><u>Road Name</u></b>	<b><u>Particulars</u></b>
Pastwa Lake Road	From 435 Pastwa Lake Road end of road
Kuiack Road	Entire length
Hay Lake Boat Launch Road	Entire length

**SCHEDULE E**

**Clean Equipment Protocol**

(commences on the following page)

# Clean Equipment Protocol for Industry

Inspecting and cleaning equipment for the purposes of invasive species prevention



*Catalyst for research and response*



Publication Information

Halloran, Joe, Anderson, Hayley and Tassie, Danielle. 2013. Clean Equipment Protocol for Industry. Peterborough Stewardship Council and Ontario Invasive Plant Council. Peterborough, ON.

Printed April 2013  
Peterborough, Ontario

ISBN: (to be confirmed)

This document was prepared for the Canada-Ontario Invasive Species Centre and the Ontario Ministry of Natural Resources by the Peterborough Stewardship Council and the Ontario Invasive Plant Council.

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[www.ontarioinvasiveplants.ca](http://www.ontarioinvasiveplants.ca), [www.invadingspecies.com](http://www.invadingspecies.com) or [www.invasivespeciescentre.ca](http://www.invasivespeciescentre.ca)



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# Introduction

## Why Invasive Plants are a Problem

Invasive alien species are “a growing environmental and economic threat to Ontario. Alien species are plants, animals and microorganisms that have been accidentally or deliberately introduced into areas beyond their normal range. Invasive species are defined as harmful alien species whose introduction or spread threatens the environment, the economy, or society, including human health (Government of Canada 2004).” (Ontario Invasive Species Strategic Plan, 2012). The great majority of plant invasions occur in habitats that have been disturbed either naturally or by humans (Rejmanek 1989; Hobbs and Huenneke 1992; Hobbs 2000).

The ecological effects of invasive species are often irreversible and, once established, they are extremely difficult and costly to control or eradicate. According to Pimental et al. (1999), invasive species in the U.S. cause economic and environmental damages totalling over \$138 billion per year, with agricultural weed control and crop losses totalling approximately \$34 billion per year. Exact figures for the total economic and environmental damages are not available for Canada. In Ontario however, the costs of dealing with just one invasive species is astonishing; Zebra Mussels cost Ontario power producers who draw water from the lake \$6.4 million per year in increased control/operating costs and about \$1 million per year in research costs (Colautti et al. 2006).

Invasive species can spread to new areas when contaminated mud, gravel, water, soil and plant material are unknowingly moved by equipment used on different sites. This method of spread is called an unintentional introduction, and is one of the four major pathways for invasive species introduction into a new area of Ontario (Ontario Invasive Species Strategic Plan, 2012).



**Buckthorn removal, Lynde Shores Conservation Area.**  
Photo by: Central Lake Ontario Conservation Authority

Invasive plant seed and propagules (plant material, i.e. rhizomes) have the ability to travel sight unseen in mud attached to or lodged in various parts and spaces between parts of vehicles, machinery and other mechanical equipment. A recent study at Montana State University found that most seeds (99% on paved roads and 96% on unpaved roads) stayed attached to the vehicle after traveling 160 miles (257 km) under dry conditions.

Invasive plant species are commonly transported on or in vehicles and construction equipment when they are moved to new locations. Those vehicles include four-wheel drives, excavators, tractors, loaders, water trucks and all-terrain vehicles. Failure to properly clean vehicles and machinery of soils, mud, and contaminated water that may contain invasive species seed and propagules can result in permanent, irreversible environmental impacts. These impacts can mean substantial cost to the landowner, land manager and/or the user. Businesses may also face liability issues for activities and operations that result in the introduction of invasive species.

Some of the invasive species in Ontario which have been known to spread through equipment transfer include:

- **Common Buckthorn** (*Rhamnus cathartica*)
- **Dog-strangling Vine** (*Cynanchum rossicum*)
- **Garlic Mustard** (*Alliaria petiolata*)
- **Giant Hogweed** (*Heracleum mantegazzianum*)
- **Glossy Buckthorn** (*Frangula alnus*)
- **Japanese Knotweed** (*Polygonum cuspidatum*)
- **Miscanthus or Chinese Silver Grass** (*Miscanthus sinensis*)
- **Phragmites or Common Reed** (*Phragmites australis* subsp. *australis*)
- **Reed Canary Grass** (*Phalaris arundinacea*)
- **Wild Parsnip** (*Pastinaca sativa*)
- **Wild Chervil** (*Anthriscus sylvestri*)



**Dog-strangling vine**  
(*Cynanchum rossicum*)  
Photo by: Hayley Anderson



**Garlic Mustard**  
(*Alliaria petiolata*)  
Photo by: Ken Towle



**Phragmites**  
(*Phragmites australis* subsp. *Australis*)  
Photo by: Michael Irvine

These plants impact biodiversity by out-competing native species for space, sunlight, and nutrients. They can also have impacts on road and driver safety by physically blocking intersection sightlines, and in the case of Phragmites and Miscanthus, may fuel intense grass fires if ignited, which can damage utility stations and hydro lines.

**The harmful effects of invasive species include:**

- Physical and structural damage to infrastructure
- Human health hazards (i.e. Giant Hogweed and Wild Parsnip exposure)
- Delays and increased cost in construction activities
- Environmental damage (i.e. erosion)
- Aesthetic degradation
- Loss of biodiversity
- Reduced property values
- Loss of productivity in woodlots and agriculture

# Why Cleaning Vehicles and Equipment is Important

Passenger and recreational vehicles as well as heavy machinery are major vectors for spreading terrestrial invasive species into new areas.

It is much more costly to control invasive species after their establishment and spread than it is to prevent their spread. The spread of invasive species through unintentional introduction can be minimized significantly by the diligent cleaning of vehicles and equipment when leaving one site and moving to the next. In the case of large properties, cleaning before moving to a new site is recommended, even if it is within the same property.

This guide has been developed for the construction, agriculture, forestry and other land management industries, to provide equipment operators and practitioners with tools and techniques to identify and prevent the unintentional introduction of invasive species. It establishes a standard for cleaning vehicles and equipment and provides a guide where current codes of practice, industry standards or other environmental management plans are not already in place.

---

## Passenger and recreational vehicles include:

- 2WD and 4WD cars
- 2WD and 4WD trucks
- All Terrain Vehicles (ATV's)
- Motorbikes
- Snowmobiles

## Heavy machinery includes:

- Trucks
- Tractors
- Mowers
- Slashers
- Trailers
- Backhoes
- Graders
- Dozers
- Excavators
- Skidders
- Loaders
- Water Tankers and Trucks



**Dog-strangling Vine plants attached to ATV.**

Photo by: Francine Macdonald



**Plant material attached to bobcat.**

Photo by: TH9 Outdoor Services

# Impacts of Invasive Species on Industry

## Construction

In the UK, Japanese Knotweed (*Polygonum cuspidatum* or *Fallopia japonica*) is classified as a hazardous material. When construction occurs in established Japanese Knotweed stands workers sift the soil to remove root fragments and institute treatment plans to ensure that the Knotweed does not re-sprout, as it can damage housing foundations by growing through concrete and asphalt. The contractors must also thoroughly clean their equipment, and dispose of the contaminated soil at biohazard waste sites. While we do not have these requirements in Ontario, Japanese Knotweed is present here.

Invasive plant species can also increase site preparation and weed control costs, and reduce property values. For example, in Vermont the presence of the aquatic invasive plant Eurasian Watermilfoil (*Myriophyllum spicatum*) depressed shoreline residence property value by as much as 16.4% (Zhang and Boyle, 2010).

## Forestry/Agriculture

Invasive plant species which become established in forests will out-compete native species and prevent forest re-generation after logging or natural disturbance. Dog-strangling Vine (*Cynanchum rossicum*) is of particular concern in conifer plantations. This species thrives in the filtered light and open soils of mature plantations, and suppresses seedling establishment of native hardwoods. If its invasion continues, very few juvenile trees will survive to fill the shrinking canopy of over-mature pines. Reforestation sites are also susceptible; the thick mats of vegetation and aggressive competition from Dog-strangling Vine decrease available planting space and increase costs as more mature vegetation needs to be planted in order to ensure the new vegetation can outcompete the invasive plant. As a result, expensive control programs are often required.

## Land Management (Trail Use/Maintenance)

Recreational trail use and the maintenance of trails can facilitate the transport of invasive plant material and seeds, and create open and disturbed sites that are prime locations for the establishment of invasive species. Studies have proven that trails act as corridors which assist in the spread of invasive plant species. Humans, their pets, and vehicles such as ATV's can be vectors of invasion along trails because seeds and plant pieces can be carried on equipment and clothing. In addition, frequent trampling along trails alters soil properties, limits the growth of some native species, and creates conditions that may favour the growth of non-native species (Kuss et al. 1985; Marion et al. 1985; Yorks et al. 1997).

## Roadsides/Utilities

Invasive species can increase the cost of roadside and utility maintenance by requiring additional maintenance and control efforts. The presence of invasive species can also provide a safety hazard. In the case of Phragmites and Miscanthus (invasive grass species), along with interrupting sight lines, the dead stalks which remain standing each autumn also provide combustible material. Fires in these stands burn intensely, and can damage utilities and hydro lines. Phragmites along roadsides is generally assumed to be spread through the transport and burial of rhizome fragments through ditching, ploughing, and other human activities that transport rhizomes on machinery. Studies have shown that vehicles and road-fill operations can transport invasive plant seeds into uninfested areas, and road construction and maintenance operations provide optimal disturbed sites for seed germination and seedling establishment (Schmidt 1989; Lonsdale & Lane 1994; Greenberg et al. 1997; Trombulak & Frissell 2000).

# Steps to Prevent the Unintentional Introduction of Invasive Species from Equipment

Inspection and cleaning of all machinery and equipment should be performed in accordance with the procedures, checklists and diagrams provided in this protocol.

When visiting more than one site, always schedule work in the sites that are the least disturbed and free of known invasive species first, and visit sites with known invasive species infestations last. This will greatly reduce the risk of transferring plants to new locations.

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## When to Inspect

### Inspection should be done before:

- Moving vehicles out of a local area of operation
- Moving machinery between properties or sites within the same property where invasive species may be present in one area, and not in another
- Using machinery along roadsides, in ditches, and along watercourses
- Vehicles using unformed dirt roads, trails or off road conditions
- Using machinery to transport soil and quarry materials
- Visiting remote areas where access by vehicles is limited

### Inspection should be done after:

- Operating in areas known to have terrestrial invasive plants or are in high risk areas (i.e. recently disturbed areas near known invaded areas)
- Transporting material (i.e. soil) that is known to contain, or has the potential to contain, invasive species
- Operating in an area or transporting material that you are uncertain contain invasive species
- In the event of rain. If mud contains seeds, they can travel indefinitely until it rains or the road surface is wet, allowing for long distance transport. This may result in transporting seeds to areas where those species did not previously exist

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## How to Inspect

- Inspect the vehicle thoroughly inside and out for where dirt, plant material and seeds may be lodged or adhering to interior and exterior surfaces.
- Remove any guards, covers or plates that are easy to remove.
- Attention should be paid to the underside of the vehicle, radiators, spare tires, foot wells and bumper bars.

If clods of dirt, seed or other plant material are found, removal should take place immediately, using the techniques outlined below.

## When to Clean

Vehicles and heavy equipment that stay on formed and sealed roads have a low risk of spreading invasive species. Cleaning is only required when inspection identifies visible dirt clods and plant material or when moving from one area to another.

Depending on the invasive species present, vehicles may need to be cleaned even when deep snow is present. Phragmites, for example, can still be spread, even in packed snow because the seed heads are usually above the surface of the snow. Other plants, such as Dog-strangling vine, will be contained beneath deep snow.

*\*Regular inspection of vehicles and machinery will identify if any soil or plant material has been collected on or in vehicles and machinery.*

## Where to Clean

Clean the vehicle/equipment in an area where contamination and seed spread is not possible (or limited). The site should be:

- Ideally, mud free, gravel covered or a hard surface. If this option is not available, choose a well maintained (i.e. regularly mowed) grassy area.
- Gently sloping to assist in draining water and material away from the vehicle or equipment. Care should be taken to ensure that localized erosion will not be created, and that water runs back into the area where contamination occurred.
- At least 30m away from any watercourse, water body and natural vegetation.
- Large enough to allow for adequate movement of larger vehicles and equipment.

*\*Safely locate the vehicle and equipment away from any hazards. If mechanized, ensure engine is off and the vehicle or equipment is immobilized.*

## How to Clean Inside

Clean the interior of the vehicle by sweeping, vacuuming or using a compressed air device. Particular attention should be paid to the floor, foot wells, pedals, seats and under the seats.

## How to Clean Outside

Knock off all large clods of dirt. Use a pry bar or other device if necessary.

Identify areas that may require cleaning with compressed air rather than water such as radiators and grills. Clean these areas first prior to using water.

Clean the vehicle with a high pressure hose in combination with a stiff brush and/or pry bar to further assist the removal of dirt clods.

Start cleaning from the top of the vehicle and work down to the bottom.

Emphasis should be placed on the undersides, wheels, wheel arches, guards, chassis, engine bays, radiator, grills and other attachments.

When the cleaning is finished avoid driving through the waste water when removing the vehicle or equipment from the cleaning site.

For equipment such as water trucks that may be exposed to aquatic invasive species, trucks should be disinfected with bleach solution before conducting work in a new area. For further information please refer to the Invading Species Awareness Program's Technical Guidelines listed under Contacts and Resources.



**Hosing down a vehicle in Queensland Australia**

Photo by: TH9 Outdoor Services

# Final Inspection Checklist

**Conduct a final inspection to ensure the following general clean standard has been achieved:**

- No clods of dirt should be visible after wash down.
- Radiators, grills and the interiors of vehicles should be free of accumulations of seed, soil, mud and plant material parts including seeds, roots, flowers, fruit and or stems.

Diagrams have been provided to assist in quickly identifying key areas to inspect and clean on a variety of vehicles associated with the targeted industries. These can be used in combination with vehicle checklists to ensure all areas of the vehicles have been inspected and cleaned.

## Equipment Required

- A pump and high pressure hose OR High pressure water unit
- Minimum water pressure for vehicle cleaning should be at least 90 pounds per square inch. Water can be supplied as high volume/low pressure or low volume/high pressure (NOAA Fisheries Service).
- Air compressor and blower OR Vacuum
- Shovel
- Pry bar
- Stiff brush or broom



**Cleaning station at construction site.**

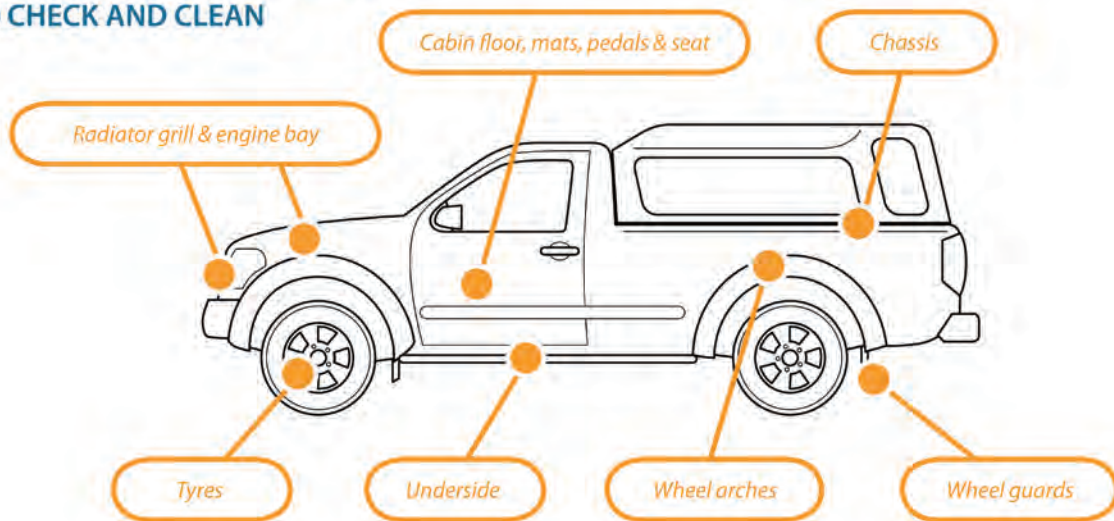
Photo by: Mark Heaton, OMNR



# Inspection and Cleaning Diagrams and Checklists

## 2WD and 4WD Vehicles

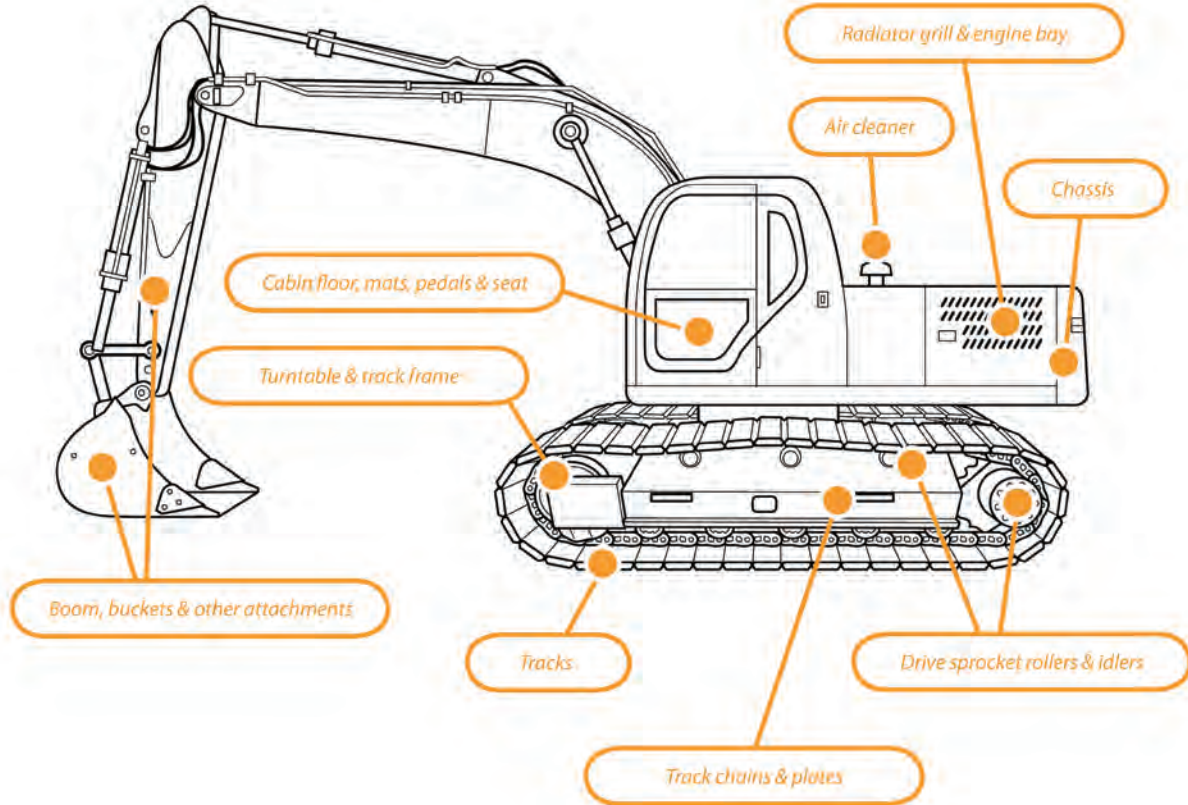
### 4WD VEHICLE WITH KEY SPOTS TO CHECK AND CLEAN



		✓
<b>Cabin</b>	Floor, mats, pedals, seats	
<b>Engine</b>	Radiators, engine bay, grill	
<b>Body</b>	Underside, chassis, crevices, ledges, bumper bars	
<b>Wheels</b>	All wheels (including spare), wheel arches, guards	
<b>Tray</b>	Floor, canopy (if included)	

# Excavator

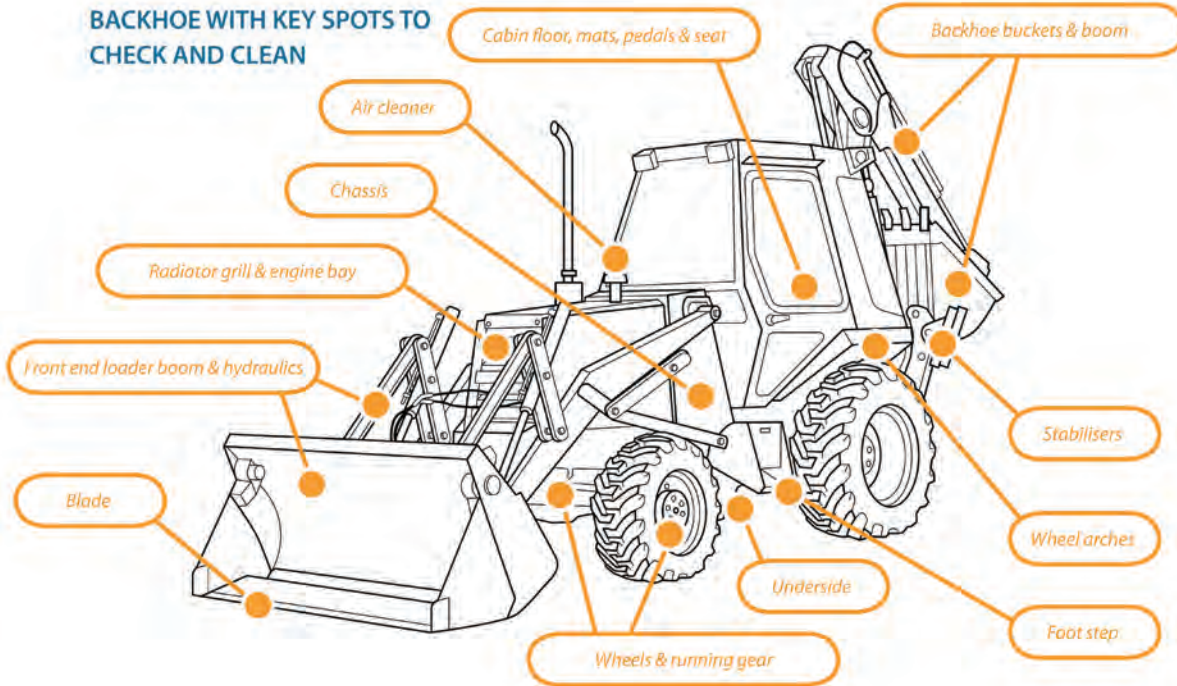
## EXCAVATOR WITH KEY SPOTS TO CHECK AND CLEAN



		✓
<b>Cabin</b>	Floor, mats, pedals, seats	
<b>Engine</b>	Radiators, engine bay, grill, air cleaner	
<b>Tracks</b>	Tracks, track frame, drive sprocket rollers, idlers	
<b>Body Plates</b>	Plates of cabin	
<b>Body</b>	Ledges, channels	
<b>Bucket</b>		
<b>Booms</b>		
<b>Turret Pivot</b>		

# Backhoe

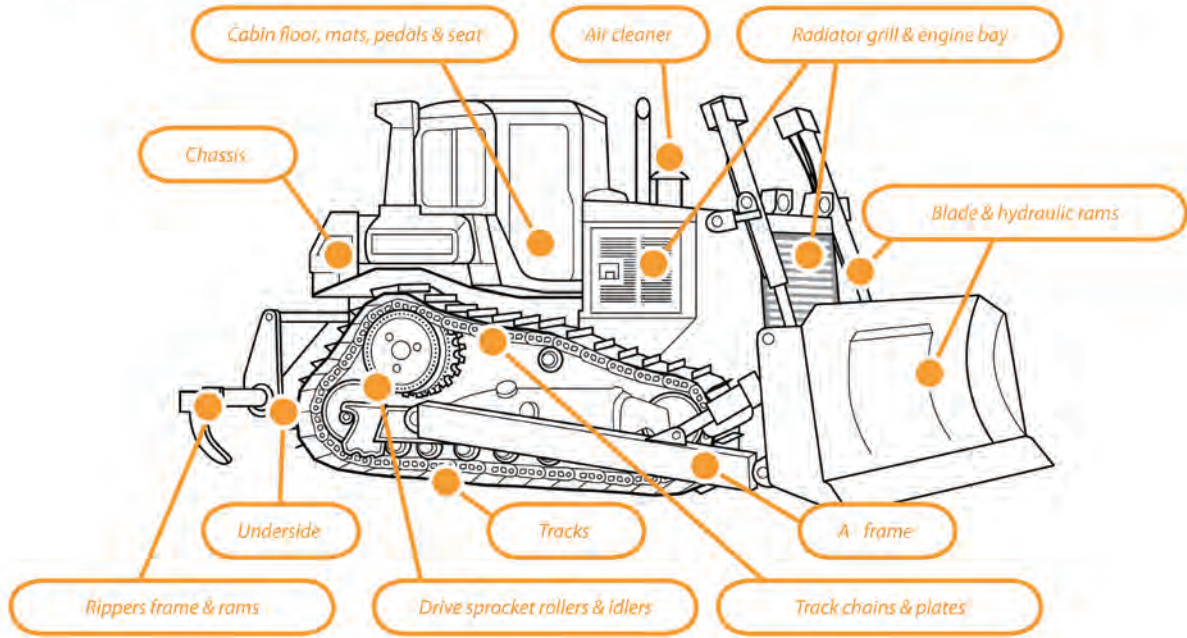
## BACKHOE WITH KEY SPOTS TO CHECK AND CLEAN



		✓
<b>Cabin</b>	Floor, mats, pedals, seats, foot step	
<b>Engine</b>	Radiators, engine bay, grill, air cleaner	
<b>Wheels</b>	All wheels (including spare), wheel arches, guards	
<b>Front end loader</b>	Blade, hydraulics, booms	
<b>Backhoe</b>	Buckets, boom, hydraulics, stabilizers	

# Bulldozer

## BULLDOZER WITH KEY SPOTS TO CHECK AND CLEAN



		✓
<b>Cabin</b>	Floor, mats, pedals, seats	
<b>Engine</b>	Radiators, engine bay, grill, air cleaner	
<b>Tracks</b>	Tracks, track frame, drive sprocket rollers, idlers	
<b>Body Plates</b>	Belly plates and rear plates	
<b>Body</b>	Ledges, channels	
<b>Blade</b>	Pivot points, hydraulic rams, a-frame	
<b>Ripper</b>	Ripper frame, ripper points	

# Contacts and Resources

Ontario Invasive Species Strategic Plan 2012. Government of Ontario. Online, accessed May 8, 2012.

[http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@biodiversity/documents/document/stdprod\\_097634.pdf](http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@biodiversity/documents/document/stdprod_097634.pdf)

Invasive Species Management for Infrastructure Managers and the Construction Industry 2008. Wade, M. Booy, O. and White, V. Online, accessed April 27, 2012

[http://www.ciria.org/service/Web\\_Site/AM/ContentManagerNet/ContentDisplay.aspx?Section=Web\\_Site&ContentID=9001](http://www.ciria.org/service/Web_Site/AM/ContentManagerNet/ContentDisplay.aspx?Section=Web_Site&ContentID=9001)

T.I.P.S (Targeted Invasive Plant Solutions) Highway Operations. British Columbia Invasive Species Council. Online, accessed May 8, 2012

[http://www.bcinvvasiveplants.com/iscbc/publications/TIPS/Highways\\_Operations\\_TIPS.pdf](http://www.bcinvvasiveplants.com/iscbc/publications/TIPS/Highways_Operations_TIPS.pdf)

Invading Species Awareness Program Workshop Manual: Aquatic Invasive Species: An Introduction to Identification, Collection and Reporting of Aquatic Invasive Species in Ontario Waters (includes information on decontaminating equipment).

<http://www.invadingspecies.com/download/publications/manuals/WorkshopManual.pdf>

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## Reporting Invasive Species

To report invasive species, or view maps of existing records, visit the Invading Species Awareness Program website [www.invadingspecies.com/report/](http://www.invadingspecies.com/report/) or [www.eddmaps.org/Ontario](http://www.eddmaps.org/Ontario).

Or call the OFAH/MNR Invading Species Awareness Program Hotline at **1-800-563-7711**

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## Acknowledgements

We gratefully acknowledge NRM South (Tasmania, Australia) for allowing the use of their artwork and text from their “Keeping it Clean – A Tasmanian Field Hygiene Manual to Prevent the Spread of Freshwater Pests and Pathogens”.

We also sincerely thank the Clean Equipment Protocol Working Group and the Ontario Invasive Plant Council Committees and Board of Directors for their ongoing support and valuable input into this document, and the Canada-Ontario Invasive Species Centre and Ontario Ministry of Natural Resources for the support in creating this protocol.

### Clean Equipment Protocol Working Group:

Diana Shermet, Central Lake Ontario Conservation Authority; Paula Berketo, Ontario Ministry of Transportation; Travis Cameron, Ontario Ministry of Natural Resources; Jennifer Hoare, Ontario Parks; Michael Irvine, Ontario Ministry of Natural Resources; Alison Kirkpatrick, OFAH/MNR Invading Species Awareness Program; Erika Weisz, Ontario Ministry of Natural Resources; Amanda Chad, Ontario Power Generation; Nancy Vidler, Lambton Shores Phragmites Community Group; Nigel Buffone, Du Pont Canada Company; Ewa Bednarczuk, Lower Trent Conservation Authority

We also gratefully acknowledge the input and direction from Francine MacDonald, James Rockwood, Anne-Marie Roussy, Stephen Smith, Caroline Mach, Patricia Lowe, John Bowen, Karen Hartley, and the Southern Ontario Community Forest Managers group.

### More Information:

Ontario Invasive Plant Council: [www.ontarioinvasiveplants.ca](http://www.ontarioinvasiveplants.ca)

# Appendix A: Identification of Invasive Plants found in Ontario

- **Common Buckthorn** (*Rhamnus cathartica*) and **Glossy Buckthorn** (*Frangula alnus*)
- **Dog-strangling Vine** (*Cynanchum rossicum*)
- **Garlic Mustard** (*Alliaria petiolata*)
- **Japanese Knotweed** (*Polygonum cuspidatum*)
- **Phragmites or Common Reed** (*Phragmites australis subsp. australis*)
- **Giant Hogweed** (*Heracleum mantegazzianum*)

## common & glossy buckthorn

(*Rhamnus cathartica* & *R. frangula*)



**Plant type:** Shrub/small tree

**Arrangement:** Common buckthorn are sub-opposite (almost opposite). Glossy buckthorn are alternate.

**Leaf:** The common buckthorn leaf is egg shaped, edge of the leaf is “pebbled” (small rounded teeth). Veins converging toward leaf top. The glossy buckthorn leaf is more slender (tear drop shaped) and smooth margined.

**Bark:** Smooth, young bark with prominent raised patches or lenticels; rough texture and peeling bark when mature.

**Seed/Flowers:** Flowers are green-yellowish, small and inconspicuous. Green berries becoming purplish/black in late summer, berry > 1 cm in diameter.

**Buds/Twigs:** Common buckthorn has thorn-like tip on many twigs. Glossy buckthorn buds have no bud scales and lack thorny tips to twigs.

**Habitat:** Various - forest, thickets, meadows, dry to moist soils.

**Similar native species:** Native dogwoods, which lack the thorny “tip”. Native dogwoods are truly opposite in arrangement of twigs; only alternate leaved (pagoda) dogwood has alternate branching.



## dog-strangling vine

(*Cynanchum rossicum* & *C. nigrum*)



**Plant type:** Herb, twining vine

**Arrangement:** Opposite

**Leaf:** Lance shaped, smooth margin (edge)

**Bark:** n/a

**Seed/Flowers:** Bean shaped seed pod with seeds attached to downy 'umbrellas'. Flowers - pink (*C. rossicum*) or purple (*C. nigrum*) with five petals.

**Buds/Twigs:** n/a

**Habitat:** Dry to moist soils; more dominant in meadows and woodland edges.

**Similar native species:** Swamp milkweed (*Asclepias incarnata* spp.), is an upright plant, typically found in wetland habitats.

## garlic mustard

(*Alliaria petiolata*)



**Plant type:** Herb

**Arrangement:** Alternate

**Leaf:** Saw tooth like edge, elongated heart shape. Garlic/onion smell when crushed. Leaves are kidney shaped with prominent veins.

**Bark:** n/a

**Seed/Flowers:** Cluster of small white flowers with four petals. Small black < 1 mm rounded seed found in elongated 'tube-like' seed pods (similar to a bean pod).

**Buds/Twigs:** n/a

**Habitat:** Various – dry to moist soils, in all habitat types, less often in meadows.

**Similar native species:** n/a

## japanese knotweed

(*Polygonum cuspidatum*)



**Plant type:** Herb, 2 - 4 m in height.

**Arrangement:** Alternate

**Leaf:** Tear drop shaped, sharp pointed, dark green, flattened at base.

**Bark:** n/a

**Seed/Flowers:** Flowering stalk of many small greenish-white flowers.

**Buds/Twigs:** Large plant with a 'bamboo-like' stem. Stem light green maturing to tan colour.

**Habitat:** Moist to wet soils found in wetlands, water-courses and roadside ditches.

**Similar native species:** None.

## common reed

(*Phragmites australis*)



**Plant type:** Grass

**Arrangement:** Alternate

**Leaf:** Broad leaf > 1 cm wide.

**Bark:** n/a

**Seed/Flowers:** Dense cascading 'broom-like' flower head. 'Cottony' in appearance when mature.

**Buds/Twigs:** Stems rough and ridged, ligule a densely hairy band. Mature plants > 3 m tall.

**Habitat:** Moist to wet soils. Found in wetlands, water-courses and road side ditches.

**Similar native species:** Species of mannagrass (*Glyceria* sp) including tall northern, eastern and rattlesnake grass. A native common reed exists but has a smooth stem and the ligule is not hairy. It is also quite rare.



# giant hogweed

(*Heracleum mantegazzianum*)



**Plant type:** Herb. Mature plants can be over 3m tall.

**Arrangement:** Alternate

**Leaf:** Lobed leaf 1-2 m wide, lobes sharp-pointed.

**Bark:** n/a

**Seed/Flowers:** Small, white flowers in a large umbrella-shaped cluster, .75 m wide.

**Buds/Twigs:** Hairy stem with purple spots.

**Habitat:** Fresh to wet soils in forests, swamps, meadows, marshes.

**Similar native species:** Cow parsnip (*Heracleum maximum*) – has smaller flowers, no purple spots on stems. Angelica (*Angelica atropurpurea*) has a rounded-topped flower cluster and leaves divided into many leaflets.

**Do not touch this plant because it is poisonous. If you do, wash your skin immediately in cool soapy water and do not expose the area to sunlight.**

**Seek professional advice before removing.**

## Identification of Invasive Plants found in Ontario Photos by:

Credit Valley Conservation, Greg Bales, Ken Towle, Patrick Hodge,  
Ontario Federation of Anglers and Hunters, Francine Macdonald, Matt Smith

