



Clean Equipment Policy

December 4th 2023

Definitions

Definitions have been sourced from relevant Canadian and Ontario legislation, such as the *Invasive Species Act, 2015*, and the *Weed Control Act, 1990* as well as other academic resources.

Noxious vegetation: refers specifically to injurious weeds, which pose a hazard to the health of humans or wildlife, as well as agriculture.

Non-indigenous (NI) vegetation: means a species that is not native to Ontario, or to a part of Ontario, and,

- (a) is harming the natural environment of Ontario or of the part of Ontario in which it is present, or
- (b) is likely to harm the natural environment of Ontario or of a part of Ontario, regardless of whether it is present in Ontario or in a part of Ontario

Vehicle: means any kind of vehicle that is driven, propelled, or drawn on land or ice by any kind of power, including muscular power, and includes the rolling stock of a railway.

Equipment: means any tool or device used to carry out a specific function. In this document, the term equipment is inclusive of hand tools as well as mechanical equipment such as chainsaws, augers, etc.

Surface waters: means any body of water that is above ground, including but not limited to, streams, rivers, lakes, wetlands, reservoirs, creeks, etc.

Plant material: means material derived from plants, including plant cuttings, roots, and other organic materials.

Introduction and Purpose

This Clean Equipment Protocol (CEP) was developed with the intention of minimizing the introduction and transfer of noxious and non-indigenous (NI) vegetation to Sites and throughout Sites. Michipicoten First Nation (MFN) understands that the introduction and spread of noxious and NI vegetation to new areas regionally and provincially can have detrimental, costly, and often irreversible impacts on surrounding terrestrial and aquatic ecosystems. Once established, noxious and NI vegetation is incredibly difficult to control or eliminate, hence minimizing their introduction represents a priority for MFN in order to decrease the spread of these species throughout traditional territory and title lands.

Noxious and NI vegetation can spread to new areas on vehicles and equipment through water, mud, gravel, and/or plant material that is contaminated with the seeds of NI or noxious species. The spread of seeds and rhizomes in this manner has been termed “unintentional introduction” (MNRF, 2012). Literature notes that 96-99% of seeds may remain attached to vehicles and equipment under dry conditions for nearly 260 KM of travel on paved and unpaved roads (Taylor et al., 2012). The introduction and spread of noxious and NI vegetation has the ability to impact not only the health of the ecosystem but also the traditional use of land by Indigenous communities, such as MFN. MFN has taken steps to understand how noxious and NI vegetation spread, hence this CEP is being implemented with the primary goal of minimizing the transfer of noxious and NI vegetation which can be transferred unintentionally on construction equipment and vehicles to be utilized as a part of the on-going activities being completed by Proponents and associated subcontractors (hereinafter, “site staff” or “staff”).

This CEP will also act to minimize the transfer of contaminants to and from Sites as well as throughout Sites. Contaminants may be present at the Site(s) already, or become present at Sites through spills, leaks, and other deficiencies in equipment. Spill preparedness and responses have been addressed under alternative protocols and emergency planning.

Responsibilities of the Proponent and Subcontractor

As the Owner of the Project, it is ultimately the responsibility of the Proponent to ensure compliance with environmentally relevant legislation, and commitments to stakeholders, such as the implementation of the CEP.

As the Constructor of the Project, it is the responsibility of the subcontractor to undertake works compliant with relevant legislation and, commitments such as the implementation of the CEP. It is also the responsibility of the subcontractor to ensure that staff on-site have been adequately trained concerning noxious and NI vegetation as well as the implementation and function of the CEP. The Subcontractor will also be responsible for ensuring the function and continued improvement of the CEP throughout the life of the Project.

Non Indigenous Species of Relevance

A large number of noxious and NI vegetation exist within Ontario and can vary substantially based on the region of operation in the province. With this in mind, plants listed under the Ontario *Invasive Species Act, 2015* as well as under the Ontario *Weed Control Act, 1990* should represent a basis for NI vegetation of concern in Ontario.

- Common Mullein (*Verbascum thapsus*)
- Black Bindweed (*Fallopia convolvulus*)
- Great Burdock (*Arctium lappa*)
- NI Thistle spp. (*Asteraceae spp.*)
- Brown Knapweed (*Centaurea jacea*)
- Phragmites spp. and Common Reed (*Phragmites australis subsp. australis*)
- Garlic Mustard (*Alliaria petiolata*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Cow Parsnip (*Heracleum maximum*)
- Common Buckthorn (*Rhamnus cathartica*)
- Glossy Buckthorn (*Frangula alnus*)

It is recommended that information on identifying characteristics as well as photographs of these species represent a key focus of training to be given to on-site staff, as well as be available for reference by staff on-site throughout the life of the project.

What Vehicles and Equipment Require Inspection/Cleaning

The seeds of noxious and NI vegetation may be spread on all passenger, and recreational vehicles, as well as on heavy equipment and hand equipment. Vehicles and equipment that should be subject to the CEP may include, but are not limited to, the following:

- 2 WD and 4WD Trucks
- Trailers
- Backhoes
- Graders
- Dozers
- Excavators
- Skidders
- Loaders
- Water Tankers and Trucks
- All-Terrain Vehicles and snowmobiles
- Hand tools that frequently come in contact with soil and plant material, such as shovels, spades, rakes

While this CEP is focused primarily on minimizing the introduction of noxious and NI vegetation on equipment utilized for industrial activities, it is important to recognize that seeds are also spread on more

simple vectors, such as on the boots of on-site staff, though it is not practical to address all these vectors within the CEP.

How and When to Inspect

Inspections of vehicles and equipment should be completed with the goal of determining if clods of dirt, seed, or other plant material exist on the vehicle that may be transported to other locations, including new sites, laydown areas, or to different areas within the same site. Inspections should be completed frequently and will coincide with specific activities relating to construction work. The completion of different activities will involve different timing for the completion of inspections. For example, some activities will require an inspection of the vehicle and equipment before completing certain tasks, while the completion of other activities will require an inspection of vehicles and equipment following task completion. Details on when to complete inspections of vehicles and equipment are discussed herein.

Inspections should be completed when:

- Moving vehicles and equipment into a new area of operation.
- Moving vehicles and equipment from an area of operation.
- Moving or storing vehicles and equipment within and new or existing laydown or storage area.
- Moving vehicles and equipment from existing laydown and storage areas.
- Moving vehicles and equipment between properties or between areas of the same property when noxious or NI vegetation has been documented as present.
- Utilizing vehicles and equipment to transport fill, soil, or quarry materials.
- Visiting remote areas with limited vehicle or equipment access.
- Events of heavy precipitation occur at the Site or during transport/travel to or from the Site.
- Vehicles or equipment that is operating in wet soil conditions, or near-surface waters.

It is prudent to note that depending on the specific noxious and NI vegetation documented at the Site, the CEP must be followed regardless of winter conditions or in cases when deep snow is present. It is known that the seed heads of NI Phragmites species are capable of breaching the surface of the snow, hence in the case that NI Phragmites are documented as present at the Site, the CEP must be followed even under winter conditions.

Appropriate Wash Areas

An appropriate area to wash contaminated vehicles and equipment should be established during the early stages of the Project, ideally at the time when a CEP baseline is being investigated and established. Several factors must be considered when choosing an appropriate wash area at a new site. Details on how to appropriately designate a wash area are discussed herein, the area must be:

- Free of any hazards, and large enough to accommodate the frequent movement of large vehicles and heavy equipment through the area.
- Located within a well-maintained area, ideally within a gravel-covered area or atop a hard surface. When a gravel-covered area is not available, the area must be at minimum free of mud and plant debris.
- Located at a minimum of 30 m from any source of surface water.

- Located away from any existing evidence of erosion, or heavy drainage paths.
- Slightly sloped to aid in natural drainage from the area. In the case that drainage from wash areas begins to cause localized erosion, the wash area must then be encircled with light geotextile fencing and dug a minimum of 10 cm below the ground surface in order to mitigate the impacts of potential erosion into surrounding natural areas. Light geotextile fencing must be inspected regularly for rips, tears, and gaps to ensure it continues to function as designed.
- In the case that Acid Rock Drainage (ARD) is of concern, equipment wash areas must be located as far as practical from any existing evidence of ARD or acid-generating rock.
- In areas where localized erosion is possible, the wash areas will be encircled with sediment erosion control fencing, as to minimize the transport of both erosion material and the potential seeds of noxious and NI vegetation from migrating into nearby areas. Please see p.7 of Hallaron et al., 2013 for an example of how this fenced area should look (Appendix A).

Decommissioning of Wash Areas

Potential wash areas should be inspected for noxious and NI vegetation of concern following the completion of site activities or upon the decommissioning of the wash area to ensure that no noxious or NI vegetation has been established in this area. In the case that noxious or NI vegetation is documented, that was not otherwise previously documented and photographed at the onset of activities, these species will be removed using suitable physical or mechanical techniques. MFN does not condone the use of chemical treatment for NI vegetation or noxious vegetation.

When to Clean and How to Clean

Cleaning should be completed following an inspection of vehicles and equipment that has documented the presence of mud, gravel, water, soil, and/or plant materials present on the exterior or interior of the inspected vehicle or equipment.

Cleaning should be completed within an appropriately designated wash area, and involve the following key steps to eliminate evidence of mud, gravel, water, soil, and/or plant materials from vehicles and equipment:

- Physically knock off all large clods of dirt. If these cannot be safely reached use an alternative method to remove this debris from the vehicle or equipment.
- Identify areas that may require more detailed cleaning with compressed air rather than water. This may include things such as radiators and grills. Areas requiring cleaning with compressed air should be cleaned first, before washing the rest of the vehicle with water.
- Clean the vehicle with a high-pressure hose or washer in combination with a stiff brush and/or pry bar to further assist in the removal of dirt clods. Under winter conditions utilizing compressed air represents a suitable alternative to washing with water.
- Begin cleaning from the top of the vehicle and work down to the bottom as to ensure that seeds are not spreading throughout the vehicle while cleaning.
- Emphasis should be placed on the undersides, wheels, wheel arches, guards, chassis, engine bays,

radiator, grills, and other attachments.

Once the cleaning has been completed, avoid driving the vehicle through the wastewater when removing the vehicle or equipment from the designated cleaning area. Special care should also be taken if moving the vehicle/equipment off-Site to not re-contaminate the vehicle. Cleaning diagrams are available for reference on pages 8 through 11 of Halloran et al., 2023(Appendix A). These diagrams provide details regarding key areas to be targeted during the cleaning of specific vehicles and equipment.

In addition to cleaning the exterior of the vehicle/equipment, the interior of vehicles and equipment must also be cleaned. Evidence of mud or dirt, sand, or plant material must be removed from the interior by sweeping, vacuuming, and/or using compressed air. Cleaning of the interior of a vehicle should also be completed within the designated wash/cleaning area.