

Invasive Plant Management

6.2 Invasive Plant Management

The management of invasive plants during road construction and highway maintenance activities presents a significant challenge for the Ministry of Transportation and Infrastructure, its Maintenance Contractors, and adjacent land managers. Many highway operational activities carry the risk of potentially introducing or spreading invasive plants. The term invasive plant includes provincially listed noxious weeds as well as other introduced plant species with the potential to pose undesirable impacts on humans, animals, or ecosystems.



Environmental Issues

Primary environmental issues relating to the management of invasive plants and noxious weeds are summarized in the following table. It should be noted that site-specific conditions might present additional issues you will need to address in planning and undertaking your works.

Work Activity	Potential Environmental Impacts	Performance Standards and Legal Requirements
Shoulder Gravelling <i>(See Section 5.2)</i>	May contribute to the spread of noxious weeds by modifying roadside growing conditions, displacing native plants, or transporting invasive plant material	No dispersal of noxious weeds or their seeds (<i>Weed Control Act</i> , Weed Control Regulation).
Shoulder Maintenance <i>(See Section 5.2)</i>	May contribute to the spread of noxious weeds by displacing or disturbing native vegetation, transporting plant material and seeds	No dispersal of noxious weeds or their seeds (<i>Weed Control Act</i> , Weed Control Regulation).
Debris Removal <i>(See Section 5.4)</i>	May contribute to the spread of noxious weeds if the removed material is improperly handled	No dispersal of noxious weeds or their seeds (<i>Weed Control Act</i> , Weed Control Regulation).

Work Activity	Potential Environmental Impacts	Performance Standards and Legal Requirements
Ditch and Watercourse Maintenance (See Section 5.5)	May contribute to the spread of noxious weeds by displacing native vegetation or through improper disposal of invasive plant material	No dispersal of noxious weeds or their seeds (<i>Weed Control Act</i> , Weed Control Regulation).
Shore, Bank and Watercourse Maintenance (See Section 5.7)	May contribute to the spread of noxious weeds by displacing native vegetation or through improper disposal of invasive plant material	No dispersal of noxious weeds or their seeds (<i>Weed Control Act</i> , Weed Control Regulation).
Shore, Bank and Watercourse Maintenance (See Section 5.7)	May displace native vegetation	No harmful alteration, disruption or destruction of fish habitat without authorization (<i>Fisheries Act</i> , Section 35(1)).
	May contribute to the spread of noxious weeds if the removed material is improperly handled May adversely affect animal and public health, e.g., skin burns from Hog Weed	No dispersal of noxious weeds or their seeds (<i>Weed Control Act</i> , Weed Control Regulation).
	May introduce deleterious substances to a watercourse when chemicals or biocontrol management methods are implemented	No use, handling, release, transport, storage, or disposal of a pesticide in a manner that causes or is likely to cause an unreasonable adverse effect (<i>Integrated Pest Management Act</i> and Regulations). No release of any substance that could be deleterious (toxic) to fish or fish habitat (<i>Fisheries Act</i> , Sections 34(1) and 36(3)). No harmful alteration, disruption or destruction of fish habitat without authorization (<i>Fisheries Act</i> , Section 35(1)).



Environmental Best Practices

The following BPs are provided as guidelines to help you ensure your routine works are completed in compliance with the performance standards and environmental legislation. Please note that the general BPs provided apply for most work activities within this category; if BPs specific to the activity are available they are also noted below.

Regulatory Agency Contact

- Meet with the appropriate regulatory agency contact, as listed in Section 8, to discuss site-specific environmental protection measures. Refer to Section 7 for information on the Memorandum of Understanding with MoE and the recommended protocol for maintaining regular communications with regulatory agencies.
- For invasive plant control work this will involve meeting with the local invasive plant coordinator and/or weed control contractors to review proposed vegetation control work.

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- Ensure all chemical control of noxious weeds/invasive plants is done under a valid Pest Management Plan and/or Permit from MoE.
- Contractors should coordinate manual/mechanical controls with other agencies carrying out herbicide work on invasive plants.

Timing of Works

- Be aware that vegetation clearing can negatively impact nesting birds in spring and early summer. Inspect your work area for any occupied bird nests, eggs, or nests of species protected under the *Wildlife Act* and *Migratory Bird Convention Act* during this period.
- When works require renegotiation activities, act quickly to establish a native plant cover that will aid in excluding invasive plants from disturbed sites.
- Plan control activities prior to flowering and seed-set stages of plant growth.

Material Handling

- Use clean fill material free of invasive plant seeds.
- For re-vegetation activities, select locally adapted, non-invasive plant species.
- Prior to removing invasive plant species refer to methods outlined in the T.I.P.S. publications created by the Invasive Plant Council of British Columbia.
- If Adopt-a-Highway groups, or other crews, are used for invasive plant removal programs, ensure they receive proper training on requirements for actual plant removal and safety for operations
- Ensure that noxious weed/invasive plant removal or control methods that chemically or physically modify habitat are in accordance with the *Integrated Pest Management Act & Regulations*, Section 9 of the *Water Act*, and Section 35(1) of the *Fisheries Act*.
- Ensure all noxious weed/invasive plant materials are disposed of in accordance with the *Weed Control Act* Regulations and any local area protocols. When transporting noxious weeds/invasive plant or their seeds, use a covered container.

Equipment Use

- Avoid parking or staging equipment in areas of invasive plant infestations.
- Wash or brush down vehicles or equipment used in the removal of noxious weed/invasive plants to ensure they are free of noxious weeds/invasive plants and seed-containing material as they leave the work area. As a basic rule, remove and bag invasive plant seeds and plant parts from equipment. Dispose of all waste at a landfill or other designated site.

- When mowing, start vegetation control activities in “weed-free” areas and end in infested areas to minimize the risk of transporting seeds or plant materials.



Key Information Sources

The documents and websites listed below are recommended resources for invasive plant management. They can provide examples of existing protocols and management strategies, as well as additional information on specific operational BPs.

MoT Technical Circulars:

There are no relevant Technical Circulars authored to-date for this activity.

All Technical Circulars are available at:

http://www.th.gov.bc.ca/Publications/Circulars/Current_technical.asp

Locally Developed BPs

(Provide any locally-developed BPs):

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Other Resources:

T.I.P.S.: Targeted Invasive Plant Solutions. Invasive Plant Council of British Columbia. 2007.

<http://www.invasiveplantcouncilbc.ca/resources/targeted-invasive-plant-solutions-tips>

Invasive Plant Strategy for British Columbia. Undated. Invasive Plant Council of BC.

www.invasiveplantcouncilbc.ca/publications/invasive-plant-strategy.pdf

Riparian Management Area Guidebook. Forest Practices Code. Ministry of Forests. 1995.

<http://www.for.gov.bc.ca/tasb/legregs/fpc/fpcguide/riparian/Rip-toc.htm>

BC Weed Control Act: Noxious Weeds in BC Website. Pest Management, Ministry of Agriculture and Lands.

<http://www.al.gov.bc.ca/cropprot/noxious.htm>

“Dangerous Travelers” Invasive Plant Control Video

<http://www.fs.fed.us/invasivespecies/prevention/dangeroustravelers.shtml>

Roadside Vegetation Management Website. US Department of Transportation, Federal Highway Administration

<http://www.fhwa.dot.gov/environment/vegmgmt/>

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Adopt-a-Highway Program. BC Ministry of Transportation and Infrastructure

http://www.th.gov.bc.ca/adopt-a-hwy/adopt-a-hwy_home.htm



Checklist for Environmental Protection Requirements

- Is your proposed work considered a “routine” maintenance activity? If not, approvals or permits may be required. Contact your local municipal, provincial, or federal regulatory agency staff.
- Has this project been discussed with local environmental regulatory staff? In addition to the BP information presented, other site-specific conditions may apply.
- Have site-specific environmental protection requirements been identified? List below:
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