

## Monitoring and evaluation

Monitoring is a crucial part of any vegetation management plan. It will identify whether treatments were effective and whether follow-up treatments will be necessary to achieve reclamation objectives. Without monitoring, undesirable species may spread unnoticed, requiring costly and avoidable re-treatments.

## Setting up a site for success

Successful reclamation of forest sites depends, in large part, on a vegetation management plan that controls undesirable vegetation and allows target species to grow and become established. A strong vegetation management plan is one that identifies problem areas early, prevents the spread of weed seeds, combines control methods that are appropriate for the site, and monitors the site to ensure prompt follow-up treatments if needed.

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# A Guide to Vegetation Control



Meeting reclamation  
objectives by controlling  
undesirable vegetation

Vegetation management is a critical component of a successful reclamation program. Reclamation activities following industrial disturbances can make many sites vulnerable to ingress by undesirable plants, which are adapted for rapid growth on disturbed soils (see the figure on next page).

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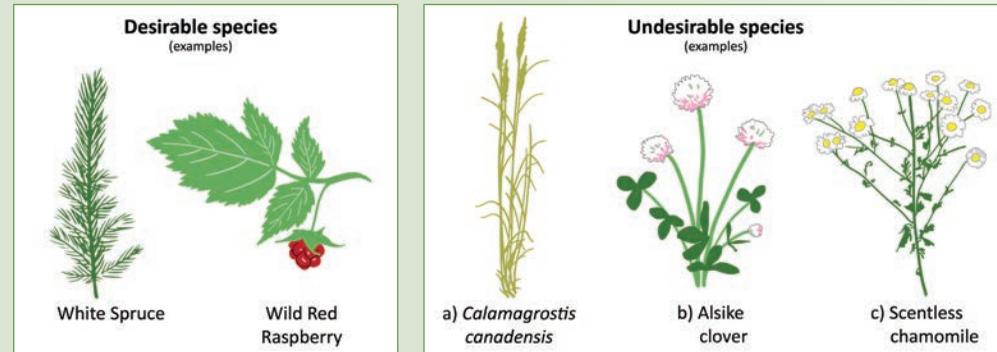
Left unmanaged, undesirable species outcompete planted trees and native vegetation and may slow their growth or even prevent their establishment on reclaimed sites.

In these cases, a prudent vegetation management plan plays an important role in achieving the reclamation objective of re-establishing a native, functional forest plant community.

Diligent vegetation management is also a legal responsibility under weed control legislation.

An effective vegetation management plan includes several components: site assessment, planning and prevention, rapid response, and monitoring. Several options for vegetation management will be explored in greater depth in this fact sheet series (see A Guide to Mechanical Vegetation Control, A Guide to Chemical and Biological Vegetation Control, and A Guide to Cultural Vegetation Control).

### Desirable versus undesirable plant species



Undesirable species may include native and non-native species that a) slow or hinder the growth of desirable species, b) may easily spread to adjacent areas or c) are listed in the weed control regulations.

### An ounce of prevention is worth a pound of cure

Planning and prevention are the most effective ways to anticipate vegetation management needs and avoid costly interventions after undesirable species become a problem. An effective vegetation management plan will set management goals, conduct an inventory of undesirable species on the site, establish prevention measures, determine methods for controlling vegetation and integrate monitoring.

An effective plan will include steps to prevent the establishment of undesirable vegetation by avoiding the introduction of weed seeds to the site. Beneficial practices include avoiding moving equipment through weedy areas, cleaning equipment before moving it to a new site and using only certified seed that is free of weeds.

## Prompt responses to vegetation challenges

When undesirable vegetation is present on a site, it is important to take early steps to control it, thus reducing its spread and avoiding the costs of dealing with a persistent weed population. The main vegetation control options include mechanical, chemical and cultural controls.

Each control method has strengths and weaknesses, and often more than one method is required for best results. An integrated vegetation management strategy is one that identifies multiple, complementary methods for controlling undesirable plants.



#### Mechanical control

Mechanical approaches to vegetation management include cutting, mowing, mulching, solarization and prescribed burns. Mechanical methods that expose soils and microsites are most effective when immediately followed by planting. Otherwise the exposed soils will be quickly re-colonized by undesirable species. See A Guide to Mechanical Vegetation Control.



#### Chemical and biological control

Chemical methods are often used in combination with mechanical control to prevent exposed microsites from being overtaken by undesirable species. Herbicides are the most common chemical control, but other techniques include biological control, fumigation and steam. These methods carry varying degrees of environmental risk, and their use is carefully regulated. An integrated vegetation management plan that avoids reliance on a single chemical method is encouraged. See A Guide to Chemical and Biological Vegetation Control.



#### Cultural control

Alternatives to mechanical and chemical methods are being explored for their effectiveness on reclaimed sites. Cover crops, companion planting and cluster planting use native species to occupy microsites and suppress the growth of undesirable species. Some techniques, such as companion planting, improve progress toward reclamation targets for both woody and herbaceous native plant cover. See A Guide to Cultural Vegetation Control.