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.

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).
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.

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

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

Chemical and biological control

Cultural control

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.