

Interpretive Bulletin 2013-01 Re-vegetation on Mineral Claims

Schedule 1, B(3) of the Placer Operating Conditions and Quartz Operating Conditions under the Placer Mining Land Use Regulation and Quartz Mining Land Use Regulation.

Note: This interpretive bulletin is not legal advice, and should not be relied upon for legal purposes. It is intended to summarize certain aspects of the Placer Mining Act and Quartz Mining Act related to mineral rights and, as such, does not attempt to present all aspects of the Acts and Regulations. This document may be amended from time to time. For complete information, the reader must refer to the Placer Mining Act, Quartz Mining Act and Regulations.

Background

The Mineral Resources Branch, Department of Energy Mines and Resources, have developed the following to provide clarification on Schedule 1, Section B (3) of the Placer Operating Conditions and Quartz Operating Conditions under the *Placer Mining Land Use Regulation* and *Quartz Mining Land Use Regulation* with regards to the “Re-establishment of vegetative mat”.

Schedule 1, Section B part (3) of the re-establishment of the vegetative mat operating condition of the Placer Mining and Quartz Mining Land Use Regulation reads as follows:

3. If adequate seed stock or root stock is not naturally available, re-seeding or transplanting of vegetation is required. Only non-invasive species may be used for re-seeding or transplanting.

Definitions

Re-vegetation means the re-establishment of self-sustaining vegetation of land which previously had vegetative cover.

Vegetative Mat means the organic horizon of soil which is characterized by the accumulation of organic matter or partly decomposed organic matter, derived mainly from leaves, twigs and woody materials including the root mass of living vegetation.

Clarification

The objective for re-vegetation of ground disturbed by exploration or mining, no matter what class of operation, is to leave the ground in such a way as to provide a good chance for successful re-vegetation by plant species native to the site and the area (natural re-vegetation).

The measures you will take to stabilize the disturbed land and/or prepare it for re-vegetation will vary depending on the scale and type of activity, the soil type, terrain and the amount of permafrost present.

Seeding

While re-seeding is an option to meet objectives such as stabilization and erosion control, preferred practices are to see the site first of all left in a state that is as unaffected as possible under favourable conditions that allow for colonization by native pioneer species and so does not require active re-vegetation. Alternatively the site can be prepared to recover naturally under a normal vegetation successional trajectory (by such practices as “rough and loose” ground preparation) or pushed towards this normal successional trajectory by planting of shrubs and trees appropriate to the site or use of bio-engineering methods such as live willow planting. If necessary to meet the objective, seeding can be used as a stop gap or short term solution by use of a short lived annual grass to initially stabilize a feature as long as it is combined with other measures that provide a return to site level long term ecological productivity.

Re-seeding can be problematic in terms of the creation of a successional stagnant vegetation environment (perennial grasses and legumes once established can prevent the encroachment of herbs, shrubs, willow, birch or other early pioneering successional species that grow over time until the mature landscape is re-established) and the concern about the introduction of invasive species or genetically different species. In addition, certain grasses and legumes can attract wildlife to roadsides, tailings ponds and other undesirable locations. Sometimes, for example on permanent road rights-of-way, we may want to encourage successional stagnation in order to prevent shrub and tree growth that can block line-of-sight, but if we are looking to return a site to an ecologically compatible land use type then we generally recommend other options such as ground preparation or planting of early successional woody species such as alder and willow.

Application of seed and fertilizer, or "assisted" re-vegetation, would only be required in areas unsuited to natural re-vegetation but which had significant vegetative cover before the land was disturbed. When seed is applied to exploration or mining

disturbances, it should consist of native species in order to avoid the introduction of undesirable new or invasive species to the area.

Information on soil types, regional conditions and seeding can be found in *Guidelines for Reclamation/Revegetation in the Yukon, C.E. Kennedy 1992* or subsequent updates to that publication.

Basic Guidelines

- Reclamation and closure measures, including re-vegetation, should be based upon best practicable technology supported by current and comprehensive technical information.
- Footprint of disturbance to vegetated areas should be as small as possible and efforts should be focused on preparing the ground surface for successful natural re-vegetation.
- Re-vegetation should be encouraged at every stage using locally available plant and organic materials set aside during stripping and site disturbance.
- If stripping is required, the first cut should be deep enough that the entire suckering root zone is taken in one pass and then stored for future placement.
- Ground surfaces should be re-contoured and roughened to reduce soil compaction and provide micro sites that promote natural re-vegetation.
- Surface cover application of silt, black muck, woody debris, etc. can provide capture sites for moisture, shade for seedlings and potential habitat for small mammals.
- Re-seeding is not the recommended primary reclamation approach – instead, site preparation should be conducive to natural re-vegetation.
- Seeding and planting of willows should only be considered to stabilize small or localized areas at high-risk for slumping.
- Mulching is not recommended as it exacerbates the cooling of sites and limits the growth of early successional species.

Sources:

Handbook of Reclamation Techniques and Mining Land Use - A Guide to Compliance with the *Yukon Quartz Mining Land Use Regulations* and Other Applicable Environmental Regulations in Mining Exploration and Development (Draft)

Handbook of Reclamation Techniques in the Yukon - *Yukon Placer Mining Land Use Regulations*