

Trans Mountain understands communities are concerned about the protection of groundwater during Project construction. As part of Project planning, a great deal of work has gone into identifying environmental impacts associated with construction and determining mitigation methods to reduce those effects.

Groundwater Management Plan

The Groundwater Management Plan (GWMP) identifies vulnerable aquifers along the pipeline route and also outlines construction mitigation measures for working around:

- Springs
- Water wells
- Shallow groundwater
- Unconfirmed aquifers

The GWMP includes:

- A list of potential groundwater related effects of the Project
- Mitigation measures to minimize potential effects identified
- Procedures for monitoring groundwater quantity and/or quality

Here are a few examples of construction mitigation measures to protect groundwater:

- Drinking water sources within the construction footprint will be flagged and fenced prior to construction
- Groundwater flow patterns will be maintained through sub-drain installation and using suitable backfill, where applicable
- On-site environment experts will monitor for signs of potential ground water contamination

Trans Mountain is committed to ongoing engagement on groundwater. Trans Mountain will file consultation reports related to the protection of municipal water sources two months prior to construction, each year during construction and for five years after commencing operations.

Learn more about Trans Mountain's commitments to protecting water sources at www.transmountain.com/watercourses-and-water



Overview

Trans Mountain is committed to reclaiming the right-of-way following construction, to the same or better than its existing condition where practical. Activities to optimize conditions to ensure effective reclamation include:

- Soil salvage and storage – pre-construction phase
 - Salvage and store topsoil and rootzone material
 - Plan grading and subsoil material stockpiles
- Erosion Control – initial post-construction phase
 - Control soil erosion through placement of shrub wind barriers, applying product to provide temporary erosion and sediment control, increase moisture retention and to control dust and wind scour, installing logs or by spreading woody debris on the soil
- Revegetation – post-construction phase
 - Apply appropriate revegetation techniques that best suit the unique characteristics of each location



- Weed control during pre-construction and post-construction phases to avoid impacts to revegetation and ensure seeded and planted species survival
- Five-year post-construction monitoring in the areas disturbed by construction activities
- 10-year post-construction monitoring in the grassland areas disturbed by construction, as specified in the NEB conditions
- Conditions on the right-of-way after that time period will be monitored by KMC Operations

Urban/Residential Areas



Trans Mountain will re-landscape any private properties disturbed by construction activities in residential areas with the goal to return the landscaping to as good as or better than that which existed prior to construction.

Agricultural Land



On agricultural lands, the primary considerations for reclamation are the management and preservation of top soil and preventing the spread of weeds and invasive species.

Parks and Sensitive Areas



Trans Mountain takes steps to protect sensitive habitats and ecosystems when conducting construction and reclamation activities in parks and environmentally sensitive areas such as wetlands. Primary considerations include protection of rare plant species, re-establishment of native plant communities and scheduling activities to adhere to wildlife timing constraints to the extent feasible.



Trans Mountain understands the importance of protecting native grasslands disturbed by construction activities in the British Columbia Interior including grasslands in the Lac du Bois Protected Area and the Nicola Valley.

Grasslands Survey and Mitigation Plan

The overall objectives of the Grasslands Survey and Mitigation Plan are to ensure no net loss of native grasslands in the BC Interior and to achieve a grassland function the same as, or better than, the baseline function.

Trans Mountain will achieve these objectives through:

- Revegetating with native grassland species
- Reducing the extent of invasive species already found in the grasslands
- Preventing introduction of new invasive species during construction

Protecting Grasslands During Construction

Trans Mountain has identified mitigation strategies to protect grasslands. Some examples include:

- Using deactivated/overgrown access roads to access the construction footprint
- Ensuring construction equipment is free of soil or vegetation debris upon arrival to the construction site
- Treating invasive weeds along access roads
- Flagging and fencing of environmental features such as archaeological sites, rare plant species and wildlife habitat features
- Using matting to protect rare ecological communities
- Stripping topsoil to preserve the native seed propagules in the soil for re-use after construction

- Building temporary berms, soil mounds, cross ditches, sediment fencing and weed free straw bales to prevent soil erosion
- Revegetating soil to reduce soil erosion

Lac du Bois Grassland and Protected Area

As part of construction Trans Mountain is proposing to construct the Project through the Lac du Bois Grasslands Protected Area.

Proposed Route

- Follows the existing Fibre-Optic Transmission System (FOTS) line from Jamieson Creek to existing Trans Mountain right-of-way (ROW)
- Approximately 7.9 km is within protected area boundaries, the remainder of route (approximately 8.6 km) is on private and Crown land
- No new linear disturbances anticipated (route will generally parallel FOTS line)

Key Considerations

In addition to general mitigation describe above, special measures will be taken to minimize impact to the Lac du Bois Grasslands Protected Area. These measures include:

- Narrowing of the construction footprint
- Restoration of the construction footprint with native grass seed
- Use of the FOTS ROW as temporary construction space to reduce new grassland disturbances

Learn more about Trans Mountain's commitments to protecting grasslands at www.transmountain.com/grasslands-survey