

### **GROUNDWATER PROTECTION**

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







### RECLAMATION AND MITIGATION

### **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.





# RECLAMATION OF AGRICULTURAL LAND

preventing the spread of weeds and invasive species. Below are some examples of how Trans Mountain will handle these On agricultural lands, the primary considerations for reclamation are the management and preservation of top soil and concerns during reclamation on agricultural lands.



 Hand-pulling, mowing or spot herbicide treatments of weeds and problem species



Careful top and sub-soil separation



 Cleaning stations for soil-handling equipment to prevent the spread of weeds and invasive species





## RECLAMATION OF 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 and critical habitats. Primary considerations include protection of rare plant species, reestablishment of native plant communities and important wildlife features, and scheduling activities to adhere to wildlife timing constraints to the extent feasible.



 There will be an option to fence off rare plant communities so they can be avoided. Rare plants that cannot be avoided will be salvaged or propagated and returned to the site after construction.



 Native plant communities will be reestablished. Treatments may include native seed applications and installations of native plant stock of grasses, shrubs and trees.  Wetland soils will be salvaged and replaced after construction. Wetland species regenerate from the salvaged soil. Wetlands may be seeded if they contain weeds or issues are identified during monitoring. Rare wetland plants may be salvaged or propagated and returned to the wetland after construction.



- Reclamation activities will be scheduled to adhere to wildlife timing constraints to the extent feasible.
- A positive legacy of successful reclamation in Jasper National Park and Mount Robson Provincial Park on Anchor Loop Project completed in 2008.





## RECLAMATION IN RESIDENTIAL AREAS

Trans Mountain will re-landscape any private properties disturbed by construction activities in residential areas.





- Certain planting and building restrictions apply to residential properties containing a permanent right-of-way
  - Trans Mountain will work with residents to design reclamation features that accommodate the easement and owner's use
- Our objective is to return the landscaping to as good as or better than what existed prior to construction

