



*Residuals fabricated soil is applied to the Cariboo Regional District Landfill in development of a wetland for leachate treatment.*

## LANDFILL LEACHATE TREATMENT WETLAND

**Client:** Gibraltar Mine

The Cariboo Regional District landfill located at Gibraltar Mine opened in 2003 to accept municipal solid waste from communities within the regional district. To treat the landfill leachate, a three stage treatment system was created which includes a sedimentation lagoon, an aeration pond, and a polishing wetland. SYLVIS provided the design, soil medium and flora for the wetland as well as designed, fabricated and placed the soil. SYLVIS coordinated and supervised the vegetation establishment and developed guidelines for leachate discharge to this constructed wetland system.

Two types of soil were fabricated: a terrestrial upland soil and an aquatic soil. The soil was created on-site using composted manure, sand, wood chips and greenwaste. The growing medium was designed to specifically enhance the growth of the wetland plants and increase the efficiency of the leachate treatment. Plants were chosen based on their treatment ability and preferred habitat.

This treatment wetland demonstrates versatility in residuals use. The constructed wetland is a healthy, diverse ecosystem that treats and purifies the landfill leachate, protecting the surrounding waterways. The construction of this wetland was made possible by SYLVIS's mobile equipment operations, commitment to providing turn-key solutions and extensive knowledge of beneficial residuals on management opportunities.

### AREAS OF EXPERTISE

Applied Research

Consultation & Education

#### > Operational Management

Options Assessment & Development

Policy & Practices

### RESIDUALS

Ash

Biosolids

#### > Effluent and Leachate

Pulp and Paper Residuals

Unique Residuals

Water Treatments Residuals

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