



Poplar trees (left), pine trees (right) are planted and then fertilized with biosolids in order to facilitate establishment and growth.

PROGRESSIVE MINE RECLAMATION USING BIOSOLIDS

Client: Lehigh Hanson Materials Limited

Lehigh Hanson Materials Limited's (Lehigh) Sechelt Operation is the largest sand and gravel mine in North America. SYLVIS initiated a reclamation program with Lehigh focused on the beneficial use of organic and inorganic residuals, primarily municipal biosolids and pulp and paper residuals as a tool in reclamation.

Since the inception of the reclamation program in 1998, activities have been undertaken at fifteen discreet areas encompassing over 50 ha of land. The program is centered on progressive closure of previously unreclaimed areas. This approach ensures that new areas are being reclaimed as they are closed to mining activities while previously reclaimed sites continue to be maintained. The reclamation program enhances habitat diversification through the establishment of wildlife corridors which in turn increases biodiversity.

Municipal biosolids from the City of Powell River, Town of Gibsons and the District of Sechelt have all been used for reclamation and fertilization activities at the Sechelt Mine. The application of biosolids enables rapid soil development enabling vegetation establishment and retention. Other residuals used in the reclamation program have included water treatment residuals and pulp sludge. Lehigh provides an environmentally sustainable residuals use option for local communities while achieving all reclamation requirements.

Lehigh submits an annual Operations Plan and Operations Report to the BC Ministry of Environment (MoE) which identifies the reclamation plan for the upcoming year and the past year's water, soil, biosolids and foliar monitoring results compared to regulatory limits. Lehigh has exceeded compliance requirements every year and maintains an excellent relationship with regulatory agencies.

The Lehigh Sechelt Mine reclamation program is one of the longest standing biosolids mine reclamation programs in BC and has been recognized with five awards including the prestigious Jake McDonald Reclamation Award from the Technical and Research Committee on Reclamation for outstanding achievement in reclamation. SYLVIS designed and implemented this mine reclamation project in cooperation with the Sechelt First Nations and local school and community groups, increasing awareness and understanding of land reclamation and environmental stewardship.

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