



*Biosolids are combined with on-site residuals to provide soil conditioning at Cannor Nurseries.*

## CANNOR NURSERIES BIOSOLIDS GROWING MEDIUM

**Client:** Metro Vancouver

Cannor Nurseries produces live trees and shrubs for wholesale; the live-tree harvesting process exports soil from the site. SYLVIS teamed up with Metro Vancouver to use Class A biosolids in combination with on-site residuals from the nursery to amend and condition the soil in areas of the nursery that have experienced significant soil loss. SYLVIS combined our experience managing biosolids and soil mixing with our experience assessing new residuals to develop an innovative win-win solution for both the nursery and Metro Vancouver.

The nursery generates wood-waste from the culled trees that are not sold. To determine the potential to beneficially use the culled tree wood-waste in combination with biosolids and other feedstocks, the first step was to sample and analyze the various materials available and conduct a series of bench-scale mixing tests. Based on this initial work, mixing ratios were developed for use during the operational phase. For the operational-scale soil mixing and conditioning project, the culled trees were ground and combined with Class A biosolids, waste sawdust from the nursery, locally sourced sand, and additional clean woody material. The resulting fabricated soil, also referred to as biosolids growing medium, was applied to nursery fields and incorporated into the native soil.

The project beneficially managed 1,500 bulk tonnes of biosolids to fabricate approximately 6,000 m<sup>3</sup> of soil, which provided soil conditioning to nursery soils through the addition of organic matter and nutrients. A significant volume of nursery-generated residuals were managed helping to clean up the nursery site and use the materials beneficially. This innovative application of biosolids within the context of a tree nursery demonstrated SYLVIS's strength of continuous innovation to offer practical and new solutions to both land owners and residuals generators.

### 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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