



Reclamation of Oilsands Wetlands

Background

When is the best time to reclaim wetlands that are inaccessible during the planting season (spring-summer) and limit tree seedlings' survival because of their excessive moisture content?

Logically, trees are not planted during the winter, especially in Alberta, where the temperature frequently dips below -40°C . However, planting trees in the winter when the wetland sites are accessible may be the only option to reclaim boreal wetlands disturbed by oil sands operation in Alberta.

Objectives

The wetland reclamation or “winter planting project” of P2P in collaboration with government and industry was initiated to find innovative and sustainable solutions to reclaiming wetlands disturbed by oil sands operation. The main objective of this project was to determine the best method to plant trees during winter, to have easy access to the sites to be reclaimed, and increase tree seedlings survival rate for enhanced restoration of natural ecosystems in the boreal region.

The trees planted are expected to provide means of carbon capture in the reclaimed environment.

Strategy

A trial site was installed at the Evergreen Centre for Resource Excellence & Innovation in Grande Prairie, Alberta in 2011 to test the survival of 900 black spruce seedlings planted during the winter at -17°C . The black spruce seedlings were planted in mounds of peat of exposed deep warm soils created by breaking the frozen ground with a backhoe.

Actual outcome

Over 94% of the black spruce seedlings planted during winter survived.

The success of this project has led to the immediate incorporation of winter planting into the 2012 reclamation work of industry partners and was highlighted by **Suncor's CEO, Steve Williams in 2012 as “one of the major innovations in oil sands reclamation effort”**. The performance of planted seedlings are still being monitored.

Project Partners

OSLI-Oil Sands Leadership
Initiative (COSIA)

Global Restoration Corp.

Project Funders



NSERC
CRSNG

OSLI-Oil Sands
Leadership
Initiative (COSIA)