

# CHARACTERIZING FIRE REGIMES IN SUB-BOREAL LANDSCAPES: CURRENT FIRE HISTORY RESEARCH IN THE SUB-BOREAL BIOGEOCLIMATIC ZONES OF BRITISH COLUMBIA

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## ABSTRACT

Lignum Ltd. holds a 610,000-ha Innovative Forest Practices Agreement (IFPA) within the Cariboo-Chilcotin region of central British Columbia. The Lignum IFPA is ecologically diverse, with the majority of the IFPA comprising variants of the Sub-Boreal Pine and Spruce (SBPS), Sub-Boreal Spruce (SBS), and Interior Douglas-Fir (IDF) biogeoclimatic subzones.

A key tenet of the Lignum IFPA Forestry Plan is to design forest practices that create and maintain patterns and structures that more closely approximate the apparent range of those created by natural disturbances. In the Cariboo-Chilcotin region, which is similar to most interior western Canadian forests, fire is considered to have been the dominant historical forest disturbance. However, within the ecologically diverse IFPA area, historical fire regimes are thought to have displayed a large amount of variation in terms of size, frequency, and severity.

We present the methods and preliminary results for an ongoing fire history research program in a 630,000-ha study area in the SBPS and SBS subzones of the Cariboo-Chilcotin region. The project characterizes historical fire regimes through the reconstruction and mapping of historical fires at a scale of 1:20,000 for the entire project area. During the past summer, more than 300 fire history plots were sampled with the collection of more than 320 fire-scar samples and some 1,500 increment cores. Given the intensive field sampling, detailed mapping scale, and existence of a variety of Geographic Information System-compatible spatial information sources, this project may be the most detailed fire history study performed for a sizeable land base in North America. The results of this project will fill an acknowledged information gap for SBPS-SBS fire regimes in the Cariboo-Chilcotin region, and will ultimately be used to guide Lignum's short- and long-term ecosystem management strategies for stand- and landscape-level harvesting objectives.

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