Sub-Boreal Spruce Forests
Overview of Ecology and Forest Management

Che Elkin, UNBC
Adaptive Silviculture in SBS

- Objectives
- Current conditions
Sub-Boreal Spruce

Ecology

Variants

Disturbance

Management
Sub-Boreal Spruce

• Largest biogeoclimate zone in northern interior BC
  • 10.3 million ha

• Climate mild continental
  • Precipitation ranges from 500mm in interior to 950mm in the mountainous terrain

• Rolling terrain of the Nechako and Fraser plateaus

• Dominated by upland coniferous forests
SBS Regional Context

Englemann Spruce – Subalpine Fir
Cooler

Boreal White and Black Spruce
Colder
SBS Regional Context

- CWH: Sub-Boreal Pine – Spruce
  Drier and Cooler

- SBS: Interior Douglas-Fir
  Drier and Warmer
SBS Regional Context
SBS variation

Flavors of SBS

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Forest Structure

Species composition

- Douglas-fir
- Trembling aspen
- Balsam poplar
- Lodgepole pine
- Black spruce
- White spruce
- Scouler’s willow
- Subalpine fir
- Mountain alder
- Sitka alder
- Paper birch

SBS zone
Disturbances and Forest State
Disturbances and forest state

Daust and Price 2014
MPB and Fire
Spruce Beetle Attack in the Omineca Region

AOS Accumulative 2020

- Trace
- Light
- Moderate
- Severe
- Very Severe
Disturbance and Reforestation

Environmental Reporting BC
https://www.env.gov.bc.ca/soe/indicators/land/silviculture.html
Management
Silviculture systems (BC)

Environmental Reporting BC
https://www.env.gov.bc.ca/soe/indicators/land/silviculture.html
Species Planted on all Crown Land
Northern Interior Forest Region

Silviculture Facts – Summary charts and Graphs FLNRORD 2016
Management and forest conditions

Primary Forest

Diameter Limit Cutting ~1960s, 1970s

Replanted forests
Recent Retention

Shelterwood
Sub-Boreal Spruce Future?
Adaptive Silviculture?