Kamloops Climate Change Adaptation Workshop – Notes

Personal observations:

- Lower snowpack in Blue River town-site
- Seasons change later – winter starts later but hangs on longer
- Summer drought runs into fall
    - Logging and site prep under high fire hazard
    - Drought extends up into subalpine into October
        - Ends with early snow
- Fire seasons are longer,
    - Crews start earlier
    - Short -staffed in the fall
- Burning windows limited
    - Changes create uncertainty
- Seasonality changing
    - Synchrony between Fd and spruce budworm increased
    - More damage, better budworm survival
- Fd has not had a good cone crop in a decade
- More frequent high-intensity fires
- Night time temps stay warmer
    - Reduced overnight recovery, lower humidity
- In Cariboo, longer drought with short intense wet periods and then back to drought
- Inconsistent snow
- Old timer used to cut ice under the Red Bridge – now river doesn't freeze over

Vulnerable species and where and why

- Spruce in the MS – hotter and drier
    - Spruce beetle, terminal weevil
- Douglas-fir at lower elevation
    - Tussock moth
    - Reverse of encroachment as edges die back
- Pl in the IDFdk and ICH
    - Lots of things like to eat it
- Whitebark pine in ESSF – already at the margin, assaulted by blister rust and MPB
    - Weak competitor in a small niche – narrow ecological amplitude
- Cedar in the transitional zones e.g. IDFmw
    - Drought caused dieback in 2008
- All species somewhere, where they are near the edge of their niche
    - Changes in competitive advantage favour some over others
    - Generalists will do better than obligates

- Improved growth in the ESSF

Vulnerable ecosystems and where and why

- Wetlands – falling water table means edge will move in
- Alpine tundra – shrinking area as forests move up slope
- Very dry PP and IDFxh – sensitive to fire, can shift out of forest
- Shallow soils?
- Saline areas – as they dry out there is no niche for those unique species to move to
- Birch and aspen
- Old growth in many subzones
    - More frequent stand replacing fire
    - Reducing mean age
    - E.G. Py – logging and bark beetles have taken out most of the old growth
    - Need management to recruit conditions into the future

Species Exercise (IDFdk1)

Discuss what might cause you to promote or demote a species within a specific BEC site series today, knowing that it will be under a different climate in the future.

Promote:

- Ponderosa pine
    - We don't have a strategy or body of knowledge
    - Look to US for knowledge
    - Try more, keep track of it
    - Can we make a product from it?

Demote

- Spruce
    - Already tertiary & likely to be less feasible
    - Has footnotes
    - Relatively rare in the IDFdk1
- Lodgepole pine
    - Predicted to be unreliable
    - Start on dry sites
    - Think about limiting deployment
    - Utilize as a nurse crop to establish other species (e.g. Douglas-fir)
    - We already have a lot on the landscape

Describe who you think should be involved in the elements necessary to consider for any changes – e.g., feasibility, reliability, productivity?

- Practitioner / silviculturist

- Ecologist
- Policy makers
- Habitat biologist
- Agrologist
- Entomologist & Pathologist
- Economist
- Stakeholders
- Hydrologists
- Mill Managers

What will you now do differently as a result of the workshop?

- Review what I've been doing in the context of climate change
- Find out more about what is going on
- Think about how to normalize adaptation
- Find ways to enable change
    - Licensees meet with district staff
    - Identify obstacles and find solutions
    - Bring as an agenda item for silviculture committees
- Spend some time exploring the tools document
    - CFS is also developing a tools page
- Link the knowledge with the ground
- Connect modellers with practitioners
    - Develop communication and feedback
- Model review and validation
- Feed into FSP stocking standards
    - Suggestions from ecologists for Chief Forester standards
    - Draft coming March 31