

Fire-based science to keep in mind when talking to SRD about forest fires

Sustainable Resource Development (SRD) and Spray Lake Sawmills often misrepresent the science behind forest management decisions. This page gives you a “heads up” about some of these misrepresentations that concern forest fires. You need to be sensitive to these before discussing the forest fire issue with SRD staff, or you’ll easily be misled. Also, SRD often trots out the opinions of some “expert” to support their decisions. This is often irrelevant: peer-reviewed science matters, not expert opinions. So don’t defer to authority, but do defer to arguments based on peer-reviewed science!

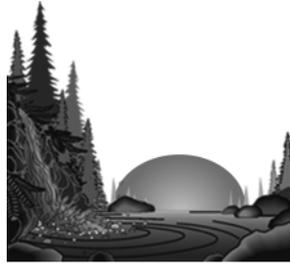
Argument 1: Decades of fire suppression have left an unnaturally old forest, one that is more prone to fire.

Rebuttal: There is no evidence of human fire suppression in the natural forests of Kananaskis Country. Fire frequency in pine stands of the Kananaskis Valley is the same before and after European settlement [source: Johnson & Fryer (1987; Can J Bot 65:853)]. Vegetation composition is the same pre- and post-1883. The valley burned once every 150 years (on average). Forest fires in our neck of the woods are driven by weather, not people. More generally, there is also no evidence of human fire suppression in the boreal forest [source: Bridge et al. (2005; For Sci 51:41)].

Argument 2: Our unusually old forests present an increased fire risk to the community.

Rebuttal: The fuel responsible for crown fires (the ones that are dangerous to our community) is the same for all forest ages over the range 25 to 250 years, based on research in the Kananaskis Valley [source: Fig. 4 of Bessie & Johnson (1995; Ecology 76:747)]. This means that there’s no reason to remove older stands to protect the community from fire: the younger stands are as dangerous to the community as the older ones (over the 25 to 250 year old range). Other research shows that Kananaskis forests of all ages are equally likely to

burn [source: Johnson & Larsen (1991; Ecology 72:194)]. That is, forest age does not explain likelihood of forest fire. So science shows that as the forests around us age, they do NOT present an increased fire threat. But the fire threat is certainly there.



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Argument 3: Fire risk is higher following an outbreak of bark beetles

Rebuttal: This argument seems intuitively appealing, but almost no published science (that I’m aware of) supports the idea that forests attacked by pine beetles present an increased risk of forest fire. In one study (in Colorado), forests attacked by the spruce beetle burned about 30% less often than forests not attacked by

the beetle [source: Fig. 4 of Bebe et al. (2003; Ecology 84:362)]. In another study (in Wyoming), forests attacked by the mountain pine beetle were about 11% more likely to burn in the 1988 Yellowstone Fire [source: Lynch et al. (2006; Ecosystems 9:1318)]. So there’s no strong support in the peer-reviewed published literature for this notion.

Argument 4: We must log the forest to protect the community from fire.

Rebuttal: We need very little logging to do this. We need the infrastructure in place to defend the community from a fire that originates in K-Country. This may involve construction and maintenance of 1 or 2 fire breaks, and an associated road system, along which fire-fighting crews and equipment can rapidly be mobilized. Such fire breaks would be limited in size and location, relative to clearcut logging. As the national park communities of Jasper and Lake Louise show us, protecting the community from forest fires isn’t the same as removing the local surrounding forest. Clear-cutting our local forest would indeed help reduce the risk of fire, but the benefit is short (see argument 2 above): the forest is scheduled to be clearcut every 100 years, but it remains a major fire threat to the community for 75% of this cycle. No science to cite here: just common sense. Fire can’t be the reason to remove a forest if the regenerating forest poses a fire risk to the community for most of its anticipated life cycle.

Written by Ralph Cartar, Bragg Creek Environmental Coalition

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