

FMF Natural Disturbance Program Research

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Fire Control Impacts: Real or Imagined?

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Fire control is very real to our partners. Jasper National Park, for instance, has been fighting fires since about 1930. Since then, the rate of burning has declined dramatically. In the Table below, the percent of forest disturbed over the last 60 years stand out in stark contrast to the estimates of burning for the previous 140 years. Not once since we have been fighting fires has the 20-year rate of burning exceeded even one percent.

Estimated 20-Yr Burning Rates in JNP			
20-Year Period	% Forest Burnt in each 20-Year Period		
	Jasper Ecological Zone		
	Montane	Lower Subalpine	Upper Subalpine
1971-1990	0	0.2	0.2
1951-1970	0	0.7	0.2
1931-1950	0.3	0.5	0.2
1911-1930	6	7	4
1891-1910	17	14	7
1871-1890	54	32	7
1851-1870	21	5	1
1831-1850	27	15	6
1811-1830	9	6	2
1791-1810	13	10	6

The shift in Jasper “old growth” forest over the same period is even more striking. For instance, in 1930, forests older than 100 years in the Montane covered 21% of the area, compared to 78% today. In the Upper Subalpine just 8% of the forest was older than 300 years, compared to 25% today.

Weldwood has even better evidence to suggest that fire control is real. A simulation exercise that projected historical disturbance rates and sizes across the FMA, suggests that some of the “protected” areas are creating historically unprecedented situations. Model output (below) shows that historically, Old Hardwood in the Lower Foothills usually ranged between zero and about 20

percent. After 50 years of fire control, the 64% Old Hardwood found today is beyond “natural” levels.

It is difficult to argue with these numbers. Fire control has probably been the single most important cultural impact on FMF landscapes over the last several decades. Now we have large quantities of old forest, and higher than normal fire danger. The risks are as much ecological as they are cultural.

