TRENDS ANALYSIS: WILDFIRE

FALL 2015

What does this measure & why is it important?

This indicator measures the area burned each year by wildfires, based on records of fires since 1919 from the Wildfire Management Branch of the BC Ministry of Forests, Lands and Natural Resource Operations. The area burned from year to year is highly variable and is closely correlated with both temperature and precipitation (Utzig, Boulanger & Holt, 2011). Therefore, data have been analysed using a ten year moving average which measures the average area burned over the previous ten years.

Wildfires can cause economic, social, cultural, and environmental losses by destroying buildings, forests, heritage sites, or even communities. They can cause respiratory problems, affect water quality in community watersheds, close transportation routes, and in the worst cases, result in loss of life. Due to the significant risks associated with wildfire, in recent years, Community Wildfire Protection Plans have been prepared for most communities in the region. These plans include an assessment of the forests immediately surrounding the communities. The risk of catastrophic fire in forests that have high fuel loads can be mitigated through fuel reduction treatments. Those high risk areas around our communities have been mapped, and options to treat those areas to reduce the hazards have been described. However, many communities struggle to implement the necessary treatments due to lack of funding and staff resources.

What are the trends & current conditions?

2015 was a notable fire year in the Basin-Boundary region, with over 13,800 total hectares burned. The biggest fires were located near Rock Creek (4417 ha) and in the Granby River drainage (1686 ha). Details on each fire can be found on the Digital Basin. The ten year moving average shows that the area burned per year was significantly reduced with the onset of provincial fire suppression efforts following World War II (Figure 1). Figure 2 shows the fire history since 1950 in more detail. The RDI's 2013 analysis of historic fires showed that, since 1919, of the 28 communities found in our region, 24 had had a large wildfire (at least 5 hectares) come within 2 km of their municipal boundaries. Of the four municipalities that are not on this list, Invermere and Radium Hot Springs had both had large fires within 5 km of their boundaries, and Silverton and New Denver had areas identified as having a high probability and high consequence of wildfire in the immediately surrounding area (Blackwell, 2008).

The RDI's 2013 poll of residents found that 47% of Basin-Boundary residents agree that wildfire is a threat to their community, while 22% disagree and 30% neither agree nor disagree. The continued build-up of forest fire fuels combined with a projected increase in area burned in the near future due to climate change (Utzig, Boulanger & Holt, 2011) suggests that fires are a more immediate threat than is perceived by residents in our region. It is possible that the threat is underestimated because evidence of fire, and the reminder of its threat, fades with forest regeneration. However, the longer an area goes without burning, the greater the risk of damaging fire.

References

Blackwell, B.A. (2008). *New Denver / Silverton Protection Area. Community Wildfire Protection Plan Part 2*. Report prepared for the RDCK.

Utzig, G., Boulanger, J., & Holt, R.F. (2011). *Climate change and area burned: Projections for the West Kootenays*. Report #4 from the West Kootenay climate vulnerability and resilience project. Retrieved from http://www.kootenayresilience.org.

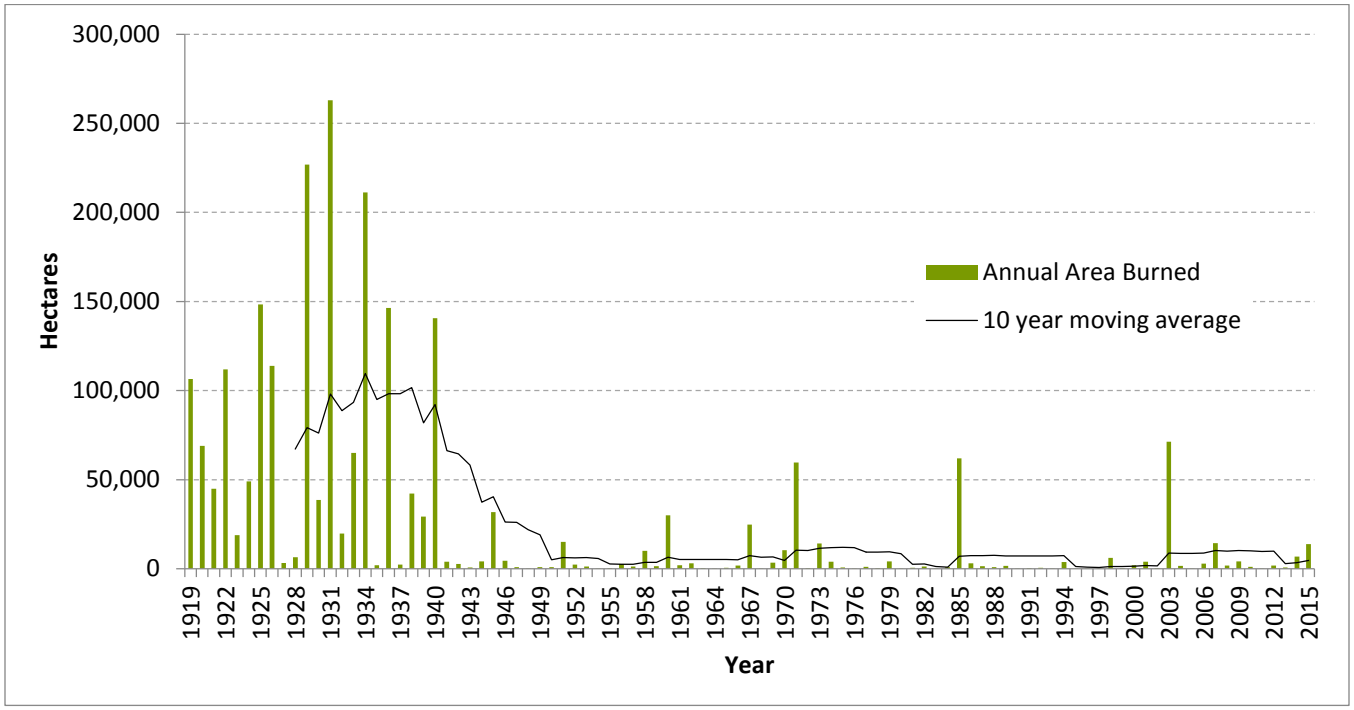

Figure 1: Area burned by wildfires in the Basin-Boundary region 1919 - 2015, with a 10 year moving average.

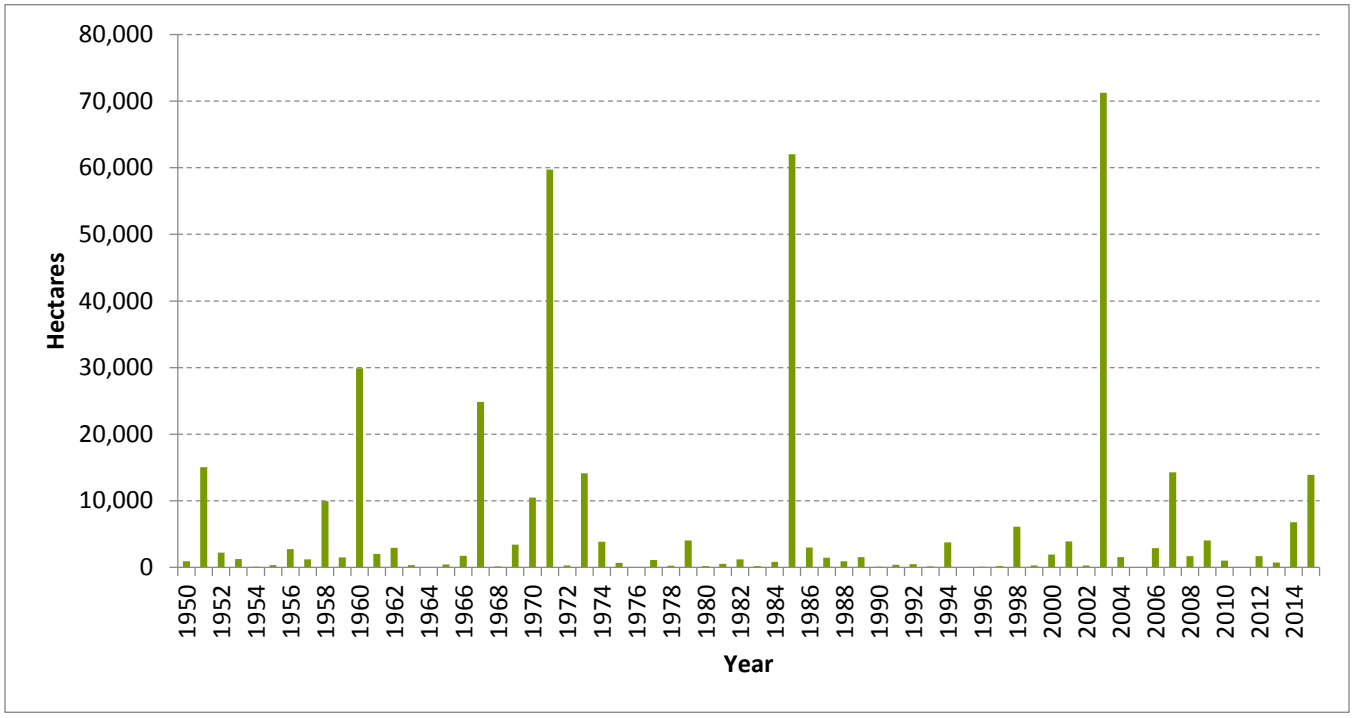

Figure 2: Area burned by wildfires in the Basin-Boundary region 1950 - 2015.