

FIRES AND SOILS IMPACT ON WOODLOTS



BACKGROUND

- In 2014 the Nadina District was impacted by a couple of very large forest fires. The China Nose fire wiped out about 75% of w2050. The woodlot owner was devastated by the fire impacts and contacted Nadina about any programs that were in place to help offset planting costs on the plantations that were destroyed. A field visit came up with disturbing results....

This can happen to you too!

- It is important to bear in mind this scenario can happen to you. Fire does not discriminate and if you know what to do in the event of a fire on your woodlot it will make all the difference.
- They say a picture is worth 1000 words, get out and photograph your woodlot. Make sure there is a date time stamp and store the info in a couple of places. One never knows when that photo may help you explain to the government you did indeed have trees planted on that cutblock.

RESULTS REPORTING WHY DO IT??

- Some things to know about Results reporting and why;
- It is legislated under section 76 of the (WLPPR) ANNUAL reporting is in the form of Results reporting.
- If a fire goes through your woodlot and the cutblocks that have been destroyed are NOT in Results you are not able to claim assistance under section 108 of the Forest and Range Practices Act..

RESULTS REPORTING WHY DO IT??

If an eligible event, as described under Forest Planning and Practices Regulation (FPPR) Sec. 96 (1.1), causes damage to a stand prior to the achievement of free growing status, the minister, under authority of FRPA Sec. 108 (2), must grant relief or provide funding to an obligation holder if the obligation on the area cannot be met without significant extra expense than would have been the case if the damage had not occurred. Any holder of a free growing obligation is eligible to apply. This includes licensees, BCTS, district managers and any “third party” obligation holders via FRPA Sec. 29.1 free growing transfers. The relief or funding will only be granted if:

- i) the person did not cause or contribute to the cause of the damage;
- ii) the person exercised due diligence in relation to the cause of the damage; or,
- iii) the person contributed to the cause of the damage but only as a result of an officially induced error.

As per FPPR Sec. 96 (1.1), a damaging event is defined as:

- a) a wildfire;

SO REPORT ANNUALLY IT'S THE LAW

- Do the right thing Report annually into Results
- Let's just say it is a form of “crop insurance” ...







What happens in the soil?

- Essentially what happens in the soil after a fire is the porosity ends up getting choked up with ash and organic debris. Where water would normally be held in the pores gets squeezed out and has no where to go. The soil becomes extremely unstable and cannot withstand any mechanical pressure caused by logging. Result mass soil destruction and site degradation issues.

What happens in the soil?

- a severe burn may compromise the mechanical cohesion of soil in some forest stands for up to 10 years (Wondzell et al. 2003). In other words, fire-induced landslides may occur long after the potential for runoff-initiated erosion events has subsided.
- http://watershed.org/news/win_00/2_hillslope_fire.htm

What happens in the soil?

- A severe fire may also increase the rate at which the soil becomes saturated with the water that does infiltrate (Bitterroot National Forest 2000). This happens for two reasons: first, the loss of soil organic matter, which can store five times its weight in water (Cohen 2003), reduces the soil's total water-holding capacity, and second, extensive plant mortality can diminish water uptake from forest soils (Wondzell et al. 2003).

What happens in the soil?

- Any increase in runoff tends to fully wane within the first 1-2 years after severe fire, as fire-induced water-repellency diminishes, soil pores are rid of ash and other fine sediments by overland flow, and plant cover rebounds (Wondzell et al. 2003).

Logging recommendations after fire

- As a result of our field visit and research review we came up with a few conclusions:
- 1. harvest in the winter (better control on ensuring good site conditions – frozen soils).
- 2. avoid confining/ channeling water especially over steeper slopes (velocity will cause > erosion). Also to remember on flatter terrain above steeper slopes to be aware of the skidding pattern - to avoid confinement of water .
- 3. more surface runoff post fire , so do not harvest in the spring.