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Windrow Burning

Data Collection 2107

Greg Baxter, November 2017



Windrow Burning 2017

Background

- An AAF S&T project promoted by the High Level Forest Management Area in response to the hazard created from the smoke produced by land-owners burning debris when the fire season ends (Nov 1st).
- Data collection began in 2016 to determine if burning of windrows can occur safely during the 'fire season' to reduce smoke issues in November.
- Moisture content, smoke dispersal and surrounding hazard all investigated to see if there is an option for burning 'out of season'.

Windrow Burning

Objective

- To compile moisture content data and develop a hazard assessment protocol for surrounding fuels including smoke dispersal scenarios to identify if there are alternative periods when windrow burning may take place safely.

Windrow burning – 2017 Update

- Three trips were made to study area in High Level to collect moisture content and stand density data. Site was visited at: end of April, end of July and end of September.

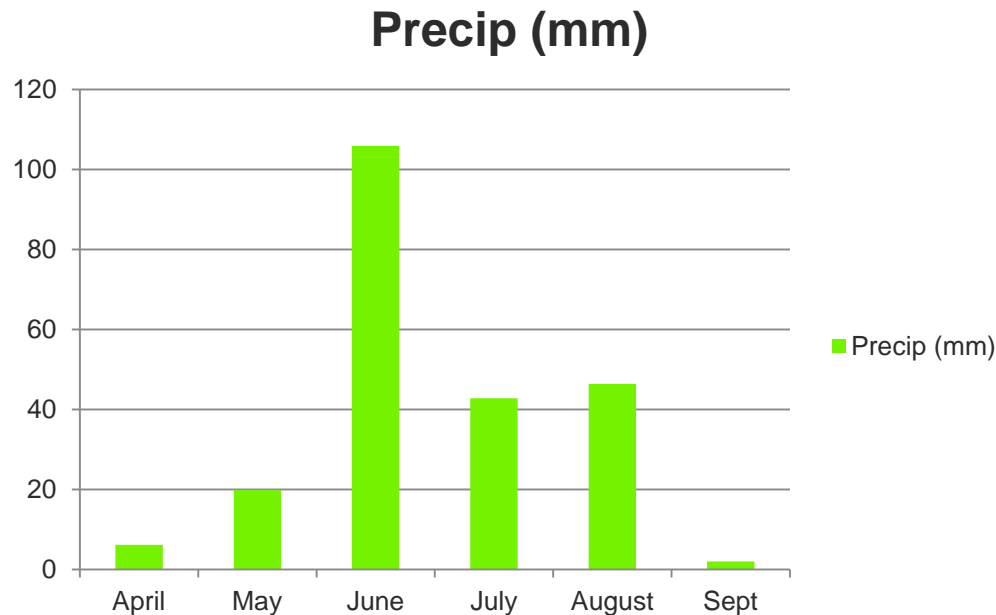
Moisture Contents (%)

Collection	Windrow 1		Windrow 2		Windrow 3	
Date	North	South	North	South	North	South
April	32.6	37.4	39.3	42.0	42.3	47
July	33.3	31.4	22.8	31.7	36.4	28.2
September	35.4	30.9	35.8	39.8	41.1	39.4

Windrow burning – 2017 Update

Results:

- April mc% 40: July 30% Sept 39%.
- Rains in June, July, August caused an increase in mc% due to timelag of heavy fuels.



Windrow Burning

Next Milestone

- Burn two of three research windrows this fall. Keep one windrow for an extra year of moisture content data collection.
- Collect stand density data for next seasons windrow data collection based on land-owners winter clearing.
- Discuss with land-owner possibility of constructing windrows in a N-S orientation.
- Using Bluesky Canadian Playground Smoke model to simulate smoke production during windrow burning. Run simulations for ‘summer burns’ following rain events.



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Thank you

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