

Supplementary Material

Generating fuel consumption maps on prescribed fire experiments from airborne laser scanning

T. Ryan McCarley^A, Andrew T. Hudak^{B,}, Benjamin C. Bright^B, James Cronan^C, Paige Eagle^D, Roger D. Ottmar^C and Adam C. Watts^C*

^AUniversity of Idaho, College of Natural Resources, Moscow, ID 83844, USA

^BU.S. Department of Agriculture Forest Service, Rocky Mountain Research Station, Moscow, ID 83843, USA

^CU.S. Department of Agriculture Forest Service, Pacific Northwest Research Station, Seattle, WA 98103, USA

^DUniversity of Washington, School of Environmental and Forest Sciences, Seattle, WA 98195, USA

*Correspondence to: Email: andrew.hudak@usda.gov

Table S1. List of candidate ALS metrics used in Random Forest models. The variables selected in each model (highlighted) are ranked by importance within to the model (1 being most important) as calculated by Increase in Node Purity (Gini coefficient)

Statistical Metric of the Point Cloud	Canopy Fuel	Down Woody Debris	Litter	Duff	Total Fuel	Subcanopy Fuel	Available Canopy Fuel
Average Height	1	3	2		2	3	
Standard Deviation of Height							
Canopy Cover (percent of first returns $\geq 2m$)			1		1		
Median Height	2						
95th Percentile of Height							
Average Height (returns $< 2m$ only)							
Standard Deviation of Height (returns $< 2m$ only)							
Average Height (returns $\geq 2m$ only)				4	4		
Standard Deviation of Height (returns $\geq 2m$ only)					3	4	
Median Height (returns $\geq 2m$ only)			3				
Percent of Returns Between $\geq 0.5m$ and $< 1m$ (returns $\geq 2m$ only)							
Percent of Returns Between $\geq 1m$ and $< 2m$ (returns $\geq 2m$ only)							
Percent of Returns Between $\geq 0m$ and $< 0.5m$		1		1		1	1
Percent of Returns Between $\geq 0.5m$ and $< 1m$							
Percent of Returns Between $\geq 1m$ and $< 2m$							
Percent of Returns Between $\geq 2m$ and $< 4m$	5	2		3	5	2	3
Percent of Returns Between $\geq 4m$ and $< 8m$	4			2			2
Percent of Returns Between $\geq 8m$ and $< 16m$	3	4		5		5	
Percent of Returns Between $\geq 16m$ and $< 32m$							