Utah Smoke Bulletin

September 2018 **Topic: ERTs**

Greetings Utah Burners- I hope you had a safe and productive wildfire season. As we begin to transition into prescribed fire, I wanted to take a minute to review emission reduction techniques (ERTs). Bottom line when choosing an ERT on the website: you can rarely go wrong with "Increase Combustion Efficiency", but the secondary technique will be project-specific. Just for this month of September, if you submit any forms, please also email pcorrigan@fs.fed.us or call me at 801-440-1350 to give me a heads-up. Also, remember forms default to 'draft' status after you fill them out and you need to submit them fully. I promise I'm working on it. Thanks, Paul

ERT Method	Specific Techniques	Description	Utah Examples
Increase combustion efficiency	Burn piles	Shift combustion from smoldering to flaming phase	Hand piles, mechanical piles, windrows, chaining debris, and slash burning
	Aerial/mass ignition	Rapid ignition of a large area	Whenever using aerial, and with some ground ignition tactics
	Backing fire	Only more efficient than head fire when fuels are dry; they also must be continuous	Some ponderosa pine burns
	Dry conditions		Generally present on all broadcast burns
	Rapid mop-up		
Reduce the area burned	Mosaic burning	Patches of burned and unburned areas within the unit	Can be done for most broadcast burning. Need to estimate black acres only for emissions.
	Isolate fuels	Avoid jackpots, piles, etc.	Can be done post timber sale if burning piles separate from broadcast
	Burn concentrations	Burn only concentrated fuels	Pile burning, log deck burning
Reduce fuel load	Mechanical removal		Post-logging burns
	Mechanical processing	Wood chips or other shredded biomass	Burn prep that puts chips/brush on the "green" side of the line
	Firewood/Grazing		
Reduce fuel consumed	High moisture in large fuels		Spring broadcast burning, some years
	Moist Litter and Duff		Tree well burning
	Burn before large fuels cure	Within 3-4 months of harvest or mortality event	Logging debris, windthrow, beetle kill events
	Burn before precip	Reduces smoldering period	Biochar and/or wet mop-up mimics this process
Schedule burning before new fuels appear	Burn before litter fall		Aspen burning before leaves are shed
	Burn before green-up		Spring burning with grass component
Reduce fuel production	Site Conversion	Permanent change of vegetation type	Conversion of Phrag, Tamarisk, PJ to other plant species
	Chemical Treatments		Burning following herbicide (Phragmites or otherwise)

Source: NWCG Smoke Mgt Guide for Rx Fire, (https://www.nwcg.gov/sites/default/files/publications/pms420-2.pdf) chapter 4, page 144