

# Emission Reduction Techniques

Here are the six categories of emission reduction techniques, along with specific techniques and examples to implement them.

ERT Method	Specific Techniques	Description	Mountain West Examples
<b>Increase combustion efficiency</b>	Burn piles	More flaming, less smoldering	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	More efficient than head fire when fuels are dry; they also must be mainly continuous	Some ponderosa pine burns
	Dry conditions		Generally present on all broadcast burns
	Rapid mop-up		
<b>Reduce the area burned</b>	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.	Non-targeted fuels lined and avoided during ignitions
	Burn concentrations	Burn only concentrated fuels	Pile burning, log deck burning
<b>Reduce fuel load</b>	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		
<b>Reduce fuel consumed</b>	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	Emphasize precip when submitting smoke requests if this is a factor. Biochar and/or mop-up mimics this process
<b>Schedule burning before new fuels appear</b>	Burn before litter fall		Aspen burning before leaves are shed
	Burn before green-up		Spring burning with grass component
<b>Reduce fuel production</b>	Site Conversion	Permanent change of vegetation type	Conversion of Phrag, Tamarisk, PJ to other plant species
	Chemical Treatments		Burning following herbicide