

Rules of Thumb

1. Obtain and use latest weather and smoke management forecasts.
2. Relative humidity will roughly halve with each 20°F rise in temperature and double with each 20°F drop in temperature in a given air mass.
3. Expect increased spotting when relative humidity drops below 30 percent. Do **not** burn when the relative humidity is below 25 percent.
4. Burn when mixing height is above 1,650 feet [500 meters].
5. Do **not** burn under temperature inversions.
6. Burn areas with low fuel loadings and large-sized trees on marginal days at the high end of the prescription window.
7. Never underburn during a drought. Soil moisture is needed to protect tree roots and lower litter.
8. Don't burn on organic soils unless the water table is very close to the surface.
9. Heading fires produce about three times more particulate than backing fires.
10. Burn when fuels are dry, but not too dry. Wet fuels produce substantially more particulate than do dry fuels.
11. Start burning logging debris by midmorning.
12. Site prep burning behind chopping or other mechanical treatment gives best results if done 10 to 15 days after treatment.
13. Windrows are the most polluting of all southern fuel types.
14. Broadcast burn scattered debris if possible.
15. Do not pile when either ground or debris is wet.
16. Dirt in piled debris will increase the amount of smoke produced by up to four times. Shake out dirt while piling; "bump" piles while burning, and repile as necessary.
17. Use a smoke management plan. Consider smoke sensitive areas. Look several miles downwind and down-drainage for potential targets.
18. Estimate background smoke concentration [micrograms per cubic meter] in the absence of high humidities by dividing 500 by the visibility in miles.
19. If nighttime Dispersion Index forecast is poor or very poor [less than 13], stop burning by 3 p.m. ST.
20. Doubling the Dispersion Index implies a doubling of the atmospheric capacity to disperse smoke within a 1,000 square mile area.
21. Assuming 1 ton of fuel per acre is being consumed by smoldering combustion during poor nighttime dispersion conditions, expect visibility in the smoke to be less than ½ mile within 1½ miles of the fire.