

## Colorado Prescribed Fire Smoke Permits

### Pile Standard Permit Condition Worksheet

The endnotes are important. Each corresponds to a number in parentheses in the table.  
Piles must be clean.

Construction (1) and Typical <a href="#">Size</a> (2) of a Pile:	> 5.0 Miles from an Occupied Home (3)	0.6 - 5.0 Miles from an Occupied Home	≤ 0.5 Miles from an Occupied Home
any construction method: ≤300 ft <sup>3</sup> per pile example (4): 10' x 10' x 7' mound = 275 ft <sup>3</sup>	<i>Pile Category 1a:</i> End ignition by sunset. Daily max count (5, 6): <ul style="list-style-type: none"> <li>○ fair(+), storm or snowing: 1,000 piles</li> <li>○ wind only: 125 piles</li> </ul>	<i>Pile Category 1b:</i> End ignition 2 hours before sunset. Daily max count: <ul style="list-style-type: none"> <li>○ good(+), storm: 1,000 piles</li> <li>○ fair or snowing: 600 piles</li> <li>○ wind only: 75 piles</li> </ul>	<i>Pile Category 1c:</i> End ignition 2 hours before sunset. Daily max count: <ul style="list-style-type: none"> <li>○ very good, excellent or storm: 1,000 piles</li> <li>○ good: 500 piles</li> <li>○ fair or snowing: 300 piles</li> <li>○ wind only: 50 piles</li> </ul> Constrain wind direction etc. in the field as needed in order to keep smoke plumes from intersecting any homes, or to do so only while it is snowing.
hand or rake: 301 - 2,000 ft <sup>3</sup> blade: 301 - 500 ft <sup>3</sup> examples: 13' x 13' x 7' mound = 465 ft <sup>3</sup> 20' x 20' x 12' mound = 1,885 ft <sup>3</sup>	<i>Pile Category 2a:</i> End ignition 1 hr before sunset. Daily max count: <ul style="list-style-type: none"> <li>○ good (+) or storm: 750 piles</li> <li>○ fair or snowing: 600 piles</li> <li>○ wind only: 50 piles</li> </ul>	<i>Pile Category 2b:</i> End ignition 2 hours before sunset. Daily max count: <ul style="list-style-type: none"> <li>○ very good(+) or storm: 750 piles</li> <li>○ good: 500 piles</li> <li>○ fair or snowing: 300 piles</li> <li>○ wind only: 35 piles</li> </ul>	<i>Pile Category 2c:</i> End ignition 3 hours before sunset. Daily max count : <ul style="list-style-type: none"> <li>○ very good(+) or storm: 500 piles</li> <li>○ good: 300 piles</li> <li>○ fair or snowing: 150 piles</li> </ul>
hand or rake: ≥2,001 ft <sup>3</sup> blade: 501 - 25,000 ft <sup>3</sup> example: 20' x 15' x 100' half-cylinder = 23,562 ft <sup>3</sup>	<i>Pile Category 3a:</i> End ignition 3 hr before sunset. Daily max vol.: <ul style="list-style-type: none"> <li>○ fair(+) or storm: 1,000,000 ft<sup>3</sup></li> </ul>	<i>Pile Category 3b:</i> End ignition 3 hrs before sunset. Daily max vol.: <ul style="list-style-type: none"> <li>○ storm: 1,000,000 ft<sup>3</sup></li> <li>○ good (+): 500,000 ft<sup>3</sup></li> <li>○ fair: 250,000 ft<sup>3</sup></li> </ul>	<i>Pile Category 3c:</i> End ignition 4 hrs before sunset. Daily max vol.: <ul style="list-style-type: none"> <li>○ storm: 300,000 ft<sup>3</sup></li> <li>○ good(+): 200,000 ft<sup>3</sup></li> </ul> Once fire's heat allows, chunk at least daily until smoke production ends.
blade > 25,000 ft <sup>3</sup>	non-standard permit		

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1. *Construction* refers to what was used to build the piles. If no machinery was used to pile up the slash, use 'hand.' Use 'rake' if the machinery used lifted the material with tines, as with a brush rake, grapple, or boom-delimber. If a bulldozer, front-end loader, excavator or other equipment with a blade or enclosed bucket was used to build the piles, including if only to push surface clean-up into the pile edges, use 'blade.' If more than one method was used, choose the more restrictive category.
2. Pile *dimensions* should be reported based on typical or average size. Estimating a little generously is good, but the size need not be based on the largest pile in the project. Describe the variability in a narrative if (a) any pile is more than a third larger than the average and/or (b) more than 20% of the piles fall in a larger size category. For piles over 25,000 ft<sup>3</sup> each, instead provide dimensions of each pile.
3. '*Home*' means closest occupied residence. For piles >300 ft<sup>3</sup> each, to count as occupied there may be someone in the home either the day of burning or the following night. Only for piles ≤ 300 ft<sup>3</sup> each, if a home is vacant during the burn day it may be considered to be unoccupied. If a person in every home within the relevant radius is contacted individually before burning, either in person or by a 2-way phone conversation, and none of the people in a contacted household have unmitigated health concerns related to smoke, then note the mitigated distance in the block provided on the application form and categorize the burn according to the **distance to the closest home** that was not contacted and cleared.
4. *Volume estimating* equations: We recommend using the [volume calculator spreadsheet](#).
5. *Fair, good, very good, or excellent* means the National Weather Service (NWS) has forecasted the day's best [ventilation](#) to be the named adjective or better at some point during the day of ignition.  
*Wind* means the one-minute average on-site eye-level observed wind speeds are 4(+) mph measured before ignition and also 4(+) mph measured at least 15 minutes later, during which delay one test pile may be burned.  
*Snowing* means ignition occurs while it is observed to be snowing as indicated by visibility through snow of 1 mile or less.  
*Storm* means probability (PoP) of snow ≥ 60% for at least 6 hours in the 18 hours following ignition OR good (+) ventilation forecasted at least until the next sunrise. Use an NWS [tabular](#) or spot forecast. For spot forecasts the duration of the precipitation probability may have to be requested specifically.
6. *Daily max count or vol.* means maximum number or total volume of piles to ignite in one day.