

**Source Category:** Managed Burning - Slash

**SCC Code:** 2810005000

**Pollutants of Concern:** PM-10, PM-2.5

**How is the PM National Emission Inventory developed for this category?**

**Current Methodology (see also the link to the NEI Methodology Description):**

Previous versions of the National Emissions Inventory did not include an estimate of emissions from slash burning. Emissions for slash burning were included in an overall category for managed burning (SCC 2810015000). California was an exception and reported emissions for slash burning under SCC 2810005000. If a state wishes to estimate slash burning separately, we suggest use of the procedure in Section 13.1 in AP-42.

- The suggested AP-42 methodology for slash burning is based on an activity factor (expressed in acres) that is multiplied by an emission factor (lb of pollutant per ton of fuel burned) (see Section 13.1 in AP-42). A fuel loading factor (expressed in tons of fuel/acre) and a fuel consumption factor (expressed as a percentage) are also required to estimate emissions from slash burning. The method was developed for a 1989 Forest Service inventory of particulate matter from prescribed and slash burning.
- The method estimates emissions for CO, PM10, and VOC. The NO<sub>x</sub> and SO<sub>2</sub> emissions are estimated by applying the ratio of CO emissions to either the NO<sub>x</sub> or SO<sub>2</sub> emissions from the 1985 NAPAP inventory.
- Initially, the activity data are at the state-level and pollutants are distributed to the county-level based on forest acreage per county.

**Current Variables/Assumptions Used in Suggested AP-42 Methodology:**

- An activity factor, expressed as the sum of land acres subject to slash burning. [*U.S. Forest Service*]
- A fuel loading factor, expressed in units of tons of fuel per acre. [*Estimated from similar data applied for prescribed burn*]
- A fuel consumption factor, expressed as the percentage of pre-burn fuel for the fuel category actually burned during the fire phase. [*Estimated*]
- Emission factors for the fuel category and fire phase level [*Forest Service*].

**Uncertainties / Shortcomings of Suggested Methods:**

- The number of acres subject to prescribed burning are reported for federal lands but not necessarily for private lands and logging operations.
- The fuel availability and emission factors used for prescribed burning are also applied to slash burning.
- It is difficult to separate the reported activity data for emissions from prescribed burning and slash burning under SCC 2810015000.

**How can State, Local, and Tribal agencies improve upon this methodology?**

- Obtain local data on acreage subject to slash burn practices. [*Applicable public or private land management agency*].
- State or local estimates of the months when prescribed burns are conducted [*Applicable public or private land management agency*].
- Determine local burning practices (broadcast, windrows, pile and abandon, other).

**NOTE:** Slash burning is only done in areas where large tracks of land are clear cut for logging or wood harvest purposes. State, local, and tribal agencies should assess the potential emissions from slash burning to decide whether effort is necessary to improve the estimates for this category.

**Where can I find Additional Information and Guidance?**

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<b>AP-42 Section 13.1</b>	<a href="http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s01.pdf">http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s01.p df</a>
<b>NEI Methodology Description</b>	N/A