



Smoke Management Plan (SMP) Application

GENERAL:

An SMP is required by North Coast Unified Air Quality Management District (NCUAQMD) when you are burning - more than an acre of material per day, piles larger than a 10ft in diameter, burning multiple piles at a time, broadcast burning, strip burning, a commercial burn, or if your burn will affect Sensitive Receptor(s). Sensitive Receptors are defined in NCUAQMD regulations as hospitals, schools, colleges and universities, population centers, residential subdivisions, commercial areas, residential care facilities, daycare centers, group home, freeways and major roadways, campgrounds, recreational areas, or other areas as determined by the NCUAQMD (see Rule 206 of Regulation II – Open Burning at: [www. http://www.ncuaqmd.org/files/rules/reg%202/Rule%20206.pdf](http://www.ncuaqmd.org/files/rules/reg%202/Rule%20206.pdf)).

Applications must be submitted thirty (30) days prior to any planned burn to allow for review and approval by the NCUAQMD. Plan your projects accordingly, as the NCUAQMD must have sufficient lead time to review your plans, especially during the peak prescribed burning periods of the year. Complete the application in its entirety as incomplete forms will be denied. In order to be complete, the application must be signed by the person responsible and attach additional spread sheets if necessary. Submittal of an SMP application is not considered permission to proceed with any burn.

SMP & BURN AUTHORIZATION PROCEDURE:

- 1) Obtain a valid Burn Permit from the NCUAQMD (portal.ncuaqmd.org).
- 2) Submit a copy of your SMP Application (including spreadsheet and maps) to the NCUAQMD for approval. Once your SMP has been approved you may then submit your approved plan the CARB Prescribed Fire Information Reporting System (PFIRS) (<https://ssl.arb.ca.gov/pfirs/index.php>) if utilized as required. Once approved, a SMP is valid for two years and can be extended upon request provided that there are no changes.
- 3) Determine/identify what burn units and/or types and amounts of materials are to be burned (#piles, size, acres) on your SMP.
- 4) Determine if your burn unit(s) are in meteorological prescription (acceptable wind direction(s), etc.) by using what was submitted in your SMP and comparing these with the burn weather/wind forecast for the site on the day you want to burn. Weather conditions at the burn site must comply with the requirements of your SMP.
- 5) Verify the day you want to burn is a “Permissive Burn Day” by calling the NCUAQMD Burn Day Status line at 1-877-287-6329 (or 707-443-7665) as indicated on your Burn Permit.
- 6) Prior to ignition every day you must obtain a “Burn Authorization Number” for the units/items you plan to burn from the NCUAQMD Burn Program Coordinator at (707) 443-3093 (ext 122). A Burn Authorization number can be obtained up to 96 hours prior the day of the planned day of ignition, contingent upon a Permissive Burn Day and that your burn units continue to meet the meteorological/wind prescription. To obtain a Burn Authorization number for a weekend or holiday, you should contact the Burn Coordinator by the previous Friday during the week.
- 7) SMP holders may apply to burn on a designated “No Burn Day”, by submitting an application for a *No Burn Day Permit* from the NCUAQMD.
- 8) If any authorized burn escapes beyond your control and what is authorized, then when it is safe to do so the responsible party must immediately notify the NCUAQMD (Rule 201.10).
- 9) A CAL-FIRE burn permit is also required for Non-Standard permit holders in State Responsibility Areas (SRA) during fire season, which typically begins on May 1st.

Failure to follow the conditions in your Burn Permit, the SMP as approved, or failure to obtain a Burn Authorization for a burn would be a violation and may result in enforcement action. The NCUAQMD may consult with CARB as necessary with large (250 acres or larger) or multi-day burns (with heavy fuels and over 100 acres). If applicable, you may be required by the NCUAQMD to submit an annual estimate of emissions (see page 5 of application).

SMP APPLICATION

Property Owner: _____ Phone: (____) _____ Cell: (____) _____

Property Owner Mailing Address: _____ City: _____ Zip Code: _____

Applicant / Responsible Party: _____ Company: _____

Applicant Mailing Address: _____ City: _____ Zip Code: _____

Applicant Phone: (____) _____ Cell: (____) _____ Fax #: (____) _____

1. Project Name: _____

2. Location of Burn: Give the legal description/APN, Lat & Long, and common address for the burn site.

3. Type of Material to be Burned: Redwood Slash Mixed Conifer Slash Grasslands
 Brush Oak Understory Berry Vines
 Orchard Prunings Commercial Structure Vehicle
 Residential Structure Other: _____

4. Date the Material was Logged or Cut: _____

5. Burning Method: Tractor Piles Broadcast Strip Burning Hand Piles
 Other: _____ # Piles _____ Pile Size(s): _____

6. Projected Tonnage: _____

7. Projected Acreage in a Calendar Year: _____

Give an estimate of the total tons of material to be consumed by the burn, and give an estimate of the total acreage to be burned, or if pile burning, the amount of acreage the material in the pile came from.

Tonnage Estimate Chart			
Pile Size	Tons Per Pile	Pile Size	Tons Per Pile
6x6	0.45	20x20	4.7
10x10	0.71	25x25	7.5
15x15	2.1	50x50	29

8. Expected Duration of the Fire: Hours: _____ Days: _____

Give an estimation of how long the fire will be burning, either in hours or days. If the fire will be burning over the evening hours you must indicate.

9. Site Elevation: _____ Slope Aspect: _____

10. Identify All Potential Smoke Sensitive Areas Within 5 Miles of the Burn: Sensitive areas include any towns and/or major roads within a radius of 5 miles that could be impacted by smoke from the burn project. For burn projects over 100 acres, a map showing sensitive areas within a radius of 20 miles from the burn site and the expected direction of smoke travel is required.

- Identify all potential smoke sensitive areas on your submitted SMP Spreadsheet/maps

11. If Smoke Impacts Occur to any Smoke Sensitive Areas: Describe what specific actions will be taken if smoke from the burn(s) unexpectedly impact smoke sensitive areas. This may include, but not be limited to the following: a) manage burn to reduce smoke, b) modify ignitions to reduce smoke, c) cease ignition(s), or d) extinguish burn if required by CAL FIRE, local fire department, or the NCUAQMD.

12. Monitoring Requirements: If smoke may impact smoke sensitive areas, the smoke management plan may need to include appropriate monitoring, which may include visual monitoring, ambient particulate matter monitoring (such as portable PM2.5 EBAM monitors, etc.) or other monitoring (PM sensors, etc.) approved by the NCUAQMD for burn projects that are:

- | | <u>Select</u> | |
|--|------------------------------|-----------------------------|
| (1) for projects greater than 250 acres | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (2) projects that will continue burning or producing smoke overnight | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (3) projects conducted near smoke sensitive areas | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

If you answered YES to any of the above questions, then your burn project may be subject to specific air monitoring requirements as indicated below. Applicable projects will require that monitoring detail information is also identified on your SMP spreadsheet.

- Perform Visual Smoke Monitoring – all projects require the burner to use visual monitoring to assess smoke impacts. Visual monitoring includes the evaluation of smoke travel off the property where the burn is being conducted.
- Use of PM Sensors to monitor smoke impacts - the burner may be required to utilize the EPA Fire & Smoke Map (fire.airnow.gov) to view any existing sensors near the burn to also monitor smoke impacts (PurpleAir.com website may also be utilized). Depending on the project, the NCUAQMD may require the burner to strategically deploy additional PM Sensors if none are currently representative in the area where there may be impacts.
- Use of portable PM Monitors (EBAMs) - In consultation with CARB, the NCUAQMD may also elect to deploy portable PM Monitors for projects with anticipated receptor impacts or those greater than 250 acres, which requires the burner to provide notification to the NCUAQMD at least 2 days prior to ignition to allow time for possible monitor deployment.

13. Meteorological Prescription: Provide a detailed meteorological prescription that must be met to proceed with this fire. At a minimum, the prescription shall include acceptable wind direction. Other considerations may include wind speed, temperature profile, winds aloft, humidity, temperature, actual and predicted inversions, burn day status and forecast, precipitation forecast, and any other meteorological condition which may affect smoke dispersion and/or fire behavior. The burner may also be required to submit/share any Spot Forecasts when requesting Burn Authorizations depending on the type and size of the burn.

- Identify Meteorological/wind prescription on submitted SMP Spreadsheet (pg 6)
- Identify source of weather information: NOAA (weather.gov) Windy (windy.com)

14. Actions That Will Be Used to Minimize Smoke Emissions: List what pre-treatment methods (drying times, tarps, stacking methods, etc.) have been used to minimize smoke emissions and/or reduce fuel loading. Fans or air blowers may be needed to reduce particulate emissions. Include any alternatives to burning that have been considered and to what extent they were used.

15. Public Notification Procedures to be use Prior to Ignition: Describe what notification procedures are to be used to make sure the public is aware of the planned burn (examples include newspaper / radio announcements, road signs, flyers / handouts, door-to-door announcements, etc.).

Note: Applications must be submitted to the NCUAQMD at least thirty (30) days prior to any planned burn to allow for review and approval by the District. Plan your projects accordingly, as the District must have lead time to review your plans, especially during the peak prescribed burning periods of the year. All pages of the SMP Application and SMP Spreadsheet (page 6) must be filled out or the SMP application package will be considered incomplete.

Signature & Acknowledgement of Property Owner: _____ **Date:** _____

Signature of Applicant / Responsible Party: _____ **Date:** _____

****** DISTRICT USE ONLY ******

PROJECT SPECIFIC REQUIREMENTS THAT MUST BE FOLLOWED BY BURNER:

- ✓ Prior to ignition you must verify it is a **Permissive Burn Day** by calling the Burn Day Status line at 1-877-287-6329 (or 707-443-7665) as indicated on your Burn Permit. Weather conditions at the burn site must comply with the requirements of your SMP.
- ✓ Prior to each ignition every day, you must obtain a **Burn Authorization Number** from the Burn Program Coordinator at (707) 443-3093 (ext 122).
- ✓ Perform Visual Smoke Monitoring – burner will use visual monitoring to assess smoke impacts. Visual monitoring includes the evaluation of smoke travel off the property where the burn is being conducted.
- Use of PM Sensors to monitor smoke impacts - burner to utilize the EPA Fire & Smoke Map (fire.airnow.gov) to view any existing sensors near the burn to also monitor smoke impacts (PurpleAir.com website may also be utilized).
- Use of portable PM Monitors (EBAMs) - burner to provide notification to the NCUAQMD at least 2 days prior to ignition to allow time for possible PM Monitor deployment.
- Other: _____

NCUAQMD SMP APPROVAL: _____

Date: _____

Annual Estimate of Emissions

Date: _____

Name/Company: _____

Property Location: _____

For Calendar Year: _____

How to Estimate Tonnage Calculations for Burn Piles:

- Choose the pile size most representative of the piles on your burn site
- Multiply the number of piles (by vegetation type) in your project by the corresponding “Tonnage per Pile” value to get the total tonnage/
- Example #1: Eighteen (18) piles of redwood slash were burned over the course of the calendar year. The diameter of each pile was 10 feet by 10 feet. Multiply 18 piles x 0.71 tons, which equals (=) 12.78 tons of redwood slash (100%) burned. If a combination of material then estimate the % of each type.
- Example #2: Twenty-five (25) piles were burned over the course of the calendar year. Ten (10) of the piles were Douglas Fir slash and were 4 feet by 4 feet in diameter. Fifteen (15) of the piles were conifer slash and were 25 feet by 25 feet in diameter. Calculate the following:
 - 1) Multiply 10 piles x 0.056 tons which equals (=) 0.56 tons of Douglas Fir slash burned.
 - 2) Multiply 15 piles x 7.4 tons which equals (=) 111 tons of conifer slash burned.

Tonnage Calculations for Specified Pile Sizes					
Indicate County: Humboldt, Del Norte, Trinity					
Pile Size	# Piles	Tons /Pile*	Total Tons Burned	Type of Vegetation Burned**	% Per Type
4ft x 4ft diameter x 3ft height		0.12			
5ft x 5ft diameter x 4ft height		0.21			
6ft x 6ft diameter x 5ft height		0.45			
8ft x 8ft diameter x 6ft height		0.56			
10ft x 10ft diameter x 6ft height		0.71			
12ft x 12ft diameter x 8ft height		1.3			
15ft x 15ft diameter x 8ft height		2.1			
20ft x 20ft diameter x 10ft height		4.7			
25ft x 25ft diameter x 10ft height		7.5			
50ft x 50ft diameter x 10ft height		29			

*Pile tonnage calculated using paraboloid volume (cu.ft) formula [Paraboloid Volume (cu.ft) = 3.146 x (height x diameter) /8, USDA 2/96 Forest Service General Technical Report #PNW-GTR-364] multiplied by 30 lbs/cu.ft, multiplied by 0.2 packing ratio [U.S.Forest Service Conformity Handbook, Table 6, Revised 2/13/01].

** Types of Vegetation: 1) Redwood, 2) Douglas Fir, 3) Mixed Conifer, 4) Tan Oak, 5) Orchard Prunings, 6) Sitka Spruce, 7) Berry Vines, 8) Madrone, 9) Grass, 10) Brush, 11) Field Crop Stubble, 12) Forest Understory, 13) Mixed Oak, 14) Alder, 15) Invasive/Exotic Species, 16) Hay, 17) Other _____.

