

Detailed Instructions for Application Forms

Related Documents

Pile Burn	Broadcast Burn
pile application	broadcast application
pile worksheet	broadcast worksheet

Basic instructions are embedded in the forms as hover hints and should suffice for most burns. The [hints are available also as a .doc](#).

[Detailed Instructions for Smoke Application Forms](#) (this document). Not needed for most basic permit applications, but addresses atypical situations

[Glossary](#). Consolidated list of terms specific to Colorado's smoke program. Each term's definition also appears in some other place where the term is used.

[Guidance for Non-Standard Permits](#). For experienced burn bosses working with especially complex projects

Smoke program [manual](#). Addresses in detail formal requirements, program concepts, and background about individual permit conditions. The manual might be useful if you have a specific question or are terribly interested in Colorado's smoke program.

Introduction

This paragraph is the most important part of the document. If you are a new permittee [please call us](#). We want to talk with every new permittee. We'd prefer to hear from you even if you are drafting paperwork for your boss' signature.

Here's why. Unless we have already reviewed your project(s), initially we will probably want to discuss the fire and not focus exclusively on the paper trail. Second, the paperwork can be involved. Working through it alone the first time invites a big waste of time.

Application Forms Overview

This document is detailed. If you're not sure it is what you need, read the next page or two and/or skim the headers.

Most of this document is guidance (recommendations). Where requirements rather than guidance are listed in this document, they are repeated also in the smoke program's [manual](#).

Other than that, little information is duplicated between the smoke program's [manual](#) and this document.

The target audience for this document is a land management agency employee or similar person who has never prepared an application for a Colorado smoke management permit and who is apt to work with multiple smoke permits over time. It makes the following assumptions:

- Fire terminology is familiar.
- Your prior involvement with managing smoke on the ground ranges from some to a whole lot.
- You have the opportunity if you wish to discuss permits with coworkers or others who already know the paperwork.

Examples are a Fire Management Officer who recently moved to Colorado or an employee whose career development now includes applying for permits.

If you don't have the background to make our assumptions valid we recommend that rather than diving into this document, you [call us](#) and/or fill out a [simplified pile application](#) or a [broadcast application](#) using only the [hover hints](#) as instructions.

If this document is what you are looking for, there are headers to help you focus. After some general notes, the topics are arranged in the approximate order that they appear on the forms.

General Notes

A permit must be approved as indicated by an APCD signature on Form A and assignment of a permit number before any burning may start.

Permit conditions are based largely on the information in the application. The burn's description as shown on the permit is binding. For example, the number of acres indicated and fuel loadings submitted are outer limits on the permit. So are firm but volunteered statements in the application, such as planned public outreach or mop up. Finally, all conditions are part of the permit. Failure to comply with any permit condition may result in enforcement.

Background Philosophy

For many years we at APCD have chosen to recognize that most permittees who are professional land managers or wildland firefighters know their fuels, publics, and projects better than we ever will, and also that most are knowledgeable and very responsible with respect to smoke.

One consequence of that working confidence is that you have flexibility to define and request the smoke permit conditions that are best for your burn. Another is that standard conditions, which are designed for fire professionals, assume some degree of experience-based recognition of unusual smoke circumstances on a particular day - and consequent self-restraint.

Do not abuse that trust. If in doubt about what the atmosphere of earned trust is worth among fire professionals statewide, ask around. Our premise is that in every respect,

you will recognize and **request only leeway that is responsible**.

We try to save field discretion for the permit variables that cannot reasonably be defined and/or accurately described in advance. Whether piles are sufficiently cured for efficient combustion is an example. An especially important element of field discretion is the smoke equivalent of the typical last go/no go question. For the fire, 'can this burn be implemented safely and meet objectives?' For smoke, 'does the smoke situation as a whole feel right even if all the permit constraints are met individually?'

No permit condition may be ignored or 'adjusted' in the field. Similar to a burn plan, at no time do you have the option to unilaterally change your permit conditions because something else seems better at the time. Only APCD may do that.

Even in good faith, APCD staff may not concur with you about what permit conditions are necessary. If we do not agree that the conditions you request are adequately protective of air quality, we almost always call you to discuss it before finalizing the permit.

To start, choose the appropriate version of application Form A. The [forms are available](#) electronically. There are different [application forms for broadcast](#) and for [piles](#). The first parts of the two forms are nearly identical, so initially they have the same following instructions.

[Instructions and notes that apply to all burns come first. Notes that apply only to special situations are indented in this document.]

If a project involves both broadcast and pile burning in the same location, complete two permit applications.

For Colorado smoke permit purposes, broadcast burns include all projects whose fuels are burned where they fell (or were felled), including jackpot burning.

To finish, send the completed application using a method and address listed near the signature block on the form. Email is preferred. Fax or snail mail work.

New permittees may pay fees up front or be billed. Most agencies are billed annually. For details see <http://www.cdphe.state.co.us/ap/smoke/Fees.html>.

What happens after you send in an application? By regulation we have up to 30 days to process an application after it is complete. (For a few non-standard permits, public comment on proposed conditions may extend that calendar another 2-3 months.) Often review takes much less than 30 days, but please don't count on it.

As part of our review process, we often end up phoning or sending you email with a question or three. Once that is cleared up we fill in the conditions blocks on Form A, sign and date it, and assign a permit number. At that point Form A is no longer an application but has become a permit. We email it back to you, or if necessary, mail or fax it.

For procedural instructions about using a permit, please see the general permit conditions portion of Form A including the hyperlinks, or [contact us](#).

Application Forms Line by Line

Burn Name

You pick the burn's name. Using the same name for the permit as you will use for spot weather requests simplifies tracking later.

Sometimes a permit is for only part of a project, or covers more than one project. In either case, the project name and the permit name may differ. If so, please try to choose names that will minimize confusion.

If you are a private landowner, your name or the name of your property works well.

Please keep names short and simple.

Occasionally two permittees each submit projects with the same name. If so we add a word or two to the name to help us keep the pair straight, and we tell you.

County

If the burn is in more than one county, list them all.

Most Likely Burn Dates

List the month(s) or season(s) when this year's burning is most likely to occur. This information is not binding.

Burn Year

Permits are good for (the remainder of) one calendar year.

If you want a permit for both the current year and next year right away, make a copy of the completed application, change the burn year on the copy, and submit both. They end up in different files in our office.

Renewal?

If the project already has a permit in one calendar year and the permit being renewed was submitted electronically, then the way to renew it for a subsequent year is either (1) to send an email saying that only the year has changed and you want a renewal, or (2) to resubmit an application with updated information.

If you are renewing last year's permit but need to make some changes, (1) do not retype everything on to the latest version of the application form. We make minor updates as often as every couple months. Except for some unusual situations, the old forms still work fine. Permits take enough time as it is. Don't make it worse for yourself. (2) If you have the electronic version of your permit that we sent back to you with conditions and a permit number on it also, it is a convenience to us if you start from that version, not the version you sent in when you requested the permit. Feel free to request that we email you that version. (3) It helps us also if you mark changes from last year's application

with a word processor's track changes, and/or point them out in the narrative or your cover email.

If a full year has already elapsed since the project had an active permit, we may still be able to treat it as a renewal. If the most recent previous permit is three years old or more, submit the project as if it were new. Chances are the forms, conditions, or something else will have changed enough to matter for the paperwork by then.

Lat/Long or TRS

Indicate the Township, Range, and Section(s) (TRS) or latitude and longitude of the planned burn. If you have both, TRS works a little better with our maps.

Lat/long should be for a place near the center of the project.

TRS locations should include all sections where any burning may occur.

Rarely, a project is so large that it is impractical to list every section. If so, give only townships and ranges.

Administrative Unit ID(s)

Land management agencies each have a 3-letter [abbreviation](#).

If the burn is on private land, put 'PVT.'

If the public agency responsible for the burn does not have its own smoke permit abbreviation, use 'LCL.'

For burns that cross ownership boundaries, put 'MUL' and list each owner or agency.

As the hover hint notes, we also want to know zone or Ranger District names.

Colorado State Forest Service and occasionally other government agencies burn on behalf of another agency or on private land. In that case, use your own agency ID but also write in the landowner's name.

Regardless of the agency or person to whom the permit is issued, ultimately a landowner or agency's line officer is responsible for what happens in relation to smoke and permit compliance on their land. If there are questions or appears to be a problem, however, our initial contact typically is with the burn boss.

Contact Person Information

The contact person is who you want us to call or email if we need clarification or more information about the application or its [annual report](#). For private land this could be, for example, the landowner, Colorado State Forest Service, a contracted NWCG-qualified burn boss, or a ranch manager.

It's good to put down two names, especially if you are doing all the paperwork but still want your boss' name on the permit. Include yours too, please.

Billing Information

If all of the land to be burned has a single owner or management agency and that is who will pay the permit fee, ignore the billing information block.

We are willing to split up a permit's [fees](#) among more than one party. Usually but not necessarily, this is for burns that cross jurisdictional boundaries. Let us know you want a split bill by filling out the billing block on the application. Also fill it out for any burn with multiple administrative IDs even if one of them will pay the full amount.

As long as all affected parties agree, we don't care how you decided who pays what percent.

Landowner's Name

If the contact person (burn boss) is not the landowner or an employee of the agency that owns or manages the land where burning is planned, indicate the landowner in this section.

For any CSFS project this section should be completed.

For private land, indicate also whether the person manages or owns 10,000 acres or more in Colorado. Ones who do and are [significant users](#) of wildland fire are subject to additional requirements established in the Colorado Air Pollution Control Commission's [Regulation 9](#). We don't ask this question about agencies because most have already satisfied significant user requirements, and we notice and talk with any others.

Smoke Risk Identifiers

The smoke risk section of the application relies heavily on the worksheet, [pile](#) or [broadcast](#). If you aren't sure what category the burn should be in, leave it blank and we will complete that block.

Miles to Nearest Occupied Home and Mitigated Distance

Usually air miles to nearest home is straightforward. However, the worksheet explains when a residence may be considered to be unoccupied. In that case or if you have made contact with every neighbor as far as a specified distance as described in the worksheet footnotes, fill out both actual and mitigated distances.

Smoke Receptors

Smoke sensitive receptors are anywhere you don't want heavy smoke and that it might go. This section of the application helps us picture the burn. It does not directly establish any permit conditions.

To identify receptors think big-scale, at least several miles out from even a small pile burn. In general, list the community or subdivision closest to the project in each quarter of the compass.

Don't omit receptors from this list because they are in a direction you will be constraining for wind. The list is about potential impacts, not likely ones. Isolated ranches, groups of homes, or

special permit cabins may but do not need to be listed as receptors even if they are very close. They are taken into account in distance to an occupied home. If a much larger community is farther than the receptor listed for that direction but is still within 25 miles, it is good to include. Finally, pay particular attention to receptors that are downdrainage as well as those most likely to be downwind. Beyond these suggestions, there is judgment involved and we may edit your choices.

You may include or not include roads, airports, and other transportation features. APCD does not review potential smoke impacts on transportation, so in that sense we don't need to know. (The burn boss is responsible.) However, these features may influence how you manage smoke, so it may help us understand your application if you list them anyway. Also, a transportation feature may serve to label groups of homes or other places where people gather and in that case should be included. An airport nearby is likely to meet the latter test.

Selecting receptors is more complicated in urban areas where there are many communities in any direction. It is not critical to record each one, because of the way receptors are used in permitting. Unless we already know an area well, during the review process we look on a map to learn more about each burn's surroundings. If there is high potential for impacts in a direction, there will be required mitigations such as wind direction constraints. The mitigations may be applied to all potentially affected communities in the same direction, or sometimes only those within an approximate distance.

If a burn is large or spread out, distances to each receptor may vary within the burn. Record the distance from the fire edge closest to each receptor.

The home of a smoke-sensitive individual, such as a person with respiratory illness, is a critical concern when managing a project's smoke. It is not necessary to list it as a receptor, however, since each known sensitive person must be addressed individually. If there are key considerations specific to this burn about known or possible smoke-sensitive individuals, describe them in the narrative.

Colorado is so urban that we have yet to see or imagine a project that has no receptors at all. Even if you believe the burn's smoke won't even be detectable in the nearest community, list it. Doing so helps document just how far away it is.

Minimum Elevation

For burns in the central Front Range, there are [special constraints](#) that reflect the area's compounded air pollution problems. The same link to more details appears near the top of the project-specific permit conditions in case you need to check it later. In the relevant areas, winter particulate alert restrictions (probably better known by their old name, 'red/blue') apply only below 7,000', while [ozone alerts](#) apply at all elevations.

If your burn is both above and below 7,000' and can be segmented, usually pile projects, then the relevant portions of the burn may have different red/blue restrictions. Note this in the narrative.

Brief Description of Fuels

Here write out the how you would describe the fuels to a burn boss in a casual conversation. You are helping us to visualize your burn. Examples:

P/J with some loose jackpots, and minimal grass or other understory
3' sage, to 6' in draws but no pine stringers
Buffalograss [You may note cow pies if you wish.]
10-year-old dilapidated hand piles
Boom-delimber slash and cull built in place with no landing clean-up debris

Especially for a major project with potential for significant smoke impacts, feel free to send a photo or two.

Management Use/Type of Project

Multiple uses may be chosen. Brief descriptions and examples of the categories follow.

- **Natural Fuel Reduction**
Projects to reduce fuels that have accumulated naturally, generally in the interest of ecosystem health. Example: a burn whose purpose is resource-based or is being used to mimic a historic fire cycle.
- **Activity Fuel Reduction**
Projects to reduce or dispose of slash generated during logging activities, including pre-commercial thins.
- **Hazardous Fuel Reduction**
Treatment of fuels generated while taking actions to reduce the risk of uncontrollable wildfire or otherwise prepare for wildfire suppression. Examples: piles created while removing the lower limbs of trees and trimming back fuels near structures; residue from construction of a fuel break; limbing up at the edge of public land.
- **Species Conversion**
Projects to eliminate some species and encourage others. Example: burning cheat grass or kochia in an effort to restore a native grass ecotype.
- **Site Prep**
Preparation for site revegetation. Example: Reducing duff and litter to support seeding or replanting.
- **Range Improvement**
Projects that will encourage forage production for domestic livestock
- **Wildlife**
Projects to improve habitat, including forage, for wild animals
- **Pest Control**
Projects to reduce insects or non-native vegetation. Example: burning dead tops before spraying thistles
- **Other**
Briefly describe any purpose of the project that does not fit in any other category.

Public Outreach

How will people the smoke may reach know that you may burn, and how will they have a way to contact you far enough ahead of time if they want to discuss smoke-related concerns? There are some [example descriptions of public outreach](#) on our website, or look in the public outreach section of the [simplified pile application](#)..

Smoke Contingency

Describe what the burn boss will assign people to do if the smoke is unexpectedly awful. Like an escaped fire contingency plan, this section isn't about what we expect will happen. It describes what we plan to do if the unexpected happens. It can help to picture the thickest, worst smoke you can imagine coming from the project, multiply that density or duration by some large number, and ask yourself 'what will we do then?'

We review smoke contingency plans for a couple characteristics. First, does it look feasible? Don't say the group will complete 100% mop up of a large understory burn between mid-afternoon and sunset, for example. Is it really likely to be possible and safe to do what you say is planned? Second, is it specific? Too often we read contingencies that say some version of 'we'll do our best to put it out and/or finish off the burn quickly, circumstances depending.' While that may be true, it isn't much of a plan. Does the unit have internal roads or trails, prepared or otherwise? Will a pile burn in the cold of winter have an engine?

Occasionally once a test fire stage is past, there's no sound way to stop the fire other than to complete ignition as originally planned. Some but not all aerial ignition in oak is an example. Just as the helicopter sat down for the last time, the plume took a hard right and sank into Steamboat Springs. Consider again the thought exercise described above. If the smoke is bad enough, we'll try *something*. At the very worst we may advise people either door-to-door or via media what to expect overnight, contact County Health and the hospitals, and do some investigating so we can learn from the experience for next time. If that's all that can be done, say so.

Narrative

The narrative is intended for any and all notes that don't fit elsewhere. Examples:

- If you are requesting non-standard conditions that are in some way less restrictive than standard, including more acres per day or a wind direction of 'any,' what offsetting smoke mitigations will you use?
- What happened with smoke when the same area was burned before?
- Do you want a pre-burn site visit and/or do you think this is a burn it is especially important for us to watch and photograph? Do *you* intend to document the smoke?
- If it isn't already clear, what actually are the key smoke concerns for the project?
- Do you plan to burn mostly small units but are requesting a high daily limit for one large unit or for above-average flexibility?
- Is fuel load especially variable within this project?
- Do you plan on making ample use of a Maximum Manageable Area, which would make daily estimates of acres to burn less certain than usual?

As a way to decide what if anything you need to write in the narrative, include anything about the project you'd want to know in our shoes that the application doesn't already portray.

Wind Direction

If you are requesting a non-standard wind direction of 'any,' describe offsetting mitigations in the narrative. Standard permit conditions for nearly all broadcast and some pile categories include limiting wind directions to protect nearby receptors.

Because National Weather Service forecasts are precise only to the second compass letter, so are we.

For the smallest category of piles (only), we typically approve for wind direction be constrained in the field rather than fixing transport directions in the permit. There are three reasons. First, the relevant plume height may be quite low, and therefore wind may be especially variable during a day or within a project area. Second, smoke from these projects generally is light and brief, so midday mistakes usually have less impact than with other piles. Third, many projects cover enough ground close to homes that the appropriate directional constraint for one portion of the project is different than what's needed in another portion. The last characteristic may allow you to burn on more days by choosing which piles to burn based in part on wind direction.

From a technical enforcement perspective, wind directions on the permit must be consistent with the forecasted transport wind direction. In the forecast 'transport wind' refers to average speed and direction from ground level to the mixing height at the time.

Passing beyond enforceable minimums and into the realm of good judgment, it is especially pertinent to piles that wind direction be reasonable at the altitude that carries the plume to the distance range where the plume passes homes. Far enough from the fire, that is the mixing height. But for nearby receptors the relevant wind height may vary by unit, time of day, etc.

Conditions Category

The project's permit condition category corresponds to and is defined in the [worksheet](#). Terms with specific definitions that are given on the worksheet include 'minimum wind speed,' 'snowing', 'waves,' and others. Some are repeated in footnotes on the permit as well.

Standard v. Non-Standard Conditions Requested

If the standard conditions for the condition category look reasonable for the project, check the box that you are applying for them. In that case it's easier on us if you leave the conditions section blank, since we paste them in. For more information about non-standard permits, see [Guidance for Non-Standard Permits](#).

Applicant Signature

We take your signature as an affirmation that you consider your request to be not only true but also responsible. ('Did I see that word again?') We take that seriously.

We can accept a typed name instead of a written signature if we receive the application from a government email account or emailed from a private permittee with whom APCD has a long-standing relationship.

Project-Specific Conditions

For much more detail about ventilation adjectives, end ignition times, and other permit conditions, please see the smoke program's [manual](#). Because the finer points of program requirements are a key component of the manual, they are not repeated in this guidance document.

General Permit Conditions

General permit conditions are not negotiable. With few exceptions we don't tailor them for individual projects. The smoke program's [manual](#) discusses several of them in detail.

For other data items the [pile](#) and [broadcast applications](#) differ. Broadcast is addressed next in this document.

Broadcast Burns Only

Smoke Fuel Category

Please refer to the [worksheet](#). Smoke fuel category is one indicator of a project's potential to create smoke impacts. The fuel category is less an evaluation of expected smoke than of the worst-case possibility.

The categories are strictly and numerically defined. They don't represent your opinion about how well this particular project fits the labels we've assigned to the categories.

Smoke fuel category also affects which if any application components not on a form must be included. A smoke map is an example. The worksheet table's left side columns provide details.

If the fuel in various burn units within the project is so different that it falls into two smoke fuel categories (or perhaps for other relevant reasons), you may want different permit conditions for each unit or for groups of units. Please explain your request in the narrative. We will need a map of units to show us what we are all considering. If it's the loads that differ, send detailed load information for each (group of) units. To do that you are welcome to reformat the application in any way you like, or send the extra information separately.

Dominant NFDRS Fuel Model

Indicate the National Fire Danger Rating System fuel model that best describes the predominant fuels that are targeted to be burned. A table that lists [fuel load by size class for each NFDRS fuel model](#) is available.

We use NFDRS because those fuel models include heavy fuels, important for smoke potential. BEHAVE addresses only the flaming front of fires that propagate in fine fuels, so FBPS fuel models do not even include thousand-hour fuels. That's why we don't use FBPS models for permit applications.

If a different fuel model best describes 10% or more of the project area, list as many models as are necessary.

Ignition Method(s)

We want to take into account the possibility that aerial ignition can generate more lift than hand lighting. We realize it doesn't always. Also, we give end time extra attention for aerial ignition.

1000-hour Fuel Moisture Minimum and Method

Fuel moisture information is needed only for a few projects, as defined on the worksheet. Basically, here you either do elect or elect not to commit to a fuel moisture so high (or low) that heavies have little potential to smolder. For many understory burns, heavy fuel moisture is not an effective or necessary mitigation, but for a few it is critical. If you do not plan to use fuel moisture as smoke mitigation, put in a very low minimum number.

In choosing a method, we generally recommend 'calculated from the nearest RAWS' because it is so much easier. Sampled can be more representative of the burn site but in order to be accurate it must be derived from peeled and elevated sample logs that have been in place for at least three months. Calculated values often run a couple points drier than sampled heavy fuel moistures. We take that into account when reviewing your proposed conditions.

Site Fuel Load

[The smoke program's manual](#) gives required fuel load accuracy by component.

Method(s) Used to Estimate Fuel Loads

There is a good [fuel photo series for Colorado](#) fuels, or use any other you think fits. Some [additional photo series](#) are linked from our website.

You also may use transects. However, they are more work than a fuel photo series, and in Colorado's sparse fuels, usually less accurate. See the smoke program's [manual](#) for more details about estimating fuel loads, including transects and about unevenly distributed duff.

Duff and litter cannot be estimated accurately from photos. Use your familiarity with the burn site instead.

Do not simply use a standardized set of numbers, perhaps from a fuel model. Fuel loads are an important and binding part of the application. They must be specific for the project being permitted. Getting fuel data may require an extra trip to the field and other work. The bigger the project and the higher its smoke risk, the more concerned we are to have accurate fuel load data.

Maximum Total Annual Acres

Record the area encompassed within the most likely fire perimeter.

Total project size and maximum daily acreage are critical to the permitting process. Approval of the projects is based on air quality impacts that reflect the proposed size. Exceeding them is grounds for enforcement.

If in doubt, estimate a little high.

Any project that escapes and is declared a wildfire is exempt from enforcement based on excessive acres alone.

If you have a large MMA (maximum manageable area, or other Term du Jour) and think it's likely you'll burn at least some of it, it's going to be more difficult to specify the day's acres. Please see the smoke program's [manual](#) and/or [call us](#). Also talk to us if you'll be 'guerilla burning' without any pre-defined unit boundaries.

Do not reduce total or daily acres because you expect a mosaic. Count all the area within the black perimeter. We use perimeter because only that is readily verifiable. Note in the emission reduction techniques section the percent of area you expect will remain unburned, and discuss it further in the narrative if needed.

Tailored Conditions Specific to Broadcast Burns

Please see a separate document that addresses [non-standard conditions](#).

Daily Acres

If requested maximum daily acres are half or less than the standard conditions, ignition **end times** an hour later may be considered.

Pile Burns Only

Street Address of Piles

Skip this block unless the piles are on private land and the contact person's address is not the same as the piles' street address. For example, the contact person's address may be a post office box.

1000 hr(+) fuel as % of Volume

We know of no photo series to help in estimating percent volume of heavies, so make your best estimate. Especially if you aren't sure, we welcome photos of typical piles within the project - or of labeled outliers.

Maximum Total Piles for Year

If you have dozens to thousands of piles, please do not spend time to count each one just to make the permit precise! The annual total is a maximum, an outer limit. Suggestion: Estimate average piles per acre and add 10-20%. Then keep a running tally during the year. If even so you approach your annual ceiling and have piles left to burn, call us about a permit amendment. That kind of amendment typically isn't a big deal. And it's simpler for both APCD and usually you as well if we amend a permit rather than issue a second permit for additional similar piles (or acres) in the same project.

Avg. Ft³ per pile

Please take into account pile rounding rather than simply multiplying dimensions. There is a simple [spreadsheet](#) with [instructions](#) for a range of piles shapes. Both are derived from a USFS research publication, PNW-GTR-364. The spreadsheet is linked also from the application form.

If you aren't sure how to figure volume or don't want to, leave the volume block empty. We'll calculate it for you. You are welcome to suggest a shape, too; see the calculation aids listed above.

[CONSUME](#) includes a module that makes the same calculations using the same formulas. Choose the 'Pile Information' tab, then the red button for 'Create/Edit Pile.' To see more pile shape options, click on the pile drawing

The calculations and baseline results are identical also if you use [PNW's on-line calculator](#). For smoke permits use the geometric volume, not the "corrected" volume. We're none too sure the latter is more accurate, and even if it is, it would be worse to have some permits calculated this way and others not. For details see the [manual](#).

Pile Dimensions

Some instructions about pile dimensions are in the [hover hints](#). As far as accuracy, pace the piles off if you are reasonably confident ($\pm 10\%$) about pacing. Or use a tape measure, or get help from someone who is sure of their stride. Estimate height visually. Comparing a pile's height to that of a person standing next to it can help. Where best guesses are involved, err by using high numbers.

Pile volume is an average, and not the size of the largest pile. If some piles have more than twice the average volume, please describe the range.

Construction method(s)

Please see the [pile worksheet](#) for more detailed definitions of each conditions category you could choose.

Spread (Are some piles more than a mile from others)?

Sets of piles at least a mile apart may be permitted to burn simultaneously as if each set were a separate project. We call this 'double waves.' An additional condition for using double waves is that day's weather must be such that the plumes do not intersect within the distance range that the smoke is visible. Double waves are not allowed if the dispersion is forecasted to be poor all day and the only weather attribute that allows for burning is minimum windspeed.

Finally, as always, feel free to [contact us](#).