Chicago Wilderness

Volunteer Stewardship Regional Standards

Brush Pile Burn Boss Training Manual

Updated: December 3, 2019

TABLE OF CONTENTS

CONTRIBUTORS

This course was prepared by the Chicago Wilderness Volunteer Stewardship working group, including assistance from the following partners:

- Forest Preserve District of Cook County
- Forest Preserve District of DuPage County
- Forest Preserve District of Kane County
- Lake County Forest Preserve District
- McHenry County Conservation District
- Forest Preserve District of Will County
- The Morton Arboretum
- Chicago Wilderness

The Chicago Wilderness Volunteer Stewardship working group collaborates to establish regional standards for stewardship education.

Growing a skilled pool of volunteer leaders who can act as site stewards or otherwise support Chicago Wilderness organizations in managing and restoring regional natural areas is a key strategy for supporting future biodiversity. Standardized regional trainings help to support conservation and restoration initiatives by sharing resources, training capacity, and experience between organizations. Likewise, standardized trainings make it easier for volunteers to lend their skills and knowledge across jurisdictional boundaries.

Organizations or individuals interested in being added to this working group, or those who wish to receive updates on the process, should contact:

The Morton Arboretum

Megan Dunning, Manager of Adult Learning Programs
The Morton Arboretum
Email: mdunning@mortonarb.org
Office: (630) 725-2101

OVERVIEW

OBJECTIVES OF THIS CLASS

The objectives of this class are to train volunteers to:

- Run workdays that are safe, effective, minimize collateral damage, and leave the site safe for others.
- Properly construct, safely ignite, monitor, and secure brush piles before leaving.
- Communicate effectively in accordance with their agency's requirements.
- Use available weather data and site observations to make good judgment calls on all aspects of brush pile construction and burning.

The personal safety of volunteers is vitally important. It is critical that brush pile burns be conducted safely and in accordance with the Illinois Environmental Protection Agency (IEPA) and local regulations. County-specific regulations are available in Appendix D.

Although agency staff will notify you of updates to local policies and regulations, it is ultimately your responsibility to understand and follow the rules. Failure to meet the requirements of regulations may jeopardize your county's open burn permit with the IEPA and affects the operation throughout the county, not just your site. It is important that everyone in a leadership position at a site keeps that in mind as they are making decisions.

Conducting brush pile burns without incident also fosters positive public perception of the use of fire in restoration work.

WHY BURN BRUSH

Piling and burning cut brush is an efficient means to handle cut brush, large quantities of which are often produced on a workday. Leaving excess brush on the ground impedes controlled burns, interferes with resprout and invasives control at a later date, can smother desirable ground vegetation, can be a safety hazard and can create inappropriate wildlife habitat.

Chipping is an alternative but can only be done in areas where a vehicle can be safely driven to without damage to the area. Chipping is used instead of burning only if burning creates public safety or perception issues and the site is accessible. Otherwise burning is the preferred method to eliminate brush and is almost always the most efficient

Addressing some concerns about brush pile burning
Not everyone understands the need for burning brush. More information about dealing with the public will be discussed later in this class, but a few key points to consider are:

- All brush pile burns create a temporary burn scar. However, any negative impacts on a small, limited area are outweighed by the positive impact on the entire area. Although burn scars are temporary, minimizing site damage through careful positioning and good practices while burning reduce the short-term negative impact while increasing the long-term positive impact. Best practices to minimize negative and maximize positive impact will be discussed later.
- All brush pile burns have some risk and should be conducted carefully. Awareness of weather conditions, careful positioning of the brush pile, good practices while burning and being prepared for unexpected factors reduce that risk. The managed risk is accepted for overall benefits.
- All burning produces smoke which includes CO_2, CO, and particulate matter. However, awareness of wind direction/speed and proper communication to area residents can reduce local negative impact of these. The long term benefits of a healthy ecosystem that will ultimately fix more carbon and produce more oxygen far outweighs the slight negative effects of these small burns in the short term.

A diverse, healthy native ecosystem is the ultimate goal. Clearing and burning brush is part of the long-term plan for achieving that.

PLANNING & PREPARING

WEATHER CONSIDERATIONS

Agency staff and volunteer site leaders must check weather conditions before and during the workday. Agency staff monitors weather data throughout the day and has the responsibility of suspending burning if there are weather concerns. Agency staff will contact the site leader listed for the workday to make sure that the site leaders are aware of the conditions and are taking appropriate action. However, because cellphones are not always available, not heard out at the work site, reception is not guaranteed, etc., the call method is not foolproof. The site leaders should also be aware of weather conditions so that good decisions are being made and alternate plans for the workday are made even before any phone call is received from agency staff.

Is it especially important to monitor weather conditions on questionable weather days.

Weather impacts both where you should burn and whether you should burn. You do not need to be a meteorologist, but an understanding of how weather impacts burning, smoke movement, etc. will help you plan your workday, predict possible concerns, prevent problems later, and make you better prepared.

The NOAA (National Oceanic and Atmospheric Administration) website and the Airnow (EPA) website are important tools that you will use to plan your workday and conduct your brush pile burn. These websites contain the hourly forecast for AQI (Air Quality Index), wind direction, wind speed, relative humidity, temperature, and a lot more! It is a good idea to save this website to your Favorites or to your Smartphone search as you will be using it before and throughout the workday.

Ground Truthing

While we can look up the weather beforehand, there is no replacement for checking the site conditions in person. Ground truthing is the understanding of your site, awareness of various features (ecological features or manmade structures), and how the regional data should be adjusted for your locale. You can reference your agency's land management guidelines.

Weather Websites

NOAA's website is http://www.noaa.gov/. Enter the zip code where you will be working to get weather data from the closest NOAA data source. Information on this website will allow you to determine how safe it is to burn.

There are several spots on the NOAA where you will be gathering data to make your weather related decision regarding the burn. Below the 7 Day Forecast, there are options for different forecasts. Either the Hourly Weather Graph or Tabular Forecast will give you the hourly forecast for the following factors (one in graph form and the other in a table):

- Temperature
- Mixing Height
- Surface Wind Speed
- Transport Winds
- Wind Direction
- Posted Wind Speed (20 ft Height)
- Gusts
- Vent Rate
- Relative Humidity

The website allows you to click on and off the features that you need so you can create a graph or a table of just the factors that you want to look at.

The US EPA's AirNow website is http://airnow.gov/. This site provides the AQI (air quality index) information that you need – both the current reading (updated hourly) and the forecast. It provides information on air quality and the health effects of burning. You can also sign up for a service that notifies you the day beforehand about the forecast for the next day.

How to Use the Data

Temperature – Brush piles will burn faster and ignite more easily on a warmer day than on a cold day. But there are no specific temperature requirements for a burn. This is a decision made by the Site

Steward and the Brush Pile Burn Boss. Temperature is needed for herbicide record keeping in some counties as well.

Relative Humidity – Ideal humidity is 30% and 50% for a brush pile fire. Higher relative humidity makes it difficult to burn but it is still safe. Lower relative humidity makes it unsafe to burn. **You should not burn on days with relative humidity under 25% and should be extra cautious in the 25-30% range.** Relative humidity is naturally higher very early (before 10:00am) and later (after 3:00pm). Shutting down brush pile burns in late afternoon is actually easier because of the increasing humidity late in the day.

Wind speed – In standard weather reports (i.e. in the media) the wind speed is posted for readings at 30 ft. However, for fire decisions, the wind speed is measured at a height 20 ft above the ground. Wind must be at least 5 mph and should be no more than 20 miles per hour generally. **Burning when wind speed is lower than 5 mph is a violation of our permit with IEPA.** Wind is required to feed oxygen to the fire and to move the smoke. Burning when wind speed is over 20 miles per hour is prohibited in the safety guidelines of most agencies.

This is site dependent though, for instance, wind speed in a woodland is significantly reduced from posted wind speed because the trees slow down wind speed. If it is too windy to burn in a prairie, it may be possible to burn in a woodland. Likewise, if it is not windy enough to burn in a woodland, it may be possible to burn in a prairie. This is a good example of how ground truthing plays a role in decision making.

Wind direction, Gusts, Mixing Height, Transport Winds, and Venting – These factors all determine where the smoke will go. Avoid sending smoke where it will directly impact roads, paved trails, walking paths, homes, businesses, etc. Gusts will challenge managing the smoke and embers. Factors such as mixing height, transport winds, and venting determine the height and speed at which the smoke will move, so observation (ground truthing) of what is happening to the smoke as it moves from the immediate area is very important. For example, smoke dispersal decreases as mixing height lowers. Familiarity with these additional factors will help you predict smoke movement and help you avoid problems later.

AQI – The air quality index (AQI) is a measure of how clean or polluted the air is that is issued by the EPA. The maximum level of safe air quality is set at 100. Since fire decreases air quality in the short term, we must be aware of what the AQI is that day. **Burning when AQI is 100 or above ("Code Orange" or "Ozone Alert") is prohibited and is in violation of IEPA regulations.** Ozone alerts will be on the Airnow website and will be announced in local media. If AQI hits 100, all fires must shut down as soon as possible. A guideline to follow is if the AQI is 85 in the morning, it will most likely (but not always) increase to 100 by late afternoon so the decision should be to not start the fire at all that workday or to monitor the AQI throughout the day and be prepared to shut the fire down early. In addition, pile should not be burned when fog is present, as this prevents smoke dispersal.

Red Flag Days – Red flag warnings are issued by the US National Weather Service and are typically announced in the local media. Red flag warnings will be issued when the relative humidity is less than 25% and the wind speed is more than 20mph. They can also be called when other factors are at certain

levels, such as drought conditions, vegetative moisture, humidity, wind speed, and wind behavior. **Burning is not allowed on Red Flag Days.**

Additional Restrictions

Some counties require additional conditions that minimize the potential for fire to escape (see Appendix D for county-specific restrictions). Common restrictions include:

- A minimum of 2 inches of snow cover must be present.
- The ground must be saturated.
- Brush piles may only be burned during certain months.
- Brush piles are burned during normal hours of operation - as a general rule of thumb, brush piles should be started no earlier than 30 min after sunrise and should be completed at least 30 min before sunset.
- Brush pile burns may not be allowed with certain types of workdays (ex. youth groups, corporate workdays).

Furthermore, piles should not be ignited during the prescribed burn spring and fall seasons, which vary depending on weather conditions. As you will be required to notify agency staff of a brush pile burn, staff will alert you to any conflicts with the prescribed burn seasons.

Shutting Down a Fire

We recognize that shutting down a fire quickly without a tanker of water is challenging. If a fire needs to be shut down due to weather considerations or other emergencies, we do expect that you stop feeding the fire immediately (don't try to finish), and use any tools for suppression that you have available to you.

Ground Truthing

There is no substitute for paying attention to what is going on at that moment. Weather can change suddenly. You need to be able to shut down a fire if unsafe conditions start to develop.

Site Knowledge

To make the best decisions at a site, it is important that the workday leader have the necessary information. For a volunteer managed site, consult agency staff or the Site Steward.

It is important that the leader has an awareness of:

- The site's land use history or at least its previous use

- Likelihood of any seed bank potential (related to statement above)
- Where protected, endangered, sensitive, or favorable species of flora and fauna are located, particularly in relation to the timing of bird nesting, herp hibernation, and vulnerable times of year
- Best access routes to work area that do the least damage when bringing crews and equipment through sensitive areas.

BURN PERMITS

Each agency obtains an Open Burning Permit with the IEPA. County and local governments may require additional permits (see Appendix D). The permits are issued on an annual basis. It is required to carry copies of these permits with you when burning. Your agency will provide copies of any required permits.

Standard Requirements

Basic requirements of our permits and standard conditions for open burning that always apply are:

- Wind speed should be greater than 5 miles per hour. Caution should be exercised when burning near a smoke sensitive area if wind speeds are near 5 mph so that a consistent wind direction can be observed.
- Prohibition of burns on "Code Orange" or "Ozone Alert" days as identified by the AQI. All fires started must be extinguished if the status changes to Code Orange (100) during the burn. Use the forecast tool on the AQI website, and, if conditions are predicted to exceed 100, brush piles should not be ignited.
- Prohibition of burns on Red Flag Days.

TOOLS & PERSONAL PROTECTIVE EQUIPMENT

TOOLS

Necessary tools vary by site, weather conditions, etc. The Brush Pile Burn Boss and/or the Site Steward is responsible for having the appropriate tools available for both managing and extinguishing a fire. Being prepared may mean that you will bring out tools that you won't use. But if you wait until the situation occurs, it is too late to go back and get more tools.

Common tools and their use for managing a fire are:

- Pitchfork – Used to move larger pieces or large quantities of brush within the fire
- Council fire rake (Frake) – Used to scrape a variety of materials from around the fire. Will cut brush if necessary
- Fire Rake (Asphalt rake with steel shank)– Used to move brush within the fire and to create safe burn line around brush pile
- Fire Leaf Rake with rounded tines (Tine Bow Rake), or Wire Broom – Used to move loose leaves and light brush from around brush pile
- DIY "Pushystick" – Can be made on site using a forked branch – Used to push and flip materials



Common tools for smothering or extinguishing a fire are:

- Flapper – Used to tamp and drag fuels to smother burning and smoldering fuels;
- Backpack Water Pump – Used to douse spotting fires
- Bucket for water – Can be used if close to a water source
- Flat Nose or Metal Scoop Shovel – Used to shovel snow onto the fire


The presence of tools for smothering or extinguishing fires can also decrease negative perception by the public regarding the use of fire for managing brush.

PERSONAL PROTECTIVE EQUIPMENT

The personal protective equipment (PPE) that you will need to conduct a brush pile burn is the same as what you use for brush clearing, including:

- Leather work gloves
- Safety glasses
- Hard sole close-toed shoes (ideally boots)
- A hat
- Hearing protection if you're working near chainsaws or brush cutters

Safety glasses likewise protect your eyes from the radiant heat emitted from a brush pile, which burns much hotter than your typical campfire and can be damaging to your eyes. Long hair should be tied back.

Clothing made of natural fibers (ex. cotton, wool) is required for those adding to the fire, as embers can melt synthetic materials. Nomex is recommended, but not required.
(see Appendix D).

BRUSH PILE PLACEMENT

Brush piles should be placed near the work area but care should be taken to balance dragging distance and number of piles. Brush piles may not be placed in designated floodplains, and it is highly recommended to avoid placing brush piles in large depressions that can hold water.

MINIMIZING THE BURN SCAR

Though removing invasive species has a huge positive effect, the intensely localized heat of a brush pile burn sterilizes the soil and covers the ground with a layer of ash. Therefore, brush pile burns always create a burn scar that may temporarily affect a limited area. The impacts can be reduced by follow the tips below:

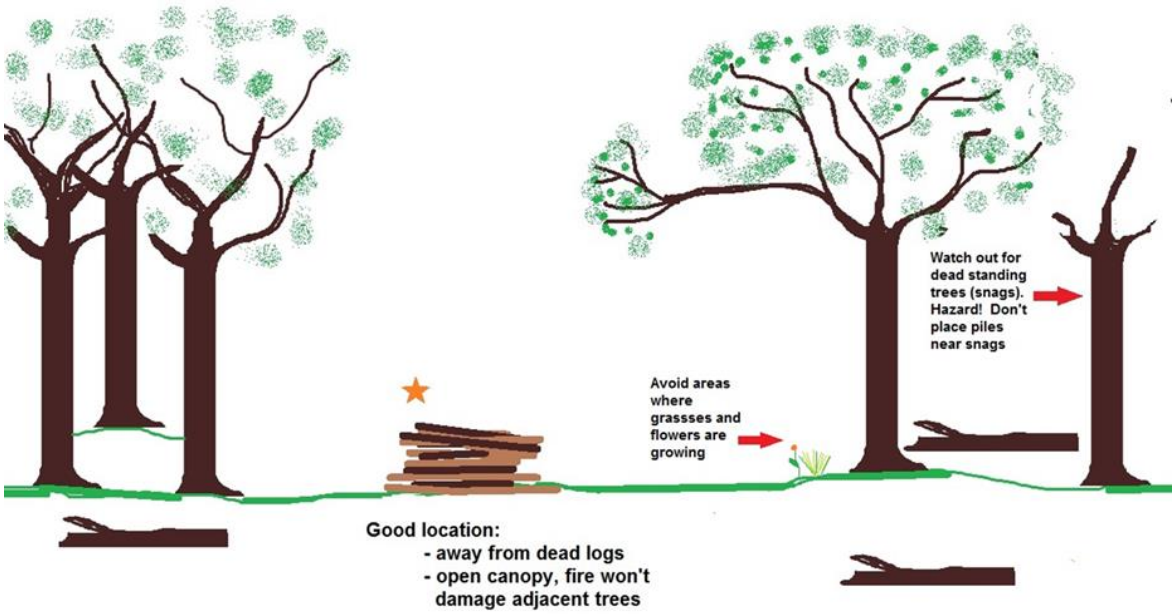
- Use an existing brush pile burn scar when practical.
- Keep brush piles limited in their space – keep the footprint reasonable in size, especially while adding to it.
- Don't connect new brush piles to old burn scars. Allow patches of good vegetation in between to ultimately spread back into the burn scar.
- Use a degraded area that doesn't have plants of high quality. An area that has already been damaged by excessive shade from brush can be cleared and used as a burn site.
- Be aware of your proximity to valued trees, and remember that roots extend as far as their dripline.
- Use an area of herbaceous invasives or resprouts.
- Avoid placing brush piles in floodplains along rivers and streams or in large depressions that can hold water.

LOCATION OF OTHER FUELS

Be aware of any situations or conditions in which fire could escape by looking for nearby fuels. Avoid placing a brush pile burn near any of the following:

- Ground fuels (peaty areas and roots) – Ground fires are slow moving, hot, difficult to extinguish, and can burn for a very long time. These areas must be avoided at all costs, as a peat fire is difficult to manage.

- Tall, highly flammable fuels (tall grasses, cattails, or pine trees) - Wind direction and speed affect this decision. Guideline: Stay at least 25-50 feet away from these fuels because it does not take much to ignite them.
- Aerial fuels (vines, snags, "widow makers", dead trees, tree canopy with dead, dry leaves, needles and ladder fuels like small oaks with leaves still on the branches) - Wind direction and speed affect this decision. Guideline: Remember to look up when you are placing the brush pile, and make sure that you are at least 20-25 ft below dead leaves and over 25 ft away from snags. You may have to increase the distance from the work site to get a site that is clear of aerial dangers.
- Dry herbaceous fuels (dead leaves or grasses) – Although these should be avoided, they can be easily raked out of the way for a fire break or raked in and used in the fire



PROTECTING DESIRABLE VEGETATION

Since the vegetation in burn scars takes longer to recover than surrounding areas, proactively take the following steps to protect desirable vegetation:

- Place the brush pile close to the area of work while recognizing other safety considerations. This is not only for the efficiency of the workday but as an important consideration to limit disturbance by walking the same route repeatedly.
- Protect nearby trees as much as possible, particularly important trees to that ecosystem.
- Avoid areas with desirable shrubs and understory trees. Even if they are not part of the fire, heat from the fire can damage them more easily than larger trees because of their thinner bark. Remember to look up to anticipate where the smoke and associated particulates will carry.
- Avoid areas with desirable herbaceous species. Some plants may not be visible above ground at the time of year that you are burning. Knowing where these species are on your site will help you locate the brush pile to minimize or avoid collateral damage.

- Where canopy trees, understory trees and shrubs are thick, it may not be practical to avoid them all. Base decisions for placement of the brush pile on the long-term goals for the site per the management plan.
- Do not build brush pile on top of uncut stumps. All stumps coinciding on the burn pile footprint must be cut and herbicided prior to burn pile creation.

LEAVING A BRUSH PILE

A burn may not be completed for a variety of reasons, many of them safety related (weather conditions, number of leaders, nature of group, available time, etc.) that are all good decisions to leave a brush pile and not burn it. Brush left at the end of a workday should be left scattered, in a feeder pile, or with some seasonal exceptions, a well-made brush pile.

The brush pile can become wildlife habitat so depending on the time of year and temperature fluctuations, there are things to do to limit or prevent any wildlife impact.

- Herpetiles (aka herps) conserve energy when dormant and do not move from places of warmth or protection until conditions improve. Saved brush piles are a place where they would be vulnerable in mid-late fall and throughout the spring (not in winter).

- If brush pile is left during a transitional temperature time (typically in late fall or late spring), herp and mammal movement in and out of piles is a possibility
    - Use an "altar" construction brush pile to keep brush off the ground and not available for animal shelter. Position several larger logs to create a raised platform (altar) at the bottom of the brush pile.
    - Create a feeder pile and use the already cut brush to feed into a new brush pile. Brush that is resting directly on the ground should be moved so that animals, particularly herps are not accidentally burned.

- If brush pile is left when ground was already frozen and temperatures have stayed below 50°, only mammal movement needs to be considered as herps are hibernating elsewhere. Mammals may seek temporary shelter in brush piles, but are much more mobile and able to flee.
    - Rustling the pile or starting fire at one end will encourage any residents to retreat from the pile and moving the brush off a well-made brush pile left from a prior workday is not needed.

Some organizations do not allow piles built in the growing season to be burned in place later in the year due to the risk to herpetiles (see Appendix D).

SAFETY CONSIDERATIONS

- Keep brush piles away from paths and trails so that the smoke does not affect others' enjoyment of the area. Placement should consider wind direction and lift as mentioned earlier.
- Make sure that the paths between the work area and the brush pile are free of vines, stumps, "impalers," tools, etc. Remove any tripping hazards or overhead hazards if possible. If you have a chain sawyer in your crew, now is a good time to recheck that all stump heights are 2" or less. Mark any stumps if they can't be avoided or removed.

SAFETY TALK

The Site Steward or Workday Leader is responsible for giving the introductory talk at the beginning of the workday. Besides the welcome, thank you, and overview of work, safety should also be part of this talk. If the leader does not adequately talk about safety directly related to the fire, the Brush Pile Burn Boss should add their comments to the intro talk.

The points that need to be covered when there is a brush pile burn should include:

- This is a working fire, not a campfire, which is small, contained, and fed slowly. A brush pile fire can get to a roaring stage quickly.
- The fire gives off radiant heat which is dangerous to the eyes. Protective eye covering is required if you are working close to the fire.
- The fire gives off particles and gasses that can be harmful to your lungs, potentially affecting your ability to breathe easily. Avoid the area where the smoke is blowing*, spend the least amount of time close to the fire, and respect a safe zone around the fire.
- Embers can jump quite a distance; although you think that you can anticipate movement of embers, they can jump in all directions when a heavy log is thrown on.
- Do not jump on or try to tamp down a fire, as this will generate dispersal of embers and particles.
- Large flames, especially if prompted by wind gusts, can happen suddenly. Never approach a brush pile fire from the upwind* side where the flames are blowing towards you.
- Tripping into the fire can happen if there are short stumps, vines, tools, etc. Be aware as you approach a fire.
- Heat from the fire can make snowy or wet ground conditions muddy and slippery.
- Synthetic materials in clothing and footwear can catch on fire and/or be damaged from embers easily. If you are wearing clothing or footwear that you value or is not fire safe, keep a distance from the fire.
- People who are sensitive to smoke should not work near the fire.
- Do not burn poison ivy, poison oak, or poison sumac. Urushiol, the naturally occurring irritant in the sap of these plants, can be inhaled if burned.
- There are many tasks in the workday that can be done a comfortable distance from the fire. The workday leaders can match volunteers up with those tasks.

*To explain upwind and downwind, the best way to understand this is to imagine yourself moving along a straight line with the wind blowing against your back. If you want to turn "upwind" or "into" the wind,

then it will be blowing into your face. If you wanted to turn "downwind" or "with the wind", then you will turn in the opposite direction with the wind blowing behind you.

WORKING A BRUSH PILE

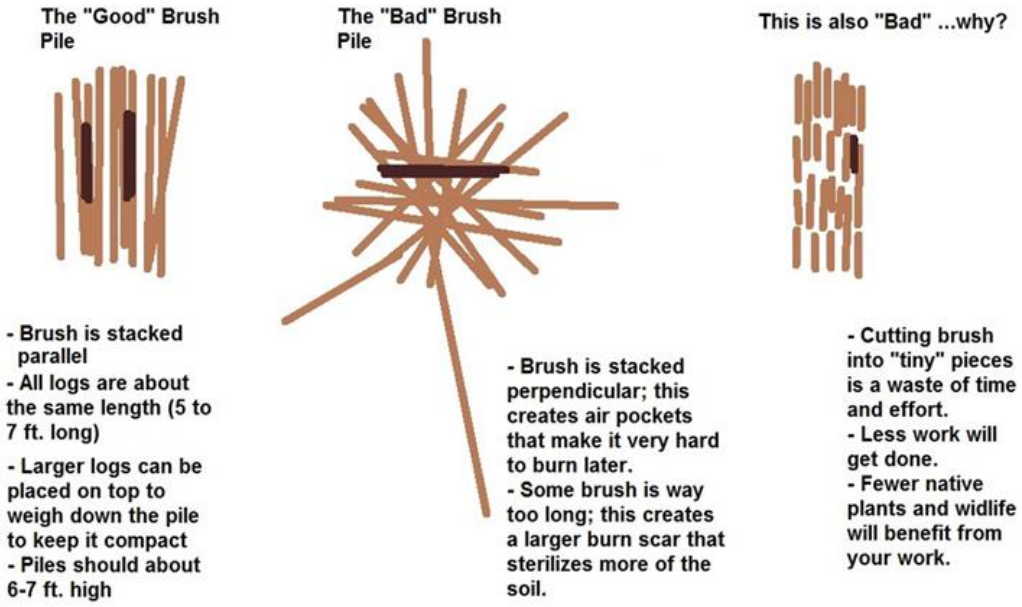
CONSTRUCTION

Note that certain agencies limit the size of brush to less than 12 inches in diameter at breast height (dbh) due to the safety concerns with chainsawing, the weight of the logs, and the difficulty in burning large logs (see Appendix D).

Different considerations apply if the brush pile is going to be burned the same day or in the future. If you're burning the pile the same day, follow the below recommendations:

- Getting Started
    - Dry dead wood is the best foundation. Use wood leftover from an earlier brush pile. Some groups actually save some dead wood from a previous workday to provide a good base for the next fire. Dead wood will also be less smoky and will allow you to get the fire hotter before green wood is added. Avoid using dead wood that has now become wildlife habitat or have fungi, lichen, and moss growing on it.
    - The base of the pile should consist of smaller branches 1-3 inches in diameter to a depth of 2-3 feet.
    - Smaller twigs and branches should be packed together at the beginning of the fire at the ignition site.

- During the Burn
    - Keep the pile compact by interspersing large logs throughout the pile, but avoid having it so high and narrow that it is susceptible to toppling over as the lower pieces start to burn and the pile collapses. It's recommended to keep the pile less than 10 feet tall.
    - Stack smaller logs (less than 3" in diameter) and brush parallel to keep the pile compact, which improves combustion, making it easier to stack and keeping the burn scar to a minimum.
    - Brush, tree limbs and logs should be cut into 5-foot or 7-foot sections.
    - Small side branches should be lopped or broken off to keep the brush pile compact and easier to handle if you need to move pieces once in the fire.



In general, the best practice is to burn the brush pile the same day that it is built, but we recognize that that is not always possible. In some cases, particularly due to weather conditions, it is also not always the safest option. In counties that have additional weather restrictions, you are usually burning the piles later on.

If the brush pile is not being lit that day:

- Densely packing will allow you to get more brush into a single pile. It may discourage animal habitat. Fewer piles are less unsightly. Follow similar guidelines to build a compact brush pile as you would if you were planning to burn the pile the same day, including:
    - Start with smaller material for the base of the brush pile.
    - Cut off side branches of limbs so they'll stack more easily.
    - Periodically compress the pile by placing heavier branches on top. You may push on the pile to compress it, but only if there is no fire!
- You may consider covering it with a tarp if rain or snow is anticipated.
- When you do come back to burn it, care must be taken to make sure no animals have taken refuge in it during months that the animals will be moving from shelter to shelter – late fall and early spring. This includes animals who may not be visible (snakes, for example) because they have burrowed in the ground beneath the brush pile. Moving the brush to a new site, drastically disturbing the brush pile and starting at one end are several options that help minimize any destruction of animals. In winter, when animals are in another protected space or summer when they are free to move, a simple rustling of the pile will give the animal warning.
- Let agency staff know that you have left a brush pile(s) out there if you don't plan to burn it within a week. Always provide a map of brush pile locations.

IGNITION

Stages of Ignition

Once ignited, pile will move through three stages: initial ignition, middle ignition, and final combustion/smoldering. Be aware of what stage the pile is in at all times. **Do not leave a pile unattended during the initial or middle ignition stages.**

Initial ignition is characterized by:

- High heat
- High flame height
- Complete combustion of the main inner portion of the pile

During this phase, the majority of the fuel is in combustion and accessing the pile with manpower or equipment may not be possible due to intense heat. Never leave the pile unattended in this stage.

Middle ignition is characterized by:

- Unburned material along the outer edges of the pile
- Nearly complete combustion of the main or inner fuels

During this phase unburned material may be carefully relocated to the center of the pile for further burning and the edges of the pile may be condensed from the sides by rake or machine to reduce the ground impact zone. Never leave the pile unattended in this stage.

Final combustion/smoldering is characterized by:

- Ash
- Complete combustion of fuel

During this phase the center of the pile will still be hot, but if material has been properly stacked and condensed during the first two phases the pile should no longer have remaining fuel to burn. It is safe to leave a brush pile burn in the smoldering stage.

A pile that has reached the final combustion/smoldering stage is properly compacted and consolidated so that no large fuels remain. Note that some municipal ordinances require that a brush pile burn is completely extinguished prior to leaving the site.

Lighting a Fire

There are several ways to start the fire. Some agencies will provide the below supplies for ignition (see Appendix D), but volunteers may be expected to provide their own:

- Propane tank or drip torch – pretty foolproof, but heavy to carry
- Matches/grill lighter and paper – most common and often all that is needed
- Bags of dried sticks – most helpful if there has been rain, snow or dew

- Fire-starter log

Things to consider:

- If burning an old brush pile with snow on it, make sure to bring a shovel or broom to remove the snow.
- Place the ignition site on the upwind side so that the flames can help get the rest of the pile started.
- Light in the middle if the wood is very dry to slow down the fire's advance.
- Some people prefer to build the small nucleus fire first, and then build the brush pile on top and around the started fire.

ADDING TO & MONITORING A FIRE

The Brush Pile Burn Boss determines who can feed the brush pile in conjunction with the other site leaders. Everyone that works near the fire should be reminded of a few safety issues at least once at the beginning of the workday and throughout the workday if they aren't following the rules.

- Pay attention to wind direction, and work from the downwind side of the fire.
- Embers can burn holes in clothing. Caution should also be taken by securing long hair.
- Those adding to or working the fire should wear natural fiber clothing (such as cotton and wool) and not those made with synthetics. (Nomex clothing is safest and required by some agencies - see Appendix D). This includes shoes and boots – leather with non-synthetic laces is acceptable.
- Eye protection should always be worn while working around brush piles. Eyeglasses or goggles are highly recommended for all that are adding to the fire, and required for all ages in many agencies (see Appendix D). They are required for youth under 18.
- Some counties have age restrictions on who is allowed to add to the fire (see Addendum D).
- Heavy logs typically require assistance in moving to the pile and putting onto pile.
- Encourage volunteers to lift heavy logs first, and then toss on top rather than trying to lift and toss all in one motion.
- Embers can travel upwards quickly, so remember to look up throughout the burn.
- Do not add poison ivy, poison oak, or poison sumac to the fire! This is an inhalation hazard. Volunteers should check with the Brush Pile Burn Boss if they don't know how to ID these plants. If present, a separate pile should be made and left to decompose.

The Brush Pile Burn Boss also supervises activity near the brush pile site. They are in charge of assuring that:

- There is no horseplay around the fire.
- Everyone stays a respectful distance away from the fire.
- New items are added at an appropriate pace.
- Green wood or rotted deadwood is only added when it is hot!

- Brush should be added to the top, but it is a common mistake for new items to be added at the edges of the fire. Using tools can help place and keep new items on top to prevent the burn from naturally widening, quickly expanding the burn scar. If someone is unable to get the new brush thrown on top, particularly if it is too heavy, it is often necessary to get someone else to help place it properly.
- Weather is monitored and decisions are changed if necessary.
- Fire is closely monitored while workday is active. Reduced monitoring is acceptable when most volunteers have left as the entire workday is closing down and packing up.
- The fire is shut down appropriately, either in an emergency or at the end of workday in collaboration with the Site Steward or Workday Leader.
- Fire is reduced to embers that will not re-ignite.
- Signs are posted to warn people of embers when all volunteers have left if required by their agency (see Appendix D).

A few other hints:

- Buckthorn is resinous and burns well (especially if dead), so it is good to use at the beginning.
- Wood varies in its moisture content. Basswood, willow, and maple are highest in moisture content, sometimes referred to as "wet," harder to start, and smokier, so they should only be added later after the fire is hot enough. Ash is one of the least difficult woods to burn when green.
- All dry, dead wood can be used to start a fire, but basswood, willow, and maple are least useful. Honeysuckle may be difficult to burn by itself.
- Add green wood after the fire is hot to minimize smoke. Live wood always produces smoke, but at higher temperatures there will be less smoke.

SUPERVISION GUIDELINES

MULTIPLE BRUSH PILES

Depending on the number of people cutting during the workday and/or if you have brush piles left from a previous workday, it often makes sense to have multiple brush piles burning at the same time. However, additional piles require more Brush Pile Burn Bosses (or other qualified leaders) to properly and safely monitor the fires.

AMOUNT OF SUPERVISION

The Brush Pile Burn Boss or other leaders in charge of the fires should not be included in the calculation of the number of leaders needed at a workday. The Brush Pile Burn Boss or leaders need to be focused on their responsibility to monitor the fire and the activity around the fire. When dealing with untrained volunteers, it is a best management practice to assign an experienced leader to be the "pile master" when constructing the pile prior to burning.

If you are working with an inexperienced volunteer group, trying to do plant ID, teaching cutting technique, interpreting nature, talking to the public, etc, you cannot also supervise the fire properly. Other qualified leaders need to do those tasks and not the same person who is supervising the fire(s). The fire, while in full strength, needs focused attention.

DISTANCE FACTOR

The general guideline for supervision is a minimum of one person for up to two brush piles within 50 feet of each other. If the brush piles are farther apart, separate qualified leaders need to be assigned to each.

As long as there is at least one certified Brush Pile Burn Boss on site, you can "draft" other volunteers (ex. assign two leaders and the Brush Pile Burn Boss splits his/her time between the two fires). If there are no other qualified leaders in the work group to "draft" (ex: you're leading a group with one teacher and 25 teenagers), having volunteers build a secondary "feeding" pile while you are burning the first one is a better practice than starting more fires than you can manage at the same time.

YOUTH FACTOR

If you intend to burn while a youth group under 18 is present, it is best to err on the side of extra supervision. Making sure that the fire is added to properly and safely, that clothing, footwear and eyewear are appropriate, and any other safety issues require more attention with youth groups than with adults. You may be able to "draft" an adult leader from their group to help supervise, but not always. If the group leader has other interests, distractions, priorities, or duties of their own (ex: grading papers on the bus) or are being used as an ID resource, they may not be able to give enough focus to safety.

If it is an individual youth(s) with their parents (not a youth group), it is the parent's responsibility to provide that extra supervision of their own kids. It should be noted that some agencies do not allow youth under the age of 18 to be present during a brush pile burn (see Appendix D).

ALTERNATIVE PLANS

If you don't have enough leaders actually leading at a workday, let the burn happen at a later time. Safety and being able to properly monitor everything that is going on at a workday are more important than getting the pile burned. A few options would be:

- A couple of volunteers can decide to stay and do the burn later in the day when the inexperienced group has left
- The piles can be left to be burned on another scheduled workday with more experienced volunteers
- Contact agency staff to schedule a Brush Pile Burn Boss and at least one other volunteer during that same week
- Contact agency staff to see if they are available to burn.

Although we certainly like to see the brush piles get burned on the same day, we do not recommend sacrificing safety to accomplish that.

ENDING THE WORKDAY

EXTINGUISHING THE FIRE

The Site Steward and Brush Pile Burn Boss determine the point in time when to stop feeding the fire. A live fire cannot be left even if it appears to be small and safe. Remember – **you cannot leave until the pile is safely in the smoldering stage!!!** The monitor needs to stay at the site until it is just embers that if left undisturbed will not re-ignite. This includes consideration for wind conditions. At that point, a Hot Coals sign is posted (see Appendix C).

Additionally, some municipal ordinances require that a pile is completely extinguished prior to leaving the site. Do not plan a brush pile burn if you have commitments immediately afterward.

STUMPS

Stumps should be left in a safe condition (as close to the ground as practical). For both safety and aesthetic reasons, there should be a plan in place to get the stumps flush cut (no higher than 2 inches).

Agency staff recognizes that snow depth, availability of a chainsawyer, and also the type of group that is cutting may make that difficult to achieve immediately.

Non-snow situations:

- Cut anything 1” dbh (lopper size cut) and smaller flush to ground
- If the group is unable to flush cut (ex. anything greater than 1” dbh or a multistem clump), cut it at waist height (30-36”) as opposed to leaving the stumps at a low height, which can cause a tripping or impaling hazard.

Snow conditions:

- Select a site away from trails or other highly trafficked areas where high stumps could be a concern or danger to the general public.
- Select a site with larger specimens rather than areas with many small specimens.
- Cut at waist height (30-36”) and monitor snow depth at work area.
- Schedule a chainsaw crew as soon as snow and ground conditions permit.
- For aesthetic reasons, extra care is needed with herbicide bark treatment so that herbicide doesn’t discolor snow.

DECISION ON CHIPPING

If an area is accessible to an agency staff vehicle (ex. near a bike path, multi-purpose path/trail, or parking lot) and is smoke sensitive, chipping may be an option. Contact agency staff in advance, and staff will be scheduled to address the brush generated after the workday. If it is a day of decision, notifying after the fact is acceptable. Ideally, we would like to chip the brush as soon as possible because of appearance.

If arranging brush to be chipped, lay it out to make it as easy as possible for someone to grab the brush and put it in the chipper:

- Cut ends should face the road or trail so they can be grabbed and fed into chipper in one motion.
- Cut ends should be at the curb or about 1 ft in from a trail or path.
- Brush should be spread out to decrease piling and entanglement.

REPORTING

COMMUNICATION TO YOUR AGENCY

Each agency requires advance notice of brush pile burns. The specific processes for scheduling, notification, cancellations, and post-burn reporting are outlined in Appendix D.

COMMUNICATION TO OTHER AGENCIES & ENTITIES

A record of the notification to internal and external contacts is done via Burn Notification Sheets. This includes all parties that are notified of a brush pile burn via email, phone call, or weekly report. This information is listed on the burn notification sheet so that the Site Steward and Brush Pile Burn Boss can answer any questions on notification from the public or from any authorities that may show up at the burn site.

BURN

NOTIFICATION SHEETS

Every site has a unique Burn Notification Sheet. These are "living" documents, as parties asked to be included or to be removed from the list from time to time, jurisdictional boundaries change, and phone numbers change. Requests to be added or deleted from the list should be given to agency staff so they determine if the action is appropriate or necessary.

There are similar forms for Prescribed Burns that need to be updated in parallel to brush pile burns so it is important that Site Stewards let the agency staff know about any requests for changes.

An example Burn Notification Sheet is below:

BRUSH PILE BURN NOTIFICATION TRACKING FORM

Site Number	Site Name	Site Location	City	Workday Date
1301	River Trail Nature Center	3120 Milwaukee Ave	Northbrook	
Site Contact		Cell Phone	Home Phone	
Director			847-824-8360	

Contact Information				Pre-Burn				Post-Burn			
Name	Method	Timing	Phone # / Website	Initials	Date	Time	Contact's Name	Initials	Date	Time	Contact Name
POLICE FPCC ~ Dispatch	Call	Day of	708-771-1001								
POLICE ~ Northbrook	Call	Day of	847-724-5750								
FIRE ~ Northbrook	Call	Day of	847-272-2121								
AIRNow ~ US EPA	Website	Day of	airnow.gov				AQI =	Notes:			
NOAA ~ Nat'l Weather Service			nws.noaa.gov				Wind =	Notes:			
Forest Preserve Commissioners, Administrators, Police, Directors and Staff	Email	Thurs		Volunteer Resources							
Cook County Dept of Environmental Control	Email	Thurs									
Illinois EPA	Email	Thurs									
Chicago Dept of Health	Email	Thurs									
INPC, IDNR, Dept of Homeland SEM	Email	Thurs									
Goslin – 14th	Email	Thurs									
St John's Church (Sunday)	Call	Day of	847-296-5727								
Glenbrook Comm Pre School	Call	weekday	847-699-9298								

AQI Air Quality--- http://www.airnow.gov/index.cfm
Weather ---------- http://www.weather.gov

In case of a medical emergency or criminal activity, call 911. Give your location and clear directions and designate personnel to direct responders when they arrive.

In the event you need assistance with suppression of a brush pile or snag please contact FPCC Police dispatch at 708-771-1001. FPCC dispatch will contact the appropriate FPCC staff to deal with the situation. Please remain on scene until staff arrive. Follow-up with John McCabe via email at john.mccabe@cookcountyil.gov

VolRes 06-25-12

TROUBLESHOOTING COMMUNICATIONS & SCHEDULING

There are many reasons a burn could not be completed on the day originally scheduled. Some of the reasons are:

- Weather issues – red flag day, rain
- Not enough leaders to manage both the fire and the cutting
- Not enough time to let the fire burn down before volunteers have to leave
- Volunteers were extra productive and fire could not keep up with amount
- Inappropriate group of volunteers to burn with – small children

Some agencies required notification when cancelling a brush pile burn. If a burn needs to be cancelled, provide agency staff with the following information:

- The reason the burn was cancelled

- Revised date for the burn (if rescheduling)
- Request for agency staff to burn the pile (if not rescheduling)

The rescheduled burn requires staffing of at least one Brush Pile Burn Boss and one other volunteer. Specific policies regarding cancelling a brush pile burn are available in Appendix D.

COMMUNICATING WITH THE PUBLIC

There is a lot of opportunity to educate the public when they stop to ask what the group is doing. To much of the public, green is always good, especially green trees and shrubs like buckthorn. This might be a good opportunity to engage any interested visitors in a discussion of invasives - for example, most people understand pulling herbaceous weeds like garlic mustard better than tree and shrub removal.

EDUCATION

When members of the public walk by a site and wonder what is happening, take the opportunity to share information with them about restoration, such as:

- If part of the site has been restored, show them the "after" effect of restoration by asking them to compare how the two areas look.
- Inform them about invasive (including natives) species vs. natives. Tell them that invasives have an unfair advantage and what you are doing is just returning the advantage to the natives. Most people can relate to weeding a garden so that the desirable plants can grow.
- Explain how our ecosystems are fire dependent based on natural fires and how Native Americans historically used fire. You are substituting mechanical brush removal with what fire would have removed had it been allowed to continue.
- Explain that a healthy woodland allows people and animals to move through it and allows light to the forest floor, which isn't possible with heavy brush.

In some cases, members of the public will have a negative view and share it with you. However, if the public involvement becomes difficult and confrontational, education and positive engagement may not be possible. In these scenarios:

- Call agency staff or police and ask for their assistance with any members of the public who are interfering with the workday (see county-specific contact information in Appendix D).
- Take a work break until police arrive if you are uncomfortable.
- Be aware that protestors cannot take pictures of any youth under 18 without parental consent. You can let them know that it violates state law.
- Protestors must keep at least 30 feet away from the worksite by law.
- Do not argue with or confront anyone.

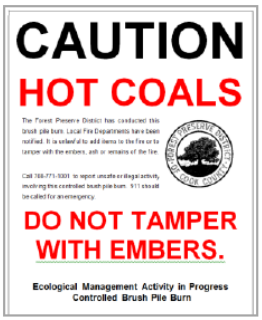
If you feel that your safety is being threatened, extinguish the fire and walk away. It is not worth your safety.

SIGNAGE

Agency staff may have signs available for you to use at workdays (see Appendix D). Each site should have enough signs to use appropriately. Typically some kind of signage is required, particularly if your worksite is near a trail.

Hot Coals signs alert the public and staff (such as police) that the embers that remain are the result of a managed, planned fire, and the conditions are safe if left undisturbed. It serves two purposes:

1) That the fire is not called in to agency staff, municipal police, or fire departments unnecessarily
2) That people don't touch or walk on the hot embers.



Hot Coals

Restoration Site Sign

IMPACT ON WILDLIFE

When working in a natural area, all of us must be cognizant of the fact that we are working in the habitat of wildlife. The long term result of our work is an improved habitat for wildlife; however, the short term effect can be disruptive and harmful to them. We take care to minimize harm to individuals within the species.

Brush piles are attractive homes to many of our woodland wildlife. If brush piles aren't burned or chipped right away, wildlife may have settled in. The best way to avoid potential negative impacts to wildlife is to move a brush pile that has been left more than a day or two. It gives wildlife ample opportunity to vacate and move on. If that isn't practical, disrupting the brush pile with movement may give the wildlife sufficient warning. Also, starting the fire at one end of the pile may also give them enough warning.

Knowing what species of wildlife are found in your area is helpful. Learning about their behavior patterns, including seasonal patterns, will help you make decisions that impact them the least. Seasonal changes determine when they are establishing shelter. What might be safe to do in late spring and summer when they are active, moving from place to place, may be harmful in late fall when they are approaching a more dormant stage and looking for winter shelter. Once winter shelter has been established, it is less likely that new winter shelter will be sought. Burning piles that have been created during the winter months is usually without wildlife risk.

Wildlife at most risk are the ones unable to vacate quickly. Examples include the young or injured who may not be able to vacate on their own or cold blooded reptiles who may be sluggish and unresponsive on cold days. Hornets and wasps can also be found nesting in the brush pile.

If there is a discovery of a bird nest during the workday, it is important to move the work to a different area, except during the winter season. All native birds, especially threatened and endangered, are protected during the nesting season by law (refer to Illinois Wildlife Code for state guidance). Non-native species such as starlings, pigeons and house sparrows are not protected. Generally April through July is recognized as nesting season in northern Illinois, although it varies by species.

Disturbance of the brush or the fire may startle and cause a surprise response from wildlife. Take caution and be extra aware!

If you have any questions about leaving brush piles and the effect it has on wildlife, talk to agency staff. Although time tables and guidelines are helpful, decisions need to take into account current weather trends, site conditions, and wildlife behavior patterns.

Any brush piles not burned or chipped within one week should be reported to agency staff.

AESTHETICS

Be aware of public perception regarding aesthetics of the site. The long term aesthetic improvement of an area outweighs the short term look of an area. Piles of brush and burn scars are not attractive, but they are necessary to reach our goal. The following can minimize negative perception:

- Raking over burn scars and dispersing ash.
- Deep raking and seeding burn scars after you no longer are using them.
- Limiting the number of unburned brush piles.
- Keeping brush piles to be burned out of plain sight, particularly near trails.

TROUBLESHOOTING & ESCAPED FIRE

Even if you follow all safety rules, an occasional fire may escape or slop over. **Do not panic!**

- Try to resolve the issue yourself, but do not put yourself or anyone else in harm's way.
- Call for necessary backup as soon as you recognize the need for assistance. Contact agency staff (see Appendix D for contact information).
- Although many situations can be handled by agency staff, if you feel that the local fire departments will be needed, call 911 as well.
- You must wait at the site until agency staff arrive or local authorities take over.
- If a medical emergency arises, call 911 right away.
- Remember when alerting agency staff or local authorities that accurate directions are often difficult in remote areas. It is best to send volunteers out to key points (driveway entrances, trailheads, etc.) to direct emergency responders.

PUTTING IT ALL TOGETHER

PLAN & PREPARE

Report your workday and your plan to burn a brush pile to agency staff ahead of time, in accordance with county-specific procedures (see Appendix D).

Before starting your workday, come prepared by checking the weather in the morning and decide on the necessary tools/supplies to lead a safe workday. Dress appropriately, and make sure to have enough personal protective equipment for your volunteers. As John McCabe, Director of Resource Management for the Forest Preserves of Cook County, says, "I'd rather bring a tool and not need it than need another tool and not have it."

Ground truth the site, and determine the best location for the brush pile by considering all of the factors:

- Wildlife habitat
- Desirable trees and herbaceous species to be protected
- Burn scar size and proximity to other scars
- Smoke movement
- Safety and perception of other site users

Notify all agencies listed on the Brush Pile Burn Notification Sheet prior to igniting the pile. If required by your agency, place appropriate signage to notify the public of smoke or workday activities.

HAVE A SAFE WORKDAY

Start your workday with a safety talk so that everyone is on the same page about how to behave around a brush pile burn. During the workday, continuously monitor the weather, manage the brush pile burn, and supervise the people around it for safety.

When should you stop feeding the fire? It depends on how big the fire is, the size of the wood being added to the pile, and weather conditions. Bigger logs should be added earlier, since you must wait for them to burn to the smoldering stage before leaving. For example, a 3-hour group workday might look like this:

- 8:00am Ignite the fire and set up for workday
- 9:00am Volunteers arrive, assign roles, and add brush of all sizes to the fire
- 10:30am Stop adding big logs to the fire
- 11:00am Stop adding any branches that are thicker than your wrist in diameter, rake unburnt twigs from edge to the center of the fire
- 11:30am Stop adding any brush
- 12:00pm Volunteers leave, clean up supplies, and rake out big logs from center of ash to edges to cool
- 12:30pm Confirm that fire is in the smoldering stage or extinguish if necessary, leave the site

As you stop adding to the fire, place newly cut brush in piles a safe distance away from the fire, taking wind speeds for the next 48 hours into consideration. Some agencies specify the minimum distance combustible fuels must be placed from the ash pile (see Appendix D).

FINISHING A WORKDAY

Before leaving the site, put up a Hot Coals sign and make all calls according to the Brush Pile Burn Notification Sheet.

CERTIFICATION PROCESS

Certification to become a Brush Pile Burn Boss involves:

- Completion of a Brush Pile Burn class - either in person or online
- Completion of Brush Pile Burn test
- 2 Field Observations by certified stewards, workday leaders, or agency staff
    - Some agencies only allow staff to sign off on field observations (see Appendix D).

After the test is completed, you will be issued a Certificate of Completion with two blank locations for signatures from field observations. Your certificate is not considered complete until a certified trainer signs off on both field observations.

You are responsible for providing a copy of this certificate to any agencies for which you plan to volunteer.

POLICY ON CAMPFIRES

Campfires are not allowed outside of designated areas. Brush pile fires are not the same as campfires, so if they are used as a campfire for cooking, several issues must be considered.

PUBLIC PERCEPTION

Although the stewardship volunteers understand that the fire was initially set for the purpose of managing and removing brush, other site users may not understand that. If you are in an area that is visible from trails, drives, etc. it is highly recommended to not use the brush pile for cooking.

YOUTH EDUCATION

The example that is set by cooking with a brush pile fire could make it easy for youth to assume that ground fires or campfires are acceptable in areas where they are not allowed. Make sure that you are educating youth properly so that they understand that they cannot start fires outside of designated areas. The brush pile fire used as a cooking fire is an exception only available to stewardship workdays.

PROXIMITY TO FIRE

Although the fire might not be as intense when you are using it to cook, it still isn't totally contained, so remember that some of the same safety issues and risk to clothing, skin, etc. still apply. If you're going to cook on a brush pile fire, assign people who are dressed appropriately and who understand the safety considerations to do the cooking.

Also be aware that cooking at the end of the workday may mean that the fire shut down is even later, so make sure you'll have adequate staff available to monitor the fire if it goes later than intended.

ALTERNATIVES

A suggested alternative is to put a small base from a grill over the fire and use the cut wood/twigs as fuel. It doesn't set the wrong example, and it is easier to shut down at the end.

Other sites have done mini-fires on the scoop of a shovel using embers from the fire and additional fuel.

APPENDICES

Appendix A: Illinois Open Burn Permit Example
Appendix B: Burn Notification Sheet Example
Appendix C: Hot Coals Sign Example
Appendix D: County-Specific Policies

1) Forest Preserves of Cook County
2) Forest Preserve District of DuPage County
3) Forest Preserve District of Kane County
4) Lake County Forest Preserve District
5) McHenry County Conservation District
6) Forest Preserve District of Will County

Appendix A: Illinois Open Burn Permit Example

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, DIRECTOR

217/782-2113

OPEN BURNING PERMIT

PERMITTEE

McHenry County Conservation District
Attn: Brad Woodson
18410 U.S. Highway 14
Woodstock, Illinois 60098

Application Number: B1810037 I.D. Number: 111095
Date Issued: October 11, 2018 Date Received: October 10, 2018
Date Open Burning May Begin: One Day from Date Issued
Date Open Burning Must Cease: One Year from Date Issued
Open Burning of: Prairie/Woodland/Wetland for Ecological Management
Location: 46 Sites in McHenry County Conservation District (See Attached)
County: McHenry

Permit is hereby granted to open burn the above-referenced material, subject to the standard conditions attached hereto and the following special conditions:

1. Issuance of this permit shall not exempt this open burning from applicable local restrictions.

2. Section 9(a) of the Environmental Protection Act is applicable to open burning, i.e., persons affected by such open burning may lodge complaints with the Environmental Protection Agency if the burning is injurious to human, plant, or animal life, to health, or to property, or unreasonably interferes with the enjoyment of life or property.

3. Burning shall take place only when wind is blowing away from roadways, residences, railroad tracks and populated areas.

4. Prior to each scheduled burn the Permittee shall notify residences and businesses that may be affected, of the intended open burning activity.

5. The Permittee shall notify and receive prior approval from the local fire protection district at least 24 hours prior to the actual burn.

6. Open burning is prohibited on "Orange AQI or Worse" or "Air Pollution" alert days. Information regarding alert status may be obtained by calling:

For Cook County - 312-744-4365
For Lake, McHenry, Kane, DuPage and Will Counties - 708-865-6320
For Monroe, St. Clair, and Madison Counties - 314-645-5505
between May - September

Or

Check http://www.epa.state.il.us/air/aqi/index.html for the AQI website.

If you have any questions on this permit, please call Floyd McKinney at (217)782-7187.

Raymond E. Pilapil
Manager, Permit Section
Bureau of Air

REP:FEM:mlm

cc: Region 1

Appendix B: Burn Notification Sheet Example

BRUSH PILE BURN NOTIFICATION TRACKING FORM

Site Number	Site Name	Site Location	City	Workday Date
1204	**Linne Woods**	**Dempster – north side; E of Lehigh**	**Morton Grove**	

Site Steward	Cell Phone	Home Phone
Steward	**847-123-4567**	**847-123-4567**

Contact Information				Pre-Burn				Post-Burn			
Name	Method	Timing	Phone # / Website	Initials	Date	Time	Contact's Name	Initials	Date	Time	Contact' Name
POLICE FPDCC ~ Dispatch	Call	Day of	708-771-1001								
POLICE ~ Morton Grove	Call	Day of	847-470-5208								
FIRE ~ Morton Grove	Call	Day of	847-470-5242								
FIRE ~ Red Center	Call	Day of	847-724-5700								
Glen Grove Equestrian	Call	Day of	847-966-8032								
Freedom Woods Equestrian	Call	Day of	847-967-9800								
AIRNow ~ US EPA	Website	Day of	airnow.gov				AQI =	Notes:			
NOAA ~ Nat'l Weather Service			nws.noaa.gov				Wind =	Notes:			

Forest Preserve District Commissioners, Administrators, Police, Directors and Staff	Email	Thurs		Volunteer Resources							
Cook County Dept of Environmental Control	Email	Thurs									
Illinois EPA	Email	Thurs									
Chicago Dept of Health	Email	Thurs									
INPC, IDNR, Dept of Homeland SEM	Email	Thurs									
Silvestri – 9th	Email	Thurs									

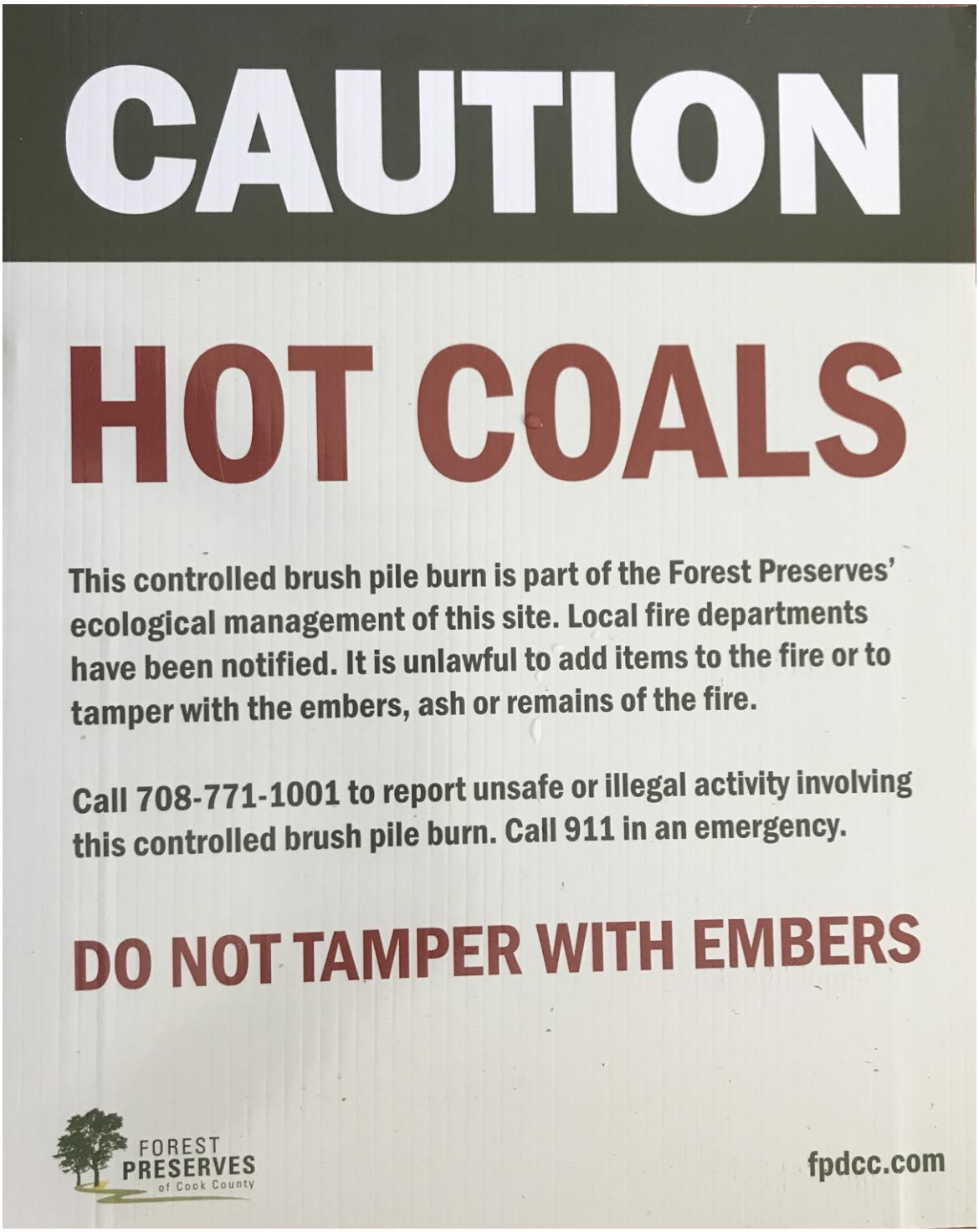
AQI Air Quality--- http://www.airnow.gov/index.cfm
Weather ---------- http://www.weather.gov

In case of a medical emergency or criminal activity, call 911. Give your location and clear directions and designate personnel to direct responders when they arrive.

In the event you need assistance with suppression of a brush pile or snag please contact FPDCC Police dispatch at 708-771-1001. FPDCC dispatch will contact the appropriate FPD staff to deal with the situation. Please remain on scene until staff arrive. Follow-up with John McCabe via email at john.mccabe@cookcountyil.gov

VolRes 06-25-12

Appendix C: Hot Coals Sign



Appendix D: County-Specific Policies

Disclaimer Statement

This content is provided for informational purposes only and does not include policies for all organizations utilizing brush pile burning in the Chicago region. Please refer to your organization's policies regarding brush pile burning.