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Before you burn

TAKE FIVE

Don't let your fire get out of Hand!

A GUIDE TO SAFE BURNING

TAKE FIVE

A GUIDE TO SAFE BURNING

Before You Burn...

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South Carolinians have used fire as a tool since colonial times. Fire is extremely important in wildlife and forest management; it still has a legitimate role in some areas of waste disposal. **The use of fire is a privilege, a privilege that could be lost unless we burn safely.**

THINK BEFORE YOU STRIKE!



1. Are there reasonable alternatives to burning?

Before burning debris, evaluate the situation carefully. Are there gullies on your property where debris could be used productively for erosion control? Would it be safe and practical to simply let the debris decay in place? Is there a landfill or public burning site available?

2. What are your capabilities?

Make absolutely sure that your ability and resources are adequate for the burning you wish to do. Here are some things to consider:

- a) Availability of appropriate tools and equipment
- b) Availability of persons to help with the burning
- c) The amount of time you have available to tend the fire
- d) Your physical condition

Don't overestimate your capabilities! It is far better to have more resources than you need: **always err on the side of safety!**

3. What risks will be associated with your burn?

Most human activities involve some risk, and success usually depends on how well we identify and deal with the potential danger. Here are some situations which may increase the danger associated with your burn:

- a) Large piles which will produce great heat and smoke
- b) Heavy logs and stumps which will burn and smoke for a long time
- c) Piles near homes or other structures
- d) Burning site near roads, occupied homes, or businesses
- e) Branches overhanging the burning site
- f) Other flammable outdoor fuels nearby, *ie* grass, dry leaves, etc.

Many risks can be eliminated or minimized with a little extra effort. This includes conducting the burn under favorable weather conditions. If you have doubts about the risk involved, call your local County Ranger for assistance.

4. For burning woodland acreage, have a written plan.

Prescribed burning of woodlands requires careful planning by someone experienced in fire behavior. A written plan should be prepared to outline the purpose of the burn, acceptable weather conditions, placement of fuelbreaks, equipment and personnel needed, and burning procedures. Prescribed burning planning is available through the S.C. Forestry Commission and many private forestry companies.

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There are four types of laws and regulations you must comply with anytime you burn. These are: SC Forestry Laws, DHEC regulations, county or local ordinances, and civil laws. This booklet provides a brief overview of such requirements. If you have questions, check with the proper authority before burning.

SC FORESTRY LAWS

These state laws regulate the use of outdoor fire except within corporate limits of towns and cities. They require that anyone planning to burn must first obtain authorization from the Forestry Commission.

Authorization is granted based on the requestor's statement that adequate precautions have been taken to insure the fire will not escape. This includes preparing a satisfactory fuel break around the burning site, having adequate tools and equipment available to control the fire, and agreeing to monitor the fire constantly until it is burned out.

Authorizations will not be granted for any burn if smoke from the fire will create an obvious health or safety problem.

Under state law it is illegal to allow your fire to spread to someone else's property; it is also illegal to intentionally burn someone else's property without permission.

LOCAL ORDINANCES

Counties, towns, and some fire districts have additional ordinances or regulations that apply to outdoor burning. Check with your local fire department for specific information on these.

Burning Laws

CIVIL LIABILITY

Under civil law you may be held responsible for any damage you cause to someone else or their property. If your fire or smoke results in personal injury or property damage, the injured party may sue for restitution in civil court.

DHEC REGULATIONS

The Department of Health and Environmental Control is responsible for protecting air quality and insuring that health and safety requirements are observed. Among other things, their regulations specify:

1. That forestry, wildlife, and agricultural burning is done according to South Carolina Smoke Management Guidelines.
2. That household trash may be burned only if disposal services are not available. Such burning must be at least 500' from any inhabited building.
3. That waste material from construction may be burned on site, but not within 500' of any occupied structure on adjacent property. Materials that create heavy smoke (oils, asphaltic material, natural or synthetic rubber may not be burned.)
4. That land-clearing debris burns must be at least 1000' from public roadways, residences, or businesses. Burning must be done between the hours of 9:00 am and 3:00 pm on days when smoke will not carry into smoke sensitive areas. Only plant material may be burned; the number and size of piles is limited.
5. That no burning may be done which violates other State or local requirements.

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CHECK

The weather is one of the most important factors in a safe successful burn. Fire weather forecasts and smoke management forecasts are available daily through NOAA weather radio and SC Forestry Commission installations.

Almost every aspect of weather has a bearing on how your fire will behave, but the most significant factors are wind and relative humidity.

Wind speed has a direct effect on how fast a free-burning fire will travel in a given fuel type, *ie* the greater the wind speed, the faster a fire will spread. As the wind speed increases, there is a greater chance of sparks being blown across your firebreak into areas you don't wish to burn. Wind also tends to dry out fuels, making fires burn more intensely.

Relative humidity is a measure of how much moisture is in the air. The moisture content (and flammability) of fine fuels like dead grass, pine straw, and leaves is directly affected by humidity. When the humidity is high (70-100%), fine fuels absorb moisture from the air, thus reducing their flammability.

When the humidity is low (less than 25%), fine fuels dry out quickly and burn readily. Low relative humidity also increases the chances that windblown sparks will set unwanted fires.

CAUTION: HIGH WINDS OR LOW RELATIVE HUMIDITY ARE DANGER SIGNS WHEN BURNING.

the Weather

You should also be conscious of how long it has been since the last rain. About three days after a rain is usually a good time to burn. If it has been a week or ten days since the last rain, you may wish to postpone burning until a safer time.

Managing your smoke is just as important as managing your fire. Any Forestry Commission office can provide current smoke management information, but here are some general rules:

1. Don't burn if the wind will carry your smoke onto roads, airports, or occupied buildings. Sometimes smoke will also flow downhill or downdrainage, so consider the terrain as well as the wind.
2. Don't burn if the atmospheric conditions will prevent your smoke from dissipating quickly.
3. Don't burn when an atmospheric inversion is predicted. Inversions commonly occur during the evening and at night. It's a good general rule to have your fire completely burned out by sundown.

NOTE: ANY FORESTRY, AGRICULTURE, OR WILDLIFE BURNING MUST COMPLY WITH SOUTH CAROLINA SMOKE MANAGEMENT GUIDELINES.

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In order for a fire to spread it must have a continuous source of fuel. A fuel break is a cleared strip that goes all the way around the area to be burned. The width of the strip depends on the material to be burned, the wind speed, the relative humidity, and the dryness of surrounding fuels. The fuel break must be **completely** clear of flammable material. Always construct your breaks before starting the fire.

Clearing a fuel break for a small debris pile can be done with hand tools like rakes, shovels, or hoes. Don't leave piles of flammable material at the margin of your break; scatter it over the area outside the break or add it to your debris pile.

Fuel breaks for burning large areas like agricultural fields or woodland acreage are usually done by machine. For field burning, a farm tractor and disc can be used to plow a

Break Around The Site

break around the margin of the field. Fuel breaks for burning woodland acreage should be constructed as specified in your prescribed burning plan.

Regardless of method, fuel breaks must be wide enough to contain the fire and must be clear all the way down to mineral soil.



REMEMBER: STATE LAW REQUIRES ADEQUATE FUEL BREAKS FOR ALL OUTDOOR BURNING. If you aren't sure about your fuel breaks, call your County Ranger.

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Keep ● Fire Control Tools Handy

By the time you're ready to actually start your fire, you should have taken all the precautions already discussed in this book. You know you're in compliance with all the safety laws, you know that the weather conditions are right for safe burning, and you have prepared an adequate fuelbreak around the site. In theory, your burn will be textbook perfect and you have no need for fire control tools.

Don't bet on it. **Remember Murphy's Law: If something *can* go wrong, it *will*.** Weather forecasts can be wrong, weather conditions can change without warning, or you may have overlooked something in your preparation. Always be ready for the worst to happen.

Tools necessary for burning a small pile of debris or leaves include a rake, hoe, or shovel and a water hose or water bucket. For large jobs like forest acreage or land clearing debris you may need more specialized equipment like tractors with plows or blades, backfire torches, fire rakes and swatters, backpack pumps, and an experienced crew.

NOTE: HAVE TOOLS READY BEFORE STARTING THE FIRE

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5.

Stay With Your Fire

There is an old saying among people who use fire that burning consists of hours of boredom, punctuated by moments of sheer terror. It is easy to become lulled into a false sense of security when your burn is going well, but a safe burn requires constant vigilance.

What to do with your time while the fire is doing its work? Here are a few suggestions:

1. Re-pile unburned material in debris piles so it will be more completely consumed.
2. Patrol and improve firebreaks while forested acreage is being burned.
3. Burn out islands that may be left in forest and field burns.
4. Watch for sparks which may carry fire out of your burn area.
5. Monitor smoke constantly.

Always be alert for changes in weather which can affect fire behavior.

IF . . .

your fire begins behaving erratically...

smoke begins to drift toward sensitive areas...

you have any doubts about safety...

PUT THE FIRE OUT IMMEDIATELY!

**DON'T LET YOUR FIRE
GET OUT OF HAND!**

South Carolina
Forestry Commission Offices

CAMDEN DISTRICT OFFICE 432-3181
P.O. Box 457
632 Dekalb Street
Camden, S.C. 29020

FLORENCE DISTRICT OFFICE 669-8685
P.O. Box 1765
U.S. Hwy. 52N, 1 1/2 N I-95
Florence, S.C. 29503

KINGSTREE DISTRICT OFFICE 382-8761
P.O. Box 509
State Road 159
Kingstree, S.C. 29556

NEWBERRY DISTRICT OFFICE 276-3823
P.O. Box 129
Highway 34 & Henderson Road
Newberry, S.C. 29108

ORANGEBURG DISTRICT OFFICE 534-3543
P.O. Box 1223
550 Henley Street NE, Room 106
Orangeburg, S.C. 29116

SPARTANBURG DISTRICT OFFICE 583-3438
725 SC Highway 56
Spartanburg, S.C. 29302

WALTERBORO DISTRICT OFFICE 538-3708
P.O. Box 278
Sidneys Road
Walterboro, S.C. 29488

MANCHESTER STATE FOREST 494-8196
Route 1, Box 35
Highway 261
Wedgefield, S.C. 29168

SAND HILLS STATE FOREST 498-6478
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