

## MEMORANDUM OF UNDERSTANDING

among the  
Georgia Department of Natural Resources  
Environmental Protection Division,  
Georgia Department of Natural Resources  
Wildlife Resources Division  
and the  
Georgia Forestry Commission

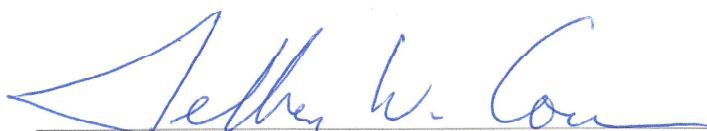
This agreement made and entered into on the 1<sup>st</sup> day of May 2025, by and among the Georgia Department of Natural Resources Environmental Protection Division (hereinafter referred to as EPD) and Georgia Department of Natural Resources Wildlife Resources Division (hereinafter referred to as WRD) and the Georgia Forestry Commission (hereinafter referred to as GFC).

Whereas, EPD, WRD, and GFC, recognize the critical importance of prescribed fire for resource management and the resulting benefits to forestry, wildlife, and agriculture; and

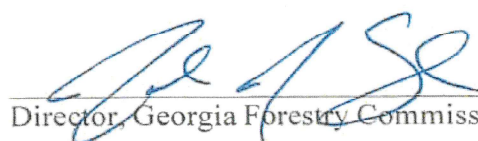
Whereas, EPD, WRD, and GFC, recognize the importance of minimizing the public health and environmental impacts of smoke intrusion into populated areas from prescribed fires; and

Whereas, EPD, WRD, and GFC, in cooperation with federal and private partners, have developed a "Basic Smoke Management Plan, dated May 1, 2025" (Exhibit A).

Now, therefore, in consideration of the mutual benefits to each party hereto, the parties agree to implement the "Basic Smoke Management Plan, dated May 1, 2025". This Agreement shall become effective as soon as signed by all parties. Any party has a right to terminate this agreement upon six (6) months' notice.

  
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Director, Environmental Protection Division

  
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Commissioner, Georgia Department of Natural Resources

  
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Director, Georgia Forestry Commission

Attachment: Exhibit A

# BASIC SMOKE MANAGEMENT PLAN

May 1, 2025



*Prepared by:*

Georgia Forestry Commission, Georgia Department of  
Natural Resources – Environmental Protection Division,  
and Georgia Department of Natural Resources – Wildlife  
Resources Division

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## INTRODUCTION

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This Smoke Management Plan (SMP) details Georgia's basic framework of procedures and requirements for managing smoke from prescribed fires. The Georgia Department of Natural Resources and the Georgia Forestry Commission developed this plan with cooperation from Federal military installations located in Georgia, Federal land managers associated with the United States Fish and Wildlife Service, the United States Forest Service, the National Park Service, and groups and associations representing environmental interests or private individuals in Georgia. "The Interim Air Quality Policy on Wildland and Prescribed Fires"<sup>1</sup> and the draft Environmental Protection Agency (EPA) guidance document, "Elements of a Smoke Management Program,"<sup>2</sup> were used to structure the elements of this SMP. The Interim Policy addresses how best to achieve national clean air goals while improving the quality of wildland ecosystems through the increased use of prescribed fire. The Georgia Department of Natural Resources (DNR) and the Georgia Forestry Commission (GFC) are cooperatively responsible for administering this SMP.

The purposes of this SMP are to implement EPA's policy: to minimize the public health and environmental impacts of smoke intrusion into populated areas from fires that are managed to benefit resources or the environment; to avoid significant deterioration of air quality and potential National Ambient Air Quality Standards (NAAQS) violations; and to avoid visibility impacts in Class I areas while providing the citizens of the State of Georgia with healthy air and ecosystems. Additionally, for instances when emissions from a prescribed fire may qualify as an exceptional event, the EPA has stated that a state must demonstrate that a certified SMP was in place at the time of the event, or the state must ensure that the burner employs basic smoke management practices. Implementation of this SMP will, therefore, also facilitate the flagging and other treatment of ambient monitoring data under the Exceptional Events Rule.<sup>3</sup>

Georgia's economy is heavily supported by agriculture and forestry. Both of these key industries utilize prescribed burning to cultivate products needed by the nation and the world. In addition to managing forests and agricultural resources, prescribed burning helps protect lives and property by reducing accumulations of forest fuels and sustains and recovers imperiled species and ecosystems as listed in Georgia's State Forest Action Plan (SFAP) & Wildlife Action Plan (SWAP).

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<sup>1</sup> U.S. PEA, April 23, 1998

<sup>2</sup> Draft three, U.S. EPA, December 31, 1997

<sup>3</sup> 40 CFR 50.14 and 51.930

Many of Georgia's forests are managed for the habitat provided to wildlife and for ecosystem services provided to people. Prescribed burning promotes healthy forests which in turn provide clean air, clean water, and conserve soil as well as provide recreational opportunities for Georgia's citizens and visitors. Prescribed burning is necessary to maintain healthy ecosystems and to meet requirements of the Federal Endangered Species Act. For example, the red cockaded woodpecker is Federally endangered, and Federal property managers must use prescribed fire to enhance its recovery. Prescribed fire is an important tool to maintain habitat for popular and economically important game species, such as the northern bobwhite, wild turkey, and white-tailed deer. Many native animals and plants are dependent on habitats maintained by fire. Fire plays a vital role in statewide wildlife management goals and has been recognized as one of the highest priority conservation actions in the SWAP.

Prescribed burning is acknowledged as a valuable risk reduction strategy for communities, helping to prevent longer lasting and more intense wildfires, along with the associated smoke. This method is essential for effective forest management, supporting vital infrastructure in FEMA's Water and Energy sectors. In Georgia, forests managed with prescribed fire contribute more than \$42 billion to the economy. The advantages of prescribed burning are also highlighted in Georgia's SFAP and strategic plan, aimed at conserving working forest landscapes, safeguarding forests from harm, and enhancing the public's benefits derived from trees and forests.

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## I. AUTHORIZATION FOR PRESCRIBED BURNING

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The Georgia General Assembly recognizes that the forestlands and resources of the state are natural resources of great economic value to the citizens of the state and that prescribed burning is a resource protection and land management tool which benefits the safety of the public, Georgia's forest resources, the environment, and the economy of the state. The Assembly enacted the *Georgia Prescribed Burning Act*<sup>4</sup> to authorize and promote the continued use of prescribed burning for community protection and for silvicultural, environmental, and wildlife purposes. The legislature understood that, as the State's population continues to grow, concerns about liability and smoke nuisance complaints could cause prescribed burn practitioners to limit burn activity and reduce the benefits to the State. The *Prescribed Burning Act* tasks GFC with training prescribed burn practitioners, promoting prescribed burning with the public, and protecting prescribed burning from restriction by local ordinances.

Prescribed burning is also regulated in Georgia under the *Georgia Forest Fire Protection Act*.<sup>5</sup> Burn permits are required from GFC for all prescribed fires except agricultural burning for cultivated crops, improved pastures, and orchards (which is notification only). According to the *Georgia Forest Fire Protection Act*, all forest fire protection work is under the direction of GFC. The Act gives GFC the authority to go on any land for the purpose of preventing, controlling, or suppressing any uncontrolled fire. An aggressive State wildfire suppression policy has contributed substantially to protecting air quality in Georgia.

Prescribed burning helps achieve many desired resource objectives and can be used to minimize the emissions and adverse impacts of smoke on public health and the environment by reducing fuel loads that can lead to catastrophic wildfire. The *Georgia Air Quality Act*<sup>6</sup> is designed to preserve, protect, and improve air quality, to control emissions in order to prevent the significant deterioration of air quality, and to attain and maintain national ambient air quality standards (NAAQS) set by the US Environmental Protection Agency (EPA). This Act authorizes the Georgia Environmental Protection Division (EPD) to issue rules regarding air quality, including the authorization to regulate prescribed burning when subject to the Federal Clean Air Act. Air pollutants of concern from prescribed fire include emissions of precursors for ozone and primary and precursor emissions of particulate matter. Georgia EPD's open burning regulations<sup>7</sup> prohibit all open burning in the State with exceptions, including authorized prescribed burning. Additional restrictions apply to counties that were previously designated as nonattainment areas for the 1979 1-hour Ozone NAAQS and 1997 8-hour Ozone NAAQS, along with counties that were found to contribute to the nonattainment status of designated counties. The rule also places restrictions on counties with a population exceeding 65,000 (as listed in the 2010 Census) that are within the summertime burn restrictions. Furthermore, prescribed burning is restricted on a seasonal basis (depending upon the county) during the summer ozone season in multi-county areas in and around Atlanta, Macon, Augusta, and Georgia counties near Chattanooga, Tennessee.

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<sup>4</sup> Ga. Code Ann. 12-6-145 to 12-6-149

<sup>5</sup> Ga. Code Ann. 12-6-80 to 12-6-93

<sup>6</sup> Ga. Code Ann. 12-9-1 to 12-9-25

<sup>7</sup> Rules for Air Quality Control, 391-3-1-.02(5), "Open Burning"

## A. PERMITTING

The *Georgia Forest Fire Protection Act* requires prescribed burn practitioners to obtain a permit from GFC before initiating a fire. The size, date, type of burn, county location, weather, air quality conditions, and other relevant information are used as criteria to determine if a permit shall be issued. Permits are issued by forest rangers and dispatchers that are trained in fire, weather, and smoke management. According to GFC procedures, all burn projects of one acre, or more are screened to determine if air sheds, or smoke-sensitive populations are threatened. Permits are issued or denied based on smoke management and fire danger. In order for permits to be issued, all the requirements of Georgia EPD's *Rules for Air Quality Control* concerning open burning and GFC's guidelines must be met. Areas specified by Georgia EPD as especially susceptible to violations of air quality standards will be given special attention to avoid issuance of permits during measured or expected high air pollution periods. Such attention will include a regional review of the previous and current days' ambient concentrations for ozone and particulate matter in relation to the NAAQS. Although agricultural burning does not require a permit, notification of GFC is required.

GFC has considerable investment in fire weather/smoke management forecasting, training, public relations, and fire permitting. The GFC uses the National Weather Service (NWS) fire weather forecasting services to evaluate current and forecasted weather conditions to make determinations concerning burn permitting status and evaluating individual burn permit requests. NWS Fire Weather Forecasts are available to the general public through web access and mobile applications. This Fire weather dashboard is also available to the public for smoke management planning. Permitting status and smoke management programs are managed by local GFC field offices.

The following are examples of some of the forecasted meteorological parameters produced by the NWS fire weather forecasting system used in evaluating fire and smoke management on their Fire Weather Dashboard (<https://www.weather.gov/dlh/fwd>):

- Mixing Height (MH) - the thickness of the lower layer of the atmosphere where "mixing" occurs.
- Transport Wind Speed (TWS) - the average of all wind speeds between the surface and the mixing height.
- Fog Potential - estimation of the potential for natural fog. It is a function of cloud cover, probability of precipitation, relative humidity, and wind speed.
- Plume Trajectory - the direction that a smoke plume is expected to travel.
- Turner Stability and Atmospheric Tendency - a measure of atmospheric stability determined from opaque cloud cover, cloud ceiling height, surface wind speed, and solar elevation angle.
- Smoke Dispersion Index (DI) - a measure of the atmosphere's "diluting power." It is a function of the mixing height, transport wind speed, and atmospheric stability class.

- Ventilation Rate - based on multiplying transport wind (knots) by mixing height (feet) and are used by land agency personnel to identify poor smoke dispersal days.
- Low Visibility Occurrence Risk Index (LVORI) - an index for probability of low visibility that is dependent upon relative humidity and the smoke dispersion index.

Explanations of these parameters and other helpful information can be obtained at the GFC website ([gatrees.org](http://gatrees.org))

## B. TRAINING REQUIREMENTS

GFC employees who receive burn authorization/permit requests and notifications are trained to utilize various smoke screening tools, common best practice parameters (e.g., 1650 mixing height etc.), and the full range of smoke/weather parameters and location/proximity to Smoke Sensitive Areas to evaluate burn permit requests on a case-by-case basis. Smoke management parameters are provided on the GFC website ([gatrees.org](http://gatrees.org)). Burn permit requests are evaluated using plume modeling systems to identify specific smoke-sensitive areas within the impact area of the planned burn.

GFC's Georgia Prescribed Fire Manager Certification program (authorized by the *Georgia Prescribed Burning Act* and funded by the *Georgia Forest Fire Protection Act*) includes a module on smoke management. Publications that provide important smoke management guidance for prescribed fire practitioners include:

- *Introduction to Prescribed Fire in Southern Ecosystems*<sup>8</sup>  
([https://www.srs.fs.usda.gov/pubs/su/su\\_srs054.pdf](https://www.srs.fs.usda.gov/pubs/su/su_srs054.pdf))
- *Guidebook for Prescribed Burning in the Southern Region*  
([https://secure.caes.uga.edu/extension/publications/files/pdf/B%201560\\_2.PDF](https://secure.caes.uga.edu/extension/publications/files/pdf/B%201560_2.PDF))
- Smoke Management Guide  
(<https://southernfireexchange.org/smoke-management-guidebook-for-prescribed-burning-in-the-southern-region/>)

## C. INTERAGENCY COORDINATION

The Georgia Department of Natural Resources' Environmental Protection and Wildlife Resource Divisions work directly with GFC to regulate and monitor outdoor burning in the State. The Department of Public Safety and the Department of Transportation work with GFC to minimize negative smoke impacts on Georgia's highways. EPD actively participates in the Visibility Improvement State and Tribal Association of the Southeast (VISTAS) regional planning organization to develop plans for improving visibility in Class I areas in Georgia and nearby states.

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<sup>8</sup> United States Department of Agriculture, Forest Service Southern Region, 2018; Science Update Publication SRS-054

Coordination also occurs among the EPD, GFC, and Federal land management agencies in the State. Although State laws requiring a permit from GFC for prescribed burning generally do not apply to Federal agencies, Federal land managers have policies and management practices in place to conduct prescribed burning in a manner to benefit natural resources while minimizing air pollution.

Lands located in Georgia that are managed by the USDA Forest Service and Department of Interior must be managed by policies that ensure compliance with GFC permit requirements.

The Department of Defense (DOD) installations in Georgia comply with other Federal land and ecosystem management requirements that address prescribed burning and air pollution. These DOD Facilities do not have to have a permit from GFC; however, they do notify GFC on days they are burning.

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## **II. SMOKE MANAGEMENT**

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The goal of smoke management is to reduce the exposure of Georgia's citizens to air pollution, impaired visibility, and nuisance caused by prescribed fire smoke. Use of the basic smoke management guidelines presented in this document will reduce the impact of smoke from prescribed fires on air quality and visibility. The basic principles of smoke management include identifying and mitigating impacts to smoke sensitive areas, minimizing emissions, selecting appropriate meteorological conditions to maximize smoke dispersion, properly evaluating weather conditions prior to burning, giving public notification, and monitoring air quality. By doing all the items just listed, prescribed burners will also foster understanding between prescribed burn practitioners and adjoining communities of planned burning activity.

The following are essential smoke management components that are considered when planning prescribed burns.

### **A. SMOKE MITIGATION**

Smoke mitigation comprises those actions that are utilized to minimize fire emissions. The effects of smoke from prescribed fire can be mitigated, when necessary, by planning burns to minimize impacts on smoke sensitive areas, provide for good smoke dispersion, and utilizing best management practices that manage the quantity of emissions that are released.

#### **1. Minimize Impacts to Smoke Sensitive Areas**

Due caution should be practiced whenever wind will carry smoke to smoke-sensitive areas. Wind direction should be considered to minimize smoke intrusion to smoke sensitive areas, such as populated areas, public roads, schools, nursing homes, hospitals, airports, etc.

The authorizing agent and the prescribed burn practitioner should consider location of smoke-sensitive areas prior to authorizing and initiating a prescribed fire.

Basic smoke management practices include planning and activities before, during, and after the burn. Prior to the burn, use the appropriate tools in the smoke management toolbox. Depending on the complexity of the burn, these may include:

- [VSmoke](#) and the [Simple Smoke Screening Tool](#) show where your smoke is going and how big the impact will be.
- [BlueSky](#), [HYSPLIT](#), or [PB-Piedmont](#) are helpful for smoke screening on higher complexity burns.
- The [Georgia Winds and Air Quality Map](#) shows current wind direction for your area and air quality in the region.
- [AirNow Fire and Smoke Map](#) shows air quality and wildland fires in the region.
- [GFC Public Viewer](#) shows current wildfires and permitted prescribed fires across the state as well as critical smoke and air quality status.

Practices that can help with smoke management during the burn include using ignition patterns that minimize smoke production and maximize lift, finishing ignition early to promote lift, monitoring changing weather conditions and responding to unintended smoke impacts, being aware of smoke watch outs (sea breezes, heavy fuels, large piles, smoldering duff potential), and considering contingency plans to cut burns off if smoke becomes an issue.

Depending on the number and location of smoke sensitive areas, basic smoke management practices after the burn may include: minimizing impacts from smoldering fire using appropriate mop-up standards, ensuring that the weather forecast for the night and the following day are appropriate for smoke management, monitoring down drainage areas the night of the burn, using the LVORl when there are smoke sensitive targets nearby.

## **2. Select Good Smoke Dispersion Conditions**

The *Introduction to Prescribed Fire in Southern Ecosystems*<sup>9</sup> details smoke dispersion index that generally should be used for prescribed burning in Georgia. National Weather Service daily fire weather forecasts predict the dispersion index each morning and update values each afternoon. When smoke-sensitive areas are present and likely to be impacted by smoke, a value above 40 on the smoke dispersion index is desired. Values above 60 are desired for larger burns or if smoke-sensitive areas are in close proximity to the burn.

Atmospheric mixing height, transport wind speed, and atmospheric stability are also important weather factors that influence smoke dispersion. General guidelines are for a minimum mixing height of 1,650 feet; transport winds of at least 9 mph; and a slightly unstable atmosphere.

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<sup>9</sup> United States Department of Agriculture, Forest Service Southern Region, 2018; Science Update Publication SRS-054

However, prescribed fires may be successfully conducted below these commonly accepted parameters depending on proximity of smoke-sensitive areas and the size and type of the area to be burned. The smoke from a prescribed fire belongs to the person that ignited it, and it is his/her responsibility to minimize any potential negative impacts and, in particular, avoid smoke intrusion of smoke-sensitive areas.

Smoke dispersion should be monitored during the burn by the prescribed burn practitioner for any effects on nearby smoke-sensitive areas. The GFC should be notified if problems occur. Practitioners are responsible for negative impact from their smoke and should take steps to mitigate any problems. If there is a possibility that smoke-sensitive areas could be affected, nighttime burning should be conducted under the following best practices: wind speeds are anticipated to be at least 3-5 mph, relative humidity is forecasted to be below 80%, mixing height reaches 1650 feet or higher, the visibility risk index is 7 or lower, and smoke dispersion is rated 7 or above.

### **3. Manage Released Emissions**

Both the timing and the amount of emissions released by a prescribed fire are usually manageable and can help to reduce smoke impacts. The burning technique utilized should be based on atmospheric conditions and total emissions expected to be released to minimize effects on smoke sensitive areas.

One way to reduce total emissions is to reduce the area (i.e., fuels) to be burned. Forest thinning, whole-tree chipping, use of herbicides where appropriate, and mechanical removal or utilization of fuels to achieve desired resource benefits are all potential options. Another effective method to limit emissions is to schedule a burn when some of the forest fuels are not burnable due to moisture content. These options should be considered whenever necessary to prevent smoke intrusion of smoke-sensitive areas.

Where air quality is a concern, other forest management practices should be considered in lieu of burning or as a pretreatment to reduce the amount of smoke from the planned burn.

When EPD's air quality monitors indicate actual exceedances or likely exceedances of air quality standards, EPD and GFC will work together to restrict burning as appropriate.

## **B. SMOKE DISPERSION EVALUATION**

Smoke dispersion evaluation will be the responsibility of the GFC. Using the NWS fire weather forecast, the GFC looks at primary smoke management components of the forecast including surface wind, direction and speed, smoke dispersion index, transport wind speeds, and mixing height. There is also a low-visibility occurrence risk index for predicting visibility problems. GFC employees who issue burn authorizations are trained to follow published guidelines for smoke management.

Burn permit requests are entered into a statewide permit system which allows other GFC field offices to monitor the number, size, and proximity of burn permits within a particular area. Authorizations may be denied or modified to avoid serious smoke impacts.

Georgia's Prescribed Fire Manager Certification Program stresses the necessity of evaluating smoke dispersion and transport winds in the prescribed burn planning process and teaches practitioners how to implement best smoke management practices.

## **C. PUBLIC NOTIFICATION**

Prescribed burn practitioners are encouraged to notify local residents, businesses, and other populated areas that may be impacted by smoke from their prescribed burn. Information provided should include the proposed date, time and location of the burn; contact information for the prescribed burn practitioner who is conducting the burn; and why the area is being burned. For larger fires or fires that may create a special interest from the public, additional notification should be provided through the media. GFC maintains a media notification system where fires in excess of 1,000 acres are reported to the GFC Public Relations Department, which automatically issues a media alert for the affected area. GFC maintains a Memorandum of Understanding with the Georgia Department of Public Safety and the Georgia Department of Transportation whereby all prescribed fires of 100 acres or more are reported for smoke monitoring on Georgia highways.

Partners in the Georgia Prescribed Burn Council, such as USFS, GA Department of Natural Resources, the Nature Conservancy, Tall Timbers, and the Jones Center, also carry out public notifications for prescribed fire throughout the busy fire season. This includes press releases, social media content, and local contacts. Partners also share public notice on smoke and human health impacts through the Department of Public Health. Additionally, GFC provides an interactive [Public Viewer](#) which shows daily permitted prescribed fires, wildfires, current air quality index (AQI), smoke forecast, and surface winds. Additionally, by clicking on the AQI reading on the map or following the links provided on the public viewer you can get more information about air quality including the PM<sub>2.5</sub> readings.

## **D. AIR QUALITY MONITORING**

EPD monitors levels of air pollution, including ozone and particulate matter, across the state. These monitors are located in urban, suburban, and rural locations for various purposes. NAAQS are set by EPA to protect the health and welfare of the population. When the concentration of an air pollutant exceeds the level of a NAAQS, this is considered an exceedance. Scientific studies have linked high levels of particulate matter, especially fine particles, with significant health problems including premature death, respiratory-related hospital admissions and emergency room visits, aggravated asthma, acute respiratory symptoms (including aggravated coughing and difficult or painful breathing), chronic bronchitis, decreased lung function that can be experienced as shortness of breath, and work and school absences. Burning activity can significantly impact the level of particulate matter, both fine particulate matter or PM<sub>2.5</sub> (smaller particles) as well as PM<sub>10</sub> (larger particles).

EPD maintains various types of PM<sub>10</sub> and PM<sub>2.5</sub> monitors across Georgia. The US Fish and Wildlife Service and US Forest Service both maintain fine particulate monitors for tracking visibility conditions in Federally Designated Class I areas in Georgia: Okefenokee Wilderness Area and Cohutta Wilderness Area.

In addition to air quality monitoring, prudent prescribed burn practitioners conduct planning and visual monitoring of their individual projects. Smoke management training is provided in the Prescribed Fire Manager Certification Program with emphasis on self-monitoring and minimizing smoke impact on smoke-sensitive areas. Such visual monitoring by prescribed burn managers can be useful in identifying and avoiding high levels of particulate matter that might be measured at an air quality monitor.

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## **III. PUBLIC EDUCATION AND AWARENESS**

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The Georgia Prescribed Fire Act tasks GFC to promote public education and awareness of prescribed fires. This does not preclude other agencies or organizations from promoting prescribed fire, and they are encouraged to do so. The Georgia Prescribed Fire Council and many other natural resource organizations are strong advocates of prescribed fire and include public education as part of their mission.

GFC delivers multiple prescribed burn manager trainings each year which typically reaches at least 200 candidates of which many become certified burners.

Other public outreach is delivered through school programs, public events such as landowner field days, fair exhibits, expos, Prescribed Fire Awareness Week celebration, and learn-n-burn sessions which provide hands-on assistance and training to landowners who want to conduct prescribed burns.

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## **IV. SURVEILLANCE AND ENFORCEMENT**

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GFC fire patrol aircraft advise local field offices of significant smoke intrusions discovered while on routine patrol flights. GFC rangers discuss smoke intrusions with individual prescribed burn practitioners whenever problems occur. Suggestions to alter the scope of future projects are made. GFC retains the right to void certification of Georgia certified prescribed burners if certain stipulations are not adhered to which may include smoke intrusion into a smoke sensitive area if investigation reveals gross negligence for basic smoke management practices. All outdoor burning is subject to enforcement through local law enforcement officers, GFC investigators, and DNR. The enforcement authority is in the *Georgia Forest Fire Protection Act*, as well as EPD's authority to enforce Federal and State air quality regulations and laws.

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## **V. SMOKE MANAGEMENT PLAN EVALUATION**

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GFC and DNR will collaborate closely with stakeholders to assess this plan as needed, or at a minimum, once every seven years. GFC will share data on outdoor burning, while EPD will provide relevant air quality monitoring information. The Georgia Prescribed Fire Council was established to foster collaboration among prescribed burn practitioners and other interested public and private organizations to meet statewide natural resource objectives, including air quality. DNR and GFC, along with stakeholders, will review the effectiveness of this SMP during Georgia Prescribed Fire Council Steering Committee meetings and make revisions as needed.

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## VI. GLOSSARY

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Air Quality	The characteristics of the ambient air as indicated by concentrations of the six criteria air pollutants for which national ambient air quality standards have been established [i.e., particulate matter (PM), sulfur dioxide (SO <sub>2</sub> ) nitrogen dioxide (NO <sub>2</sub> ) ozone (O <sub>3</sub> ), carbon monoxide (CO) and lead], and by visibility in mandatory Federal Class I areas.
Ambient Air	That portion of the atmosphere, external to buildings, to which the general public has access.
Class I Area	An area set aside under the Clean Air Act (CAA) to receive the most stringent protection from air quality degradation. Mandatory Class I Federal areas are (1) international parks, (2) national wilderness areas that exceed 5,000 acres in size, (3) national memorial parks that exceed 5,000 acres in size, and (4) national parks that exceed 6,000 acres and were in existence prior to the 1977 CAA amendments. The extent of a mandatory Class I Federal area includes subsequent changes in boundaries, such as park expansions.
Dispersion	A reduction of pollutant concentrations in the atmosphere over a given area.
Federal Land Manager (FLM)	The Secretary of the Department with authority over such lands. The FLM for the Department of the Interior has been delegated to the Assistant Secretary for Fish and Wildlife and Parks (includes the US Fish and Wildlife Service and US National Park Service). The FLM for the Department of Agriculture has been delegated to the US Forest Service.
Fuel	Includes combustible vegetative matter such as grass, trees, shrubs, limbs, branches, duff, and stumps
Fuel Loading	An estimate of the entire accumulation of vegetative matter on a given area, expressed in tons-per-acre.
Micrometer	One millionth of a meter (also micron).
Mixing Height	The upper limit of a mixing layer of unstable air within which the vigorous up and down movement of the atmosphere occurs. It is measured from the ground surface and is expressed in feet.
National Ambient Air Quality Standards(NAAQS)	Standards for maximum acceptable concentrations of pollutants in the ambient air to protect public health with an adequate margin of safety, and to protect public welfare from any known or anticipated adverse effects of such pollutants (e.g., visibility impairment, soiling, materials damage, etc.) in the ambient air.
Particulate Matter (PM)	Any airborne finely-divided material, except uncombined water, which exists as a solid or liquid at standard conditions (e.g., dust, smoke, mist, fumes, or smog).
PM <sub>2.5</sub>	Particles with an aerodynamic diameter less than or equal to 2.5 micrometers.
PM <sub>10</sub>	Particles with an aerodynamic diameter less than or equal to 10 micrometers (includes PM <sub>2.5</sub> ).

Prescribed Fire	The controlled application of fire to existing vegetative fuels under specified environmental conditions and following appropriate precautionary measures, which causes the fire to be confined to a predetermined area and accomplishes one or more planned land management objectives as specified in paragraphs 12-6-146(3), (4) and (7) of the Georgia Prescribed Burning Act or to mitigate catastrophic wildfires.
Regional Haze	Wide-spread visibility impairment, especially in mandatory Class I Federal areas where visibility is an important value.
Smoke Dispersion Index	A measure of the atmosphere's "diluting power". It is a function of the mixing height, transport wind speed, and atmospheric stability class.
Smoke Management Program (SMP)	Establishes a basic framework of procedures and requirements for managing smoke from fires that are managed for resource benefits. The purposes of SMPs are to mitigate the nuisance and public safety hazards (e.g., on roadways and at airports) posed by smoke intrusions into populated areas; to prevent deterioration of air quality and NAAQS violations; and to address visibility impacts in mandatory Class I Federal areas in accordance with the regional haze rules.
Smoke Sensitive Areas	Population centers (such as cities, towns, and villages), campgrounds, hospitals, nursing homes, schools, roads, airports, mandatory Class I Federal areas, etc., where smoke and air pollutants can adversely affect public health, safety, and welfare.
Transport Wind Speed and Direction	The average speed of the wind (mph) moving through the mixing layer, and the direction from which the wind is coming. When used in conjunction with the observed or forecasted surface wind, it is a smoke drift indicator.
Violation of the PM <sub>2.5</sub> and PM <sub>10</sub> NAAQS	The NAAQS levels for PM <sub>2.5</sub> are set at a daily concentration less than or equal to 35 µg/m <sup>3</sup> , and an annual mean concentration of less than or equal to 9.0 µg/m <sup>3</sup> . The daily standard is violated when the 98 <sup>th</sup> percentile of the distribution of the 24-hour concentrations for a period of one year (averaged over three calendar years) exceeds 35 µg/m <sup>3</sup> at any monitor within an area. The annual standard is violated when the annual arithmetic mean of the 24-hour concentrations (averaged over three calendar years) exceeds 9.0 µg/m <sup>3</sup> .
Wildfire	An unwanted wildland fire.
Wildland	An area where development is generally limited to roads, railroads, power lines, and widely scattered structures. The land is not cultivated (i.e., the soil is disturbed less frequently than once in 10 years), is not fallow, and is not in the United States Department of Agriculture (USDA) Conservation Reserve Program. The land may be neglected altogether or managed for such purposes as wood or forage production, wildlife, recreation, wetlands, or protective plant cover.
Wildland Fire	Any non-structural fire that occurs in the wildland. Note: Wildland fires include unwanted (wild) fires and prescribed fires that are managed within a prescription to achieve resource benefits.