

Fire Plan Template



The Fire Plan Template and supporting appendices (the Template) were developed by the Georgia Environmental Protection Division (EPD) and is intended for use by mulching operators in the State of Georgia. This Template is composed of two parts; 1) a template for a fire plan as required by Georgia Rule 391-3-4-.04(7)(g), and 2) guidance on recommended best practices to reduce and/or eliminate the risk of fire specific to mulching operations.

The Template is for general informational purposes only and does not specify how a fire plan should be written. Rather, the purpose is to guide mulching operators on how to 1) develop a fire plan and to 2) recommend practices and elements for inclusion. As such, some practices and elements described in the Template may or may not be applicable to an operator's specific operations. There are practices and elements not included in this Template that an operator may want to include. At a minimum, a fire plan should include the following:

- A. Good housekeeping procedures (See Appendix A).
- B. Maintenance activities (See Appendix A).
- C. Fire containment equipment (See Appendix A).
- D. Personal protective equipment (See Appendix A).
- E. Employee training (See Appendix A).
- F. Types of fire hazards at the facility (See Appendix B).
- G. Checklists for documentation of compliance (see Appendices C-E).
- H. Site plan (see Appendix G).
- I. Procedures for emergency action.

It is up to the operator to review the contents of this Template and other supporting literature to determine which practices and elements should be included in the fire plan specific to the operation. The result is to create an implementable fire plan that will reduce and/or eliminate the risk of fires and to enact a plan to quickly extinguish fires.

Mulch, as defined by Rule 391-3-4-.01(44), is a product produced by grinding, shredding, or chipping of yard trimmings, land-clearing debris, untreated and unpainted wood, or any combination thereof, that has not undergone controlled aerobic decomposition to produce a stabilized organic product. Mulching, as defined by Rule 391-3-4-.01(45), is the grinding, shredding, or chipping of yard trimmings, land-clearing debris, untreated and unpainted wood, or any combination thereof, that has not undergone controlled aerobic decomposition to produce a stabilized organic product.

The Template is limited in scope to the definitions provided above for mulch and mulching. Mulch piles must only contain the materials as listed in the above definitions and must be segregated from other piles containing other recovered materials.

Fire Plan Template

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Fire Plan Template

I. OBJECTIVE

The purpose of this fire plan is to reduce the causes of fire, prevent loss of life and property by fire, and to prevent environmental impact to land, water, and air natural resources. The fire plan should help employees recognize, report, and control fire hazards.

II. SCOPE

This fire plan is applicable to (INSERT MULCHING OPERATION/FACILITY NAME) located at (INSERT ADDRESS). The effective date is (INSERT EFFECTIVE DATE).

III. RESPONSIBLE PARTIES

The responsible party for this fire plan is (INSERT TITLE/NAME OF RESPONSIBLE PARTY). He/she is responsible for ensuring that this plan is executed and that (INSERT MULCHING OPERATION/FACILITY NAME) employees and any contracted vendors involved with operations and related activities are informed of, and adhere to, the procedures outlined in this plan. He/she is responsible for reviewing this plan for any significant changes on the interval specified in the Review Schedule section below.

A. Responsible Parties Contact Information

Title	Name	Phone Number	Email Address
(INSERT TITLE)	(INSERT NAME)	(INSERT PHONE NUMBER)	(INSERT EMAIL ADDRESS)

B. Local Fire Authority Contact Information

Title	Name	Phone Number	Email Address
(INSERT TITLE)	(INSERT NAME)	(INSERT PHONE NUMBER)	(INSERT EMAIL ADDRESS)

C. Environmental Protection Division Contact Information

For questions on compliance and for further assistance, please contact the Georgia Environmental Protection Division (EPD) Land Protection Branch at (404) 362-2537.

D. Review Schedule

This fire plan shall be reviewed and updated as necessary by the responsible party as designated above every (INSERT REVIEW SCHEDULE TIME FRAME) from effective date, or whenever there are changes to the site layout or operations.

IV. GOOD HOUSEKEEPING

The following good housekeeping practices shall be implemented on site (See Appendix A):

A. (INSERT GOOD HOUSEKEEPING PRACTICES)

V. MAINTENANCE ACTIVITIES

Maintenance activities, including but not limited to welding, open burning and fueling vehicles, shall not take place within 25 feet of stockpile without proper fire prevention measures and records.

The maintenance activities at this site include (OR AS DOCUMENTED IN THE FOLLOWING HOT WORK PERMITS. See Appendix F for example):

Maintenance Activity name and Description	Fire Prevention Measure Taken
(INSERT MAINTENANCE ACTIVITY)	(INSERT FIRE PREVENTION MEASURE TAKEN)

VI. FIRE CONTAINMENT EQUIPMENT

Below is a list of fire containment equipment and their respective locations on this site:

Fire Containment Equipment Type	Location
(INSERT FIRE CONTAINMENT EQUIPMENT TYPE)	(INSERT LOCATION OF EQUIPMENT)

VII. PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE) will be provided to all employees. The following are examples of PPE available at this site (See Appendix A):

A. (INSERT PPE)

VIII.EMPLOYEE TRAINING

Employee training should include, but not be limited to, the following topics (See Appendix A):

A. (INSERT EMPLOYEE TRAINING TOPIC)

(INSERT RESPONSIBLE PARTY) will be responsible for ensuring that all employees receive the training designated in this section and for maintaining records of employee training.

Employee Name	Training Name	Date of Completion	Responsible Party Sign-Off
(INSERT EMPLOYEE NAME)	(INSERT NAME OF TRAINING)	(INSERT DATE OF TRAINING COMPLETION)	(INSERT RESPONSIBLE PARTY SIGN-OFF)

IX. FIRE HAZARD IDENTIFICATION

The following fire hazards have been identified at this site (See Appendix A):

A. (INSERT FIRE HAZARDS)

X. EMERGENCY ACTION PLAN

In case of adverse events, such as those caused by fire or extreme weather, the following procedures shall be enacted as part of an emergency action plan:

A. (INSERT EMERGENCY ACTION PLAN HERE)

Appendix A – Supplemental Fire Plan Information

Appendix A provides supplemental information that can be used in the development of a Fire Plan.

MINIMUM REQUIREMENTS

The fire plan reduces the risk of fires in the following ways:

- A. Describes good housekeeping procedures for ensuring control of accumulated flammable and combustible waste material and residues and identifies fire prevention equipment and systems maintenance to prevent or control ignition of fires.
- B. Identifies maintenance activities that require open flame.
- C. Includes description of fire containment equipment.
- D. Includes description on personal protective equipment (PPE).
- E. Provides employee training about fire hazards that may be encountered.
- F. Identifies types of fire hazards and procedures to avoid and control fires from these hazards.
- G. Provides checklists for documentation of compliance with the fire plan (see Appendices C-E).
- H. Includes site plan that clearly establishes stockpile buffers (see Appendix G).
- I. Describes procedures for emergency action.

GOOD HOUSEKEEPING

To limit the risk of fires, the following precautions may be taken:

- A. Minimize storage of unprocessed wood stockpiles and mulch.
- B. Dispose of combustible waste (oil rags, miscellaneous paper) in covered, airtight, metal containers.
- C. Use and store flammable materials (fuel, oil) in well-ventilated areas away from ignition sources.
- D. Perform “hot work” (welding or working with an open flame or other ignition source) at least 25 feet away from stockpiles, unless using a fireproof barrier.
- E. Keep equipment in good working order; inspect electrical wiring and machinery regularly and keep motors and machine tools free of dust and grease.
- F. Ensure that heating units are safeguarded.
- G. Report all fuel leaks immediately and ensure they are repaired immediately.
- H. Repair and clean up flammable liquid leaks immediately.
- I. Keep work areas free of dust, lint, sawdust, scraps, and similar material.
- J. Do not rely on extension cords if wiring improvements are needed and take care not to overload circuits with multiple pieces of equipment.
- K. Ensure that required hot-work permits are obtained.
- L. Turn off electrical equipment when not in use.

MAINTENANCE AND FIRE CONTAINMENT EQUIPMENT

Ensure proper maintenance, inspection, and testing of the following equipment:

- A. Portable fire extinguishers (water truck) and fixed extinguishing systems (water tank, soil).
- B. Equipment installed to detect fuel leaks on equipment or storage tanks.
- C. Emergency backup systems (generator, backup method) and the equipment they support.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE) will be provided to all employees. The following are examples of PPE available at this site:

- A. Gloves
- B. Masks
- C. Hoods/helmets
- D. Eye protection

EMPLOYEE TRAINING

Employee training should include, but not be limited to, the following topics:

- A. Best management practices for fire prevention
- B. Identification/elimination of fire hazards
- C. Procedures for fire containment
- D. Procedures for fire extinguishment
- E. Procedures for fire protection and PPE

Appendix B – Types of Fire Hazards

The following sections address the major workplace fire hazards and the procedures for controlling the hazards.

A. Flammable and Combustible Materials

Regularly evaluate the presence of different types of combustible materials. Certain types of substances can ignite at relatively low temperatures or pose a risk of catastrophic explosion if ignited. Such substances require special care and handling.

1. Class A combustibles

These include common combustible materials (wood, paper, cloth, rubber, and plastics) that can act as fuel. To handle Class A combustibles safely:

- a. Frequently inspect areas where stockpiles of woody materials and mulch combustibles are kept.
- b. Keep work areas clean and stockpiles of woody materials and mulch free of fuel paths and trash that could allow a fire to spread. Process woody material on a first in first out basis within the 90-day timeframe.
- c. Keep combustibles 25 feet away from accidental ignition sources, such as hot plates, soldering irons, or other heat- or spark-producing devices unless fire barriers are in place.
- d. Keep combustible trash (paper, oil rags, plastic, rubber) in metal-lined receptacles with tight-fitting covers.

Water, multi-purpose dry chemical (ABC), and halon 1211 are approved fire-extinguishing agents for Class A combustibles.



2. Class B combustibles

These include flammable and combustible liquids (gasoline, oils, greases, tars, oil-based paints, and lacquers), flammable gases, and flammable aerosols. To handle Class B combustibles safely:

- a. Store, handle, and use Class B combustibles only in approved locations where vapors are prevented from reaching ignition sources, such as heating or electric

equipment, open flames, or mechanical or electric sparks. Note the location of Class B combustible storage(s) on the site plan.

- b. Know the location of and how to use the nearest portable fire extinguisher rated for Class B fire. Note location of fire extinguisher(s) for Class B combustibles on the site plan.

Do not use water to extinguish Class B fires caused by flammable liquids. Water can cause burning liquid to spread, making the fire worse. To extinguish a fire caused by flammable liquids, exclude the air around the burning liquid. The following fire-extinguishing agents are approved for Class B combustibles: carbon dioxide, multi-purpose dry chemical (ABC), halon 1301, and halon 1211. (NOTE: Halon is an ozone-depleting substance and is no longer being manufactured. Existing systems using halon can be kept in place, but employers must post signs indicating where halon or other agents that pose a serious health hazard are used.)



B. Spontaneous Combustion

Spontaneous combustion in a combustible material storage stockpile can occur due to natural biochemical reactions resulting in pile temperatures exceeding 175 degrees Fahrenheit. To prevent fire due to spontaneous combustion the pile temperature should be monitored twice weekly and turned or watered to cool the pile whenever pile temperatures exceed 140 degrees Fahrenheit. Maintain 40-60 percent moisture in the pile.



C. Lightning

Weather should be monitored closely for thunderstorms and lightning, especially after long periods of extremely dry weather. Additional manpower for inspection during these times should be considered.



D. Contamination with Commercial or Municipal Solid Waste

Special inspection procedures for incoming loads of combustible woody material should be implemented to identify contamination from materials such as Class A and B combustibles and electronic equipment with lithium-ion batteries, a potential source of fires. Any commercial solid waste must be removed from woody materials and disposed of appropriately.



E. Smoking

Certain outdoor areas may be designated as no smoking areas. The areas where smoking is prohibited outdoors will be identified by NO SMOKING signs. No smoking in these areas must be strictly enforced.



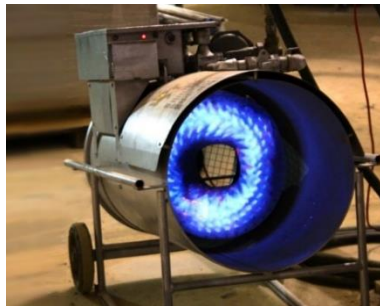
F. Electrical Fire Hazards

Electrical system failures and the misuse of electrical equipment are leading causes of workplace fires. Fires can result from loose ground connections; wiring with frayed insulation; or overloaded fuses, circuits, motors, or outlets.



G. Portable Heaters

Portable electric heaters must have tip-over protection that automatically shuts off the unit when it is tipped over. A portable heater may only be plugged into a wall outlet and never into an extension cord or cubicle outlet. Always allow adequate clearance between the heater and combustible furnishings or other materials.



H. Cutting, Welding, and Open-Flame Work

Ensure the following:

1. All necessary hot work permits have been obtained before work begins.
2. Fire watch has been established.
3. Documentation of maintenance activities is recorded in this fire plan (see section VI).
4. Cutting and welding are done by authorized personnel in designated areas whenever possible.
5. Torches, regulators, pressure-reducing valves, and manifolds are UL-listed or FM-approved.
6. Oxygen-fuel gas systems are equipped with listed or approved backflow valves and pressure-relief devices.

7. Cutters, welders, and helpers are wearing eye protection and protective clothing, as appropriate.
8. Small tanks, piping, or containers that cannot be entered are cleaned, purged, and tested before cutting or welding on them begins.



Appendix C - Fire Safety Survey

(Date)

Perform a walkthrough of the facility with the local fire department or Georgia State Certified Fire Inspector and other emergency responders to assess the layout of the structures, types and volume of combustible material storage, and other hazards they may encounter when responding to an emergency. Provide a copy of this survey to local authorities for their records.

Type of Fire Hazard	Location	Emergency Actions	Required PPE
List Examples			
Buffers			
Meet 50'			
As Approved by Inspector _____			

Completed by: _____ Date: _____

Appendix D – Fire Plan Guidance and Best Management Practices (BMP) Guide

Fire Plan Requirements				
<i>Do I have this?</i>				Records Requirements
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Maintain current fire plan on site and available for review upon request
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Provide documentation/verification of a fire inspection with the local fire department, Georgia State Certified Fire Inspector and/or the State Fire Marshall’s office; provide documentation that recommendations of the inspection are addressed
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Maintain employee training records
<i>Do I have this?</i>				Fire Prevention
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Identify property line and storage pile buffer area requirements
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Provide employee training in identification/elimination of fire hazards
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Include best management practices for fire prevention
<i>Do I have this?</i>				Fire Containment
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Plan includes procedures for containment on the property and between storage piles
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Identify equipment on site for containment
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Provide employee training in fire containment
<i>Do I have this?</i>				Fire Extinguishing
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Describe all steps and measures to extinguish fires
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Provide employee training in fire extinguishment
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Provide emergency contact information for assistance in firefighting

Completed by: _____

Date: _____

Best Management Practices for Fire Prevention, Containment and Extinguishment

<i>In place at facility?</i>				BMPs
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Temperature and moisture probes for the storage piles
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Stockpiled soil for fire extinguishment
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Fire extinguishers
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Water truck
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Water storage tank and fire pump
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Local fire department and emergency responders contacts
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Fire safety survey with the local fire department or Georgia State Certified Fire Inspector
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Establish minimum fire lanes around and between the property line and storage piles in coordination with the local fire department
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Monitor pile temperature-twice per week-address hot spots greater than 140 degrees F
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Develop procedures for inspections to identify contaminants in the feedstock, such as flammable chemicals and computer batteries that may cause fires
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Weather events - Prepare for long periods of dry weather followed by lightning and thunderstorms
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Moisture levels - Keep storage pile moisture between 40-60 percent
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Turn storage piles-release of heat is critical for the prevention of fires in organic material piles-turn or open-up the storage pile if temperature exceeds 140 degrees F
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Designate and enforce smoking areas
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Designate and enforce maintenance areas for cutting and welding
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Designate areas for combustibile and flammable materials storage
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Insure proper insulation and grounding of electrical equipment
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Restrict pile size-less than 25 Feet in height and 25,000 square feet in area

Completed by: _____

Date: _____

Appendix E- Best Management Practices Checklist for Flammable and Combustible Materials

Best Management Practices Checklist for Flammable and Combustible Materials				
<i>Do I have this?</i>				BMPs
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are combustible scrap, debris, and waste materials, such as oily rags, stored in covered metal receptacles and removed from the worksite promptly?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are approved containers and tanks used to store and handle flammable and combustible liquids?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are NO SMOKING signs posted on liquefied petroleum gas tanks?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids and within 10 feet of any inside storage area for such materials?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are extinguishers free from obstruction or blockage?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are all extinguishers serviced, maintained, and tagged at least once a year?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are all extinguishers fully charged and in their designated places?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are NO SMOKING signs posted in areas where flammable or combustible materials are used or stored?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are safety cans utilized for dispensing flammable or combustible liquids available at the point they would be used?
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Are all spills of flammable or combustible liquids cleaned up promptly?

Completed by: _____ Date: _____

Appendix F - Example of a Hot Work Permit

HOT WORK PERMIT

All temporary operations involving open flames or producing heat and/or sparks require a Hot Work Permit. This includes, but is not limited to, Brazing, Cutting, Grinding, Soldering, Thawing, and Welding.

INSTRUCTIONS FOR FIRE SAFETY SUPERVISOR

1. Verify precautions listed at right (or do not proceed with the work).
2. Complete page 1 and retain for job files.
3. Post page 2 in vicinity of hot work.

DATE _____	JOB NO. _____
---------------	------------------

LOCATION/BUILDING & FLOOR (Be Specific)

DESCRIPTION OF WORK BEING PERFORMED

NAME OF PERSON DOING HOT WORK

The above location has been examined, the precautions checked on the Hot Work Checklist have been taken to prevent fire, and permission is authorized for this work.

SIGNED: _____
(Permit Authorizing Individual)

SIGNED: _____
(Person doing Hot Work)

SIGNED: _____
(Fire Watch)

TIME
STARTED: Date: _____ Time: _____ AM/PM

Date: _____ Time: _____ AM/PM

FIRE WATCH SIGNOFF
Work area and all adjacent areas to which sparks and heat might have spread were inspected during the fire watch period and were found fire safe.
Signed: _____

FINAL CHECKUP (minimum 30 minutes after Hot Work)
Work area was monitored for _____ hour(s) following Hot Work and found fire safe.
Signed: _____

FILL OUT EMERGENCY INFORMATION ON BACK OF Page 2.

OK HOT WORK CHECKLIST N/A

- Sprinklers and hose streams in service/operable.
- Hot Work Equipment in good condition (e.g., power source, welding leads, torches, etc.)
- Multi-purpose fire extinguisher and/or water pump can.

REQUIREMENTS WITHIN 35 FEET OF WORK

- Dust, Lint, Debris, Flammable Liquids and oily deposits removed; floors swept clean.
- Explosive atmosphere in area eliminated.
- Combustible floors (e.g., wood, tile, carpeting) wet down, covered with damp sand or fire blankets.
- Remove flammable and combustible material where possible. Otherwise protect with fire blankets, guards, or metal shields.
- All wall and floor openings covered.
- Walkways protected beneath hot work.

WORK ON WALLS OR CEILINGS

- Combustibles moved away from other side of wall.

WORK IN CONFINED SPACES

- Confined space cleaned of all combustibles (example: grease, oil, flammable vapors).
- Containers purged of flammable liquids/vapors.
- Follow confined space guidelines.

FIRE WATCH/HOT WORK AREA MONITORING

- Fire watch will be provided during and for 30 minutes after work, including any coffee or lunch breaks.
- Fire watch is supplied with an extinguisher, and/or water pump can, also making use of other extinguishers located throughout work area.
- Fire watch is trained in use of this equipment and familiar with location of sounding alarm.
- Fire watch may be required for opposite side of walls, above, and below floors and ceilings.

OTHER PRECAUTIONS TAKEN

Appendix G – Sample Site Plan

- Mulching operation must have buffer zone around all stockpiles
- There must also be a buffer between stockpiles and the property line
- Buffer between stockpiles property line may include fire lane
- The buffers must be a minimum of 50 feet unless otherwise designated by the local fire authority or certified state fire inspector

