El Paso County, CO
Public Health
Prevent • Promote • Protect

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# Wildfire Clean-up Guidance

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In response to the Black Forest Wildfire, El Paso County Public Health is providing guidance on re-entry standards pertaining to public health:

- Debris and Ash - Handling and Disposal Issues
- Asbestos
- Safe Cleanup
- Household Hazardous Materials
- Propane Tanks
- Food Safety Guidance
- Fire Ash Safety and Cleaning
- Respiratory Health
- Health Masks
- Private Wells/Water Systems and Septic Systems
- Livestock Disposition
- Tetanus and First Aid Guidance

Wildfire can create an unexpected emergency situation that warrants a rapid response. A prompt cleanup will enable residents to move forward with their lives while minimizing potential public health and environmental issues that may be exacerbated the longer the material is left in place, such as water contamination from run-off. In light of this situation, the Colorado Department of Public Health and Environment and El Paso County Public Health will temporarily waiving certain regulatory requirements that might otherwise apply.

**Debris and Ash - Handling and Disposal Issues**

The ash deposited by forest fires is relatively nontoxic and similar to ash that might be found in your fireplace. However, any ash may contain unknown substances, including chemicals. In particular, ash and debris from burned structures may contain more toxic substances than forest fire ash, because of the many synthetic and other materials present in homes and buildings. For example, car batteries or mercury light bulbs may have been present in the buildings. In addition, older buildings have a greater potential of containing asbestos and lead.

Care should be taken when handling any materials from buildings that are either partially damaged by the fire (i.e., salvageable building materials remaining) or completely destroyed by the fire (i.e., only

ash and debris remain). Protective clothing and equipment should be worn to avoid skin contact and inhalation of ash and other disturbed material.

Debris and ash should be handled in a manner that will minimize exposure to any unknown potentially hazardous materials that may be present in the debris. Soil under the area where the ash/debris was deposited should be scraped to ensure that all ash and building debris has been removed from the site.

- To prevent damage to the drinking water and wastewater disposal systems, the well head and septic system (including the leach field) should be located and clearly marked prior to removal of debris.
- To prevent groundwater contamination due to a damaged well head, it is recommended that ash and debris should not be removed until the well head is properly covered or protected. If you believe your well head has been damaged, a well industry professional assessment is recommended.
- In order to minimize dust, first wet then package debris inside a 6-mil plastic sheeting liner or 6-mil (thick plastic, puncture-resistant) sealed bag and cover during transportation to secure the contents during transport.
- Before debris can be removed from the property, a demolition permit may be required from the Pikes Peak Regional Building Department based on the type of structure.
    - Apply for the permit online at www.pprbd.org or call (719) 327-2880 for information.
- The debris can be taken to one of the landfills listed. Please contact the landfill to ensure that they can accept the material.

The landfill should be informed that the material has come from the Black Forest Fire area. Contractors should consult with the Occupational Safety and Health Administration (OSHA) at (303) 844-5285 to determine required training and personal protective equipment that will be required for those handling this material.

A state-issued demolition permit is not required to remove the ash and debris from buildings that have been partially or completely destroyed. However, the ash and debris must be thoroughly wetted prior to handling to minimize dust.

**Asbestos**

If asbestos-containing material is known to be present in ash or debris in amounts greater than the trigger levels, they must be removed in accordance with Colorado Regulation No. 8, Part B, however a permit is not required according the Colorado Department of Health and Environment (CDPHE). Trigger levels for single-family residential dwellings are 50 linear feet on pipes, 32 square feet on other surfaces or the volume equivalent of a 55 gallon drum.

- Permits for removal of asbestos are not required by CDPHE if asbestos-containing materials are not known. Handle the ash/debris as outlined in the “Wildfire Guidance” document, no permits necessary.

The following landfills will accept Black Forest Wildfire ash, soils, and debris and waste materials known to contain friable asbestos.

WASTE MANAGEMENT COLORADO SPRINGS LANDFILL
1010 Blaney Road,
Colorado Springs, CO
(719) 683-2600

WASTE CONNECTIONS LANDFILL
10000 Squirrel Creek Road
Fountain, CO
(719) 382-9661

The landfills listed above and the following landfill is accepting Black Forest Wildfire ash, soils, and debris that **do not** contain friable asbestos. Additional landfills may be added to this list or may be contacted directly, as noted above.

WASTE MANAGEMENT MIDWAY LANDFILL
8925 Rancho Colorado Blvd.
Fountain, CO (I-25 and exit 119) (almost to Pueblo County Line but still in El Paso County)
(719) 382-8383

Metal debris must be washed clean of ash/debris prior to recycling. Concrete debris (foundations) must be disposed of at an approved landfill. If you wish to recycle this material, it must be inspected by a certified asbestos building inspector and found to be free of asbestos-containing materials prior to recycling.

If you need additional information, please contact Charles Johnson at the Department's Solid Waste Unit at (303) 692-3348 or Charles.Johnson@state.co.us , or the Asbestos Unit at (303) 692-3100 or www.cdphe.state.co.us/ap/asbestos/index.html.

**Disposal of Household Chemicals**
Everyday items, such as household cleaners, fertilizers, and pesticides, contain dangerous chemicals that may have spilled in or near your home during the fire response. Be alert for leaking or compromised containers and reactive household chemicals, such as caustic drain cleaners and chlorine bleach. Take these steps to prevent injury or damage:

- Keep children and pets away from leaking or spilled chemicals.
- Do not combine chemicals from leaking or damaged containers; doing so might produce dangerous chemical reactions.
- Do not pour chemicals down drains, storm sewers, or toilets.
- Do not try to burn household chemicals.
- Clearly mark and set aside unbroken containers until they can be properly disposed.
- Leave damaged or unlabeled chemical containers undisturbed whenever possible.
- Do not put household chemicals in the trash. When discarding these products, they become household hazardous waste requiring proper disposal.
- Do not put chemicals in a trash bag. Use boxes or plastic tubs to transport.
- Transport chemicals in the trunk of your vehicle.

Bring household waste to the El Paso County Household Hazardous Waste Facility, 3255 Akers Drive Colorado Springs, CO 80922. 719-520-7878. This program is free to all El Paso and Teller County residents.

**Safe Cleanup, Propane tanks**

If you have a propane tank system, contact a propane supplier, turn off the valves on the system, and leave the valves closed until the supplier inspects your system. Tanks, brass and copper fittings, and lines may have been damaged from the heat and can be unsafe. If fire burned the tank, the pressure relief valve likely opened and released the contents.

**Safe Cleanup, Heating oil tanks**

If you have a heating oil tank system, contact a heating oil supplier for an inspection of your system before using it. The tank may have shifted or fallen from the stand, and the fuel lines may have kinked or weakened. Heat from the fire may have caused the tank to warp or bulge. Non-vented tanks are more likely to bulge or show signs of stress. The fire may have loosened or damaged fittings and filters.

**Food Safety After a Fire**

Food exposed to fire can be compromised by four factors: heat of the fire, smoke fumes, chemicals used to fight the fire, and power outage as a result of the fire.

**Heat**

Food in cans or jars may appear to be fine, but if they have been close to the heat of a fire, they may not be edible. Heat from a fire can activate food spoilage bacteria. If the heat is severe, the cans or jars can split or rupture, resulting in unsafe food.

**Smoke Fumes**

Toxic fumes, which may be released from burning materials, are one of the most dangerous elements of a fire. The fumes can be hazardous, and they can also contaminate food.

- Discard any food stored in permeable packaging, such as cardboard or plastic wrap. Toxic fumes can permeate the packaging and contaminate the food.
- Discard any raw foods stored outside the refrigerator, such as potatoes or fruit, as they could also be contaminated by fumes. Even food stored in the refrigerator or freezer can become contaminated by fumes, as the seals are not necessarily airtight.

**If food from your refrigerator or freezer has an off - flavor or odor when it is prepared, it should be discarded and not eaten.**

**Chemicals Used to Fight Fires**

Chemicals used to fight fires contain toxic materials that can contaminate food and cookware. While some of the chemicals may be listed as non-toxic to humans, they can be harmful if swallowed. These chemicals cannot be washed off of the food.

**Discard foods that have been exposed to chemicals, including:**

- Food stored at room temperature, such as fruit and vegetables
- Food stored in permeable containers, like cardboard and screw-topped jars and bottles
- Canned goods and cookware exposed to chemicals can be decontaminated if they have not been subjected to severe heat (see “heat” above).

- Wash canned goods and cookware that have been exposed to chemicals with soap and hot water. Then dip them in a bleach solution (1 teaspoon of bleach per quart of water) for 15 minutes, rinse, and let air dry.

**Power Outage**

The main concern with perishables stored in the refrigerator and freezer is the availability of electrical power. Refrigerated items should be safe, provided that the power is off for no more than about two hours. If the power has been off for more than two hours:

- Keep the refrigerator and freezer doors closed.
- Open the refrigerator as little as possible.
- Discard any perishable food that has been held at temperatures above 41°F for more than four hours.
- Discard any food that has an unusual odor, color, or texture.
- Discard food in your refrigerator and freezer that looks suspicious, such as the presence of liquid or refrozen meat juices, soft or melted and refrozen ice cream, or unusual odors.
- Never taste food to determine its safety. Food unfit for human consumption is also unfit for pets. **If in doubt, throw it out.**

If you need additional information, please contact the Environmental Health Division at (719) 578-3199.

**Fire Ash Safety and Cleaning**

Safe Cleanup, Fire Ash Safety and Cleaning

- Large amounts of ash have been deposited on indoor and outdoor surfaces in areas near the recent wildfire. Ash from forest fires is relatively nontoxic and is similar to ash that might be found in your fireplace; however, all ash may contain small amounts of cancer-causing chemicals.
- Fire ash may also irritate the skin, especially to those with sensitive skin. If ash is inhaled, it can be irritating to the nose and throat and may cause coughing. Exposure to ash in the air can also trigger asthmatic attacks or worsen other chronic respiratory disease symptoms. Persons with heart or lung disease should consult with their physicians before using a mask during post fire cleanup.

**To avoid possible health issues:**

- Do not allow children to play in the ash.
- Wash ash from toys before allowing children to play with them.
- Wash ash off household pets.
- Wear gloves, long-sleeved shirts, and long pants when cleaning ash, and avoid skin contact. If ash does get on your skin, wash it off as soon as possible.
- If you have a vegetable garden or fruit trees, wash the fruit or vegetables thoroughly before eating them.
- Avoid circulating ash into the air as much as possible. Do not use shop vacuums and other non-HEPA filter vacuums, as they do not filter out small particles and can blow particles into the air where they can be breathed in. HEPA filter vacuums can be used, if available.
- Well-fitting dust masks may provide some protection during cleanup. Masks rated N95 or P100 are more effective than simpler dust or surgical masks in blocking particles from ash. In general, many ash particles are larger than those found in smoke; thus, wearing a dust mask can significantly reduce (but not completely eliminate) the amount of particles that are inhaled.

- In most cases, gently sweeping indoor and outdoor hard surfaces followed by wet mopping is the best way to clean up ash residue. A damp cloth or wet mop may be all that is needed on lightly dusted areas.
- Avoid washing ash into storm drains whenever possible.
- If you wet down ash, use as little water as possible.
- Collected ash may be disposed of in the regular trash. Ash may be stored in plastic bags or other containers to help prevent it from being disturbed.
- Ash and debris inside burned structures may contain toxic substances other than forest fire ash because of synthetic and other materials present in buildings. Older buildings, in particular, may contain asbestos and lead. A more cautious approach should be taken when removing ash and other debris from inside burned structures.

**Should I wear a mask while cleaning up after a fire?**

It's important to protect your lungs from health hazards like smoke and ash while cleaning up after a wildfire. If you cannot avoid the area, a "particulate respirator" can help to protect your lungs during cleanup efforts.

**How to Choose the Correct Mask to Protect Your Lungs**

- Choose a mask called a "particulate respirator" that has the word "NIOSH" and either "N95" or "P100" printed on it. These are sold at many hardware and home repair stores and pharmacies.
- Choose a mask that has two straps that go around your head. DO NOT choose a mask with only one strap or one with straps that just hook over the ears.
- Choose a size that will fit over your nose and under your chin. It should seal tightly to your face. These masks do not come in sizes that fit young children.
- Do not use bandanas (wet or dry), paper or surgical masks, or tissues held over the mouth and nose. These will not protect your lungs from wildfire smoke or debris.

**How to Use a Mask**

- Place the mask over your nose and under your chin, with one strap placed below the ears and one strap above.
- Pinch the metal part of the mask tightly over the top of your nose.
- The mask fits best on clean-shaven skin. Keep your face clean and shaven.
- Throw out your mask when it gets harder to breathe through or if the inside gets dirty. Use a new mask each day if you can.
- It is harder to breathe through a mask, so take breaks often if you work outside.
- If you feel dizzy or nauseated, go to a less smoky area, take off your mask, and get medical help.
- If you have a heart or lung problem, consult with your doctor before using a mask.
- Remove earrings and jewelry before donning or doffing equipment to prevent catching them on the respirator.
- Check in a mirror to ensure that your respirator fits properly.
- N95 masks do not protect against vapors or fumes.

**Respiratory Health**

- Avoid getting ash into the air as much as possible. Do not use leaf blowers or take other actions that will put ash into the air.

- Shop vacuums and other common vacuum cleaners do not filter out small particles, but rather blow such particles out the exhaust into the air where they can be breathed.
- The use of shop vacuums and other non-HEPA filter vacuums is not recommended. HEPA filter vacuums could be used, if available.
- Well fitting dust masks may provide some protection during cleanup. A mask rated N95 or P100 will be more effective than simpler dust or surgical masks in blocking particles from ash. In general, many ash particles are larger than those found in smoke; thus, wearing a dust mask can significantly reduce (but not completely eliminate) the amount of particles inhaled.
- Persons with heart or lung disease should consult their physician before using a mask during post-fire cleanup.
- Gentle sweeping of indoor and outdoor hard surfaces followed by wet mopping is the best procedure in most cases. A damp cloth or wet mop may be all that is needed on lightly dusted areas.
- Children are more likely to be affected by health threats from smoke because their airways are still developing and because they breathe more air per pound of body weight than adults. Children also are more likely to be active outdoors.
- Pay attention to local air quality reports. Listen and watch for news or health warnings about smoke. Also pay attention to public health messages about taking additional safety measures. Refer to visibility guides if they are available.
- If you are advised to stay indoors, keep indoor air as clean as possible. Keep windows and doors closed unless it is extremely hot outside. Run an air conditioner if you have one, but keep the fresh-air intake closed and the filter clean to prevent outdoor smoke from getting inside. If you do not have an air conditioner and it is too warm to stay inside with the windows closed, seek shelter elsewhere.
- Do not add to indoor pollution. When smoke levels are high, do not use anything that burns, such as candles, fireplaces, or gas stoves. Do not vacuum, because vacuuming stirs up particles already inside your home. Do not smoke, because smoking puts even more pollution into the air.

**Wells and On-site Wastewater Treatment Systems (Septic Systems) after a Wildfire**

Your well or septic system could be adversely affected by fire, power outages, equipment failure, or contamination of water supplies.

**Private Wells/Water Systems**

- Perform a visual inspection of your well and other components which are part of your water supply system, including:
- Damage to electrical wires and wire connectors which supply power to your well
- Damage to above ground PVC plastic pipes used with the well to bring water to your house
- Damage to well houses and special equipment (chlorinators, filters, electronic controls)
- Damage to pressure tanks which could have been caused by exposure to excessive heat
- Damage to storage tanks, vents and over-flow pipes
- If you find damage to your well or water system, contact an appropriate contractor to repair the damage.
- If your water tastes or smells earthy, smoky or burnt, you may need to thoroughly flush your water lines.

- If your system has been damaged or if you are in doubt about the safety of your water, you may want to have your water tested. Contact the El Paso County Public Health, Environmental Health Division, or a certified lab regarding water testing.
- Each person in a household will need at least one gallon of water per day for drinking, cooking and general hygiene. If you suspect that your water supply may have been compromised during the fire, bring plenty of bottled water with you when returning to your home.

**If you do not have water that you know is safe, it is possible to purify the water for drinking purposes. Start with the cleanest water you can find and treat it by one of the following methods:**

**Chemical Disinfection:**
Treat the water with household-strength liquid chlorine bleach (do not use scented bleach products). Add bleach according to the table below, stir or shake; allow water to stand for 30 minutes before drinking.

| Amount of Water | Amount of bleach if water is clear | Amount of bleach if water is cloudy |
|---|---|---|
| 1 gallon | 1/8 tsp | ¼ tsp |
| 5 gallons | ½ tsp | 1 teaspoon |

**Boiling Water as Disinfection:**
- Boil the water for 10 minutes. Once the water has cooled, it can be consumed, or stored in clean containers to use later.
- If you suspect that your well or water system has been contaminated, or if sampling indicates that bacterial contaminants are present, disinfection of your well is recommended. Contact El Paso County Public Health's Laboratory Services for instructions on proper well disinfection.

**Wastewater Systems:**
- If you are connected to an onsite wastewater treatment system (septic system), inspect your OWTS for damage:
- Damage to plastic piping above ground that may have been damaged by heat
- Raised systems scorched or damaged by fire
- Damage to piping where pipes enter the home/structure
- Disturbance of the soil treatment area by large vehicles such as firefighting equipment
- If your septic system has been damaged, backing up, or malfunctioning, discontinue use and contact El Paso County Public Health, Environmental Health Division, for guidance and instruction regarding repair and restoration of the system.

For additional information on private wells and on-site wastewater treatment systems, contact El Paso County Public Health's Environmental Health Division at (719) 578-3199.

**Safe Removal and Burial of Pets and Animals**

El Paso County Public Health and the Colorado Departments of Agriculture and Public Health and Environment are working cooperatively to provide guidance to assist with the safe removal and burial of pets, animals and livestock.

**Burial requirements or use of landfills**
To protect drinking water:
• Do not place deceased animals in any body of water or seasonal creek or pond.
• All deceased animals must be buried at least 150 feet from a water well.
• In no case should the bottom of the burial pit be closer than five feet to the groundwater table.
• In the event of burial you encounter groundwater, choose another site or option.

**Other options for deceased animal removal or burial include:**
Locations
• Deceased animals may be taken to any permitted sanitary landfill that will accept them.
• Dead animals may be composted. This option requires contact with Colorado Department of Public Health and Environment.

**Contact Information:**
Colorado Department of Public Health and Environment

Roger Doak
Solid Waste Program
303-692-3437

Charles Johnson
Solid Waste Program
303-692-3348

Erin Kress
Environmental Agriculture Program
303-692-3523

Colorado Department of Agriculture
Jim Miller
303-239-4103

**Tetanus and First Aid Guidance**
After a fire, there is risk of injury as cleanup efforts begin. Tetanus is a concern for persons with both open and closed wounds, and a tetanus vaccination is recommended for all residents returning to the burn area who have not had a documented dose within the past 5 years. Prompt first aid management for wounds and prevention of infection is another important consideration. If you receive a puncture wound or a wound contaminated with feces, soil, or saliva, a health care professional should determine if a tetanus booster is necessary, based on individual records.

**Wound Care**
**Seek medical attention as soon as possible if:**

- There is a foreign object embedded in the wound.
- The wound is at special risk of infection (such as a dog bite or a puncture by a dirty object).
- A previous wound shows signs of becoming infected (e.g. increased pain, heat, swelling, redness, draining, or fever).

**Care for Minor Wounds**

- Wash your hands thoroughly with soap and clean water.
- Avoid touching the wound with your fingers while treating it.
- Remove obstructive jewelry and clothing from the injured area.
- Apply direct pressure to any bleeding wound to control bleeding.
- Clean the wound after bleeding has stopped:
- Examine wounds for dirt and foreign objects.
- Gently flood the wound with clean water, then gently clean around the wound with soap and water.
- Pat the wound dry and apply an adhesive bandage or dry clean cloth.

**Other Considerations**

Wounds in contact with soil and sand can become infected.

Puncture wounds can carry bits of clothing and dirt into wounds and result in infection.

Crush injuries are more likely to become infected than wounds from cuts.