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## **HEALTH-RELATED INFORMATION FOR PROPERTIES IMPACTED BY FOREST FIRES**

Every year, forest fires have the potential to impact properties in Jefferson County. As families begin to rebuild their homes and communities, some environmental issues have to be addressed such as individual sewage disposal systems, water wells, water quality, food products, asbestos and fire fighting chemicals.

### **Individual Sewage Disposal Systems**

Since most components of an individual sewage disposal system are underground there should be little direct impact from fire. However, some above ground components such as PVC vent pipes in the leaching field or electrical junction boxes for pumps and mechanical systems could be affected. If you notice damage to any of these components, call the Department of Public Health at 303 271-5700 for information and recommendations.

Even if the system has escaped fire damage it may have been impacted by fire suppression activities on the property. If fire trucks were driven across any portion of the leaching field they may have caused damaging soil compaction. If that appears to be the case, contact the Department for instructions.

Loss of vegetation in the area can lead to erosion problems that could damage your leaching field. Look for signs of erosion such as loss of dirt or gullyng and take steps to divert drainage around the area of the absorption bed. Bales of straw will provide temporary relief, but reseeding of grasses and wildflowers will help anchor the soil.

If your home has been destroyed and you wish to rebuild, it may be possible to use the existing septic system provided it has not been damaged. Again, contact the Department for information and guidance.

### **Water Wells**

Like individual sewage disposal systems, most of the components of the well and water system are underground and should not be directly impacted by fire. However, you should closely examine the above ground components such as the well casing (the “well head”) for signs of fire damage. Specifically, you should verify that the electrical lines to the well head have not been damaged. You should also check the sanitary seal on the well head for fire damage. Repairs to the well, if necessary, should be made by a licensed water well contractor.

### **Water Quality**

Since your water well pulls water from hundreds of feet below the surface, you should see little immediate impact from the fires. However, with the loss of surface vegetation, the ability of the soil to filter precipitation potentially could be compromised. Possible longer-term effects may include an increase in turbidity (cloudiness), poor taste and odor, and possibly an increase in bacteria. Consult a water treatment professional about the possible need for water filtration or treatment systems if your water quality does not improve.

### **Food Products**

If your house has been damaged and you find that canned goods or other non-perishable food items have survived the fire, we recommend that you **DO NOT** use them. Although the containers may appear to be intact, high temperatures may have caused the seams to fail, thus exposing the contents to potential contamination.

If you lost power during the fires (digital clocks are flashing), it is usually best to discard the contents of your refrigerator or freezer. Although the power loss may not have been significant, it is usually not possible to know how long the products were without refrigeration. Freeze-thaw cycles can cause problems, so when in doubt, throw it out!

### **Asbestos**

For buildings partially damaged by the fire (i.e., salvageable building materials remaining), the building materials must be inspected by a certified asbestos building inspector prior to renovation or demolition activities impacting the building materials. If asbestos-containing material is present in amounts greater than the trigger levels, they must be removed

in accordance with Colorado Regulation No. 8, Part B. 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.

For buildings completely destroyed by the fire (i.e., only ash and debris remain) if there are no building materials remaining to be sampled, the ash/debris should be handled in a manner that will minimize potential exposure to asbestos fibers and other hazardous materials in the debris. Soil under/surrounding the building should be scraped to a depth of at least two inches to ensure that all ash and building debris has been removed from the site.

Materials must be wetted to minimize dust; packaged inside a double 6-mil plastic sheeting liner in an end-dump roll-off with the sheeting completely closed over the material once the roll-off is loaded for transportation to a landfill. .

The landfill should be informed that the material has come from the fire area and may contain suspect asbestos-containing materials or other hazardous materials. 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 demolition permit is not required from the state to remove the ash/debris from buildings that have been completely destroyed. However, the ash/debris must be wetted prior to handling.

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.

Contact the Department for landfills accepting fire debris.

## **FIRE FIGHTING CHEMICALS**

Modern fire fighting techniques include the use of a variety of chemicals that can help control the spread of fire. However, care must be taken in dealing with these chemical residues.

### **Fire Retardant**

Fire retardants from aerial tanker drops may be present on your property. Retardant contains ammonia and will sting if it gets into cuts or scratches or comes into contact with

chapped or sunburned skin. Wash thoroughly with a gentle soap and water to remove all residues as many of the fire chemicals are drying to the skin. After washing use a good quality hand cream to minimize drying and chapping.

#### Structure Cleanup (wood / metal):

- The red color of retardants comes from iron oxide (rust) which can be very stubborn to remove, so wash retardant off as soon as possible. Some of these products may discolor metal.
- Dampen a stained surface with water and scrubbing with a stiff-bristled brush dampened and dipped in borax has been effective.
- Power washers may drive the red colorant into the surface of the wood and should generally be avoided.
- Restrict water use to prevent puddles which may be attractive to pets.
- Avoid leaving standing puddles of water by using absorbent materials such as sand, soil, or other materials.

#### Vegetation:

- Rinse retardant off vegetation. Avoid leaving standing puddles of water by using absorbent materials such as sand, soil, or other materials.
- Leaf burn may occur since retardants contain levels of fertilizer higher than what is often sold at garden stores. This causes vegetation and plants to appear dead after contact. However, they will generally recover and grow back - usually within one to two months.
- As with any garden produce, wash fruit and vegetables thoroughly before using.

#### Effects on Pets & Other Animals:

- Shampoo thoroughly as many of the products are very drying to skin...
- Use materials that will effectively absorb any puddles after shampooing, or in areas that animals may have access to. Materials such as sand / soil / or other absorbents should be used on any standing water or puddles.
- Avoid ingestion of water – keep animals away from puddles.
- If your pet appears ill from drinking out of puddles or standing water, make sure your veterinarian knows the animal may have ingested a fertilizer-based product.

## **Fire Retardant Foams**

These are frequently applied from ground equipment and may also be applied from helicopters and some fixed-wing air tankers. Class A foams are strong detergents similar to those used for hand-washing dishes and are generally easy to clean-up.

- If a fire was close enough to bake the foam onto windows, scrape the residue off with a paint scrapper.
- Treatment of persistent residues with a tub and tile cleaner designed to remove soap residues may be effective.
- Keep pets away from the area.
- Avoid ingestion of water by pets and other animals – keep animals away from puddles.
- If your pet appears ill from drinking out of puddles or standing water, make sure your veterinarian knows the animal may have ingested a detergent-based product.

## **Water Enhancers**

- Water enhancers contain very efficient water absorbers similar to those used in disposable diapers. These products tend to be very slippery and hold water in place for several hours to several days. After the product has dried, it may become wet and slippery again if exposed to water.
- They may be difficult to wash off of buildings and equipment due to the oils in the formulations. For new structures or others with siding and paint in good condition, a power washer with a good, degreasing detergent may be of use.
- For structures with older siding or surface treatments or log structures, dampening the surface and scrubbing with borax and a stiff bristle brush is preferred to minimize damage to the surface.
- If your pet appears ill from drinking out of puddles or standing water, make sure your veterinarian knows the animal may have ingested a product containing super absorbent polymers.

For more information regarding these and other environmental health issues, please call Jefferson County Public Health 303-271-5700.

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