

# HAZARD ANNEXES

## WHAT TO DO?

### HOW-TO'S FOR EACH OF FAIRFAX COUNTY'S MOST PREVALENT HAZARDS

Fairfax County is vulnerable to a wide range of hazards (natural, human-caused, and everyday). These hazards threaten the safety of residents. They have the potential to damage or destroy property and disrupt the economy. While we cannot eliminate hazards, we can lessen their potential impacts.

Hazards may occur in isolation, or – more commonly – in ripple-effect clusters. For example, a hurricane may trigger a flood as well as power outages and medical emergencies. Or a thunderstorm may produce lightning that causes a structural fire.

The Northern Virginia Hazard Mitigation Plan and other sources were used to identify the hazards detailed below. These identified hazards are those that pose the greatest risk to the county (that is, the highest probability of causing the most severe impacts to exposed lives and property). The analyses are based on detailed reviews of prior hazard history, as well as forecasting and probabilistic modeling tools.

*The hazard annexes are grouped by common characteristics, and do not imply any rank-order:*

#### **Natural hazards:**

- ▶ Thunderstorm
- ▶ Hurricane or Tropical Storm
- ▶ Flooding
- ▶ Winter Storm or Extreme Cold
- ▶ Extreme Heat
- ▶ Tornado
- ▶ Earthquake
- ▶ Pandemic Influenza

#### **Human-caused hazards (including accidents and intentional acts):**

- ▶ Cyber Attack
- ▶ Civil Disorder
- ▶ Acts of Violence/Terrorism
- ▶ Hazardous Materials
- ▶ Chemical, Biological, Radiological, or Nuclear
- ▶ Dam Failure

#### **“Everyday” emergencies:**

- ▶ Structural Fire
- ▶ Power Outage/Blackout
- ▶ Medical Emergency

# STRUCTURAL FIRE

## WHAT IT IS

Over 4,000 Americans die each year and 25,000 are injured in fires. Fire can start fast – in less than 30 seconds a small flame can turn into a major fire. It also spreads quickly, both vertically and across enclosed spaces. In five minutes a residence can be engulfed in flames. Moreover, even in areas without flames, smoke and heat can be lethal due to burns (exterior or to the throat and lungs), asphyxiation, disorientation, or simple panic.

## WHAT TO DO

### Before (Preparedness/ Mitigation)

- ❑ Install smoke alarms and change the batteries every six months.
- ❑ Have fire extinguishers on each floor in your house, in known and easy-to-grab locations, and know how to use them; be sure the extinguisher in your kitchen is designed for grease fires.
- ❑ Check that fire extinguishers are sufficiently pressurized every six months.
- ❑ Have and exercise a household evacuation plan that includes two ways to get out of each room in the event the primary way is blocked by fire or smoke.
- ❑ Be sure your wiring and circuit breaker box are up to code.
- ❑ Install GFCI outlets in all bathrooms, kitchens, and other areas where water may come into contact with electrical appliances.
- ❑ Have adequate homeowners or renters insurance.
- ❑ Inspect extension cords for frayed or exposed wiring or loose plugs.
- ❑ “Babyproof” electrical outlets.
- ❑ Get your chimney cleaned on a regular basis.
- ❑ Do not store used rags soaked with painting or cleaning chemicals.
- ❑ Do not keep spare fuel tanks (propane or gasoline) indoors, including in an attached garage.
- ❑ Do not smoke in bed.
- ❑ Be careful when using alternative heating sources (for example, space heaters). Never leave these heating sources unattended.
- ❑ Never use a device meant for cooking or outside use (for example, a camp stove or deep-fryer) as an interior heat source.

## KEY TERMS

- ▶ **Asphyxiation** is when a person is deprived of oxygen, which may lead to unconsciousness or death. It is the leading cause of death in house fires.
- ▶ A **First Degree Burn** is a superficial burn that produces redness.
- ▶ A **Second Degree Burn** is a partial-thickness burn that produces redness and blistering.
- ▶ A **Third Degree Burn** is a full-thickness burn that kills nerve endings and completely burns flesh. If there is a third degree burn, there will also be second and first degree burning around the burn site. Third degree burns over any considerable amount of a person’s body can be fatal.

- ❑ Never leave a burning candle unattended. Consider using battery-operated flameless candles.
- ❑ Learn First Aid.
- ❑ Refer to “Medical Emergency,” below.

### During (Response)

- ❑ Use a fire extinguisher to put out small fires. Never use water on an electrical or grease fire.
- ❑ If your clothes are on fire, “stop, drop, and roll” until the fire is extinguished.
- ❑ If you are escaping through a closed door, use the back of your hand to feel for heat.
- ❑ Crawl low under the smoke to your exit.
- ❑ Close doors behind you to delay the spread of fire.
- ❑ Do not gather valuables or use the phone while exiting a burning structure. Just get out.
- ❑ Once you are out safely, call 911.
- ❑ Once the fire department arrives on the scene, go to the first unit and tell them that all family members are out or accounted for including pets.
- ❑ Do not remain in a burning structure to save a pet that does not want to leave.

### After (Recovery)

- ❑ Seek medical attention as needed.
- ❑ Do not go back into a burning structure for any reason until authorities say it is safe to do so.
- ❑ Call your insurance agent.
- ❑ Contact your local disaster relief services if you need housing, food or a place to stay.
- ❑ In many cases, your home or the building you were residing in may be deemed a hazard and you may not be able to return for a lengthy period of time.

# POWER OUTAGE / BLACKOUT

## WHAT IT IS

Power outages can be frustrating and troublesome when they last a short while, but they can be dangerous if they last days or longer – especially in very cold or hot weather, or for individuals with specialized medical needs. Outages can also be costly, as all the refrigerated or frozen food in a home is liable to spoil.

Outages may occur on their own, but more often they are a secondary effect of tornadoes, hurricanes, thunderstorms, winter storms, extreme heat (from system overload), or even deliberate acts such as an explosive or cyber attack. Some recent large-scale power outages were the result of grid-management software glitches, with no physical damage to components.

Depending on the primary hazard, damage unrelated to the outage may slow power restoration primarily due to downed trees or floodwaters blocking access.

## WHAT TO DO

### Before (Preparedness/ Mitigation)

- ❑ Sign up for Fairfax Alerts and have a battery or crank powered radio available.
- ❑ Back up all critical files on your computer.
- ❑ Consider purchasing a generator for your home – consult an electrician or engineer before purchasing and installing. Safely store an adequate supply of fuel for the generator.
- ❑ Unplug electrical equipment. Spikes and surges could occur as power is restored, damaging equipment.
- ❑ Fill a bucket or two as a water source and potentially for bathing and flushing the toilet – if municipal water pressure relies on electricity, pressure in the system may fail.
- ❑ Maintain a phone with an earpiece that connects by a cord to the receiver (not a wireless phone), and by wire to the wall; retain copper-wire phone service if you have the option (conventional phone service is not reliant on electrical power). If you switch to VoIP, be sure to purchase a battery backup.
- ❑ Charge cell phones and battery-powered devices you use regularly.

### During (Response)

- ❑ Report your outage. Never assume a neighbor has reported it.
- ❑ Use a flashlight only for emergency lighting.
- ❑ Never leave a burning candle unattended. Consider using battery-operated flameless candles.
- ❑ Unplug electrical equipment until a steady power supply returns.
- ❑ Only use generators away from your home and never run a generator inside a home or garage, or connect it to your home's electrical system.

## KEY TERMS

- ▶ A **Power Outage** is a state of electric power loss in a given area or section of a power grid. It could affect a single meter (house or building), a block, a circuit, or a system, depending on the extent of the damage and the root cause of the outage.
- ▶ A **Brownout** is indicated by voltage dropping in the system. It is characterized by the lights dimming.
- ▶ A **Blackout** is the total loss of power in a given area.

- ❑ Remember that your gas appliances will still work, even in a blackout, this includes gas ranges and grills. Do not attempt to use a gas furnace or hot water heater unless you are a licensed professional.
- ❑ Keep tabs on food storage/ food safety:
  - Do not open your refrigerator or freezer – they will remain cold longer this way.
  - If it is cold outside, consider putting your food outside to keep it cool.
  - How long your appliances stay cold will depend on their size, how full they are (a fuller cooler will stay cold longer), and how warm the air around them is; a refrigerator will warm up within a few hours; a freezer is typically OK for a full day or longer.
  - Once you decide to open the refrigerator or freezer, plan to eat everything you can as fast as you can – a thawing freezer and a backyard grill can be the foundation of an excellent neighborhood “freezer party.”
- ❑ If water pressure fails, a bucket of water dumped manually into a toilet will cause it to flush.

### After (Recovery)

- ❑ If power is restored, be certain it is steady before you plug equipment into it.
- ❑ Eliminate unnecessary travel especially by car as some traffic lights might be out and roads could be congested.
- ❑ Throw away any refrigerated food that has been exposed to temperatures 40° F or above for two hours or more, or that has an unusual odor, color, or texture. When in doubt, throw it out!



# MEDICAL EMERGENCY

## WHAT IT IS

A medical emergency is any acute injury or illness that poses an immediate risk to a person's life or long-term health. You can't predict accidents or illnesses, but you can prepare for a medical emergency.

Medical emergencies may happen on their own, or they may be a secondary impact of virtually every other hazard addressed in this Community Emergency Response Guide.

Some examples of medical emergencies are: difficulty breathing, fainting, chest pain or pressure, uncontrolled bleeding, coughing or vomiting blood, sudden severe pain, poisoning, or major injuries, such as broken bones, lacerations, burns, or puncture wounds.

## KEY TERMS

- ▶ **CPR** is short for cardiopulmonary resuscitation. CPR is an emergency procedure in which the heart and lungs are made to work by compressing the chest overlying the heart and forcing air into the lungs. It is used to maintain circulation when the heart has stopped pumping on its own. CPR courses are offered by many community organizations.
- ▶ **First Aid** refers to a course of basic injury-treatment and life-saving skills offered by many community organizations.
- ▶ An **Automated External Defibrillator (AED)** is a portable device that checks the heart rhythm and can send an electric shock to the heart to try to restore a normal rhythm.
- ▶ **File of Life** is a form that you keep on your refrigerator door that provides emergency personnel critical medical and emergency-contact information in case you are unable to provide that information to them yourself.

## WHAT TO DO

### Before (Preparedness/ Mitigation)

- ❑ Know how to call or text 911.
- ❑ Keep well-stocked First Aid kits at home, at work and in your car.
- ❑ Put together a list of emergency contacts.
- ❑ Keep a list of medical conditions and medications with you at all times.
- ❑ Fill out a File of Life and put it on your refrigerator door.
- ❑ Learn the warning signs of medical emergencies.
- ❑ Participate in trainings such as CPR, First Aid, Basic Life Support (BLS), or Stop the Bleed to prepare yourself for emergencies.

### During (Response)

- ❑ Stay calm, and call 911. If you are trained, start CPR (cardiopulmonary resuscitation) or rescue breathing, if necessary.
- ❑ If you think you are having a medical emergency, seek immediate medical care.
- ❑ Gather as much information as possible about the circumstance, and call 911. Follow all the operator's instructions carefully. Stay on the line until the operator says it's OK to hang up.
- ❑ If you have only a brief time with the operator, make sure you share your address and your medical issue first.
- ❑ Call if you can, text if you can't. It is always preferred that you call 911 since it is a better way of exchanging information.

### After (Recovery)

- ❑ Review all your documentation to ensure your emergency contact and medical information are up to date.
- ❑ Educate others in your networks to better prepare your community.