

# Alexandria CERT: Community Emergency Response Team

Police – Fire – Medical Emergency	911
Alexandria Non-Emergency	703-746-4444
Alexandria Animal Control	703-746-4774
National Poison Control Center	800-222-1222
National Suicide Prevention Lifeline	800-273-8255

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## What Are Your Risks?

Identifying hazards at your home and in your neighborhood can make you better prepared to prevent or deal with emergencies, whether small or large. It is also useful to be aware of hazards where you work. Start within your home, then examine the neighborhood for hazards: What incidents could happen? Who could be affected? How badly could an incident impact people or property or the environment? Developing awareness of hazards can be an educational activity for children. And you may find over time hazards you never noticed or things that change the hazard profile of the surrounding area.

**At Home.** Every home should have smoke detectors on each level and outside each sleeping area. Homes with natural gas also need carbon monoxide detectors on each level. Electrical hazards include overloading outlets and power strips, frayed cords or cords run underneath carpets, and faulty wiring. Review what hazardous substances are stored under cabinets in the kitchen, bathrooms and laundry area, in the basement, and in the garage. It's dangerous to store bleach near other cleaning products that contain ammonia. A garage can have multiple dangerous substances: oil-based paint and paint thinners, charcoal and charcoal lighter or propane tanks for grills, fertilizer, pesticides, gasoline and oil, etc.

**Neighborhood Hazards.** Walk through your neighborhood in a ¼ to ½ mile radius and list what could cause problems. And think about secondary effects. Could electrical lines come down in a storm, causing power outages? Secondarily, winter heating and summer cooling would be affected, traffic lights could go out, and stores and gas stations would have trouble operating. Winter storms and flooding, from weather events or water main breaks, disrupt traffic and may prevent fire and ambulances from responding promptly. Highway crashes also disrupt traffic and may involve trucks carrying hazardous materials. Rail cars also carry hazardous materials. Gas stations and other businesses such as hardware and paint stores have explosive or corrosive materials on the premises.

**Neighborhood Vulnerabilities.** Who might be affected by an incident? Would elderly persons or persons with disabilities would have trouble evacuating? Consider also people without transportation or who don't speak English well. What about children in school or daycare? Are there targets of criminal activity or hate crimes?

## Reducing Your Risks

**Protect Your Home.** Test your smoke detectors and carbon monoxide detectors each month. Replace batteries in the detectors. Have enough fire extinguishers and know how to use them. Fix electrical hazards. Know where utility shutoffs are and how to safely shut them off. Prepare for extended power outages and boil water orders. For hazardous substances, eliminate, limit, or isolate as much as you can. Take financial measures to help recover from an emergency by having insurance and a rainy-day fund.

**Evacuation Routes.** Plan at least two ways how to get out of your home or your workplace. Also determine a meet-up location at a safe distance. Likewise, plan several evacuation routes from your neighborhood and from the larger area. Consider what you would do if you couldn't drive out or had to abandon your vehicle.

**Resources.** Think where you could go and who could help you and your neighbors. Are there places for shelter or where you could get food and first aid or other medical supplies? Are there people with medical training? Also identify facilities that have supplies, tools, or equipment to use if there is an emergency.

## Drones: Public Safety and Security

Drones – unmanned aerial vehicles (UAVs) – support public safety and security in a variety of ways.

**Vehicle Crash Reconstruction.** Using old methods, measurements were done by tape, and skid marks and other information were noted on graph paper, all of which could take 6-8 hours. Drones help law enforcement collect evidence and map the scene of a crash in less than 15 minutes. This allows roads to open sooner. The longer a road is closed, the more likely there will be secondary crashes. And employing drones reduces the chance law enforcement, fire and medical, and towing personnel will be endangered while working the crash scene. Drones can also be used to report on the extent of the crash and its impact on traffic flow, so traffic can be redirected efficiently. More generally, traffic flow monitoring by drones is used to help cities manage traffic congestion and improve travel times.



Photo credit: John Bullock and Erin Easterling/Purdue University

**Search and Rescue.** Drones can cover large areas quickly when searching for persons who are lost, in distress, or trapped by debris or in caves. Using drones is also safer for personnel conducting the search when terrain is hazardous or arduous. Search drones are equipped with vision cameras and/or thermal (infrared) cameras or sensors. The real-time videos and images are sent to a ground control system along with GPS locations. The team directing search and rescue operations then analyzes the information to make decisions.



**Bomb Threats and Hazardous Materials.** Drones allow law enforcement to investigate possible bomb threats from a safe distance. The same is true if there is a spill or leak of hazardous materials. In addition, a drone might be able to collect samples of the suspected hazardous materials for analysis. Another hazardous situation would be an incident at a nuclear power plant: a drone can provide emergency responders with information about radiation levels and other details about the incident.

## Drones in Disasters

**Disaster Response.** Drones are used to survey areas affected by a disaster and to provide vital information about life-safety hazards. They also provide awareness of damage to property, the environment, and critical infrastructure such as transportation, power and water utilities, or tele-communications systems. Drone cameras take high resolution images and videos to help pinpoint the worst-affected areas and assess the scale of the damage.

Information from drones can create up-to-date maps of the disaster zone to support emergency managers who need to make decisions about deploying response resources, logistics, and evacuation. When disaster areas are difficult or dangerous to reach, drones can be used to drop small supplies of medicine, food, and water to persons in need. Drones can also be a tool to temporarily re-establish communications networks damaged or destroyed by disaster.

**Emergency Preparedness.** Drones help with monitoring and forecasting, serving as an early warning system. Emergency managers can deploy drones to monitor the environment in various ways. One is to drop small sensors into waterways and then track their movement either to report on flood progress or to forecast future flooding events. In agricultural areas, drones can survey the effect of drought on crops and forests.