

UNIT FOUR

Environmental Emergencies



Revised: March 31, 2016

ENVIRONMENT EMERGENCIES STUDY GUIDE

What 3 elements are necessary for a fire?

- 1.
- 2.
- 3.

Identify 5 causes of these environmental emergencies?

Fire Emergencies

- 1.
- 2.
- 3.
- 4.
- 5.

Driving Emergencies

- 1.
- 2.
- 3.
- 4.
- 5.

Poison Emergencies

- 1.
- 2.
- 3.
- 4.
- 5.

Identify 5 dangers linked to these environmental emergencies?

Power and Water Outage

- 1.
- 2.
- 3.
- 4.
- 5.

Sever Weather

- 1.
- 2.
- 3.
- 4.
- 5.

The poison control phone number is:

Unit 4

Environmental Emergencies: Preventing, Preparing, and Responding

Outcomes

Pre-Class Outcomes

Recognize the three elements necessary for a fire.

Know the main causes of fire.

Know the main causes of driving emergencies.

Know the main causes of poison emergencies.

Know the dangers associated with power and water outage.

Know the dangers associated with severe weather.

Class Outcomes

Describe preventive measures and preparation steps for a fire.

Describe preventive measures and preparation steps for power and water outage.

Describe preventive measures and preparation steps for severe weather.

Describe preventive measures and preparation steps for driving emergencies.

Describe preventive measures and preparation steps for poison emergencies.

Explain the correct procedures for responding to a fire.

Explain the correct procedures for responding to a power and water outage.

Explain the correct procedures for responding to severe weather.

Explain the correct procedures for responding to driving emergencies including what to do if you become stranded, in an accident, go into a skid, or are being tailgated.

Explain the correct procedures for responding to poison emergencies including poisons that are swallowed, inhaled, or have come in contact with skin or eyes.

Understand that smoke during a fire is deadly.

Know that in a fire emergency in a community residential setting, your first responsibility is to get everyone out.

Explain the difference between a severe weather/tornado watch and a severe weather/tornado warning.

Understand the importance of safe driving habits; particularly when transporting individuals

On the Job Outcomes

Be able to respond quickly, correctly, and calmly in the event of an environmental emergency.

Demonstrate the ability to teach the people you support how to prevent, be prepared for, and respond to environmental emergencies.

Identify the environmental emergencies that are most likely to occur in your area.

Identify your role and responsibilities in the event an environmental emergency occurs while you are at work.

Describe the purpose of and your role in implementing protection plans, fire drills, evacuation plans, and training people to evacuate.

Be able to use properly a fire extinguisher as an. escape and/or rescue tool in the event of a fire.

UNIT 4
ENVIRONMENTAL EMERGENCIES:
PREVENTING, PREPARING AND RESPONDING

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ENVIRONMENTAL EMERGENCIES:
PREVENTING, PREPARING, AND RESPONDING

Emergency preparedness means planning so you and those in the community residential setting know how to prevent crisis situations and how to manage those that do arise. This training focuses on five environmental hazards. They are *fire, water and power outage, severe weather, driving emergencies and poisoning.*

The material in this unit is drawn from a variety of safety pamphlets and brochures and gives general information. Some material has been modified to address the needs and circumstances of people living in community residential settings. It will not cover emergencies related to personal injury, as that information is covered in standard first aid.

Planning for an emergency in a community residential setting includes:

- Knowing the kinds of emergencies and disasters to be prepared for
- Doing what you can to help stop these emergencies from happening
- Knowing the procedures and policies to be followed
- Knowing your responsibilities before, during, and after an emergency
- Keeping an updated list of phone numbers and emergency information by each phone
- Being sure you know who is "on call" at all times

You and your supervisor should discuss the emergency policies and procedures specific to your community residential setting. You should know, as well as help the people living in the home to learn, what to do to prevent emergencies, prepare for them, and how to respond to them. Emergency preparedness can save lives! Individuals are dependent on you to provide a safe environment and should never be left alone in a house or with staff who are not trained in emergency preparedness.

Fire

Every fire is potentially life threatening. Your job is to assure the safety of the individuals living in your community residential setting. Most accidents and deaths from fire are unnecessary. Fire marshals agree that most people caught in a fire could escape safely if they were prepared and knew what to do.

Causes of fires: many fires can be prevented if people know the causes and how to prevent those that are preventable. Some of the major causes of fire include: careless smoking, heating or cooking equipment, matches and open flame, and misuse of electricity. A fire requires three elements: fuel, heat; and oxygen. Eliminate even one of these elements and a fire will not occur.

Careless smoking causes over 200,000 fires each year and over 1,200 people die in those fires. Seventy percent of all fire victims die because smokers doze off in beds or in chairs while smoking. Also, many fires start from "sneaking" cigarettes in. non-smoking areas and tossing cigarettes onto dry grass, leaves, or flowerbeds. Cigarettes can start fires as easily as lit matches if left unattended or not properly extinguished. Cigarettes can smolder unnoticed for hours before a fire breaks out.

Heating and cooking equipment that is not properly used and/or maintained is the cause of approximately one quarter of all fires. Some examples of this would include: things stacked or lying too close to a furnace, dryer, water heater, stove or other heat source; wearing loose or flowing clothing while using the stove; accumulation. of dirt under or around these same heat sources; not emptying the dryer lint tray before and after each use nor occasionally cleaning the dryer vent tube; poor ventilation between the wall and major appliances such as TV, refrigerator, microwave; not having the furnace checked and cleaned on a routine basis; using cooking sources (such as grills and ovens) as heating sources; and the use of space heaters. That is why space heaters of any kind are NOT allowed in community residential settings.

Matches and open flames are extremely dangerous. That is why lit candles are NOT allowed in community residential settings. Causes of fires in this category include not properly storing matches/lighters or flammable products; careless burning of leaves or trash; and playing around with fire or things that could start a fire. Be very aware of items that are flammable or combustible and keep them properly stored, such as gas, some paints, paint thinners, oily rags; and many cleaning fluids. Even the vapors from these products can explode into flame if exposed to any ignition source.

Misuse of electricity can lead to fire. Electrical wires can overheat at any time and can smolder for several hours, even days, before bursting into flames. This usually happens when outlets or extension cords are forced to carry too much electricity. Therefore, extension cords are NOT recommended to be used in

community residential settings. Also, faulty wiring, inadequate breakers, old fuse boxes, improper use of fuses, frayed cords, cords placed under rugs, and overloaded electrical outlets can lead to fires.

Prevention of fires: There are numerous things you can do to prevent a fire from occurring. These include a wide variety of actions on the part of everyone working and living in the home. Some examples are: properly store matches and lighters - don't leave them or cigarettes laying around; avoid using alcohol-based cosmetics and hair sprays near burning cigarettes or other heat sources; stay with someone who needs assistance while smoking; have EVERYONE follow the smoking rules of the home; make sure cigarettes are fully extinguished: empty ashtrays before they become full into fire-safe containers; follow safe smoking habits; when cooking don't wear loose clothing or place potholders, towels, etc. too close to the stove; keep all flammable and combustible products properly stored and away from heat sources; don't leave small appliances unattended when in use and unplug small appliances when not in use; keep large appliances 3 inches from the wall; keep all appliances clean and in good repair; check and replace as needed all electrical cords, including Christmas lights; keep aware of potential fire hazards and teach the people you support about fire safety and prevention.

Preparation for fires: The most important things you can do to be prepared for a fire are to have smoke detectors, know your home's fire safety plans including evacuation routes and exits, and practice fire drills. It is your responsibility not only to become knowledgeable in fire preparedness, but to also assist the people you support in learning how to prepare.

Smoke detectors greatly increase your chances of surviving a fire. The best way to survive a fire is to hear the fire before you see it. That is why all community residential settings in Michigan are required to have fire alarms and smoke detectors. However, to ensure they work they must be checked monthly and at least annually cleaned and have the batteries changed.

Fire safety plans including evacuation routes and exits should be posted, and all people working and living in the home should be familiar with them. This plan is your guideline for preparing and responding to fires. Every new staff needs to be instructed on this by his or her supervisor immediately upon hire.

Fire drills are an opportunity for EVERYONE to practice what they would do to evacuate in the event of a real fire. Fire drills include going to a pre-planned meeting place (destination point). Fire drills are to be conducted with the normal number of staff on duty for that shift. Extra staff may be present to observe and record, but may not help evacuate individuals. The minimum number of fire drills is one per shift per quarter for a total of 12 per year. At least once a year on each shift, supervisors and other management personnel should conduct unannounced fire drills with no advanced notice to staff. Individuals living in the

community residential settings are never alerted in advance or told there will be a fire drill. Priority should be given to holding fire drills during the most difficult conditions and times, such as during mealtimes, bathing, and recreation periods. If a person is bathing, be considerate of their right to privacy and dignity and do not violate these rights by taking them outside for "practice" when they are only partially clothed. Staff should carefully plan what actions are necessary for evacuating someone who is experiencing physical problems or temporary behavioral problems. The goal that is being strived for during fire drills is for all individuals to calmly and safely exit from any place in the home within 90 seconds after the alarm sounds.

Fire extinguishers are required in community residential settings and all staff must be trained and able to use a fire extinguisher. Fire extinguishers last only a few seconds. Therefore, you are only to use a fire extinguisher in a community residential setting to fight your way out; NOT to fight the fire. Community residential settings should have at least one fire extinguisher on each occupied floor and one in the basement. It is recommended that there be one in the kitchen, and one in the bedroom hallway. They should be checked at least monthly to ensure they are properly charged and functional.

Respond to fires: Your absolute first priority in a fire is to evacuate all people. No attempt should be made to fight a fire except to evacuate or rescue someone. Time is a most important factor. Any delay in evacuation increases the danger. Waste no time! A fire is never too small to begin evacuation procedures. No matter how insignificant the fire may seem, evacuate immediately. When a smoke detector sounds, everyone must evacuate. There is no such thing as a false alarm.

In the event of a fire, your first priority is to evacuate all people from the home. Knowing what to do and where to go can save lives. Total panic can result if individuals and staff don't know what to do. Some people we support become frightened and may make no attempt to escape at all or try to hide in closets or under beds. That's why fire drills are so important. The more you practice, the better your chance of survival in a real fire.

When a fire occurs, follow the evacuation plans for your home and the following guidelines. Decide which method of escape to use. Going through a door is the easiest and most natural route, but a window may be the best alternative route. Before opening any door; feel the door with the back of your hand. If the door feels hot, don't open it. The smoke and fire may be right outside the door and if the door is opened, the fire will explode into the room and will immediately fill the room with smoke, heat and toxic gases. If you can't escape by door or window, stuff a rug; sheet or other fabric around the cracks of the door and wave a cloth out the window to attract attention and yell for help. If you feel no heat from the door, go through the doorway to the most readily available exit from the home. Close all doors behind you to slow the spread of the fire.

If you are exiting through smoke-filled areas, stay low to the floor, within 1 to 2 feet. Smoke rises, so the lower you are the better you will be able to see and breathe. If possible, hold a wet washcloth over your nose and mouth to help you breathe. In this case, if you're helping someone who can't get out on his or her own, drag the person on the floor with you. Smoke, not the flames, is the real killer in a fire.

Once out of the house, go to the pre-arranged meeting place (destination point). Once there, count heads so when the fire department arrives you can let them know if everyone is present or if someone is missing. Then take everyone to a place of safety. Call the fire department from outside of the home. Don't go back into the house for any reason. Stay out of the house until the fire fighters issue an "all clear".

Water and Power Outage

Power outages can make people feel alone and helpless. Televisions, clocks, radios, and most furnaces with electric thermostats won't work without power. Telephone service can also be interrupted. Power outages generally don't affect the flow of water in cities. However, in rural communities that rely on wells, even a short-term loss of power can cause a water problem. Even when there are no power outages, a water outage could occur due to an interruption in the normal water supply or the water can become contaminated.

Causes of power and/or water outages: There are many things outside of the home, that we have no control over, that can disrupt our power and water. These include such things as construction, digging, accidents, water main break, and severe weather. Outages may also occur from problems within the home, such as overloaded circuits, appliance failure, and water pipe breaks.

Dangers of power and/or water outages: It can become extremely uncomfortable and even dangerous to the point of being life-threatening if we are without air conditioning during extreme hot and humid weather or heat in the winter. Also, refrigerated and frozen foods may begin to spoil if a power outage lasts long enough.

Prevention of power and/or water outages: We can only prevent some of the outages that occur from within the home, not those that originate outside of the home. We can do this by keeping major appliances, including the furnace and air conditioner well-maintained; not overloading circuits; trimming trees to keep branches away from wires; calling *Miss Dig* before digging even the smallest hole; and keep water pipes from freezing.

Preparation for power and/or water outages: If you are prepared for power and water outages, you will have what you need to make a power and/or water outage easier to deal with. Make sure you have the following available at all times: a battery powered radio or television, flashlights and/or battery powered lanterns, plenty of spare batteries, a supply of bottled water which is replaced every six months, purification tablets, a supply of food that requires no heating, a manual can opener, and an insulated cooler. Keep rechargeable lanterns recharged. Some community residential settings have fixed emergency lighting in hallways and stairways that comes on automatically during power failures. Carefully follow directions for testing these lights.

Respond to power outages: Use battery-powered lighting. To avoid opening the refrigerator and freezer any more than necessary; transfer foods you will soon use to an insulated cooler. Use battery powered radio, television, cell phone, CB radio or car radio to stay in touch with your community. During summer months, shut all drapes, keep windows closed if it is hotter outside than inside, go to an interior room on the lowest level where it is cooler, drink plenty of fluids, and have

low energy activities. During winter months, close off all rooms not needed, dress in layers to conserve body heat, keep people busy and active but not over tired.

Respond to water outages: use bottled water. If you know in advance your water supply will be cut off fill bathtubs for personal care, filling toilets, and washing dishes. Turn off the hot water heater and drain water from the faucet at the bottom of the tank for later use. Cook with canned or frozen foods that contain lots of liquids. In the case of water contamination, you may do one of three things for safe drinking water: use bottled water, treat water with purification tablets or purify the water with household bleach. Use bleach that contains hypochlorite as its only active ingredient. The ratio is eight drops of bleach per gallon of water. Use double the number of drops of bleach if the water is cloudy. Stir and shake water thoroughly and allow it to stand 30 minutes before drinking. The taste or smell of chlorine will tell you the water is safe to drink.

Severe Weather

Severe weather may cause an emergency. Thunderstorms, lightning, tornadoes, floods, and winter storms can all have a major impact on our lives, from a minor inconvenience to property destruction and death.

Dangers of severe weather: Flooding can cause drowning or illness from contaminated water. Thunderstorms can generate lightning strikes, which can injure and kill as well as start fires. Tornadoes can cause injury or death from flying debris or glass, being in a building that is damaged or collapsed, or being caught up in the tornado itself. Winter storms can cause slips and falls on the ice, heart attack or stroke from overexertion, hypothermia and frostbite. All of these severe weather conditions can also cause property destruction, power and water outage, contaminated water, dangerous driving conditions and in extreme cases even disease, loss of jobs and homes.

Prevention and Preparation: There is little you can do to prevent weather-related emergencies, but you can be ready for them. Know your home's procedures for severe weather. Practice severe weather drills and know where to take shelter. Involve the people you support in learning about severe weather planning. Keep an emergency supply of water, purification tablets, food that doesn't need to be cooked, and a manual can opener. Have a battery powered radio, battery powered lanterns, flashlights, and extra batteries. In the winter have sidewalk salt and snow shovels or blowers, dress in layers, and have plenty of warm blankets.

Make sure you know the difference between a watch and a warning. "Watch" means that the conditions are right for severe weather to develop. If this is the case, stay tuned to the TV or radio for weather reports. "Warning" means that a severe weather condition has been spotted in your area; *you need to take shelter immediately!* A few hours advance warning of a coming storm can be the key to not being caught in the storm and being better prepared to handle any emergency situation that may arise. If you see darkening clouds, graying skies, and/or increasing winds check the radio or TV for weather reports. In case there is a power failure, a battery powered radio or TV is the best source of information. Also, even when there are no predictions or indications of severe weather, check weather reports in order to plan suitable activities and to ensure you and the people you support are appropriately dressed for the weather.

Respond to thunderstorms: Lightning often occurs during thunderstorms. To lessen the chance of being struck by lightning, take the following precautions. Seek shelter immediately and do not use the phone unless it is an emergency. If you are outside and there is no



nearby shelter, go to a low place such as a ravine. Do not stand underneath a tall isolated tree or pole. Avoid high places, tall structures, open water, and anything metal. If you feel your hair stand on end or a "tingling" sensation, drop to your knees, bend forward, and put your hands on your knees. Do not lie flat on the ground. Persons struck by lightning receive a severe electrical shock and may be burned, but they carry no electrical charge and can be safely handled. Persons struck by lightning need immediate first aid treatment.

Respond to tornadoes: Tornadoes are the most violent offspring of a severe thunderstorm. They are often seen as a funnel-shaped cloud. When a tornado warning is given, your immediate actions can save your life and the lives of those with you. Take cover immediately! Follow the home's Tornado Evacuation Procedures. Go to the basement or interior room on the lowest floor. Stay away from doors, windows, and outside walls. Listen to the radio and stay where you are until you hear an all-clear siren or radio announcement. If you are outside, in a car or mobile home, seek shelter in a large building. If there is none, lie down in a ditch or ravine and protect your head. Do NOT try to outrun a tornado.



Respond to floods: When flooding occurs, use a battery powered radio to keep posted on civil emergency information. Evacuate to higher ground before the floodwaters reach your neighborhood. Severe thunderstorms may cause flash floods, meaning the ground is unable to absorb or the storm sewers unable to quickly handle a heavy rain in a short time period. To lessen their dangers, avoid low places and seek shelter in a large, sturdy building. Do not drive into water-covered roadways. If your home is flooded, do not drink the water until you are sure it is safe

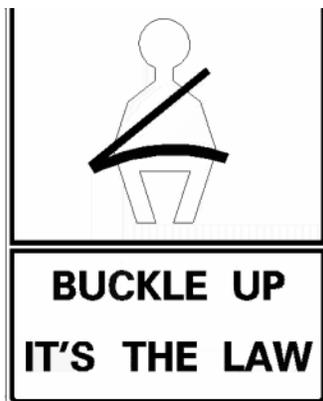
Respond to winter storms: Winter storms can mean blizzards, heavy snows, ice storms, or freezing rain or sleet. Cold weather, even without any physical exertion, puts an extra strain on the heart. Add unaccustomed physical exercise such as shoveling snow, pushing a car, or even walking fast and/or far can cause heart attack, stroke or other ailments. Therefore, in winter weather and storms, avoid overexertion. Avoid prolonged exposure to the cold and wear protective clothing. Keep clothing loose and dry. Keep posted on weather conditions in your area. Do not drive when the road conditions are dangerous, unless it is absolutely necessary. If you must drive, take someone with you and let others know your route. Travel by daylight and use major highways when possible. Drive with all possible caution. Don't drive faster than road and weather conditions permit. Don't risk being stalled, lost or isolated. Stop, seek help, or turn back if conditions become more than you are able to handle. Keep the car radio tuned to weather information.

Driving Emergencies

Sound, sensible driving habits are important to anyone, especially when transporting others. When transporting people you support you are responsible for driving safely and following all traffic laws. Ideally when transporting, at least two staff should be in the van; one to drive and the other to tend to any possible needs of the passengers. However, this is not always possible.

Causes of driving emergencies: There are numerous causes of driving emergencies. Some of the most common are drug or impaired driving; driving when tired; driving while talking on a cell phone, eating; smoking, or otherwise being distracted; road rage; weather conditions; road construction; vehicle problems; poor visibility; animals; heavy traffic, etc.

Prevention and Preparation: Keep your vehicle well maintained. Keep tires properly inflated, including the spare tire. Repair a cracked or chipped windshield and keep it clean for good visibility. Keep the gas tank at least half full and don't run low on windshield washer solvent or other fluids. Have emergency supplies in the vehicle, including flares, flashlights and batteries, jumper cables, jack, a "Help - Call Police" sign, a first aid kit, and a map. In the winter months, the emergency supplies should also include windshield scraper, sand or kitty litter, shovel, blankets, and extra winter wear. Keep abreast of weather and road conditions.



Before putting a car in drive, adjust your seat and all mirrors, make sure you and all passengers are wearing their seat belts; and properly secure any wheelchairs. Also, if the vehicle you are driving is unfamiliar to you, familiarize yourself with the location of all control switches for lights, radio, windows, heat/air, etc. and make sure you know if the car has regular or antilock brakes. Make sure you know or have directions on how to get to your destination.

While driving stay alert, follow all traffic laws, and be a courteous driver. Use your turn signals, don't go faster than road conditions and speed limits allow, avoid distractions, beware of blind spots and don't tailgate. Pull over to let emergency vehicles pass and stop for school buses with red flashing lights.

Respond to driving emergencies: If you see a *stranded motorist*, don't stop. If possible, contact the police and let them know the location of the stranded motorist. If you become a stranded motorist, stay with the vehicle and if possible get the vehicle out of the flow of traffic. Raise the hood, turn on your flashing hazard lights, signal with a cloth tied to the radio antenna or have a "Call police" sign in the window. If you run the vehicle, make sure the exhaust pipe is clear of snow or other obstruction and crack open a window to provide ventilation.

If you are involved in a *car accident*, do not leave the scene. If possible, move your car out of the traffic flow to avoid further accidents. Call police from a cell phone if you have one or have someone else call.

If you are being *tailgated*, gradually slow down, or move to the right or pull over to let them pass.

If you begin to *skid*, take your foot off the gas pedal. Shift into neutral or depress the clutch to remove power from the drive wheels. Steer gently in the direction you want the car to go. Be careful not to over steer. Keep your foot off the brakes or gently pump them to slow the car until you feel some traction. If the car has anti-lock brakes, use firm, steady pressure on the brakes to slow the car.

Poisoning



The average home is loaded with potentially hazardous substances. By increasing your awareness and teaching consumers what products are dangerous, many accidental poisonings can be avoided.

Causes of poisoning: Among the poisonous products found in homes are detergents, bleach, ammonia, household cleaning products, drain cleaner, antifreeze, paints, windshield washer fluid, shoe polish, many topical medications, many household plants, insect repellents, office supplies, pet treatments, sunscreen, many cosmetics, pool chemicals, etc. Also, carbon monoxide from gas dryers, furnaces, water heaters, gas grills, and vehicle exhaust can be deadly.

Prevention and Preparation: Avoid bringing unnecessary toxic substances into the home. Store cleaning supplies out of sight and out of reach of the wrong hands. Keep all products in their original containers. Read and heed directions and caution labels. Rinse out containers thoroughly before disposing of them. Lock up medications and keep in child-resistant packaging. Don't call medicine candy. Know the types of plants you have. Supervise the use of cosmetics, sunscreen and bug repellents. Teach the people you support about poisons and poison prevention. Don't leave the car running in the garage and don't sit for long in a closed vehicle with the motor running. Have the gas appliances routinely checked and serviced.

Also, to be better prepared in a poisoning emergency, make sure you have the following products and information. Have Syrup of Ipecac and activated charcoal on hand. These can be purchased at any drug store. Have the poison control phone number posted near each phone. The poison control phone number is 1-800-222-1222. Attend a Standard First Aid class at least every three years, so you will know the signs and symptoms related to poisoning incidents and be able to perform the correct first aid. This is very important because the wrong treatment is often more dangerous than no treatment!

Respond to swallowed poison: Call Poison Control and follow their instructions. Only use Syrup of Ipecac or activated charcoal if they instruct you to do so. Transport the person to the nearest medical facility. Take another person, if possible, to attend to the victim while the other person drives. Take any leftover poison, the container it was in and any vomit from the poisoned person with you to the medical facility.

Respond to poison on skin or in the eye: If someone gets something poisonous on their skin or in their eye, rinse immediately with cool running water until medical help arrives.

Respond to inhaled poison: If a person has inhaled carbon monoxide or smoke, get the person to fresh air. If the person is not breathing, do mouth to mouth breathing or CPR, as needed, until the person starts breathing or medical help arrives.

REMEMBER, YOU ARE RESPONSIBLE FOR THE SAFETY OF THE PEOPLE YOU SUPPORT. MAKE SURE YOU ARE PREPARED AND KNOW WHAT TO DO IF ANY OF THESE ENVIRONMENTAL EMERGENCIES OCCUR!!!