

Residential **Shelter-In-Place**



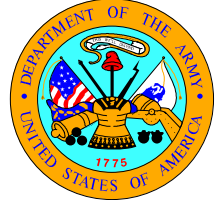
This video describes Shelter-In-Place techniques for residential structures in CSEPP communities. It explains how officials will notify residents to Shelter-In-Place, why and how sheltering protects people from a chemical vapor, and the measures residents can take to protect themselves in their homes from a chemical agent.



STUDENT GUIDE



Residential Shelter-In-Place (SIP) **Student Guide**



Prepared for

FEDERAL EMERGENCY MANAGEMENT AGENCY
Washington, DC

and

UNITED STATES ARMY
SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
Aberdeen Proving Ground, MD

by

Oak Ridge National Laboratory*
Oak Ridge, Tennessee



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INTRODUCTION

These STUDENT NOTES are intended to accompany the *Residential Shelter-In-Place* video prepared for the Chemical Stockpile Emergency Preparedness Program (CSEPP). The CSEPP is a collaborative effort by the Army and Federal Emergency Management Agency (FEMA) and state and local officials to improve the emergency response capabilities of communities that surround the chemical stockpiles at the eight U.S. Army installations in the continental United States. Since CSEPP began in 1988, state and local officials have teamed with the Army and the FEMA to protect the public in the unlikely event of a chemical agent release. Although evacuation is the preferred action in the event of an accidental release of chemical warfare agent if time permits, officials may advise residents to shelter-in-place under some circumstances. This video is intended to teach residents what is meant by shelter-in-place, why shelter-in-place works in fast-moving plumes, how to enhance the protection afforded by sheltering, and the steps residents should implement when the shelter-in-place advisory is concluded.

The FEMA/Red Cross brochures, *Your Family Disaster Supplies Kit*, *Your Family Disaster Plan*, *Emergency Preparedness Checklist*, and the Humane Society's *Planning Tips for Pets, Livestock, and Wildlife*, are reproduced at the end of this publication.

Residential Shelter- In-Place (SIP)



VOICE	SCREEN	NOTES
<p>Opening Scene:</p> <p>First Boy: Hey-remember what they told us to do at school?</p> <p>Second Boy: Yeah-let's go.</p> <p>Dad: Honey-did you hear anything about a test today?</p> <p>Mom: I didn't see anything in today's paper about a test. Do you think it's real?</p> <p>Announcer: This is a test of the Emergency Alert System. This is a coordinated monthly test of the broadcast stations in your area. Equipment that can quickly warn you during emergencies is being tested. If this had been a real emergency you would have been instructed</p> <p>Narrator: The Harrison's and their neighbors did the right thing.</p> <p>The Chemical Stockpile Emergency Preparedness Program, or CSEPP, uses a variety of warning devices to alert and notify the public in a rapid manner. A siren - or a tone alert</p>	 	

VOICE	SCREEN	NOTES
<p>signal- is meant to grab your attention. You should listen to the warning message and take immediate action. If you are outside and cannot hear the warning instructions, immediately go inside and turn to your local emergency radio or television station for information on appropriate protective action. Officials in your CSEPP community will use electronic sirens, tone alert radios, route alerting, or messages sent over TV and radio to let you know what you need to do to protect yourself, your family or household members, your pets, or people at your business or workplace.</p> <p>Depending on the situation, you may then be asked to evacuate or to shelter-in-place. In some cases officials may ask part of the community to shelter and part to evacuate. Emergency planners have developed protective action strategies to maximize public protection in the event of a release.</p> <p>If officials advise you to evacuate and you are at home, immediately gather up medications, emergency supplies, family members</p>		



Residential Shelter- In-Place (SIP)

VOICE	SCREEN	NOTES
<p>and pets, and follow recommended evacuation routes away from the hazard area to a reception center. Officials will tell you where to go and when it is safe to return.</p>		
<p>If you cannot evacuate or shelter by yourself, make arrangements for your neighbors, nearby friends, or relatives to assist you. Contact your local emergency management agency for assistance.</p>		
<p>If household members are separated, follow your household emergency plan that contains strategies to take protective actions and eventually reunite. If your family does not have an emergency plan you should develop one. Information resources developed in your community can help you to prepare a plan.</p>		
<p>Children out playing should know to return home immediately.</p>		
<p>If your children are at school, don't phone the school or try to pick them up. All schools have a plan in place to protect the children. If a family member is at work or at another location, don't risk your own safety by trying</p>		


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VOICE	SCREEN	NOTES
<p>to pick them up. And don't wait for them to get home before taking protective action. Community officials will reunite families when it becomes safe to do so.</p>		
<p>Have an emergency kit to support shelter and evacuation. This may contain a flashlight, portable radio, extra batteries, water, emergency food, clothes, and other items. The FEMA/Red Cross brochure contains a complete checklist for your family's emergency supply kit.</p>		<p>Note: The FEMA/Red Cross brochure <i>Your Family Disaster Supplies Kit</i>, is included at the end of this document.</p>
<p>Officials may advise some people to shelter-in-place in their residence or place of business if a chemical agent accident occurs. Sheltering is a normal protective activity for a variety of emergencies. People often are advised to shelter inside when natural events such as thunderstorms or snow threaten an area.</p>		
<p>For a chemical emergency, shelter-in-place means you go inside a building, close and lock windows and doors, and turn off heating or air-conditioning units and other fans or vents to the outdoors. It's</p>		

Residential Shelter- In-Place (SIP)

VOICE	SCREEN	NOTES
<p>preferable for occupants to stay in an indoor room with no outside windows. You need a portable radio or television to know when it is safe to exit. Don't wait for an emergency to pick the room to use. Choose it in advance and make sure that all household members know which room is your "safe room".</p>		
<p>If a plume containing chemical agent vapor is expected to pass over your structure, taking additional precautions to protect yourself may be necessary. To enhance the protection afforded by a structure, you should take additional actions in your safe room-like placing duct tape over cracks and plastic sheeting over windows or door openings. These measures are called "expedient sheltering" and provide a further barrier to outside air penetration.</p>	 A photograph showing two individuals in a room, one in a dark shirt and one in an orange shirt, working together to apply a strip of yellow tape across the top of a window frame. They are standing on either side of the window, reaching up to secure the tape.	
<p>You will be notified when you should end sheltering. Quickly follow official instructions on what to do next. Officials may direct you to relocate to a reception center. When officials tell you to vent structures, open doors and windows and turn on fans to replace the inside air of</p>	 A photograph of a person sitting in a wheelchair in a room. The person is positioned in front of a large window with multiple panes, looking out. The room has a potted plant on the left and a desk or table on the right.	

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VOICE	SCREEN	NOTES
<p>your residence with outside air. At this point you may be able to stay inside while venting or you may be asked to go outside into your driveway or street.</p> <p>If you cannot leave your house, try to open up your house as much as possible. Turning on fans and opening front and back doors and all windows provides good cross ventilation. Don't use your telephone or cell phone unless it's absolutely necessary. Phone circuits are quickly overwhelmed during an emergency.</p> <p>You may be wondering why officials would tell you to shelter when a plume with hazardous vapor is in your neighborhood. I'll explain what happens if a chemical agent plume passed your house.</p> <p>Notice that as the plume passes the structure that some contaminants enter the building. The concentration of contaminants is lower in the building than outside and even lower in the "safe room". Notice that the structure retains some contaminated air after all</p>		<p>Animation Sequence: Note that plume is tinted yellow for visual displays only. Chemical vapor plumes will likely have no color.</p>

VOICE	SCREEN	NOTES
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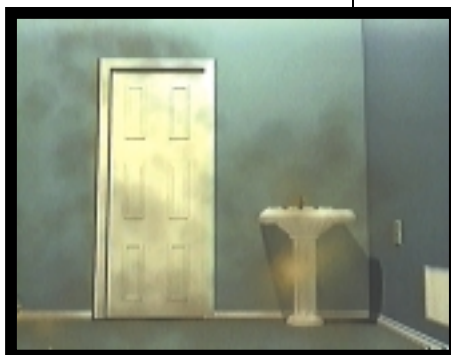
the contaminants are swept away from the air outside the structure.


The reason contaminants remain inside a structure after the plume has passed has to do with the amount of air that normally enters and leaves a building over time. This is referred to as “air exchange.”




All buildings have some air infiltration - even with all the doors and windows closed - because air is constantly moving back and forth through the walls and cracks and crevices. Scientists can measure the rate of air exchanges that occurs in a structure - that is, how long it takes for the air inside to be replaced by the air coming in from the outside.

In homes that are not sealed to up to date standards, the average air exchange rate will vary from 1 to 2 air exchanges per hour. This means that, on average, if the air exchange rate is two exchanges per hour, it will take about an hour and a half for most of the air in the house to be replaced with outside air. Unless retrofitted or weatherized,




VOICE	SCREEN	NOTES
<p>most older buildings have much higher rates of air infiltration. The air will pass more easily - and quickly - from the outside into the structure.</p> <p>If a chemical agent accident were to occur, the most likely way the agent would reach your neighborhood is through vapor in a plume. Unlike the larger particles present in smoke from fires, vapor can penetrate structures more easily. Moreover, vapors don't rise in the atmosphere and condense - so chemical agent vapors aren't going to condense and fall down as rain droplets.</p> <p>Unlike buildings, cars - even when they're completely closed up - provide little protection when moving. That's because cars have a small interior space compared to their exposed surfaces, making cars much more "leaky" than buildings. Researchers have found air exchange rates for moving vehicles range from 12 to 45 exchanges per hour.</p>		

VOICE	SCREEN	NOTES
<p>You know what that means if you've driven by a skunk on the side of the road. As soon as you smell the odor you probably open all the vents - and maybe the windows too - to get the odor out of your car - and the odor leaves very rapidly. The odor is trapped inside until the air is replaced.</p> <p>With closed, stationary vehicles the exchange rate is much lower, depending on the wind speed. But you can see why emergency officials may advise staying in a building rather than having you leave in a vehicle during the passing of a hazardous plume, or if there is not time to evacuate residents from an area before the plume arrives.</p>		
<p>Dad: Let's review how we would shelter-in-place and protect ourselves in a real emergency. First, we use the bathroom as our "safe room" because it has no windows and it's on the first floor, making it readily accessible.</p>		
<p>Then we take our shelter-in-place kit into the safe room. Now the kit includes tape, plastic sheeting for the door, a pair of scissors,</p>		

VOICE	SCREEN	NOTES
<p>a radio with extra batteries, and some emergency food and water supplies.</p> <p>Girl: We also have our plastic already cut and labeled.</p> <p>Dad: That sure speeds up the process. Now the first thing we need to do is cover the door. We have to make sure all the edges are sealed with duct tape.</p> <p>Girl: While you're doing that, Tony and I can tape around the pipes.</p> <p>Boy: I'll tape around the sink and around the pipe that goes to the toilet.</p> <p>Female: Great. And Kristan can tape around the pipes in the shower.</p> <p>Girl: That's easier to do with small pieces of tape.</p> <p>Mom: We also tape the electrical outlets and place a plastic sheet over the ceiling vent. Anywhere vapors can get in, we seal.</p> <p>Dad: Then we listen to the radio for further instructions on what to do. The radio will give us updates on the situation and tell us when we should leave the safe room.</p>		

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<p>Boy: Mom – shouldn't we keep taping?</p> <p>Girl: Yeah, if we keep taping we will get safer.</p> <p>Mom: Well, that's true, but it's more important to get a tight, firm seal the first time.</p> <p>Dad: And finally, when the official order is given to end sheltering, we'll follow official instructions to vent the house or relocate to a reception center.</p> <p>Girl: That sounds like a plan.</p>		
<p>Narrator: So if you're advised to shelter-in-place, go inside, turn off air and heat, close windows and doors, get out your pre-assembled emergency kit for expedient sheltering, go in your "safe room," tape openings, stay calm and listen for the message to end sheltering. Then follow instructions from your emergency officials on what do next.</p>		
<p>This family may never have to deal with an emergency from an accidental—or intentional—release of chemical agents, but they are well prepared because</p>		

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VOICE	SCREEN	NOTES
they have rehearsed their emergency plan. Being prepared is an important first step in protecting you and your family.		
The End		

REFERENCES

- Fletcher, B., and C.J. Saunders. 1994 "Air change rates in stationary and moving vehicles," *Journal of Hazardous Materials* 38: 243-246.
- Sorensen, J. H., and B. M. Vogt. 2001. *Will Duct Tape and Plastic Really Work? Issues Related to Expedient Shelter-In-Place*, ORNL/TM-2001/154. Oak Ridge, TN: Oak Ridge National Laboratory.
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- US Department of the Army and Federal Emergency Management Agency. 1996. *Planning Guidance for the Chemical Stockpile Emergency Preparedness Program*, Washington, DC.
- Vogt, B. M., H. Hardee, J. H. Sorensen, and B. Shumpert. 1999. *Assessment of Housing Stock Age in the Vicinity of Chemical Stockpile Sites*, ORNL/TM-13742. Oak Ridge, TN: Oak Ridge National Laboratory.

This video is only one step in being prepared for a chemical release. We urge you to think about your family plan and what steps you need to take to ensure you, your family and your pets will be protected in an unlikely event of a chemical accident.

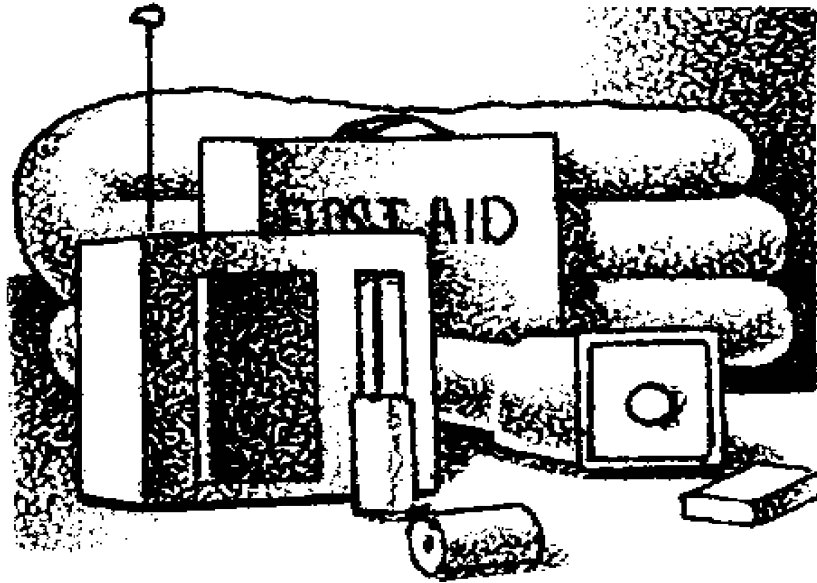
This video was produced by Oak Ridge National Laboratory managed by UT-Battelle, LLC and Rowland Productions 2002©

APPENDIX A

YOUR FAMILY DISASTER SUPPLIES KIT

HURRICANE • FLASH FLOOD • HAZARDOUS MATERIALS SPILL

Your Family Disaster Supplies Kit



Federal Emergency
Management Agency



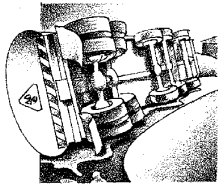
**American
Red Cross**

EARTHQUAKE • TORNADO • WINTER STORM • FIRE



Your Family Disaster Supplies Kit

Disasters happen anytime and anywhere. And when disaster strikes, you may not have much time to respond.

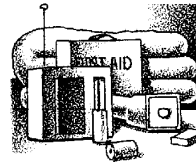


A highway spill of hazardous material could mean instant evacuation.



A winter storm could confine your family at home. An earthquake, flood, tornado or any other disaster could cut off basic services—gas, water, electricity and telephones—for days.

After a disaster, local officials and relief workers will be on the scene, but they cannot reach everyone immediately. You could get help in hours, or it may take days. Would your family be prepared to cope with the emergency until help arrives?



Your family will cope best by preparing for disaster *before* it strikes. One way to prepare is by assembling a Disaster Supplies Kit. Once disaster hits, you won't have time to shop or search for supplies. But if you've gathered supplies in advance, your family can endure an evacuation or home confinement.



To prepare your kit

- Review the checklist in this brochure.
- Gather the supplies that are listed. You may need them if your family is confined at home.
- Place the supplies you'd most likely need for an evacuation in an easy-to-carry container. These supplies are listed with an asterisk (*).

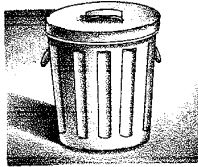




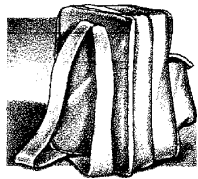
SUPPLIES



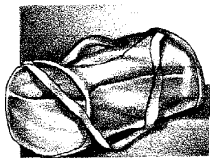
here are six basics you should stock in your home: water, food, first aid supplies, clothing and bedding, tools and emergency supplies and special items. Keep the items that you would most likely need during an evacuation in an easy-to-carry container—suggested items are marked with an asterisk (*). Possible containers include



a large, covered trash container,



camping backpack,



or a duffle bag.

Water

Store water in plastic containers such as soft drink bottles. Avoid using containers that will decompose or break, such as milk cartons or glass bottles. A normally active person needs to drink at least two quarts of water each day. Hot environments and intense physical activity can double that amount. Children, nursing mothers and ill people will need more.

- Store one gallon of water per person per day (two quarts for drinking, two quarts for food preparation/sanitation)*
- Keep at least a three-day supply of water for each person in your household.



Food

Store at least a three-day supply of non-perishable food. Select foods that require no refrigeration, preparation or cooking and little or no water. If you must heat food, pack a can of sterno. Select food items that are compact and lightweight.

*Include a selection of the following foods in your Disaster Supplies Kit:

- Ready-to-eat canned meats, fruits and vegetables
- Canned juices, milk, soup (if powdered, store extra water)
- Staples — sugar, salt, pepper
- High energy foods — peanut butter, jelly, crackers, granola bars, trail mix
- Vitamins
- Foods for infants, elderly persons or persons on special diets
- Comfort/stress foods — cookies, hard candy, sweetened cereals, lollipops, instant coffee, tea bags



First Aid Kit

Assemble a first aid kit for your home and one for each car. A first aid kit* should include:

- Sterile adhesive bandages in assorted sizes
 - 2-inch sterile gauze pads (4-6)
 - 4-inch sterile gauze pads (4-6)
 - Hypoallergenic adhesive tape
 - Triangular bandages (3)
 - 2-inch sterile roller bandages (3 rolls)
 - 3-inch sterile roller bandages (3 rolls)
 - Scissors
 - Tweezers
 - Needle
 - Moistened towelettes
 - Antiseptic
 - Thermometer
 - Tongue blades (2)
 - Tube of petroleum jelly or other lubricant
 - Assorted sizes of safety pins
 - Cleansing agent/soap
 - Latex gloves (2 pair)
 - Sunscreen
- Non-prescription drugs
- Aspirin or nonaspirin pain reliever
 - Anti-diarrhea medication
 - Antacid (for stomach upset)
 - Syrup of Ipecac (use to induce vomiting if advised by the Poison Control Center)
 - Laxative
 - Activated charcoal (use if advised by the Poison Control Center)

Contact your local American Red Cross chapter to obtain a basic first aid manual.





Tools and Supplies

- | | |
|---|--|
| <input type="checkbox"/> Mess kits, or paper cups, plates and plastic utensils* | <input type="checkbox"/> Needles, thread |
| <input type="checkbox"/> Emergency preparedness manual* | <input type="checkbox"/> Medicine dropper |
| <input type="checkbox"/> Battery operated radio and extra batteries* | <input type="checkbox"/> Shut-off wrench, to turn off household gas and water |
| <input type="checkbox"/> Flashlight and extra batteries* | <input type="checkbox"/> Whistle |
| <input type="checkbox"/> Cash or traveler's checks, change* | <input type="checkbox"/> Plastic sheeting |
| <input type="checkbox"/> Non-electric can opener, utility knife* | <input type="checkbox"/> Map of the area (for locating shelters) |
| <input type="checkbox"/> Fire extinguisher: small canister, ABC type | |
| <input type="checkbox"/> Tube tent | Sanitation |
| <input type="checkbox"/> Pliers | <input type="checkbox"/> Toilet paper, towelettes* |
| <input type="checkbox"/> Tape | <input type="checkbox"/> Soap, liquid detergent* |
| <input type="checkbox"/> Compass | <input type="checkbox"/> Feminine supplies* |
| <input type="checkbox"/> Matches in a waterproof container | <input type="checkbox"/> Personal hygiene items* |
| <input type="checkbox"/> Aluminum foil | <input type="checkbox"/> Plastic garbage bags, ties (for personal sanitation uses) |
| <input type="checkbox"/> Plastic storage containers | <input type="checkbox"/> Plastic bucket with tight lid |
| <input type="checkbox"/> Signal flare | <input type="checkbox"/> Disinfectant |
| <input type="checkbox"/> Paper, pencil | <input type="checkbox"/> Household chlorine bleach |



Clothing and Bedding

*Include at least one complete change of clothing and footwear per person.

- | | |
|--|--|
| <input type="checkbox"/> Sturdy shoes or work boots* | <input type="checkbox"/> Hat and gloves |
| <input type="checkbox"/> Rain gear* | <input type="checkbox"/> Thermal underwear |
| <input type="checkbox"/> Blankets or sleeping bags* | <input type="checkbox"/> Sunglasses |



Special Items

Remember family members with special needs, such as infants and elderly or disabled persons.

For Baby*

- Formula
- Diapers
- Bottles
- Powdered milk
- Medications

For Adults*

- Heart and high blood pressure medication
- Insulin
- Prescription drugs
- Denture needs
- Contact lenses and supplies
- Extra eye glasses

Entertainment - games and books

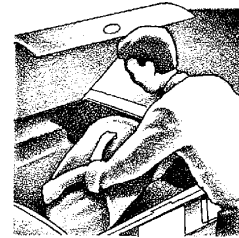
Important Family Documents

Keep these records in a waterproof, portable container.

- Will, insurance policies, contracts, deeds, stocks and bonds
- Passports, social security cards, immunization records
- Bank account numbers
- Credit card account numbers and companies
- Inventory of valuable household goods, important telephone numbers
- Family records (birth, marriage, death certificates)

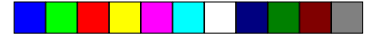
SUGGESTIONS AND REMINDERS

- Store your kit in a convenient place known to all family members. Keep a smaller version of the Disaster Supplies Kit in the trunk of your car.



- Keep items in air tight plastic bags.
- Change your stored water supply every six months so it stays fresh.
- Rotate your stored food every six months.
- Re-think your kit and family needs at least once a year. Replace batteries, update clothes, etc.
- Ask your physician or pharmacist about storing prescription medications.





CREATE A FAMILY DISASTER PLAN

To get started...

Contact your local emergency management or civil defense office and your local American Red Cross chapter.

- Find out which disasters are most likely to happen in your community.
- Ask how you would be warned
- Find out how to prepare for each.

Meet with your family.

- Discuss the types of disasters that could occur.
- Explain how to prepare and respond.
- Discuss what to do if advised to evacuate.
- Practice what you have discussed.

Plan how your family will stay in contact if separated by disaster.

- Pick two meeting places:
 - 1) a location a safe distance from your home in case of fire.
 - 2) a place outside your neighborhood in case you can't return home.
- Choose an **out-of-state** friend as a "check-in-contact" for everyone to call.

Complete these steps.

- Post emergency telephone numbers by every phone.
- Show responsible family members how and when to shut off water, gas and electricity at main switches.

- Install a smoke detector on each level of your home, especially near bedrooms; test monthly and change the batteries two times each year.
- Contact your local fire department to learn about home fire hazards.
- Learn first aid and CPR. Contact your local American Red Cross chapter for information and training

Meet with your neighbors.

Plan how the neighborhood could work together after a disaster. Know your neighbor's skills (medical, technical). Consider how you could help neighbors who have special needs, such as elderly or disabled persons. Make plans for child care in case parents can't get home.

Remember to practice and maintain your plan.



The Federal Emergency Management Agency's Community and Family Preparedness Program and the American Red Cross Community Disaster Education Program are nationwide efforts to help people prepare for disasters of all types. For more information, please contact your local emergency management office and American Red Cross chapter. This brochure and other preparedness materials are available by calling FEMA at 1-800-480-2520, or writing: FEMA, P.O. Box 2012, Jessup, MD 20794-2012. Publications are also available on the World Wide Web at:

FEMA's Web site: <http://www.fema.gov>

American Red Cross Web site: <http://www.redcross.org>

Local sponsorship provided by:

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APPENDIX B

YOUR FAMILY DISASTER PLAN

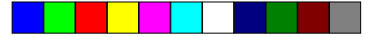
Your Family Disaster Plan



Federal Emergency
Management Agency



**American
Red Cross**

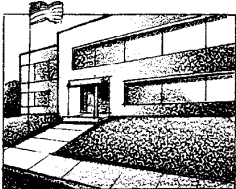


Your Family Disaster Plan

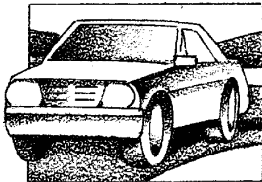
Where will your family be when disaster strikes? They could be anywhere—



at work



at school



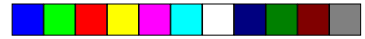
or in the car.

How will you find each other? Will you know if your children are safe?

Disaster can strike quickly and without warning. It can force you to evacuate your neighborhood or confine you to your home. What would you do if basic services—water, gas, electricity or telephones—were cut off? Local officials and relief workers will be on the scene after a disaster, but they cannot reach everyone right away.

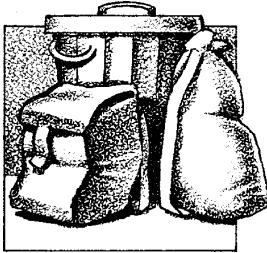
Families can—and do—cope with disaster by preparing in advance and working together as a team. Follow the steps listed in this brochure to create your family's disaster plan. Knowing what to do is your best protection and your responsibility.





EMERGENCY SUPPLIES

Keep enough supplies in your home to meet your needs for at least three days. Assemble a Disaster Supplies Kit with items you may need in an evacuation. Store these supplies in sturdy, easy-to-carry containers such as backpacks, duffle bags or covered trash containers.



Include:

- A three-day supply of water (one gallon per person per day) and food that won't spoil.
- One change of clothing and footwear per person, and one blanket or sleeping bag per person.
- A first aid kit that includes your family's prescription medications.
- Emergency tools including a battery-powered radio, flashlight and plenty of extra batteries.
- An extra set of car keys and a credit card, cash or traveler's checks.
- Sanitation supplies.
- Special items for infant, elderly or disabled family members.
- An extra pair of glasses.

Keep important family documents in a waterproof container. Keep a smaller kit in the trunk of your car.

UTILITIES

Locate the main electric fuse box, water service main and natural gas main. Learn how and when to turn these utilities off. Teach all responsible family members. Keep necessary tools near gas and water shut-off valves.

Remember, turn off the utilities only if you suspect the lines are damaged or if you are instructed to do so. *If you turn the gas off, you will need a professional to turn it back on.*

4 Steps to Safety



Find Out What Could Happen to You

Contact your local emergency management or civil defense office and American Red Cross chapter — be prepared to take notes:

- Ask what types of disasters are most likely to happen. Request information on how to prepare for each.
- Learn about your community's warning signals: what they sound like and what you should do when you hear them.
- Ask about animal care after disaster. Animals may not be allowed inside emergency shelters due to health regulations.
- Find out how to help elderly or disabled persons, if needed.
- Next, find out about the disaster plans at your workplace, your children's school or daycare center and other places where your family spends time.



Create a Disaster Plan

Meet with your family and discuss why you need to prepare for disaster. Explain the dangers of fire, severe weather and earthquakes to children. Plan to share responsibilities and work together as a team.

- Discuss the types of disasters that are most likely to happen. Explain what to do in each case.
- Pick two places to meet:
 1. Right outside your home in case of a sudden emergency, like a fire.
 2. Outside your neighborhood in case you can't return home. Everyone must know the address and phone number.
- Ask an out-of-state friend to be your "family contact." After a disaster, it's often easier to call long distance. Other family members should call this person and tell them where they are. Everyone must know your contact's phone number.
- Discuss what to do in an evacuation. Plan how to take care of your pets.

Fill out, copy and distribute to all family members



Family Disaster Plan

Emergency Meeting Place _____
outside your home

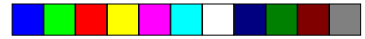
Meeting Place _____ Phone _____
outside your neighborhood

Address _____

Family Contact _____
(name)

Phone () _____ day Phone () _____ evening





3

Complete This Checklist

- Post emergency telephone numbers by phones (fire, police, ambulance, etc.).
- Teach children how and when to call 911 or your local Emergency Medical Services number for emergency help.
- Show each family member how and when to turn off the water, gas and electricity at the main switches.
- Check if you have adequate insurance coverage.
- Teach each family member how to use the fire extinguisher (ABC type), and show them where it's kept.
- Install smoke detectors on each level of your home, especially near bedrooms.
- Conduct a home hazard hunt.
- Stock emergency supplies and assemble a Disaster Supplies Kit.
- Take a Red Cross first aid and CPR class.
- Determine the best escape routes from your home. Find two ways out of each room.
- Find the safe spots in your home for each type of disaster.

4

Practice and Maintain Your Plan

- Quiz your kids every six months so they remember what to do.
 - Conduct fire and emergency evacuation drills.
 - Year _____ Drill Date _____
 - _____
 - _____
 - Replace stored water every three months and stored food every six months.
 - Test and recharge your fire extinguisher(s) according to manufacturer's instructions.
 - Test your smoke detectors monthly and change the batteries at least once a year.
 - Jan. July
 - Feb. Aug.
 - Mar. Sep.
 - Apr. Oct.
 - May Nov.
 - June Dec.
- Change batteries in _____ each year.
(month)

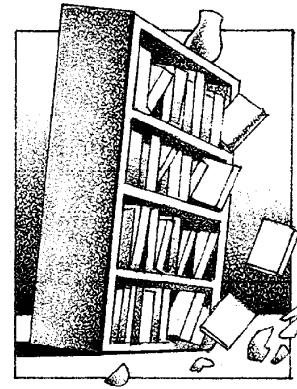
NEIGHBORS HELPING NEIGHBORS

Working with neighbors can save lives and property. Meet with your neighbors to plan how the neighborhood could work together after a disaster until help arrives. If you're a member of a neighborhood organization, such as a home association or crime watch group, introduce disaster preparedness as a new activity. Know your neighbors' special skills (e.g., medical, technical) and consider how you could help neighbors who have special needs, such as disabled and elderly persons. Make plans for child care in case parents can't get home.

HOME HAZARD HUNT

During a disaster, ordinary objects in your home can cause injury or damage. Anything that can move, fall, break or cause a fire is a home hazard. For example, a hot water heater or a bookshelf can fall. Inspect your home at least once a year and fix potential hazards.

Contact your local fire department to learn about home fire hazards.



EVACUATION

Evacuate immediately if told to do so:

- Listen to your battery-powered radio and follow the instructions of local emergency officials.
- Wear protective clothing and sturdy shoes.
- Take your Disaster Supplies Kit.
- Lock your home.
- Use travel routes specified by local authorities — don't use shortcuts because certain areas may be impassable or dangerous.

If you're sure you have time:

- Shut off water, gas and electricity before leaving, if instructed to do so.
- Post a note telling others when you left and where you are going.
- Make arrangements for your pets.





IF DISASTER STRIKES

If disaster strikes

Remain calm and patient. Put your plan into action.

Check for injuries

Give first aid and get help for seriously injured people.

Listen to your battery powered radio for news and instructions

Evacuate, if advised to do so. Wear protective clothing and sturdy shoes.

Check for damage in your home. . .

- Use flashlights — do not light matches or turn on electrical switches, if you suspect damage.
- Check for fires, fire hazards and other household hazards.
- Sniff for gas leaks, starting at the water heater. If you smell gas or suspect a leak, turn off the main gas valve, open windows, and get everyone outside quickly.
- Shut off any other damaged utilities.
- Clean up spilled medicines,

bleaches, gasoline and other flammable liquids immediately.

Remember to. . .

- Confine or secure your pets.
- Call your family contact—do not use the telephone again unless it is a life-threatening emergency.
- Check on your neighbors, especially elderly or disabled persons.
- Make sure you have an adequate water supply in case service is cut off.
- Stay away from downed power lines.



The Federal Emergency Management Agency's Community and Family Preparedness Program and the American Red Cross Community Disaster Education Program are nationwide efforts to help people prepare for disasters of all types. For more information, please contact your local emergency management office and American Red Cross chapter. This brochure and other preparedness materials are available by calling FEMA at 1-800-480-2520, or writing: FEMA, P.O. Box 2012, Jessup, MD 20794-2012.

Publications are also available on the World Wide Web at:

FEMA's Web site: <http://www.fema.gov>

American Red Cross Web site: <http://www.redcross.org>

Ask for: *Are You Ready?, Your Family Disaster Supplies Kit and Food & Water in an Emergency.*

Local sponsorship provided by:

September 1991
FEMA L-191
ARC 4466



APPENDIX C

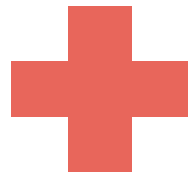
EMERGENCY PREPAREDNESS CHECKLIST

TORNADO • FLASH FLOOD • EARTHQUAKE • WINTER



EMERGENCY PREPAREDNESS CHECKLIST

Federal Emergency
Management Agency



**American
Red Cross**

HURRICANE • FIRE • HAZARDOUS MATERIAL



TORNADO • FLASHFLOOD • EARTHQUAKE • WINTER STORM • HURRICANE • FIRE • HAZARDOUS MATERIALS SPILL

Emergency Preparedness Checklist



Federal Emergency Management Agency



American Red Cross

The next time disaster strikes, you may not have much time to act. Prepare now for a sudden emergency.

Learn how to protect yourself and cope with disaster by planning ahead. This

checklist will help you get started. Discuss these ideas with your family, then prepare an emergency plan. Post the plan where everyone will see it—on the refrigerator or bulletin board.

For additional information about how to prepare for hazards in your community, contact your local emergency management or civil defense office and American Red Cross chapter.

Emergency Checklist

Call Your Emergency Management Office or American Red Cross Chapter

- Find out which disasters could occur in your area.
- Ask how to prepare for each disaster.
- Ask how you would be warned of an emergency.
- Learn your community's evacuation routes.
- Ask about special assistance for elderly or disabled persons.

Also...

- Ask your workplace about emergency plans.
- Learn about emergency plans for your children's school or day care center.

Create an Emergency Plan

- Meet with household members to discuss the dangers of fire, severe weather, earthquakes and other emergencies. Explain how to respond to each.
- Find the safe spots in your home for each type of disaster.

- Discuss what to do about power outages and personal injuries.
- Draw a floor plan of your home. Mark two escape routes from each room.
- Show family members how to turn off the water, gas and electricity at main switches when necessary.
- Post emergency telephone numbers near telephones.
- Teach children how and when to call 911, police and fire.
- Instruct household members to turn on the radio for emergency information.
- Pick one out-of-state and one local friend or relative for family members to call if separated during a disaster (it is often easier to call out-of-state than within the affected area).
- Teach children your out-of-state contact's phone numbers.
- Pick two emergency meeting places.
 - 1) A place near your home in case of a fire.
 - 2) A place outside your neighborhood in case you cannot return home after a disaster.
- Take a basic first aid and CPR class.
- Keep family records in a water and fire-proof container.

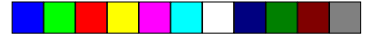
Prepare a Disaster Supplies Kit

Assemble supplies you might need in an evacuation. Store them in an easy-to-carry container such as a backpack or duffle bag.

Include:

- A supply of water (one gallon per person per day). Store water in sealed, unbreakable containers. Identify the storage date and replace every six months.
- A supply of non-perishable packaged or canned food and a non-electric can opener.
- A change of clothing, rain gear and sturdy shoes.
- Blankets or sleeping bags.
- A first aid kit and prescription medications.
- An extra pair of glasses.
- A battery-powered radio, flashlight and plenty of extra batteries.
- Credit cards and cash.
- An extra set of car keys.
- A list of family physicians.
- A list of important family information; the style and serial number of medical devices such as pacemakers.
- Special items for infants, elderly or disabled family members.





Emergency Plan

Out-of-State Contact

Name _____

City _____

Telephone (Day) _____ (Evening) _____

Local Contact

Name _____

Telephone (Day) _____ (Evening) _____

Nearest Relative

Name _____

City _____

Telephone (Day) _____ (Evening) _____

Family Work Numbers

Father _____ Mother _____

Other _____

Emergency Telephone Numbers

In a life threatening emergency, dial 911 or the local emergency medical services system number

Police Department _____

Fire Department _____

Hospital _____

Family Physicians

Name _____ Telephone _____

Name _____ Telephone _____

Name _____ Telephone _____

Reunion Locations

1. Right outside your home _____

2. Away from the neighborhood, in case you cannot return home _____

Address _____

Telephone _____

Route to try first _____

Escape Plan



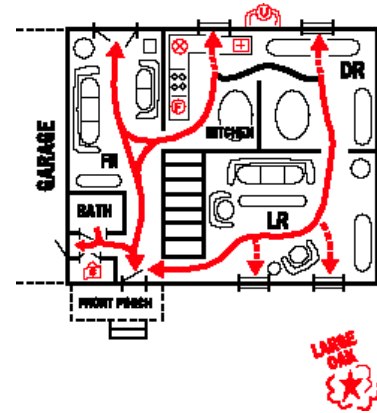
In a fire or other emergency, you may need to evacuate your house, apartment or mobile home on a moment's notice. You should be ready to get out fast.

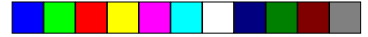
Develop an escape plan by drawing a floor plan of your residence. Using a black or blue pen, show the location of doors, windows, stairways, and large furniture. Indicate the location of emergency supplies (Disaster Supplies Kit), fire extinguishers, smoke detectors, collapsible ladders, first aid kits and utility shut off points. Next, use a colored pen to draw a broken line charting at least two escape routes from each room. Finally, mark a place outside of the home where household members should meet in case of fire.

Be sure to include important points outside such as garages, patios, stairways, elevators, driveways and porches. If your home has more than two floors, use an additional sheet of paper. Practice emergency evacuation drills with all household members at least two times each year.

Example:

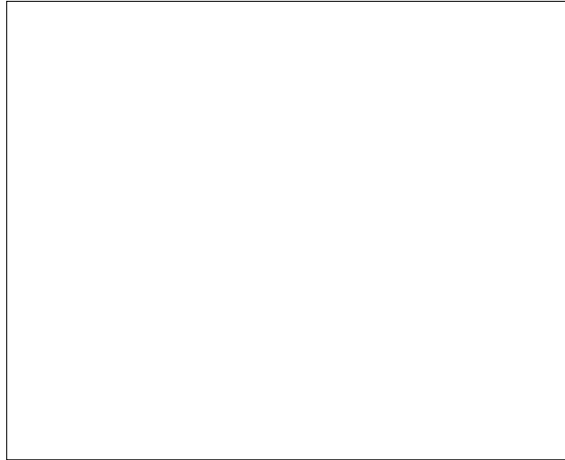
Floor one



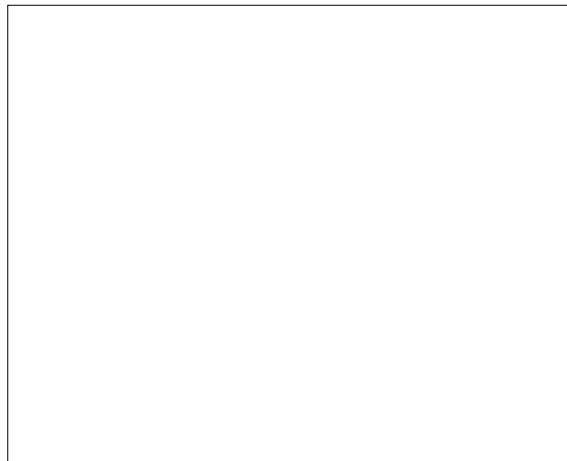






Floor Plan





Floor One







Floor Two

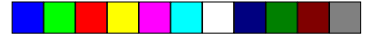


-  Normal Exit Route
-  Emergency Exit Routes
-  Fire Extinguisher
-  Smoke Detectors

-  Disaster Supplies Kit
-  Doors
-  Collapsible Ladder
-  Reunion Location (Outside)

-  Stairways
-  Utility Shut Off
-  Windows
-  First Aid Kit





Home Hazard Hunt

In a disaster, ordinary items in the home can cause injury and damage. Anything that can move, fall, break or cause a fire is a potential hazard.

- Repair defective electrical wiring and leaky gas connections.
- Fasten shelves securely and brace overhead light fixtures.
- Place large, heavy objects on lower shelves.
- Hang pictures and mirrors away from beds.
- Strap water heater to wall studs.
- Repair cracks in ceilings or foundations.
- Store weed killers, pesticides and flammable products away from heat sources.
- Place oily polishing rags or waste in covered metal cans.
- Clean and repair chimneys, flue pipes, vent connectors and gas vents.

If You Need to Evacuate

- Listen to a battery powered radio for the location of emergency shelters. Follow instructions of local officials.

- Wear protective clothing and sturdy shoes.
- Take your Disaster Supplies Kit.
- Lock your house.
- Use travel routes specified by local officials.

If you are sure you have time ...

- Shut off water, gas and electricity, if instructed to do so.
- Let others know when you left and where you are going.
- Make arrangements for pets. Animals may not be allowed in public shelters.

Prepare an Emergency Car Kit

Include:

- Battery powered radio, flashlight and extra batteries
- Blanket
- Booster cables
- Fire extinguisher (5 lb., A-B-C type)
- First aid kit and manual
- Bottled water and non-perishable high energy foods such as granola bars, raisins and peanut butter

- Maps, Shovel, Flares
- Tire repair kit and pump

Fire Safety

- Plan two escape routes out of each room.
- Practice fire drills at least twice a year.
- Teach family members to stay low to the ground when escaping from a fire.
- Teach family members never to open doors that are hot. In a fire, feel the bottom of the door with the palm of your hand. If it is hot, do not open the door. Find another way out.
- Install smoke detectors on every level of your home. Clean and test them at least once a month. Change batteries at least once a year.
- Keep a whistle in each bedroom to awaken household in case of fire.
- Check electrical outlets. Do not overload outlets.
- Purchase and learn how to use a fire extinguisher (5 lb., A-B-C type).
- Have a collapsible ladder on each upper floor of your house.
- Consider installing home sprinklers.

The Federal Emergency Management Agency's Community and Family Preparedness Program and the American Red Cross Community Disaster Education Program are nationwide efforts to help people prepare for disasters of all types. For more information, please contact your local emergency management office and American Red Cross chapter. This brochure and other preparedness materials are available by calling FEMA at 1-800-480-2520, or writing: FEMA, P.O. Box 2012, Jessup, MD 20794-2012.

Publications are also available on the World Wide Web at:

FEMA's Web site: <http://www.fema.gov>

American Red Cross Web site: <http://www.redcross.org>

Your Local Contact is:

L-154
ARC 4471
Aug. 1993



APPENDIX D

PLANNING TIPS FOR PETS, LIVESTOCK, AND WILDLIFE

The Humane Society of the United States Offers Disaster Planning Tips for Pets, Livestock and Wildlife

Whether it's a large-scale natural catastrophe or an unforeseen emergency that causes you to leave your home temporarily, everyone's family can benefit from having a household evacuation plan in place before disaster strikes. Every disaster plan must include your pets! The Humane Society of the United States (HSUS) offers the following tips to pet owners designing an emergency safety plan:

If you evacuate your home, **DO NOT LEAVE YOUR PETS BEHIND!** Pets most likely cannot survive on their own; and if by some remote chance they do, you may not be able to find them when you return.

For public health reasons, many emergency shelters cannot accept pets. Find out which motels and hotels in your area allow pets -- well in advance of needing them. Include your local animal shelter's number in your list of emergency numbers -- they might be able to provide information concerning pets during a disaster.

Make sure identification tags are up to date and securely fastened to your pet's collar. If possible, attach the address and/or phone number of your evacuation site. If your pet gets lost, his tag is his ticket home. Make sure you have a current photo of your pet for identification purposes.

Make sure you have a secure pet carrier, leash or harness for your pet so that if he panics, he can't escape.

Take pet food, bottled water, medications, veterinary records, cat litter/pan, can opener, food dishes, first aid kit and other supplies with you in case they're not available later. While the sun is still shining, consider packing a "pet survival" kit which could be easily deployed if disaster hits.

If you are unable to return to your home right away, you may need to board your pet. Most boarding kennels, veterinarians and animal shelters will need your pet's medical records to make sure all vaccinations are current. Include copies in your "pet survival" kit along with a photo of your pet. If it is impossible to take your pet with you to temporary shelter, contact friends, family, veterinarians, or boarding kennels to arrange for care. Make sure medical and feeding information, food, medicine and other supplies accompany your pet to his foster home. **NOTE:** Some animal shelters will provide temporary foster care for owned pets in times of disaster, but this should be considered only as a last resort.

If you have no alternative but to leave your pet at home, there are some precautions you must take, but remember that leaving your pet at home alone can place your animal in great danger! Confine your pet to a safe area inside -- **NEVER** leave your pet chained outside! Place a notice outside in a visible area, advising what pets are in the

house and where they are located. Provide a phone number where you or a contact can be reached as well as the name and number of your vet.

Not only are pets affected by disaster, but the other animals in the disaster area are affected as well. The HSUS offers these basic tips for people who encounter wildlife or have livestock on their property:

Wildlife

Wild animals often seek higher ground which, during floods, eventually become submerged (i.e., island) and the animals become stranded. If the island is large enough and provides suitable shelter, you can leave food appropriate to the species (i.e., sunflower seeds for squirrels). Animals have a flight response and will flee from anyone approaching too closely. If the animal threatens to rush into the water, back away from the island or you may frighten the animal into jumping into the water to escape from you.

Wildlife often seek refuge from flood waters on upper levels of a home and may remain inside even after the water recedes. If you meet a rat or snake face to face, be careful but don't panic. Open a window or other escape route and the animal will probably leave on its own. Never attempt to capture a wild animal unless you have the training, protective clothing, restraint equipment and caging necessary to perform the job.

Beware of an increased number of snakes and other predators who will try to feed on the carcasses of reptiles, amphibians and small mammals who have been drowned or crushed in their burrows or under rocks.

Often, during natural disasters, mosquitoes and dead animal carcasses may present disease problems. Outbreaks of anthrax, encephalitis and other diseases may occur. Contact your local emergency management office for help! If you see an injured or stranded animal in need of assistance, or you need with evicting an animal from your home, please contact your local animal control office or animal shelter!

Livestock

EVACUATE LIVESTOCK WHENEVER POSSIBLE. Arrangements for evacuation, including routes and host sites, should be made in advance. Alternate routes should be mapped out in case the planned route is inaccessible. The evacuation sites should have or be able to readily obtain food, water, veterinary care, handling equipment and facilities. Trucks, trailers, and other vehicles suitable for transporting livestock (appropriate for transporting each specific type of animal) should be available along with experienced handlers and drivers to transport them. Whenever possible, the animals should be accustomed to these vehicles in advance so they're less frightened and easier to move. If evacuation is not possible, a decision must be made whether to move large animals to

available shelter or turn them outside. This decision should be determined based on the type of disaster and the soundness and location of the shelter (structure). All animals should have some form of identification that will help facilitate their return. Your disaster plan should include a list of emergency phone numbers for local agencies that can assist you if disaster strikes - - including your veterinarian, state veterinarian, local animal shelter, animal care and control, county extension service, local agricultural schools and the American Red Cross. These numbers should be kept with your disaster kit in a secure, but easily accessible place.

For additional information, please contact
The Humane Society of the United States
2100 L. Street, NW
Washington, DC. 20037
Attn: Disaster Services Program
Phone: (202) 452-1100.

Source: FEMA