

THE PREPAREDNESS CONNECTION

Community Preparedness through Education, Training, and Volunteerism

Newsletter Editor: Kathy Becker

Would you like to see something included in *The Preparedness Connection*? Do you have suggestions or requests for future newsletter issues or insert topics? Send them to: emergencymanagement@aurora-il.org

Please note - sending a suggestion or request does not guarantee inclusion in this publication though we will try to include as many items as possible.

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Special points of interest:

- The Becker Family featured in EVS "Profile".
- CERT Class held
- New revised CERT Classes announced.
- Lightening Safety "Insert"

The Preparedness Connection, a newsletter aimed at preparing the community for emergencies through education, training and volunteerism will be published six times a year with the publications being available online, by email, and in paper format. Each edition will include an insert designed to give you the critical knowledge you may need when trying to be prepared for possible disasters.

To be included in our email list, please send your address to: mflaherty@aurora-il.org or call 630-801-6512.

Insert in This Edition

The 4th annual Lightning Safety Awareness Week is June 18-20. Because of this, Lightning Safety is the insert topic for this edition of the Preparedness Connection. It contains valuable information on safety for both indoor and outdoor situations.

The July/August edition insert will feature an article on West Nile Virus.

EVS Prepares Shelter Trailer

Storm season is upon us and the EVS volunteers are busy collecting the items needed to have a well-stocked shelter trailer aimed at accommodating three hundred plus disaster victims. The trailer will be stocked with enough cots, blankets and pillows for approximately one hundred people. Additional cots, blankets and pillows will be stored at the EVS facility.

Volunteers are currently trying to acquire other essential items. Letters have been sent to businesses in Aurora and the surrounding areas asking for donations of items to be used for personal hygiene and general comfort. These items include: soap, small bottles of shampoo, conditioner, deodorant, and lotion. Dental items are needed along with other personal items such as combs, disposable

Estimating the Distance to the Lightning Flash

To estimate the distance between you and the lightning flash, use the "Flash to Bang" method. When you observe lightning, count the number of seconds until you hear the thunder. Divide the number of seconds by five to get the distance in miles.

Example: If you see lightning and it takes fifteen seconds before you hear the thunder, then the lightning is three miles away. If thunder is heard five seconds after a flash, the lightning is 1 mile away; ten seconds/two miles; etc. Get to a safe location if the time between the lightning flash and the rumble of thunder is thirty seconds or less. Do not wait for rain. The lightning can strike before the rain storm begins. Lightning can also strike many miles from the initial storm. Using the 30/30 rule, if you hear the rumble of thunder within thirty seconds of the lightning, seek shelter and stay there until thirty minutes after you hear the last rumble of thunder.

razors, feminine products, tissues, and cotton swabs. Towels and washcloths would be very helpful as would flashlights and batteries. Diapers and wipes are also essential.

For the children, it would be nice to have some things to bring some normalcy back into their lives. Items needed for this include: activity/coloring books, reading books, crayons/pencils, games, etc. If you want to help with this project and/or would like more information, contact Kathy Becker at emergencymanagement@aurora-il.org



EVS Volunteer Service Anniversaries

| Month | Years of Service |
|-----------------------------------|------------------|
| May | |
| Harvey Block | 01 |
| Bryan Johnson | 04 |
| June | |
| Jim Grosse | 06 |
| Henry Schaefflein | 02 |
| July | |
| Wesley Knight | 02 |
| Terry Tiz | 02 |

Preparedness Links from Past Issues:

City of Aurora:

- ♦ www.aurora-il.org
- ♦ www.aurorapubliclibrary.org – Aurora Public Library

Disaster Preparation & Kits:

- ♦ www.fema.gov - FEMA
- ♦ www.dhs.gov – Department of Homeland Security
- ♦ www.redcross.org – Red Cross
- ♦ www.lacetoleather.com/dis.htm— Survive the Next Disaster
- ♦ www.ready.gov
- ♦ www.survivalchoices.com – Survival Preparedness Gear
- ♦ www.disasterfinder.gsfc.nasa.gov – Disaster Finder
- ♦ www.idph.state.il.us/pdf/SurvivingDisasters.pdf - Surviving Disasters: A Citizen's Emergency Handbook
- ♦ www.hsus.org/pets — disaster preparedness for pets
- ♦ www.getreadygear.com — Family Planning

Children and Disasters

- ♦ www.naspcenter.org/safe_schools/coping.html - National Association of School Psychology

Great Sites for Kids!

- ♦ www.howstuffworks.com
- ♦ www.fema.gov/kids/tornadoes

Repairs Made to Siren

On Friday, April 28, 2006 the siren telemetry system reported that siren #9, located near Dieterich School, had lost AC power. Repair crews responded immediately and discovered gusty winds had caused a large tree branch to fall, pulling down the electric service line to the siren. Repairs were completed the same day and the siren was operational again within hours.



Each issue of this newsletter will feature a different volunteer. *Volunteer in the Spotlight* is designed to put a face with a name and shed some light on the volunteers who donate a great deal of time and effort in service to the City of Aurora, but who, in general, are a relatively anonymous group of individuals.

PROFILE



Larry, Kathy and Gregory Becker

The *Volunteer in the Spotlight* this edition will be the Becker family. Larry and Kathy Becker joined EVS in August 2005; Gregory in December 2005. They became interested after hearing about the volunteer program while taking a CERT class. Since joining, all three have been extremely active. It is rare to not find at least two of them out at all special events and call-outs. They are also certified weather spotters.

Larry and Kathy have always had a lot of things in common. They have played competitive volleyball most of their lives. They took classes to become certified coaches and then organized, and for six years, ran a traveling club for eight teams ranging in age from eight to eighteen. For seven years, they led outdoor wilderness groups up to Quetico Provincial Park in Canada where the only way to travel was by canoe and backpacking. They both are pranksters at heart and have had to start with saying “joke coming” when around extremely serious people.

Larry has been employed at Lucent Technologies since 1979. He is a Member of Technical Staff (computer programmer) working in the wireless field. He has always

been the “outdoorsy” kind of guy. He owned his own canoe for quite a while and would take it out whenever possible. His life-long dream, still yet to be fulfilled, is to learn to fly an airplane. Just think of all the remote outdoorsy places he could go then!

Kathy is our newsletter editor. She is a natural organizer who is not afraid to tackle any job, big or small. She is always volunteering to do something. For eight years she, as a volunteer, coordinated and ran a conference which grew to about fourteen hundred people. She has been a group leader and held state positions for HOUSE, a homeschool organization, and was the treasurer for PACES, a child/parent organization. Before the volleyball club, she coached volleyball for many years at the grade school level. She also loves to cook and, since she has done some catering, is always being teased about the quantities she prepares. She doesn't always know the difference between cooking for four or four hundred (though Larry doesn't complain!)

Gregory has been homeschooled his whole life. He now attends Waubensee Community College. He is very interested in web design and game designing. He likes Japanese Anime and is trying to learn Japanese. His free time is also used up playing video games. He gets extreme pleasure every time he beats his dad. He loves doing DDR (Dance Dance Revolution) and has gotten quite proficient at it.

Larry and Kathy also have a 12 year old daughter. Though not an EVS member yet, she helped with the indoor painting at the EVS facility. She also helps whenever possible with any EVS things her mom is

COMMUNITY EDUCATION

Past CERT Participants

Some past CERT Training Class participants have inquired about a refresher course to review techniques that were learned at their original training. If there is enough interest, this can be arranged. Techniques covered could include a review on cribbing, a newly revised disaster scenario, and/or anything else that anyone would like to see offered again along with any new materials that may have been added to the course. If you are interested, please send an email to emergencymanagement@aurora-il.org or call 630-801-6512

2006 CERT Classes - (Community Emergency Response Team)

NOTE—NEWLY REVISED SCHEDULE!!!

To make the class more user and time friendly, slight revisions have been made to our 2006 CERT Training Schedule. Trainings will be a one-day format rather than the two-day format held in previous years. The class on Wednesday May 24, was run in this way and was very successful. Everyone who attended commented that the one-day format gave them the opportunity to attend the class and that a two-day class would have been much more difficult and even impossible for some attendees. The instructors and the class managers felt the class ran very efficiently with nothing but “fluff” being left out. Lunch break did become a “working” lunch which also helped to save the extra time needed to make this format change.

There are two classes still available for 2006. They will be held on Saturday, June 24 and Saturday, July 15, from 8:30 a.m. to 5:30 p.m. at 1100 Mitchell Road in Aurora.

If you have already participated in a CERT class, please share this information with your family, friends, neighbors, and co-workers. Encourage them to sign up for one of our 2006 CERT classes. In this way you can begin to build a CERT Team in your neighborhood or work place. If you have not taken a CERT class before, take this opportunity to talk a friend, neighbor or co-worker into taking the class with you.

Training is designed to cover disaster preparedness; fire safety; triage and treating life threatening emergencies; light search and rescue; team organization; disaster psychology; and terrorism. A final exercise gives a hands-on

approach to the training.

Since 2004, including the class just held on May 24, 2006, six CERT classes have been held in Aurora, certifying sixty community members.

CERT training applications and brochures are available for download from the City of Aurora website <http://www.aurora-il.org/emergencymanagement/certtraining.asp> If you do not have internet access or have further questions, call Mark at the City of Aurora Office of Emergency Management at 630-801-6512.

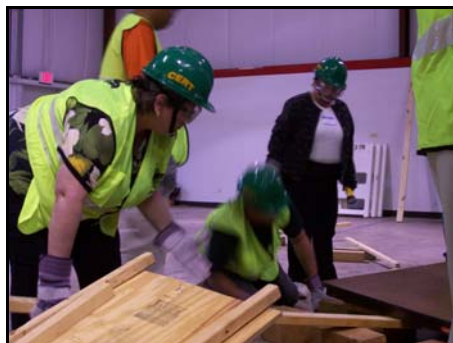
CERT Class May 24, 2006



Instructor Mike Fagel talks to the class about CERT



Hands-on instruction is given for fire extinguishers



Participants prepare to remove a victim from under a collapsed wall

Preparedness Links from Past Issues: (cont.)

Weather Sites

- ◆ www.noaa.gov – National Oceanic and Atmospheric Administration
- ◆ www.weather.gov/Chicago —
- ◆ www.weather.COD.edu— Chicagoland area.

Kane County

- ◆ www.kcoem.org—Kane County Office of Emergency Management

Government

- ◆ www.CitizensCorp.gov

New Preparedness Links:

- ◆ www.kidslighting.info – Great information for kids about lightning
- ◆ www.nwas.org — National Weather Association—Lots of interesting articles on operational meteorology and related activities
- ◆ www.lightningsafety.noaa.gov— click on Lightning Safety Awareness Week for some very interesting articles on lightning

City of Aurora’s General Info Corner

1650AM Radio (WPZZ656)

City of Aurora’s information and emergency advisory radio station

CodeRed

Aurora’s high-speed telephone notification system.—log onto the city of Aurora’s website, <http://www.aurora-il.org> and follow the link to the “CodeRed Residential and Business Data Collection” page. Those without internet access may call Aurora’s Customer Service Center (630-264-4636, Monday through Friday, 8 a.m.—5 p.m.) to give their information over the phone.

The City of Aurora Office of Emergency Management

Phone: 630-801-6512
 Fax: 630-264-7741
 Email: mflaherty@aurora-il.org



Volunteers in Service to Aurora



PATROL SCHEDULE

9 p.m. — Midnight
 (meet at EOC by
 8:45 p.m.)

- June:** 2, 3, 9, 10, 16, 17, 23, 24, 30
- July:** 1, 7, 8, 14, 15, 21, 22, 28, 29
- Aug:** 4, 5, 11, 12, 18, 19, 25, 26
- Sept:** 1, 2, 8, 9, 15, 16, 22, 23, 29, 30
- Oct:** 6, 7, 13, 14, 20, 21, 27, 28, 31
- Nov:** 3, 4, 10, 11, 17, 18, 24, 25
- Dec:** 1, 2, 8, 9, 15, 16, 22, 23, 29, 30

CALENDAR

MEETINGS/TRAINING/DETAILS/EVENTS

June

- 3 Canoe Race—EVS Detail: TBA
- 7 EVS Monthly Work Night: 7 p.m.
- 16 Downtown Alive—Blues on the Fox: 5-11p.m.
- 17 Downtown Alive—Blues on the Fox: 5-11p.m.
- 21 EVS Monthly Meeting: 7 p.m.—Winch Operation
- 23 Downtown Alive—Hot Rocks: 5-11 p.m.
- 24 CERT Training Class: 8:30 a.m.—5:30 p.m.
- 24 Aurora Fire Department 150th Anniversary Celebration—EVS Detail: 1-6 p.m.
- 24 FRRL Amateur Radio Field Days—EVS Detail: 7 a.m. (all day)
- 25 FRRL Amateur Radio Field Days—EVS Detail: ends at noon

July

- 4 4th of July Parade—EVS Traffic Detail: Step-Off at 10 a.m.
- 4 4th of July Fireworks—EVS Traffic Detail: Dusk—11 p.m.
- 5 EVS Monthly Work Night: 7 p.m.
- 7 Downtown Alive—Hi Fidelity: 5-11 p.m.
- 9 EVS Special Meeting: 2 p.m.—Vehicle Maneuvering Practice (Cook-out following practice)
- 14 Downtown Alive—The Moods: 5-11 p.m.
- 15 CERT Training Class: 8:30 a.m.—5:30 p.m.
- 16 Rain-Date for EVS Special Meeting
- 19 EVS Monthly Meeting: 7 p.m.—Basic First Aid
- 21 Downtown Alive—American English: 5-11 p.m.
- 29 Aurora Puerto Rican Heritage Festival Parade—EVS Traffic Detail: 1 p.m.

August

- 2 EVS Monthly Work Night: 7 p.m.
- 4 Downtown Alive—The Smithereens: 5-11 p.m.
- 11 Downtown Alive—The Buckinghams: 5-11 p.m.
- 16 EVS Monthly Meeting: 7 p.m.—Traffic Control
- 27 Municipal Employee Picnic—EVS Detail: 2-6 p.m.

September

- 6 EVS Monthly Work Night: 7 p.m.
- 20 EVS Monthly Meeting: 7 p.m.—Lighting Drill
- 30 Fall Festival—EVS Detail: TBA
- ?? City Services Expo 2006: TBA

October

- 4 EVS Monthly Work Night: 7 p.m.
- 18 EVS Monthly Meeting: 7 p.m.—CPR & AED

November

- 1 EVS Monthly Work Night: 7 p.m.
- 11 Veteran's Day Parade—EVS Traffic Detail: Step-Off at 11 a.m.
- 15 EVS Monthly Meeting: 7 p.m.—CPR & AED
- 24 Holiday Magic: 6 p.m.—TBA

December

- 6 EVS Monthly Work Night: 7 p.m.
- 16 EVS Appreciation Dinner/Holiday Party

Lightning Safety Outdoors

The capricious nature of thunderstorms makes them extremely dangerous; however, following proven lightning safety guidelines can reduce your risk of injury or death. You are ultimately responsible for your personal safety. You have the responsibility to act when threatened by lightning.

This document has two main sections: lightning safety outdoors when a safe location is nearby and when a safe location is NOT close.

No place is absolutely safe from lightning; however, some places are much safer than others. The safest location during lightning activity is an enclosed building. The second safest location is an enclosed metal vehicle, car, truck, van, etc., but NOT a convertible, bike or other topless or soft top vehicle.

Safe Buildings

A safe building is one that is fully enclosed with a roof, walls and floor, such as a home, school, office building or a shopping center. Even inside, you should take precautions. Picnic shelters, dugouts and other partially open structures are **NOT** safe. Enclosed buildings are safe because of wiring and plumbing. If lightning strikes these types of buildings, or an outside telephone pole, the electrical current from the flash will typically travel through the wiring or the plumbing into the ground. This is why you should stay away from showers, sinks, hot tubs, etc., and electronic equipment such as TVs, radios, and computers. Lightning can damage or destroy electronics so it's important to have a proper lightning protection system connected to your electronic equipment. The *American Meteorological Society* has tips for protecting your electronics from lightning.

Unsafe Buildings

Examples of buildings which are unsafe include car ports, covered but open garages, covered patio, picnic shelters,

shacks/pavilions, golf shelters, camping tents, large outdoor tents, baseball dugouts and other partially open structures.

Safe Vehicle

A safe vehicle is a hard-topped car, SUV, minivan, bus, tractor, etc. (soft-topped convertibles are not safe). If you seek shelter in your vehicle, make sure all doors are closed and windows rolled up. Do not touch any metal surfaces.

If you're driving when a thunderstorm starts, pull off the roadway. A lightning flash hitting the vehicle could startle you and cause temporary blindness, especially at night.

Do not use electronic devices such as HAM radios or cell phones during a thunderstorm. Lightning striking the vehicle, especially the antennas, could cause serious injury if you are talking on the radio or holding the microphone at the time of the flash. Emergency officials such as police officers, firefighters, security officers, etc., should use extreme caution using radio equipment when lightning is in the area.

Your vehicle and its electronics may be damaged if hit by lightning. Vehicles struck by lightning are known to have flat tires the next day. This occurs because the lightning punctures tiny holes in the tires. Vehicles have caught fire after being struck by lightning; however, there is no modern day documented cases of vehicles "exploding" due to a lightning flash.

Bolts from the Blue

There are times when a lightning flash can travel horizontally many miles away from the thunderstorm cloud itself and then strike the ground. These types of lightning flashes are called "Bolts from the Blue" because they seem to come out of a clear blue sky. Although these flashes are rare, they have been known to cause fatalities.

When a Safe Location is Nearby

Seek safe shelter when you first hear thunder, see dark threatening clouds developing overhead or lightning. Count the seconds between the time you see lightning and hear the thunder. You should already be in a safe location if that time is less than 30 seconds.

Stay inside until 30 minutes after you last hear thunder.

Plan Ahead! Your best source of up-to-date weather information is a NOAA Weather Radio (NWR). Portable weather radios are handy for outdoor activities. If you don't have NWR, stay up to date via internet, TV, local radio or cell phone. If you are in a group, make sure all

leaders or members of the group have a lightning safety plan and are ready to use it.

Determine how far you are from a safe enclosed building or a safe vehicle. As soon as you hear thunder, see lightning or see dark threatening clouds, get to a safe location. Then wait 30 minutes after the last rumble of thunder before you leave the safe location. If you are part of a group, particularly a large one, you will need more time to get all group members to safety. NWS recommends having professional lightning detection equipment so your group can be alerted from significant distances from the event site.

When groups are involved, the time needed to get to

safety increases. So you need to start leaving sooner. Your entire group should already be in a safe location when the approaching storm reaches within 5 miles from your location.

Here two common scenarios with suggestions on how to safely respond.

Coach of Outdoor Sports Team

You are a manager of a little league team and have a game this evening at the local recreational park. The weather forecast for the day calls for a partly cloudy skies, with a chance of thunderstorms by early evening. You arrive in your vehicle while the kids arrive with their parents. Once arriving at the park, you notice the only buildings are the the restrooms, an enclosed building. Shortly after sunset, the skies start to cloud up and you see bright flashes in the sky to the west. The local radio station mentions storms are on the way.

In this case, the safest locations are the vehicles the kids came in or the restrooms. You should have a choice of allowing the kids to go back to their vehicles or bring everyone into the

restrooms. It is important **NOT** to stay in the dugouts as they are not safe place during lightning activity. Once at a safe place, wait 30 minutes after the last rumble of thunder before going back outside.

Family at the Beach

You plan to go to the beach or lake later this morning with the kids. The weather forecast calls for a nice morning followed by a 30 percent chance of afternoon thunderstorms. You decide to head for the beach in your minivan. The beach is about 5 minutes from the parking lot. The only nearby buildings are picnic shelters. By early afternoon you notice the skies darkening and hear distant thunder. What would be your lightning safety plan of action?

In this case, the best place to go is your car. Do **NOT** seek shelter under the beach picnic shacks because these are not safe in lightning storms. Wait 30 minutes until after the last thunder crack before going back to the beach or driving home.

When a Safe Location is NOT Nearby

The lightning safety community reminds you that there is NO safe place to be outside in a thunderstorm. If you absolutely can't get to safety, this section is designed to help you lessen the threat of being struck by lightning while outside.

Being stranded outdoors when lightning is striking nearby is a harrowing experience. Your first and only truly safe choice is to get to a safe building or vehicle. If you are camping, climbing, on a motorcycle or bicycle, boating, scuba diving, or enjoying other outdoor activities and cannot get to a safe vehicle or shelter, follow these last resort tips.

- Do **NOT** seek shelter under tall isolated trees! The tree may help you stay dry but will significantly increase your risk of being struck by lightning. Rain will not kill you, but the lightning can!
- Do **NOT** seek shelter under partially enclosed buildings
- Stay away from tall, isolated objects. Lightning typically strikes the tallest object. That may be you in an open field or clearing.
- Know the weather patterns of the area. For example, in mountainous areas, thunderstorms typically develop in the early afternoon, so plan to hike early in the day and be down the mountain by noon.
- Know the weather forecast. If there is a high chance of thunderstorms, curtail your outdoor activities.
- Do not place your campsite in an open field on the top of a hill or on a ridge top. Keep your site away from tall isolated trees or other tall objects. If you are in a forest, stay near a lower stand of trees. If you are camping in an open area, set up camp in a valley, ravine, or other low area. A tent offers **NO** protection from lightning.

- Wet ropes can make excellent conductors. This is **BAD** news when it comes to lightning activity. If you are mountain climbing and see lightning, and can do so safely, remove unnecessary ropes extended or attached to you. If a rope is extended across a mountain face and lightning makes contact with it, the electrical current will likely travel along the rope, especially if it is wet.
- Stay away from metal objects, such as fences, poles and backpacks. Metal is an excellent conductor. The current from a lightning flash will easily travel for long distances (See Figure 1)



Figure 1. Dead cows lined up along a metallic fence. Lightning struck the fence, and the current traveled along the fence killing the cows. Photo Courtesy Ruth Lyon-Bateman



Figure 2: Lightning Desperation Position

If lightning is in the immediate area, and there is no safe location nearby, get into the lightning desperation position. Crouch down but do NOT lie down. Bend your knees down while keeping your feet together.

Motorcyclist/Bicyclist: So has anyone been hit riding a bike? Here are just a few real examples from the last few years.

- Virginia Beach, VA: Motorcyclist killed while traveling on Route 58.
- Altoona, PA: One motorcycle rider killed and three riders injured when they took shelter in a woods from a thunderstorm.
- Wyoming: Motorcyclist injured while driving home on I-90 from Sturgis.
- Taylor Park, CO - Dirt biker injured while heading down mountain pass.

Protect yourself when on a bicycle, motorcycle or dirt bike.

- Carry a portable NWR or listen to the radio.
- If you see threatening skies in the distance and you are passing a safe location, pull over and wait 30 minutes after the last thunder crack.
- If you can turn around and get away from the storm, do so!
- DO NOT ride into a lightning storm!

If you absolutely cannot get to a safe building or vehicle, here are some last resort choices:

- Wait out the storm below an overpass. DO NOT touch steel girders. Move away from your bike. Remain on dry surfaces if possible. Overpasses are engineered structures and are likely to be properly grounded. Although an overpass is likely to be higher than the surrounding landscape, if it is struck by lightning, the electrical current will likely be channeled safely into the ground.
- Look for a bridge. Stay away from water. Stay away from any metal surfaces. Be alert for rapidly rising water if under a bridge.

- High tension wires: If high voltage electrical tension wires cross the road, you may want to seek shelter directly underneath these wires. Do not get too close to the large metal towers which hold up these wires. Stay at least 50 feet away. Electric companies design these high tension wires for lightning strikes. If lightning should strike the wires or towers, the current is designed to safely go deep into the ground.

IMPORTANT: These recommendations are a last resort. You are NOT safe in these places, just marginally safer than in the open.

- If you are caught in the open and lightning is occurring within 5 miles, **STOP** riding, get off of your motorcycle/bicycle, find a ditch or other low spot and get into the lightning desperation position.
- Motorcyclists should move at least 50 feet away from their bike. Bicyclist should lay their bikes on the ground.

On the Water

The vast majority of lightning injuries and deaths on boats occur on small boats with no cabin. It is crucial to listen to the weather on a small aquatic vessel without a cabin. If thunderstorms are forecast, don't go out or remain relatively close to land. If you are out on the water and skies are threatening on the horizon, get back to land and find a safe building or vehicle.

Boats with cabins offer a safer but not perfect environment. Safety is increased further if the boat has a properly installed lightning protection system. If you are inside the cabin, stay away from metal and all electrical components. **STAY OFF THE RADIO UNLESS IT IS AN ABSOLUTE EMERGENCY!**

What should you do if you are on a small vessel and lightning becomes a threat? If the vessel has an anchor, then you should properly anchor the boat then get as low as possible.

Large boats with cabins, especially those with lightning protection systems properly installed or metal marine vessels are relatively safe. Remember to stay inside the cabin and away from any metal surfaces.

Scuba Divers

If the boat you are in does not have a safe cabin to be in during lightning activity, then you are safer diving deep into the water for the duration of the storm or as long as possible. Your first choice is to head in and get in safe building or vehicle.

Copied from the NOAA, National Weather Service Office of Climate, Water, and Weather Services

Safe Shelters & Indoor Safety

What is a Safe Shelter?

A house or other substantial building offers the best protection from lightning. In assessing the safety provided by a particular structure, it is more important to consider what happens if the structure gets struck by lightning, rather than whether the structure will be hit by lightning. For a shelter to provide protection from lightning, it must contain a mechanism for conducting the electrical current from the point of contact to the ground. These mechanisms may be on the outside of the structure, may be contained within the walls of the structure, or may be a combination of the two. On the outside, lightning can travel along the outer shell of the building or may follow metal gutters and downspouts to the ground. Inside a structure, lightning can follow conductors such as the electrical wiring, plumbing, and telephone lines to the ground.

Avoid Unsafe Shelters!

Unless specifically designed to be lightning safe, small structures do little, if anything, to protect occupants from lightning. Many small open shelters on athletic fields, golf courses, parks, roadside picnic areas, schoolyards and elsewhere are designed to protect people from rain and sun, but not lightning. A shelter that does not contain plumbing or wiring throughout, or some other mechanism for grounding from the roof to ground is not safe. Small wooden, vinyl, or metal sheds offer little or no protection from lightning and should be avoided during thunderstorms.

How Lightning Enters a House or Building

There are three main ways lightning enters homes and buildings: (1) a direct strike, (2) through wires or pipes that extend outside the structure, and (3) through the ground. Regardless of the method of entrance, once in a structure, the lightning can travel through the electrical, phone, plumbing, and radio/television reception systems. Lightning can also travel through any metal wires or bars in concrete walls or flooring.

Stay Safe While Inside

Phone use is the leading cause of indoor lightning injuries in the United States. Lightning can travel long distances in both phone and electrical wires, particularly in rural areas. Stay away from windows and doors as these can provide the path for a direct strike to enter a home. Do not lie on the concrete floor of a garage as it likely contains a wire mesh. In general, basements are a safe place to go during thunderstorms. However, there are some things to keep in mind. Avoid contact with concrete walls which may contain metal reinforcing bars. Avoid washers and dryers since they not only have contacts with the plumbing and electrical systems, but also contain an electrical path to the outside through the dryer vent.

Remember Your Pets

You may want to consider the safety of your family pets during thunderstorms. Dog houses are not lightning-safe. Dogs that are chained to trees or chained to wire runners can easily fall victim to a lightning strike.

Protect Your Personal Property

Lightning also causes significant damage to personal property each year. In addition to direct strikes, lightning generates electrical surges that can damage electronic equipment some distance from the actual strike. Typical surge protectors will NOT protect equipment from a lightning strike. To the extent possible, unplug any appliances or electronic equipment from all conductors well before a thunderstorm threatens. This includes not only the electrical system, but also the reception system. If you plan to be away from your home when thunderstorms are possible, be sure to unplug unneeded equipment before you leave.

Summary of Lightning Safety Tips for Inside the Home

1. Avoid contact with corded phones
2. Avoid contact with electrical equipment or cords. If you plan to unplug any electronic equipment, do so well before the storm arrives.
3. Avoid contact with plumbing. Do not wash your hands, do not take a shower, do not wash dishes, and do not do laundry.
4. Stay away from windows and doors, and stay off porches.
5. Do not lie on concrete floors and do not lean against concrete walls.