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Thunderstorms

A Thunderstorms Overview

Know the warning signs...

Thunderstorms may occur singly, in clusters or in lines. Thus, it is possible for several thunderstorms to affect one location in the course of a few hours. Some of the most severe weather occurs when a single thunderstorm affects one location for an extended time.

While thunderstorms and lightning can be found throughout the United States, they are most likely to occur in the central and southern states. The state with the highest number of thunderstorm days is Florida.

Thunderstorms: Emergency Information

Thunderstorms can bring heavy rains (which can cause flash flooding), strong winds, hail, lightning and tornadoes. In a severe thunderstorm get inside a sturdy building and stay tuned to a battery-operated radio for weather information.

Lightning is a major threat during a thunderstorm. In the United States, between 75 to 100 Americans are hit and killed each year by lightning. If you are caught outdoors, avoid natural lightning rods such as tall, isolated trees in an open area or the top of a hill and metal objects such as wire fences, golf clubs and metal tools.

It is a myth that lightning never strikes twice in the same place. In fact, lightning will strike several times in the same place in the course of one discharge.

Animated How-To: TADD

Turn Around Don't Drown®

Floods are the most common and widespread of all weather-related natural disasters. And flash floods are the most dangerous kind of floods, because they combine the destructive power of a flood with incredible speed and unpredictability.

Many weather conditions can cause a flash flood. They're often the result of heavy rainfall from slow-moving thunderstorms or new thunderstorms developing and moving over the same area or from the rain of hurricanes or tropical storms concentrated over one area.

Rapidly rising water creating a flash flood may occur with little warning.

Every year, more deaths are caused by flooding than from any other severe weather related hazard. Why? The main reason is that people underestimate the force and power of water.

Did you know that as little as six inches of moving water can knock you off your feet or cause you to lose control of your car&

And just two feet of water can cause a car even a big SUV to be swept off a road or bridge.

When cars are swept downstream into fast moving water often, the people inside them drown.

Tragically, emergency responders are often injured or killed as they attempt to rescue individuals trapped by flooding.

But many of these deaths are preventable.

Whether you are driving or walking, if you come to a flooded road, follow this simple rule: Turn Around Don't Drown.

Dont take a chance and cross a flooded road or bridge because you cant determine the depth of water or the condition of the road or bridge.

FLASH and the National Weather Service have some simple guidelines to help you and your family stay safe in flooding situations:

Do not camp or park your vehicle along rivers, streams or washes, particularly during threatening conditions.

If flooding occurs, get to higher ground. Stay away from areas subject to flooding like low spots, valleys, canyons or washes.

Avoid areas already flooded, especially if the water is flowing fast. Never try to cross flowing streams.

NEVER let your children play near flooded streams, storm drains, bayous, roads, rivers or creeks.

NEVER drive through flooded roadways. Road beds or bridges may be washed out under flood waters.

Never drive around the barriers that warn you the road is flooded.

Be especially cautious at night when it is harder to recognize flood dangers.

Always remember, if youre in doubt Turn Around Dont Drown.

And visit flash.org for more information about strengthening your home and safeguarding your family from disaster.

FLASH Card: Turn Around, Don't Drown

Turn Around, Don't Drown

More deaths occur due to flooding each year than from any other thunderstorm or hurricane related hazard. Many of these casualties are a result of careless or unsuspecting motorists who attempt to navigate flooded roads. The National Weather Service now warns anyone who comes to a flooded roadway, "Turn around... don't drown!"

Follow these safety rules:

If flooding occurs, get to higher ground. Stay away from flood-prone areas, including dips, low spots, valleys, ditches, washes, etc.

Avoid flooded areas or those with rapid water flow. Do not attempt to cross a flowing stream. It takes only six inches of fast flowing water to sweep you off your feet.

Don't allow children to play near high water, storm drains or ditches. Hidden dangers could lie beneath the water.

Flooded roads could have significant damage hidden by floodwaters. NEVER drive through floodwaters or on flooded roads. If your vehicle stalls, leave it immediately and seek higher ground. Water only two feet deep can float away most automobiles.

Do not camp or park your vehicle along streams and washes, particularly when threatening conditions exist.

Be especially cautious at night when it is harder to recognize flood dangers.

Monitor NOAA Weather Radio or your local media for vital weather related information.

More information on flood safety is available through the National Weather Service, www.noaa.gov/floods.htm, or the Federal Alliance For Safe Homes, www.flash.org. Call our toll-free help desk at 1-877-221-SAFE or email flash@flash.org.

Ranking a Tornadoes Strength

The Fujita Scale

The Fujita Scale is used to measure tornado wind speeds and damage.

F0 Gale Tornado

F0 Gale Tornado: Light damage, winds less than 72 mph. Some damage to chimneys, branches broken off trees, shallow-rooted trees uprooted, signboards damaged.

F1 Moderate Tornado

F1 Moderate Tornado: Moderate damage, winds 73-112 mph. Surface peeled off roofs, mobile homes pushed off foundations or overturned, moving autos blown off road.

F2 Significant Tornado

F2 Significant Tornado. Considerable damage, winds 113- 157 mph. Roofs torn off frame houses, mobile homes demolished, large trees snapped or uprooted, light objects become missiles.

F3 Severe Tornado

F3 Severe Tornado. Severe damage, winds 158-206 mph. Roofs and some walls torn off well-constructed houses, trains overturned, most trees uprooted, heavy cars lifted off the ground and thrown.

F4 Devastating Tornado

F4 Devastating Tornado. Devastating damage, winds 207-260 mph. Well-constructed houses leveled, structures with weak foundations blown-off some distance, cars thrown.

F5 Incredible Tornado

F5 Incredible Tornado. Incredible damage, wind 261-318 mph. Strong frame houses lifted off foundations and swept away, automobile-sized missiles fly through the air more than 100 yards, trees debarked.

The 30-30 Lightning Rule

The 30-30 Rule

Use the 30-30 rule to determine the threat of lightning in your area.

30 seconds: Count the seconds between seeing lightning and hearing thunder.

If this time is less than 30 seconds, lightning is still a potential threat. Seek shelter immediately.

30 minutes: After the last lightning flash, wait 30 minutes before leaving shelter. Half of all lightning deaths occur after a storm passes. Stay in a safe area until you are sure the threat has passed.

Animated How-To: Floods

Animated How-To's: Floods

Floods are one of the most powerful, deadly, and destructive natural disasters.

There are a number of relatively inexpensive steps you can take to protect your home and property before a flood strikes.

If you are building or retrofitting your home consider these recommendations:

Elevate your home

- Consider wet flood proofing An example of wet flood proofing is installing flood vents that create permanent openings in the foundations walls so water can flow through the structure.
- Dry flood proofing prevents floodwaters from entering the building. Install new brick veneer over asphalt coating and apply polyethylene film over existing walls.
- Construct non-supporting, break-a-way walls designed to collapse under the force of water without causing damage to the house or its foundation.

Additional Recommendations

Here are some additional recommendations to protect your home from floods. Some are simple and inexpensive; others require a professional contractor.

- Locate the main electric panel and elevate all electric outlets, switches, light sockets, baseboard heaters and wiring at least 12" above the projected flood elevation. In areas that could get wet, connect all receptacles to a GFI circuit to avoid the risk of shock or electrocution. Have electrical wiring done by a licensed electrician.
- Elevate the furnace, water heater, washer and dryer, outside air conditioning compressor, heat pump or package unit at least 12" on a base of masonry, concrete or pressure treated lumber.
- Anchor fuel tanks securely to the floor. Make sure vents and fill line openings are above projected flood levels.
- Install a floating floor drain plug at the current drain location. If the floor drain backs up, the float will rise and plug the drain. Also have a licensed plumber install an interior or exterior backflow valve to prevent floodwater causing sewage to back up and enter your home. As a last resort, use large corks or stoppers to plug showers, tubs or basins.

Get Flood Insurance

One of the most important things you can do to protect your home and family before a flood is to purchase a federal flood insurance policy. But don't wait until a flood is coming. It normally takes 30 days after purchase for flood insurance to go into effect.

Visit www.flash.org or call toll-free (877) 221-SAFE for more information about protecting your home from disaster.

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Animated How-To: Hail

Hail

In an average year, hail causes nearly 2 billion dollars in roof damage to homes primarily in the southern and central plain states, making it one of the nations most costly natural disasters.

Nearly all roof coverings are susceptible to hail damage either aesthetically or functionally by reducing its ability to shed water.

But there are steps you can take to protect your home from the damage caused by hail.

Roof Coverings

New and improved roof coverings are now more impact resistant.

Over time, the effects of sun and the weather can result in the roof covering becoming brittle, reducing its impact resistance. Asphalt shingles can be especially vulnerable to hail damage.

If you need to re-roof be sure to select impact-resistant roof coverings. These products have passed the UL2218 impact test with a rating of Class 1 through Class 4. Class 4, the most resistant, has proven to be highly effective against hail damage.

Make sure your existing roof is impact resistant by checking that products have the UL 2218 designation on labels.

Roof Decking

The stiffness of the roof deck plays an important role in hail resistance. Too much flexibility in the system reduces the effectiveness of the roof coverings impact resistance.

Solid roof decks, using tongue in groove decking or plywood on moderately spaced roof framing, greatly improve impact resistance on the roof.

The Roof Slope

The slope of the roof also has a considerable effect on the severity of hail damage.

Hailstones hitting a roof at a 90-degree angle are more likely to cause damage than those striking a glancing blow.

After a Hailstorm

After a hailstorm, check the trees, shrubs, and plants around your home. If they are stripped of foliage, there is a possibility your roof is damaged.

Also, if patio furniture, screens, or roof vents are dented, there may be roof damage.

Check your roof carefully. Be sure to cover any holes in your roof or broken windows so that water can't enter your home and damage the interior and your possessions.

Visit www.flash.org or call toll-free (877) 221-SAFE for more information about protecting your home from disaster.

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Animated How-To: Lightning

Lightning

According to the National Weather Service, lightning strikes somewhere on the surface of the earth 100 million times each day.

Each strike of lightning contains about one billion volts of electricity. That's enough energy to light a 100-watt bulb for three months.

With all that power it's amazing many researchers call lightning the most underrated of all weather hazards.

Lightning is the second leading cause of storm deaths in the United States. In addition, lightning causes millions of dollars in property damage in this country alone.

But the good news is most personal injury and property damage caused by lightning can be prevented.

At the first sign of lightning or thunder, seek shelter. Good shelters are substantial buildings or fully enclosed vehicles like a car, truck or van. Be sure to keep the windows completely shut.

Unsafe places are open spaces like sports fields and golf courses, high ground or under trees. Be sure to stay away from metal objects including small machinery, electric wires or equipment, and metal fences.

If you are outside use the 30-30 rule. When you see lightning, count the time until you hear thunder. If this time is less than 30 seconds, go inside. Then wait 30 minutes or more after hearing the last thunder before going outside.

If you are indoors, avoid water, stay away from windows and doors, do not use the telephone, turn off, unplug, and stay away from appliances, computers, power tools and television sets. Lightning can strike electric and phone lines causing shocks or surges to inside equipment.

Consider installing Surge Protective Devices (SPD) on electrical equipment. These systems can provide significant protection for electronic and electrical appliances. Be sure to keep them installed at all times.

Lightning Protection Systems

Also consider adding a Lightning Protection System - these systems include lightning rods and air terminals. They provide a direct path for lightning to follow to the ground rather than through the house and its wiring.

However a lightning protection system will not protect a home from fire or electrical damage from lightning entering through the telephone, cable or electrical lines. Whole house surge protection devices are needed for this type of lightning strike.

A Whole House Surge Protection System can be installed by the electric meter or the main electrical panel to help protect the appliances and electrical equipment in your home.

Contact your local electric company for installation information or a qualified electrician or contractor for installation.

And for more information about protecting your home and family visit flash.org

Doors and Windows -- Protecting

Protect Your Windows

Protecting the home's openings from winds and wind blown objects is the single most important step a homeowner can take in protecting the structure from serious damage. If you can keep the wind outside, you and your possessions will be safe inside.

Many products and systems are available to protect your home's openings but it is critical that any product or system be both tested and approved for wind load and wind borne debris.

Unprotected standard glass windows can be penetrated easily by wind borne debris in severe windstorms allowing damaging water and wind to enter your home. Once the window glass fails, the subsequent pressurization of the structure can cause total destruction of the house.

With the exception of impact-resistant window glass, all other glass, even if it is tempered, reinforced or insulated, needs to be protected during a severe wind storm.

Shutter Your Windows

Installing storm shutters is one of the best ways to protect your home. Purchase or make storm shutters for all exposed windows, glass surfaces, French doors, sliding glass doors, and skylights.

The most common device for opening protection is the hurricane shutter system. Choices include permanent or temporary

shutter systems for use on windows and skylights as well as gable end vents, sliding glass doors, exterior doors, and garage doors.

There are two types of shutter systems, permanent shutters, and temporary shutters.

Permanent shutters should be installed by trained individuals and according to the manufacturer's specifications to ensure the shutters will perform as designed and tested. Factors to consider when choosing a shutter system are approval status, design and test results for wind and impact resistance.

Permanent shutter types include Bahamas, roll downs, accordion, awning, and colonial hinged.

Choosing a shutter style can be based on several criteria, including the building location relative to the coast and the cost and ease of operation. Ease of operation is an important factor to consider because if shutters are too hard to close, owners may not use them. If shutters cover windows on an upper floor or hard to reach location, they should be operable from the inside. Roll-down shutters are often the easiest to operate in these conditions.

Temporary shutters are designed to withstand wind borne debris impacts and wind loads during a hurricane. They are commercially available in many types of materials including steel, aluminum, and clear plastic. Temporary shutters are typically corrugated panels that come in standard widths and can be joined to cover wider openings.

The mounting hardware for temporary shutter systems should be installed well before hurricane season by trained individuals according to the manufacturers specifications. Each panel should be clearly labeled to aid in quick installation, and should also bear approved labels.

Plywood Shutters the Last Resort

Covering your windows and doors with plywood should only be a last-resort alternative to actual storm shutters. Plywood that is not properly attached to your house can rip off during high winds and become a projectile that can cause serious harm to your and your neighbor's property.

See Emergency Board Up for detailed instructions about building plywood shutters.

The Myth of Masking Tape

Many people still believe they can use masking tape to protect their windows when a hurricane is on its way. This is a myth. Imagine a mail box that has been ripped from the ground, post and all, by a 120 mph wind gust. A dangerous projectile will not even slow down as it passes through masking tape. Windows are best protected with impact-resistant glass or hurricane shutters.

Double Entry Doors -- Securing

Bolt Down One Half

The exterior walls, doors, and windows are the protective shell of your home. If the shell is broken during a hurricane, high winds can enter the home and put pressure on the roof and walls, causing serious damage.

For each double door, at least one of the doors should be secured at both the top of the door frame and the floor with sturdy sliding bolts. Most bolts that come with double doors, however, are not strong enough to withstand high winds.

Your local hardware store can help you select the proper bolts. Some door manufacturers provide reinforcing bolt kits made specifically for their doors.

Emergency Board Up

Building Plywood Shutters

The following basic recommendations can be used in extreme emergencies to add temporary protection to doors and windows.

Count Your Windows

Count and measure the openings to be covered on your house. Plan on making storm shutters for every opening in your home. All windows, doors, gable end vent, sky light, roof vent, or any other opening that if damaged would allow wind to enter your home.

Measure Each Opening

Measure each opening, horizontally from inside to inside of the exterior trim and vertically from the sill to the bottom of the top trim. Add 8 inches to the width and 8 inches to the height measurements so that the panel will overlap the wall framing around the opening.

Cut to Fit

You will need a hand or circular saw, drill and drill bits, hammer and wrench. Don't forget to wear protective eye covering and gloves on this project. Be sure to purchase 5/8" or greater exterior grade (CDX) plywood. Plywood sheets are generally 4'x8', so your local building supply retailer can help you determine how many sheets to buy using the information about the number of openings you need to cover. More than one sheet may be necessary if you have any single opening larger than one 4'x8' sheet of plywood.

Fastening to House

For hardware, you'll need double-headed nails, wood screws, bolts, wood or masonry anchors, nuts and large washers. A range of types of fasteners can be used to attach a plywood shutter. The type of fastener will depend on the type of construction (wood, masonry, or concrete) and the type of exterior veneer (siding, brick or stucco.)

If the shortest dimension of the window or door is 4 feet or less, space fasteners at 6 inches on center. If the shortest dimension exceeds 4 feet, space fasteners at 3 inches on center. Mount plywood and fasten into place. Mount the plywood with 2 fasteners first (one on each corner) then install the remainder of the fasteners -- this will reduce the strain on your helper and facilitate set-up.

Remember, even the best designed shutter will fail in strong winds if not installed properly. So, try to get as tight a fit as possible on the plywood. You don't want to allow wind to get under the shutter.

Saving Shutters For the Next Storm

Finally, mark and store the shutters so they can be easily installed during a hurricane watch. Keep them out of the weather and other harmful elements.

Important to Remember

FLASH recommends that you install tested and certified impact resistant devices to provide the highest level of protection from

wind-borne debris. However, in an extreme emergency where a temporary measure is the only option, FLASH recommends use of the following emergency board-up procedure:

Measure and cut 5/8 inch, exterior grade plywood that will overlap the wall framing and cover windows and doors.

Attach the plywood to cover the opening with 10d common nails, 12d box nails, wood screws or lag bolts. (If installed over masonry or stucco, vibration resistant anchors should be used.)

If the shortest dimension of the window or door is 4 feet or less, space fasteners at 6 inches on center. If the shortest dimension of the window or door is more than 4 feet and less than or equal to 6 feet, space fasteners at 4 inches on center.

Plywood shutters should be used where the shortest dimension of the window or door exceeds 8 feet.

Remember, even the best designed shutter will fail in strong winds if not installed properly. So, try to get as tight a fit as possible on the plywood. You don't want to allow wind to get under the shutter.

FLASH Card: Consejos de seguridad para propietarios de casas fabricadas (Manufactured Homes)

Consejos de seguridad para propietarios de casas fabricadas

Los propietarios de casas fabricadas pueden ser vulnerables a las amenazas de incendios forestales y vientos fuertes ocasionados por tempestades, tornados o un huracán. Use los siguientes consejos de seguridad para reforzar la seguridad de la casa y ayudar a resistir la amenaza de los incendios forestales y los vientos fuertes.

Considere instalar un sistema longitudinal de amarre en el frente y parte posterior de su casa. Estos sistemas se basan menos en anclajes a tierra y pueden ayudar a evitar los efectos del óxido y la corrosión en la resistencia al levantamiento debido al viento. Construya un faldón alrededor de su casa para evitar que las brasas y los materiales combustibles se metan por debajo.

Realice una revisión anual de seguridad y siga estos consejos:

Revise por ganchos de fijación sueltos.

Asegúrese que los ganchos de fijación están correctamente alineados y no en ángulo.

Asegúrese que no existen puntos de entrada para que los materiales combustibles accedan debajo de la casa.

Revise por la cantidad correcta de amarres y su instalación correcta.

Revise la instalación correcta de los anclajes a tierra y las placas estabilizadoras.

Asegúrese de que los pilares de sustentación estén en contacto con la estructura.

Reemplace los ganchos de fijación o anclajes a tierra que muestran signos de corrosión o daño.

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Teléfono gratuito 1-877-221-SAFE

FLASH Card: Inundaciones (Flood)

Inundaciones

Las inundaciones causan más del 90 por ciento de los daños a la propiedad vinculados a desastres en los EE.UU. cada año. La clave para sobrevivir a una inundación y reducir los daños a la propiedad es la preparación

Seguro

La mayoría de las pólizas para propietarios no cubren los daños por inundaciones. Para determinar su riesgo de inundaciones, contacte a su departamento local de construcciones y planeamiento o visite www.fema.gov/nfip.

Recuerde que existe un período de espera de 30 días antes de que la cobertura de la póliza por inundaciones entre en vigencia.

Realice un inventario de todos sus efectos personales (incluyendo modelos o tipos, números de serie, fotografías y descripciones). Coloque todos los documentos en una caja a prueba de agua y resistente al fuego.

Puede necesitar un seguro contra inundaciones del NFIP (Programa Nacional de Seguros contra Inundaciones) aún cuando no resida en una zona de alto riesgo de inundaciones. Contacte hoy a su agente o compañía aseguradora privada.

Hogar

Instale sus servicios (por ej. Tablero de energía eléctrica e interruptores, equipo de aire acondicionado, caldera, etc.) 60 a 90 cm (2 a 3) sobre el nivel de inundación de la base.*

Si tiene un tanque de combustible, áncelo a una losa de concreto amplia, cuyo peso pueda resistir la fuerza de las aguas crecidas y la flotación.

Instale válvulas de retorno en la cloaca para impedir que las aguas servidas entren en su casa durante las inundaciones.*

Seguridad

Sintonice la NOAA Weather Radio (Radio del Tiempo de la NOAA) y preste atención a las últimas informaciones cuando ocurren o están pronosticadas lluvias extraordinarias.

Preste atención a las observaciones sobre inundaciones repentinas, el caudal de los ríos y las advertencias emitidas por el National Weather Service (Servicio Nacional de Meteorología).

*Sólo un contratista profesional matriculado debe llevar a cabo cambios que afecten la estructura de su casa o sus instalaciones eléctrica y de plomería.

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Para obtener más información sobre el Programa Proyecto de Seguridad llame a nuestra mesa de ayuda gratuita al 1-877-221-SAFE, correo electrónico flash@flash.org o ingrese en www.blueprintforsafety.org.

FLASH Card: La Radio del Tiempo de la NOAA (NOAA Weather Radio)

La Radio del Tiempo de la NOAA (NOAA Weather Radio)

La Radio del Tiempo de la NOAA (NWR) es la Voz del National Weather Service (Servicio Nacional de Meteorología). Proporciona información crítica sobre el clima, que salva vidas, cuando está ubicada apropiadamente dentro del hogar.

Prestaciones de la NWR

Difunde observaciones, alertas y consejos en forma inmediata desde su oficina local del National Weather Service.

Opera sin publicidad comercial, diariamente durante las 24 horas.

Debe incluir capacidad para siete frecuencias, tecnología SAME (Specific Area Message Encoder) (Codificador de mensajes para un área específica) y respaldo por pilas.

NWR está disponible en las siguientes frecuencias en megahertz:

162.400, 162.425, 162.450, 162.475, 162.500, 162.525 y 162.550.

Ubicación correcta de una NWR en su casa

La mejor recepción se obtiene cuando se la ubica cerca de una ventana.

Se puede llegar a necesitar una antena exterior si usted se encuentra a más de 48 km (30 millas) del transmisor.

Se pueden conectar luces estroboscópicas, buscaperonas, computadoras e impresoras de texto para los incapacitados visuales o auditivos.

Sitios Web útiles

Ingrese en www.srh.noaa.gov/ftproot/msd/nwr/srnnwr.html o www.nws.noaa.gov/nwr para encontrar el transmisor NWR más próximo.

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www.flash.org teléfono gratuito 1-877-221-SAFE

FLASH Card: Lightning

Lightning

Electrical surges from lightning can destroy electronic devices in your house, but this damage can be lessened or prevented by installing a system of surge protection that consists of point-of-use devices and a whole house surge device.

Surge Protective Devices (SPD)

- These systems protect electronic and electrical appliances from all but the most severe electrical surges or direct strikes.
- They should be installed at all items to be protected.
- A good electrical grounding system is essential.

Lightning Protection Systems*

- The systems provide a direct path for lightning to follow to the ground rather than through the house structure and its wiring.
- Consult a qualified contractor for installation.

***Please note:** a lightning protection system will not protect a home from electrical damage or fire from lightning entering through the telephone, cable or electrical lines to the house. Whole house surge protection devices are needed for this protection.

Whole House Surge Protection

- A whole house surge protection system can be installed on the electric meter or the electrical panel to help protect the appliances and electronic equipment in your house such as computers, TVs and VCRs.
- Contact your local electric company for installation information. If your utility company doesn't offer the service, a qualified electrician can install this device at your electrical panel.

FLASH Card: Personas con discapacidades (People With Disabilities)

Personas con discapacidades

Con frecuencia, las personas con discapacidades necesitan ayuda y un poco más de tiempo que los demás para prepararse para un desastre. La siguiente lista, si bien no es exhaustiva, contiene algunos consejos prácticos para quienes tienen necesidades especiales.

Cree una red de apoyo personal. Esta red de amigos, familiares y vecinos puede ayudarlo a hacer los preparativos para casos de desastre y a llevarlo a un lugar seguro.

Adhiera al refrigerador Instrucciones para casos de Emergencia, lo que incluye dosis de medicamentos, el equipo necesario y

contactos de emergencia.

Inscribase en los departamentos locales de bomberos y manejo de emergencias.

Identifique distintas rutas de evacuación en su casa y en el trabajo. Pídale a su empleador que incluya y evalúe estos planes.

Lleve consigo en todo momento información de emergencia sobre su salud y contactos para casos de emergencia. Puede resultar útil llevar un brazalete o una etiqueta de alerta médico para identificar su discapacidad.

Tenga a mano un medio alternativo de comunicación, como una pizarra blanca o un bloc de papel y marcadores.

Si llama al 911, golpee suavemente la barra espaciadora para utilizar el servicio de teléfono de texto.

Instale dispositivos de seguridad contra incendios en su casa, como extinguidores de incendios y detectores de humo con almohadilla vibratoria o luz destellante. Considere también la posibilidad de instalar una alarma con luz estroboscópica en el exterior de su casa para alertar a los vecinos. Pruebe las alarmas y los extinguidores con regularidad y reemplace las baterías de los detectores de humo cada seis meses.

Tenga a mano una linterna, un silbato o una campanilla para que los demás puedan darse cuenta de dónde está.

Abastézcase de suministros de emergencia, como pilas, frazadas, dinero en efectivo, alimentos no perecederos, medicamentos, agua y un receptor de radio para sintonizar la radio del tiempo.

Para obtener más información sobre cómo preparar a los niños con necesidades especiales de cuidado de la salud, visite www.aap.org/advocacy/emergprep.htm, por favor. Para obtener información sobre cómo proteger a su animal de asistencia en una emergencia, visite www.disabilitycentral.com, por favor.

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www.flash.org Teléfono gratuito: 1-877-221-SAFE

FLASH Card: Pet Safety

Hurricane Preparation for Pets

Hurricane season is June 1 through November 30. The Humane Society and FLASH are urging pet owners to ACT NOW to properly prepare pets in the likely case of a hurricane.

Pet Owners have three options in the event of a hurricane:

- Keep your pet with you at a secure, storm-prepared location (Red Cross shelters do not accept pets).
- Take your pet with you to a friends or family members house or to a hotel in a safe zone. This should be prearranged to avoid surprise and confusion.
- Leave your pet with a friend in a safe zone or board it at a veterinary clinic or kennel.

All pet boarding facilities require up-to-date vaccinations and proper identification.

- Update your pets vaccinations.
- Purchase tags and have your pet implanted with a microchip (tags and microchips used together are the most effective way of identifying pets).
- Carry a current picture of you with your pet and its medical records with you at all times.

Following is a list of supplies to have prepared for your pet:

- Portable carrier (large enough for the pet to stand up and turn around in)
- Extra leash and collar
- Extra identification tag
- Pet food at least a two-week supply of dry food in water-tight container or canned food (manual can opener needed)
- Water at least a two-week supply of clean water large dogs need one gallon per day
- Up-to-date health records
- Medications flea and tick preventative and two-month supply of heartworm preventative medication
- Litter/newspapers
- Toys and treats
- Towels
- First aid supplies
- Recent photo of you with your pet

FLASH Card: Preparación de las mascotas en caso de huracán (Pet Safety)

Preparación de las mascotas en caso de huracán

La temporada de huracanes se extiende del 1º de junio al 30 de noviembre. La Humane Society (Sociedad Humana) y FLASH recomiendan encarecidamente a los propietarios de mascotas que ACTÚEN AHORA para prepararlas adecuadamente en el probable caso de un huracán.

Los dueños de mascotas tienen tres opciones en el caso de un huracán:

Mantener a su mascota con usted en un sitio seguro, preparado para resistir tormentas (los albergues de la Cruz Roja no aceptan mascotas).

Llevar a su mascota con usted a la casa de un amigo, de un miembro de la familia o a un hotel que se encuentren en una zona segura. Esto debería arreglarse por anticipado para evitar sorpresas y confusión.

Dejar a su mascota con un amigo en una zona segura o alojarla con un veterinario o en una perrera.

Todos los centros de alojamiento de mascotas exigen las vacunas al día y la identificación adecuada del animal.

Actualice las vacunas de su mascota.

Compre etiquetas y hágale implantar un microchip (las etiquetas y los microchips juntos son la forma más eficaz de identificar a las mascotas).

Lleve consigo en todo momento una foto actual de usted y su mascota, así como la historia clínica del animal.

A continuación le presentamos una lista de elementos que debe tener preparados para su mascota:

Transportador portátil (lo suficientemente grande para que el animal puede ponerse de pie y darse la vuelta)

Correa y collar adicionales

Etiqueta de identificación adicional

Alimento para mascotas como mínimo una provisión para dos semanas de alimento seco en un contenedor hermético o alimento enlatado (se necesita un abrelatas manual)

Agua como mínimo una provisión para dos semanas de agua limpia los perros grandes necesitan cuatro litros (un galón) por día

Historia clínica actualizada

Medicamentos pulguicida y garrapaticida y una provisión para dos meses de medicación contra los parásitos alojados en el corazón

Litera/periódicos

Juguetes y antojitos

Toallas

Elementos para primeros auxilios

Foto reciente de usted con su mascota

Sea inteligente. Asegúrese. Actúe ahora.

www.flash.org teléfono gratuito 1-877-221-SAFE

FLASH Card: Rayos (Lightning)

Rayos

La sobretensión eléctrica inducida por los rayos puede destruir los artefactos electrónicos en su casa, pero este daño puede reducirse o evitarse instalando un sistema de protección contra rayos que consiste en dispositivos de uso puntual y un dispositivo contra sobretensión para toda la casa.

Dispositivos protectores contra sobretensión (SPD)

Estos sistemas protegen los aparatos electrónicos y eléctricos contra todo menos las sobretensiones severas o descargas directas.

Deben instalarse en todos los elementos a ser protegidos.

Es esencial un buen sistema de puesta a tierra.

Sistemas de protección contra rayos*

Los sistemas le proporcionan al rayo una trayectoria directa a tierra antes que a través de la estructura de la casa y su cableado.

Consulte a un contratista calificado para su instalación.

*Por favor, tome nota: un sistema de protección contra rayos no protegerá una casa contra daños eléctricos o incendio en el caso de rayos que entran por la línea telefónica, el cable o líneas eléctricas. Para este tipo de protección se necesitan dispositivos de protección total contra sobretensiones para toda la casa.

Protección contra sobretensiones para toda la casa

Se puede instalar un sistema de protección contra sobretensiones para toda la casa en el medidor eléctrico o en el tablero eléctrico para ayudar a proteger los aparatos eléctricos y los equipos electrónicos en su casa, tales como las computadoras, televisores y VCR.

Contacte a su compañía de electricidad local para obtener información de instalación. Si su compañía de servicios públicos no ofrece el servicio, un electricista calificado puede instalar este dispositivo en su tablero eléctrico.

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FLASH Card: Safe Room

Safe Room

A safe room, or storm shelter, provides the highest degree of protection for you and your family from the dangerous forces of extreme winds and debris

impacts. Consider the following information for building or installing a safe room in your home.

Safe Room Construction

- Safe rooms can be site-built or manufactured and can be installed in new or existing homes.
- Site-built safe rooms can be constructed with concrete, concrete masonry, and combinations of wood frame and steel sheathing or concrete masonry infill.
- Manufactured safe-rooms are usually built at a plant or assembled on-site.
- Issues critical to performance include:
 1. Safe rooms must be structurally isolated from the main structure of your home.
 2. Safe rooms must be securely anchored to the foundation.

3. Safe rooms installed in or over a crawl space must have a separate foundation.
4. All components of safe rooms, including walls, ceilings, and door assemblies, must be designed and tested to resist the specified wind forces and prevent perforation by wind-borne debris.
5. Safe rooms must have adequate ventilation.

Location

- Safe rooms can be located anywhere on the first floor of your home, in a basement, or outside.
- Shelters located outside your home should be accessed immediately when a storm warning is issued.

Wind Forces and Debris Impacts

- Safe rooms must be designed for wind speeds up to 250 mph and debris impacts from a 15 lb 2x4 board traveling at 100 mph.

Testing and Quality Verification

- Site-built safe rooms can be constructed in accordance with the prescriptive designs of FEMA 320, Taking Shelter From the Storm: Building a Safe Room Inside Your House.
- Deviations from FEMA 320 and manufactured safe rooms must be tested at an approved laboratory such as the Wind Engineering Research Center at Texas Tech University.
- Verification of compliance with National Storm Shelter Associations Association Standard, required for membership in the Association, provides the highest level of shelter quality.

Emergency and Disaster Supply Kit

- Prepare an emergency plan and have a disaster supply kit available in your safe room.

FLASH Card: Seguridad en caso de inundación (Flood Safety)

Seguridad en caso de inundación

Cada año se producen más muertes debido a inundaciones que a cualesquier otro peligro relacionado con temporales o huracanes. Muchas de estas víctimas son conductores descuidados o confiados que intentan pasar por calles anegadas. El National Weather Service (Servicio Nacional de Meteorología) advierte ahora a cualquiera que se acerque a una carretera

inundada, Turn around& dont drown!TM (¡Dé la vuelta... no se ahogue!TM)

Siga estas reglas de seguridad:

Si se produce una inundación, dirjase a un terreno elevado. Manténgase alejado de zonas anegadizas, incluyendo depresiones, puntos bajos, valles, canaletas, desagües, etc.

Evite las zonas inundadas o aquellas con corrientes de agua rápidas. No intente cruzar las corrientes de agua. Sólo son necesarios 15 cm (6 pulgadas) de aguas rápidas para hacerle perder contacto con el suelo.

No permita que los niños jueguen cerca de aguas profundas, bocas de tormenta o desagües. El agua puede ocultar peligros.

En las calles inundadas, el agua puede esconder importantes daños, NUNCA conduzca a través de zonas o calles anegadas. Si su vehículo se detiene, abandónelo de inmediato y busque un terreno más elevado. Sesenta centímetros (dos pies) de agua son suficientes para llevarse a la mayoría de los automóviles.

No acampe ni estacione su vehículo junto a corrientes de agua y desagües, especialmente cuando existen condiciones de peligro.

Sea especialmente cauto de noche, cuando es más difícil reconocer los peligros de inundación.

Sintonice la NOAA Weather Radio (Radio del Tiempo de la NOAA) o su medio local para escuchar información vital sobre el tiempo.

Se puede obtener más información sobre seguridad en caso de inundación a través del National Weather Service, www.noaa.gov/floods.htm, o la Federal Alliance For Safe Homes (Alianza Federal para Hogares Seguros), www.flash.org.

Llame a nuestra mesa de ayuda gratuita al 1-877-221-SAFE o envíe un correo electrónico a flash@flash.org.

¡Proteja su hogar en un FLASH con la Federal Alliance for Safe Homes!

Para obtener más información sobre el Programa Proyecto de Seguridad llame a nuestra mesa de ayuda gratuita al 1-877-221-SAFE, correo electrónico flash@flash.org o ingrese en www.blueprintforsafety.org.

FLASH Card: Severe Winds

Severe Winds

Follow tips from both the Severe Winds and Hurricane cards to create a plan today to help your family prepare for strong winds from a tornado or severe storm. Prior to a tornado, concentrate on the following areas along with the hurricane FLASH card to protect your home.

Roof

To strengthen against uplift forces:

- Make sure the roof deck is properly attached to truss/rafters with roof-wall (hurricane straps/clips) connection hardware.

- Using a caulking gun, apply a 1/4 inch bead of APA AFG-01 certified wood adhesive along an intersection of the roof deck and roof support element (rafter or truss chord) on both sides of the beam. This technique can increase the wind uplift resistance by up to 3x more than nail-secured sheathing, but should only be used on roofs one year old or greater.
- Attach quarter-round wood pieces with adhesive in the corners of the roof support elements where access is limited to one side.

Porches

Check to see if the exterior walls are connected to the foundation properly.

- Ensure that the porch is properly attached with tie downs. The tie down is an internal rod within the porch column, which better connects the porch roof to the foundation, so it cannot be lifted out of place by the wind.

Manufactured Homes

- Anchor mobile homes with tie downs and inspect them annually.
- Avoid staying inside a manufactured home to ride out a storm. Always evacuate to a nearby, designated storm shelter.

FLASH Card: Vientos intensos (Severe Winds)

Vientos intensos

Siga los consejos de las tarjetas Vientos intensos y Huracanes para crear hoy un plan que le ayude a su familia a prepararse para los intensos vientos de un tornado o una tempestad. Antes de un tornado, concéntrese en las siguientes áreas junto con la tarjeta FLASH sobre huracanes para proteger su casa.

Techo

Para reforzarlo contra las fuerzas de elevación:

Asegúrese de que la cubierta del techo esté correctamente unida a las cerchas/vigas con elementos de unión para techos y paredes (ganchos y grapas de fijación para huracanes).

Con una pistola de calafateado aplique un reborde de 0,6 cm (1/4 de pulgada) de adhesivo para madera certificado APA AFG-01 a lo largo de la intersección entre la cubierta del techo y el elemento de soporte (cordón de la cercha o la viga) a ambos lados de la viga. Esta técnica puede aumentar la resistencia a la elevación debido al viento hasta 3 veces más que un revestimiento asegurado con clavos, pero sólo debe ser usada en techos de un año de antigüedad o más.

Adose con adhesivo contrafuertes redondos de madera a los ángulos de los elementos de soporte del techo allí donde el acceso está limitado a un solo lado.

Pórticos

Verifique si las paredes exteriores están unidas correctamente a la fundación.

Asegúrese de que el pórtico esté correctamente fijado con amarras. La amarra es una vara interna dentro de la columna del pórtico, que conecta mejor el techo con la fundación de modo que no pueda ser levantado por el viento.

Casas fabricadas

Ancle las casas móviles con amarras e inspecciónelas manualmente.

Evite permanecer adentro de una casa fabricada para salir ileso de una tempestad. Evacue siempre a un albergue contra tormentas cercano.

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Fuel Tank -- Anchoring

Anchor Your Fuel Tank

A fuel tank can tip over or float in a flood, causing fuel to spill or catch fire. Cleaning up a house that has been inundated with flood waters containing fuel oil can be extremely difficult and costly.

Fuel tanks should be securely anchored to the floor. Make sure vents and fill line openings are above projected flood levels.

Propane tanks are the property of the propane company. You will need written permission to anchor them. Ask whether the company can do it first.

Make sure all work conforms to state and local building codes.

Garage Door -- Securing

Secure Your Garage Door

The most important step you can take in preparing for a windstorm is to make sure that your "building envelope" is sealed. That means tightly covering all windows and doors to prevent wind from entering. If you can keep the wind outside, you and your possessions will be safe inside.

Garage doors are the most vulnerable to hurricane force winds for two reasons, first the relatively long span of opening that they cover, and second, the weak materials they are built with.

Many garage doors are constructed of lightweight materials to conserve weight and expense. Although their lighter weight makes them easier to raise and lower, it also makes them less resistant to the wind and impact forces of a hurricane.

Reinforce or Replace

Approximately 80% of residential hurricane damage starts with wind entry through garage doors. Ideally, garage doors should be equipped with steel bracing.

Be sure to follow manufacturer's specifications when using or installing wind resistant and impact resistant products. Improper installation may cause a voided warranty or worse, a product failure that presents a threat to life and property.

Outdoor Items -- Securing

Bring Outdoor Items In

If you have furniture and other outdoor equipment on your patio or deck, bring them inside when strong weather threatens. Don't forget trash cans, grills, toys, and potted plants. Keep them from becoming flying objects that can cause additional injury or damage during storms with high winds.

Potential Hazards -- Inspecting Your Home

Interior Items

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 bookcase can fall and cause serious injury. Inspect your home at least once a year and fix potential hazards.

Power Outage -- Prepare For

Before a Blackout Happens

Assemble essential supplies, including:

Flashlight

Batteries

Portable radio

At least one gallon of water

A small supply of food.

Due to the extreme risk of fire, do not use candles during a power outage.

If you have space in your refrigerator or freezer, consider filling plastic containers with water, leaving about an inch of space inside each one. (Remember, water expands as it freezes, so it is important to leave room in the container for the expanded water). Place the containers in the refrigerator and freezer. This chilled or frozen water will help keep food cold if the power goes out, by displacing air that can warm up quickly with water or ice that keeps cold for several hours without additional refrigeration.

If you use medication that requires refrigeration, most can be kept in a closed refrigerator for several hours without a problem.

If unsure, check with your physician or pharmacist.

If you use a computer, keep files and operating systems backed up regularly. Consider buying extra batteries and a power converter if you use a laptop computer. A power converter allows most laptops (12 volts or less) to be operated from the cigarette lighter of a vehicle. Also, turn off all computers, monitors, printers, copiers, scanners, and other devices when they're not being used. That way, if the power goes out, this equipment will have already been safely shut down. Get a high quality surge protector for all of your computer equipment. If you use the computer a lot, such as for a home business, consider purchasing and installing an uninterruptable power supply (UPS). Consult with your local computer equipment dealer about available equipment and costs.

If you have an electric garage door opener, find out where the manual release lever is located and learn how to operate it. Sometimes garage doors can be heavy, so get help to lift it. If you regularly use the garage as the primary means of entering your home upon return from work, be sure to keep a key to your house with you, in case the garage door will not open.

If you have a telephone instrument or system at home or at work that requires electricity to work (such as a cordless phone or answering machine), plan for alternate communication, including having a standard telephone handset, cellular telephone, radio, or pager. Remember, too, that some voice mail systems and remote dial-up servers for computer networks may not operate when the power is out where these systems are located. So even if you have power, your access to remote technology may be interrupted if the power that serves those areas is disrupted. Check with remote service providers to see if they have backup power systems, and how long those systems will operate.

Keep your car fuel tank at least half full because gas stations rely on electricity to power their pumps.

Follow energy conservation measures to keep the use of electricity as low as possible, which can help power companies avoid imposing rolling blackouts.

Roof -- Protecting

The most important asset

The roof covering, and the deck beneath it, form one of your home's critical shields of protection from high winds and rain. Unfortunately, this shield is often the first to be lost during high winds.

Loss of the roof covering, such as shingles, tiles or metal panels makes the house more vulnerable to water damage. The loose roofing inevitably becomes wind-borne projectiles that can damage other structures.

But while the loss of roofing can make your home vulnerable to water infiltration, loss of the roof's sheathing, often referred to as decking, can result in excessive damage to your home and your possessions.

As wind blows over the roof, uplift forces pull at the roof. These uplift forces try to pull off the roof covering and the roof deck. When the roof decking is blown off, the inside of your home becomes completely exposed to the elements and trusses or rafters may become unstable and the entire roof may collapse.

Tips for new and existing roofs

The following techniques can be used during roof installation on both new and existing homes, and are best performed by a licensed, professional roofing contractor.

Install a roof deck of solid plywood 5/8 thickness to maximize wind and windborne debris resistance with 10d common nails

spaced at 4 inches along the panel edges and every six inches in the field of the plywood panel. Make sure that the nails penetrate the decking directly into the roof framing.

In your existing home, be sure to look in the attic to confirm that the roof decking is properly nailed to the roof framing. If you can see nails along the sides of rafters or trusses, where the nail penetrates the decking, your roof deck is probably not securely attached.

Create a secondary water barrier by installing self-adhering flashing tape or modified polymer bitumen strips, commonly called peel and seal, over the joints in your roof deck. This will help keep out the rain in the event the roof covering is damaged or destroyed by severe weather.

Install one layer of #30 underlayment sometimes called felt paper -- over the roof decking and secondary water barrier. The felt helps with drainage in the event water gets under the roof covering.

Install a roof covering that has been tested to ASTM D 3161 for wind resistance and UL 2218 for impact resistance. Be sure to specify these standards and look for labels on the products confirming these standards because ordinary roofing materials may not look any different from the wind resistant versions.

Finally, you can significantly increase the roofs resistance to uplift from the wind by applying a bead of construction adhesive using a caulking gun along both sides of the intersection of the roof decking and the rafters or trusses. Be sure to look for an adhesive that has been tested to specific levels.

Safe Rooms

Safe Rooms: The Ultimate Protection from High Winds

A safe room, or storm shelter, provides the ultimate in life safety protection for you and your family from the dangerous forces of severe winds produced by hurricanes and tornadoes. Consider the following information for building or installing a safe room in your home:

Safe rooms can be site-built or manufactured and can be installed in new or existing homes.

Safe rooms can be located anywhere on the first floor of your home, in a basement, or outside.

Safe rooms must be designed for wind speeds up to 250 mph and debris impacts from a 15 lb 2x4 board traveling at 100 mph.

Issues critical to performance include:

1. Safe rooms must be structurally isolated from the main structure of your home.
2. Safe rooms must be securely anchored to the foundation.
3. Safe rooms installed in or over a crawl space must have a separate foundation.
4. All components of safe rooms, including walls, ceilings, and door assemblies, must be designed and tested to resist the specified wind forces and prevent perforation by wind-borne debris.

5. Safe rooms must have adequate ventilation.

Site-built safe rooms can be constructed in accordance with the prescriptive designs of the FEMA 320 Publication, Taking Shelter From the Storm: Building a Safe Room Inside Your House. Deviations from FEMA 320 and manufactured safe rooms must be tested at an approved laboratory such as the Wind Science and Engineering Research Center at Texas Tech University.

Verification of compliance with National Storm Shelter Association's Association Standard provides the highest level of shelter quality.

FEMA has published prescriptive designs for residential storm shelters in FEMA 321, Taking Shelter From the Storm and has published guidelines for community shelters in FEMA 361, Design and Construction Guidance for Community Shelters. The National Storm Shelter Association (NSSA) developed the industry standard and the process for quality verification, both available on the web at www.NSSA.cc.

The producer should be familiar with the applicable guide to quality and take responsibility to comply with it.

Sandbags -- Making and Using Them

Making a Sand-Bag Barrier

Sandbags can be useful in redirecting storm water and debris flows away from your home. But be sure that the sandbags are properly filled and maintained.

Here's how: Fill sandbags one-half full. Use sand if readily available, otherwise use soil. Fold the top of sandbag down and rest the bag on its folded top. Take care in stacking the sandbags. Limit placement to three layers, unless a building is used as a backing or sandbags are placed in a pyramid. Tamp each sandbag into place, completing each layer before you begin a new layer. Clear a path between buildings for debris flow. Lay a plastic sheet in between the building and the bags to control the flow and prevent water from seeping into sliding glass doors.

What to Expect

There are limits to what sandbags can do, so remember: Sandbags will not seal out water. Sandbags deteriorate when exposed to continued wetting and drying for several months. If bags are placed too early, they may not be effective when needed.

Sandbags are for small water flow protection -- up to two feet. Protection from larger flow requires a more permanent flood prevention system. Be sure to consult with your local environmental protection department before disposing of used sandbags.

Sandbags that are exposed to contaminated floodwaters may pose an environmental hazard and require special handling.

Disaster Kit -- Assembling

What To Plan For

You'll need to plan for two situations: Remaining in your home after a disaster or evacuating to a safer location.

Keep enough supplies at home for at least three days. Have a three-day supply of food and water on hand -- plan for one gallon of water per person per day and food that won't spoil. Don't forget a can opener (not an electric one) and emergency tools including a fire extinguisher, battery powered radio, flashlight, and plenty of batteries.

Disaster Supply Checklist

Be sure to gather the following items to ensure your family's basic comfort and well-being in case of evacuation.

Cash -- Banks and ATMs may not be open or available for extended periods.

Water -- at least one gallon per person for three to seven days.

Food -- at least enough for three to seven days, including: Non-perishable packaged or canned food and juices, food for infants or the elderly, snack food, non-electric can opener, vitamins, paper plates, plastic utensils.

Radio -- battery powered and NOAA weather radio.

Blankets, pillows etc.

Clothing -- seasonal, rain gear/ sturdy shoes.

First Aid Kit -- medicines, prescription drugs.

Special items -- for babies and the elderly.

Toiletries -- hygiene items, moisture wipes.

Flashlight and batteries.

Keys.

Toys, books, games.

Store important documents in a waterproof container: insurance papers, medical records, bank account numbers, Social Security cards.

Tools.

Vehicle with full tank of gas.

Pet care items: Proper identification, immunization records, ample food and water, medicine, a carrier or cage, leash.

Keep Your Kit Fresh

Remember to replace stored food and water every six months. Also keep a supply of fresh batteries on hand. Remember to keep your most important up-to-date family papers in a fire and water proof container. These should include Social Security cards, deeds or mortgages, insurance policies, birth and marriage certificates, stocks, bonds, wills and recent tax returns.

The Importance of Water

Stocking an emergency water supply should be one of your top priorities. During an emergency drinking water should not be rationed, that's why it's critical to have enough water on hand for yourself and your family.

While individual needs will vary depending on age, physical condition, activity, diet, and climate, a normally active person needs at least two quarts of drinking water daily. Children, nursing mothers, and people who are ill need more water. Very hot temperatures can also double the amount of water needed.

Because you will also need water for sanitary purposes, and possibly for cooking, you should store at least one gallon of water per person per day.

When storing water, use thoroughly washed plastic, fiberglass, or enamel-lined containers. Don't use containers that can break, such as glass bottles. Never use a container that has held toxic substances. Plastic containers, like soda bottles, are best.

Seal your water containers tightly, label them and store them in a cool, dark place.

It is important to change stored water every six months.

Disaster Safety for People with Disabilities

Safety Tips for People with Disabilities

If you have a disability or special need, you may have to take additional steps to protect yourself in an emergency. If you have family, friends or neighbors with special needs, help them with these extra precautions.

People with disabilities often require assistance and additional lead time in order to prepare for a disaster. The following list, while not exhaustive, provides some practical tips for those with special needs.

Establish a personal support network. This network of friends, family, and neighbors can assist in disaster preparations and getting you to a safe place.

Post Emergency Instructions on the refrigerator to include medication dosages, necessary equipment, and emergency contacts.

Register with local emergency management and fire departments.

Identify multiple evacuation routes at home and at work. Ask your employer to include and test these plans.

Carry with you at all times emergency health information and emergency contacts. A medical alert tag or bracelet to identify your disability can prove helpful.

Have an alternate means of communication, like a dry erase board or writing tablet and markers.

When calling 911, tap the space bar to engage the TDD system.

If you are mobility impaired and live or work in a high-rise building, have an escape chair.

If you live in an apartment building, ask the management to mark accessible exits clearly.

Keep extra wheelchair batteries, oxygen, catheters, medication, food for guide or hearing-ear dogs, or other items you might need. Also keep a list of the type and serial numbers of medical devices you need.

Stock additional emergency supplies, such as batteries, blankets, cash, medications, non-perishable foods, water and a weather radio.

Install fire safety devices in the home, such as fire extinguishers and smoke alarms with a vibrating pad or flashing light. Consider also installing an alarm with strobe light outside the home to alert neighbors. Test alarms and extinguishers regularly and replace smoke alarm batteries every six months.

Keep a flashlight, whistle, or bell handy to signal your whereabouts to others.

For more information on how to prepare children with special health care needs, visit www.aap.org/advocacy/emergprep.htm. For information on protecting your service animal in an emergency, visit www.disabilitycentral.com.

Energy Conservation

Conserving Power

To conserve power to help avoid a blackout, the power industry recommends:

In heating season, set the furnace thermostat at 68 degrees or lower. In cooling season, set the thermostat at 78 degrees or higher. Consider installing a programmable thermostat that you can set to have the furnace or air conditioning run only when you are at home. Most power is used by heating and cooling, so adjusting the temperatures on your thermostat is the biggest energy conservation measure you can take.

Turn off lights and computers when not in use. This is especially true about computer monitors - avoid using a "screen saver" and just simply turn the monitor off when you won't be using the computer for a while. Turn the computer off completely each evening. It is no longer true that computer equipment is damaged from turning it off and on.

Close windows when the heating or cooling system is on.

Caulk windows and doors to keep air from leaking, and replace old windows with new, energy-efficient windows.

Clean or replace furnace and air-conditioner filters regularly.

When buying new appliances be sure to purchase energy-efficient models.

Wrap the water heater with an insulation jacket, available at most building supplies retailers.

If you have to wash clothes, wash only full loads and clean the dryer's lint trap after each use.

When using a dishwasher, wash full loads and use the "light" cycle. If possible, use the "rinse only" cycle and turn off the "high temperature" rinse option. When the regular wash cycle is done, just open the dishwasher door to allow the dishes to air dry.

Replace incandescent light bulbs with energy-efficient compact fluorescent lights.

Use one large light bulb rather than several smaller ones.

If you would like more information about rolling blackouts and how to deal with them, contact the power company that serves your area.

Evacuation -- Be Prepared

Have An Evacuation Plan

Discuss what to do in an evacuation with everyone in your family. Know where you will go if an evacuation is called. Review at least two exit routes from your home or neighborhood to a designated meeting place for your family. Don't forget about your pets. Pets are not allowed at most public shelters.

Pack Your Bags

After a disaster, you may not be able to return to your home for some time. Assemble everything your family will need in advance if you must evacuate your home. Pack one change of clothes and shoes per person as well as one blanket or sleeping bag per person. Write down the name of your insurance company, policy number, and telephone number and keep it in a safe place. Include an extra set of car keys, your credit cards, cash, and/or traveler's checks. Don't forget your important emergency contact numbers.

Don't Forget Personal Items

Create a first aid kit that includes your family's prescription medications. Pack sanitation supplies and special items for babies, senior citizens, or disabled family members. Bring extra eyeglasses and a favorite family board game to help pass the time away from home.

Evacuation -- If You Must Evacuate

Evacuate Immediately

Evacuate immediately if authorities tell you to do so. Listen to your battery-powered radio and follow the instructions of local emergency officials. Wear warm, dry clothing and sturdy shoes. Be sure to take your disaster supplies kit with you to a shelter or safe location. Use travel routes specified by local authorities -- don't use shortcuts.

Before You Go

If you have the time: Turn off water, gas and electricity before leaving. Post a note telling when you left and where you are going. Don't forget about your pets and be sure to lock your home.

Mobile and Manufactured Homes -- Safety Tips

Safety Tips for Manufactured Homeowners

Manufactured homeowners can be vulnerable to the threats of high winds from severe storms, tornadoes or a hurricane. Use the following safety tips to bolster home safety and help resist the threat of high winds.

Consider installing a longitudinal tie-down system at the front and rear of your home. These systems rely less on ground anchors and can help avoid the effects of rust and corrosion on wind uplift resistance.

Conduct an annual safety check-up and follow these tips:

Check for loose straps.

Make sure straps are properly aligned and not on an angle.

Check for proper number of tie-downs and for proper installation.

Check for proper installation of ground anchors and stabilizer plates.

Make sure that support piers are in contact with the frame.

Replace straps or ground anchors that show signs of corrosion or damage.

Have a plan where to go during a tornado threat -- a nearby pre-identified safe structure within walking distance.

Get Together With Neighbors

If you live in a mobile or manufactured home park and severe weather threatens, get together with other residents and the park owner/manager to designate safe shelter areas in the park or community.

NOAA Weather Radio

What is NOAA weather radio

Quickly changing weather demands careful attention. Keep your family safe by staying tuned to NOAA weather radio -- it provides critical life-saving weather information when placed properly in your home.

NOAA Weather Radio (NWR) is the "Voice of the National Weather Service," a nationwide network of radio stations broadcasting continuous weather information direct from a nearby National Weather Service office.

NWR broadcasts National Weather Service warnings, watches, forecasts, and other hazard information 24 hours a day commercial free.

Types of Information on NWR

Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "all hazards" radio network, making it your single source for comprehensive weather and emergency information. NWR also broadcasts warning and post-event information for all types of hazards--both natural, (such as earthquakes and volcanic activity) and environmental, (such as chemical releases or oil spills).

Getting Better Reception

Reminders: Reception is usually best if placed near a window. An external antenna may be needed if you are located more than 30 miles from the transmitter. Strobe lights, pagers, computers, and text printers can be connected for the visually and hearing impaired. Remember power outages can occur at any time, so be sure to keep a battery-powered radio handy. Go to www.nws.noaa.gov/nwr to find the nearest NWR transmitter.

People With Disabilities: Power Outage

Safety in a Power Outage

If you use a battery-operated wheelchair, life-support system, or other power-dependent equipment, call your power company before rolling blackouts happen. Many utility companies keep a list and map of the locations of power-dependent customers in

case of an emergency. Ask them what alternatives are available in your area. Contact the customer service department of your local utility company(ies) to learn if this service is available in your community.

If you use a motorized wheelchair or scooter, have an extra battery. A car battery also can be used with a wheelchair but will not last as long as a wheelchair's deep-cycle battery. If available, store a lightweight manual wheelchair for backup.

If you are Blind or have a visual disability, store a talking or Braille clock or large-print timepiece with extra batteries.

If you are Deaf or have a hearing loss, consider getting a small portable battery-operated television set. Emergency broadcasts may give information in American Sign Language (ASL) or open captioning.

Safety Tips During a Power Outage

Family Safety During a Power Outage

Only use a flashlight for emergency lighting. Never use candles.

Turn off electrical equipment you were using when the power went out.

Turn off or disconnect any appliances, equipment, (like air conditioners) or electronics you were using when the power went out. When power comes back on, it may come back with momentary, "surges" or "spikes" that can damage equipment such as computers and motors in appliances like the air conditioner, refrigerator, washer, or furnace.

Leave one light turned on so you'll know when your power returns.

Avoid opening the refrigerator and freezer.

Leave the doors of your refrigerator and freezer closed to keep your food as fresh as possible. If you must eat food that was refrigerated or frozen, check it carefully for signs of spoilage.

Use the phone for emergencies only. Listening to a portable radio can provide the latest information. Do not call 9-1-1 for information -- only call to report a life-threatening emergency.

Do not run a generator inside a home or garage.

If you use a generator, connect the equipment you want to power directly to the outlets on the generator. Do not connect a generator to a home's electrical system.

Eliminate unnecessary travel, especially by car. Traffic signals will stop working during an outage, creating traffic congestion.

Remember that equipment such as automated teller machines, (ATMs) and elevators may not work during a power outage.

If it is hot outside, take steps to remain cool. Move to the lowest level of your home, as cool air falls. Wear lightweight, light-colored clothing. Drink plenty of water, even if you do not feel thirsty. If the heat is intense and the power may be off for a long time, consider going to a movie theater, shopping mall, or, "cooling shelter" that may be opened in your community. Listen to local radio or television for more information. Get more tips on the preparing for a heat wave.

Remember to provide plenty of fresh, cool water for your pets.

If it is cold outside, put on layers of warm clothing. Never burn charcoal for heating or cooking indoors. Never use your oven as a source of heat. If the power may be out for a prolonged period, plan to go to another location (relative, friend, or public facility) that has heat to keep warm.

Listen to local radio and television for updated information.

Turn Around Don't Drown

Turn Around Don't Drown

More deaths occur due to flooding each year than from any other thunderstorm or hurricane related hazard. Many of these deaths are a result of careless or unsuspecting motorists who attempt to drive through flooded roads. FLASH and the National Weather Service warn anyone who comes to a flooded road to "Turn around ... don't drown!"

Avoid Flooded Roads

Flooded roads could have significant damage hidden by floodwaters. Never drive through floodwaters or on flooded roads. If your vehicle stalls, leave it immediately and seek higher ground. Water only two feet deep can sweep away most automobiles.

For more information about the "Turn around... don't drown" program visit www.srh.noaa.gov/srh/tadd/

Using a Generator

Safe Use of a Generator

If you are considering obtaining a generator, get advice from a licensed professional, such as an electrician.

Make sure the generator is listed with Underwriter's Laboratories or a similar organization. Some municipalities, Air Quality Districts, or states have "air quality permit" requirements. A licensed electrician will be able to give you more information on these matters.

Always plan to keep the generator outdoors -- never operate it inside, including the basement or garage. Do not hook up a generator directly to your home's wiring.

The safest thing to do is to connect the equipment you want to power directly to the outlets on the generator. Connecting a cord from the generator to a point on the permanent wiring system and backfeeding power to your home is an unsafe method to supply a building during a power outage.

Keeping Food Safe After a Power Outage

Keeping Food Safe

It's important to be aware that food that has not been refrigerated can cause severe health problems.

Remember that:

Items in a full freezer will stay frozen for about two days with the door kept closed; in a half-full freezer, for about one day.

Refrigerated foods can keep for up to four hours.

Discard any perishable refrigerated foods that have been above 40 degrees F for more than two hours.

Discard any food with an unusual odor, color or texture. Remember: "When in doubt, throw it out."

For additional information about food safety during power outages, call the toll-free USDA Meat and Poultry Hotline at 1-800-535-4555.

Power Outage -- Safety Tips

Safety Tips During a Power Outage

Whether a power outage in your home is caused by grid failure or severe weather, you can take the following steps to prepare and respond.

Include power outages in your family disaster plan, identifying alternate means of transportation and routes to home, school, or work.

Keep extra cash on hand since an extended power outage may prevent you from withdrawing money from automatic teller machines or banks.

Keep a supply of non-perishable foods, medicine, baby supplies, and pet food as appropriate on hand. Also be sure to have at least one gallon of water per person per day on hand.

Avoid opening the fridge or freezer. Food should be safe as long as the outage lasts no more than 4-6 hours.

Have one or more coolers for cold food storage, in case power outage is prolonged. Perishable foods should not be stored for more than two hours above 40 degrees Fahrenheit.

Have an emergency power supply for anyone dependent on medical equipment requiring electricity.

Keep a supply of flashlights, batteries, and a battery-powered radio on hand. Do not use candles as they pose a fire hazard.

Connect only individual appliances to portable generators and never plug a generator into wall outlets.

Use gas-powered generators only in well-ventilated areas.

When driving, be careful at intersections - traffic lights may be out, creating a dangerous situation.

Turn off any electrical equipment that was in use prior to the power.

Turn off all lights but one, to alert you when power resumes.

Check on elderly neighbors, friends, or relatives who may need assistance if weather is severe during the outage.

During a power outage, resist the temptation to call 9-1-1 for information --that's what your battery-powered radio is for.

Don't plug emergency generators into electric outlets or hook them directly to your home's electrical system - as they can feed electricity back into the power lines, putting you and line workers in danger.

Keep your car fuel tank at least half-full, gas stations rely on electricity to power their pumps.

When power is restored, wait a few minutes before turning on major appliances to help eliminate further problems caused by a sharp increase in demand.