

Severe Weather

Why Should Your Family Prepare?

Chincoteague, like other communities, is subject to the effects of major emergencies and disasters derived from natural, man-made or technological causes. One of the most serious natural disasters would be caused by a hurricane. It is possible for a hurricane to strike Chincoteague threatening lives and property. The impact would be extremely serious upon local jurisdictions and the region. Community awareness and preparedness must be taken seriously to insure that everyone understands what to do before, during and after a hurricane. The time to prepare is now. Do not wait until a crisis occurs to develop your family plan for survival.

Chincoteague residents must be prepared to respond to the threat of major emergencies and disasters. Individuals and families must accept a great deal of the responsibility in preparing for the response. How well you are prepared to respond, deal with the disaster conditions and recover from the consequences depends upon your awareness, knowledge and planning efforts. The situation is survivable. You can reduce the impact upon your family. The first step is to be aware of the hazards and risks. The next step is to become knowledgeable about what to do BEFORE, DURING, and AFTER a hurricane or other disaster strikes. Finally, you need to develop your own DISASTER RESPONSE & RECOVERY PLAN.

The enclosed information is intended to provide you with some basic information important to these processes. More information is available by calling your local Emergency Management Office.

More Hurricanes Likely

From 1950 through 1990, the Atlantic Basin has averaged annually 5.7 hurricanes, 9.3 named storms, 47 named storm days, 24 hurricane days, 3 intense hurricanes and 4.7 intense hurricane days. Dr. William Gray of Colorado State University forecasted the occurrence of 6 hurricanes, 10 named storms, 50 days with named storms, 20 days with hurricanes, 2 intense hurricanes (Category 3, 4, or 5) and 4 days with intense hurricanes during the 1998 Atlantic hurricane season. Knowledgeable sources have predicted a near normal season based upon anticipated reduced El Nino activity. During the 1997 season, the Pacific Ocean warm-weather phenomenon called El Nino fortunately disrupted normal storm development in the Atlantic. Thus, there were only seven named storms produced, three of which became hurricanes. When a tropical storm forms and winds reach 39 mph, it is given a name. It becomes a hurricane when winds exceed 74 mph.

Warm Tropical Waters Spawn Hurricanes

From June 1 to November 30, the tropical Atlantic Ocean, Gulf of Mexico and Caribbean warms up enough to spawn one of nature's most destructive storms. Hurricanes in the past have killed thousands and left entire cities in ruin. Hurricanes usually form over water that is at least 80 degrees Fahrenheit. They are giant heat engines that convert the heat energy of the tropics into wind and waves.

Storm Surge...A Deadly Killer

"Storm Surge" is a large dome of water pushed up in advance of a hurricane making landfall. This dome of water can exceed 20 feet depending upon the strength of the hurricane and tide conditions. Storm surge flooding has caused more deaths than hurricane winds. Storm surge is not to be confused with a tidal wave or tsunami. It is a large amount of water on top of which there is heavy wave action. A storm surge can last for several hours. In a deep ocean, this huge dome of water sinks and flows away. As the storm nears land, the rising sea floor blocks the building water's escape. It comes ashore as a deadly storm surge. During high tide, the storm surge will be even deeper and more extensive.

Flooding...A Dangerous Situation

Flooding may result from both heavy sustained rainfall or storm surge inundation. As the hurricane moves inland, it will be accompanied by a large amount of rainfall over a short period of time. This adds to the previous storm surge flooding and collects outside the normal boundaries of rivers, streams, lakes and canals. Depending upon a storm surge's wave size and ground elevation, water may become trapped. This creates additional associated hazards, such as drowning, electrocution from fallen power lines, health risks associated with drinking contaminated water and property damage or loss.

Winds...Highly Destructive Forces!

The following picture of a historical hurricane shows wind spiraling in toward the calm eye with the wind increasing as it nears the center. In reality, it is much more complex. This illustration from the U. S. Department of Commerce, Natural Disaster Survey Report, is a 48 by 48 square area centered on the eye of Hurricane Andrew at 4:30 AM on August 24, 1992, as the storm moved into Dade County, Florida.

All hurricanes are different, rapidly changing and dynamic. Generally speaking, the most severe winds are located just outside the eye of the hurricane in the northeast quadrant. Above illustration shows estimates of ground-level winds based upon measurements made by an U. S. Air Force airplane flying at about 10,000 feet. Winds at 10,000 feet were even stronger. Friction with the ocean and the ground slows the winds at ground level. Hurricanes produce extremely dangerous and destructive winds that kill, injure and devastate cities and whole regions for miles inland. Flying debris can kill. Don't forget, tornadoes sometimes unpredictably form within the periphery of a hurricane as the storm moves over land.

Weather Forecasting...

The coordinates of a hurricane given by the National Weather Service indicate the location of the center of the EYE. The average storm is 250 miles in diameter; thus the danger zone can extend beyond 100 miles in all directions around the coordinates. If storm was projected to hit our area, maximum conditions would exist if the storm EYE crossed over us. Keep in mind that there will always be a margin of error, since hurricanes and Mother Nature are dynamic and constantly changing.

How Are Hurricanes Classified?

The National Hurricane Center classifies hurricanes according to their potential for producing extensive damages on a scale of 1 to 5. Herbert Saffir, a consulting engineer specializing in wind damage to buildings, and Robert Simpson, previous Director of the National Hurricane Center in the 1970's, invented the rating scale. The following table is a breakdown of the average wind, pressure and storm surge values for each of the five hurricane categories. The average atmospheric pressure is given in inches of mercury. The average sea-level atmospheric pressure is 29.92 inches of mercury. Wind speed is given in miles per hour. Generally speaking, Category 3 hurricanes and higher are categorized as major. Notice that damages will increase exponentially as the category number is raised.

	CATEGORY	PRESSURE (IN Hg)	WINDS (MPH)	STORM SURGE
Depression	-	-	>35	-
Tropical Storm	-	-	39-73	-
Hurricane	1	>28.94	74-95	4-5 feet
Hurricane	2	28.50 - 28.91	96-110	6-8 feet
Hurricane	3	27.91 - 28.48	111-130	9-12 feet
Hurricane	4	27.17 - 27.88	131-155	13-18 feet
Hurricane	5	>27.17	>155	>18 feet

BEFORE A HURRICANE THREATENS

How Safe Is Your Home?

If you live near the coast, plan to relocate during a hurricane emergency. If you live in a mobile home, always plan to relocate. Don't forget that public utilities may fail if a hurricane strikes. Utilities include cable television, electric, natural gas, sewer, storm water, telephone and water. It may take days or weeks before they can be restored. This may make survivability extremely difficult. How would your family survive with one or more of the above utilities no longer available for days or weeks? Your home may be safe, but you could be affected by the loss of one or more public utilities by being close to the disaster stricken area. Contact your local Emergency Management Office for assistance in evaluating the vulnerability of your home as to the flood risks.

Evacuation Route to Safety If you Have to Leave

Plan your potential evacuation routes to a safe destination now! Consider the number of hours it will take your family to evacuate to a safe area, when traffic conditions are extremely congested. Don't wait until the last minute to plan! Have alternate routes charted as well.

Virginia Department of Transportation Traffic Control Plan

VDOT had developed a traffic control plan that is designed to maximize roadway capacities during a mass evacuation. During the emergency situations, residents need to listen to radio or television stations for specific information from local emergency management officials. Situations will be constantly changing through the evacuation period. Leave as early as possible and use routes specified for your area.

Residents of Northampton and Accomack Counties will use Route 13 North as the evacuation route. The Chesapeake Bay Bridge Tunnel is not an evacuation route.

Family Disaster Supplies Kit

Keep these supplies at home throughout the year in preparation for major emergencies or disasters. We recommend that you keep them in a separate "Family Disaster Supplies Kit" so they are easy to find when you need them. Identify a safe room for storage of the supply kit. Don't forget to rotate and replace expired items throughout the year. Family members should discuss and plan additional supplies that might be needed over an extended period of time. Be ready for the hurricane season. Some supplies will be required in the event you elect to stay in your home. Others may be required if you evacuate or relocate or go to a shelter. Plan supplies so they are clearly accessible and identifiable. After a hurricane watch is issued, there may be a high demand and short supply of many items.

- AM/FM radio (AC/DC battery operated)
- Baby food, diapers, formula, and other supplies
- Backpack, duffel bag, portable cooler or other containers
- Bleach (without lemon or any other additives)
- Canned or packaged foods, milk and beverages

- Can opener (non-electric)
- Changes of clothing, hard soled shoes and rain gear for each family member
- Eating utensils and supplies
- Emergency cooking facilities (camping equipment and supplies are great)
- Extra prescription medications, glasses or hearing aids
- Fire extinguishers
- First aid kit
- Flashlights and extra batteries (correct size for flashlights, radios, etc.)
- Food and water for pets
- Important documents (driver's license, birth certificate, insurance documents, etc.)
- Lanterns and fuel (stored in a safe and protective container)
- Matches (stored in a safe and protective container)
- Mosquito repellent
- Plywood boards 3/4" to board up windows (cut and fit ahead of time)
- Quiet games, toys, books, and cards
- Sleeping bag and blankets for each family member
- Spare keys for home, vehicles, boats, etc.
- Toilet paper, soap, toothbrushes, toothpaste and other personal hygiene items
- Water (one gallon per person per day for drinking purposes)
- Water purification procedures and tablets (check with your local health department)
- Weather alert radio (AC/DC battery operated)
- Other items preplanned by the family

Take a Regular Inventory of Your Property

A complete inventory of personal property will help in obtaining insurance settlements and/or tax deductions for uninsured losses. Inventory checklists can be obtained from your insurance representative. Don't trust your memory! Emotional stress upon your family will already be traumatic after a disaster. Document personal property by listing descriptions, taking pictures or video of household belongings. Store important documents in waterproof containers or a safety deposit box.

Do You Have Adequate Insurance?

Review your insurance policies and coverage to avoid costly misunderstandings. In addition to your homeowner's insurance, do you have flood insurance? If you are within a flood plain and/or storm surge area, flood insurances must be purchased under a separate policy. Don't forget that storm surge maps are different from flood insurance rate maps. Separate insurance policies are needed for protection against wind and flood damage. Most people don't realize this, until it is too late. If you live in an apartment or condominium do you have adequate renter's content insurance to cover your furniture and personal property? Don't wait until the last minute to get coverage. It will not be available to you in sufficient time.

Do You Have an Out-Of-State "Family Contact"

Do you have an out-of-state friend or relative, who can be your "family contact" in case your family members are separated? After a disaster, it is often easier to call long distance. Family members should call this person and advise them of their location and status. Everyone must know the telephone number of your designated family contact.

What About Family Pets?

Don't forget to make special arrangements and plans for a place that will safely house, feed and care for your pets. If you evacuate, are the pets going with you? Don't forget to include food and water in your Family Disaster Supplies Kit. You will not be allowed to bring your pets to public shelters. Make arrangements with your veterinarian, humane society or private pet shelter outside the normal hurricane impact areas.

Family Members Must Work Together as a Team

Families can cope with a disaster by preparing and working together as a team. Create a family disaster plan. Planning what to do is your best protection and your responsibility. Involve all family members in the planning process, so that they know what to expect, as well as what to do when a Hurricane Watch or Warning is issued. When will you evacuate or go to a shelter? Routinely practice and update your plan.

What Is a Hurricane Watch?

A Hurricane Watch is issued by the National Hurricane Center to alert specific regions or states that hurricane conditions pose a threat to a specified area within 36 hours. Monitor storm reports on radio and television closely. Implement your family plan. If evacuation has not already been recommended, consider leaving the area early to avoid long hours along congested and limited evacuation routes.

Portable Radio with Fresh Batteries

Your radio will be your most useful information source. This includes both your AM/FM and Weather Alert Radios. Have enough batteries to last several days. Electricity may not be available for days or weeks, if you choose to stay. Don't wait until the last minute to buy fresh spare batteries. There will be a high demand and short supply of vital supplies shortly after a hurricane watch is issued.

Flashlights, Lanterns and Matches

Store matches in a waterproof container. Have lantern fuel in a safe container and location adequate to last for

several days, if you plan to stay. We do not recommend candles. Keep fire safety in mind. If you had a fire, emergency response could be difficult or impossible!

Full Tank of Gasoline

Never let your vehicle's gas tank be less than half-full during hurricane season. Fill up as soon as a hurricane watch is issued. Remember... when electrical power fails, gas pumps will not work!

Canned Goods and Non-Perishable Foods

Store packaged foods that can be prepared without cooking and need no refrigeration. Don't forget a manual can opener!

Containers for Drinking Water

Have, clean, air-tight containers to store sufficient drinking water for several days. The local water supply will probably be interrupted or contaminated.

Materials for Protecting Windows and Doors

Have shutters or lumber ready to protect large windows and doors. Be sure to include the necessary hardware and tools to securely cover windows and doors.

What is a Hurricane Warning?

A Hurricane Warning is issued by the National Hurricane Center where sustained winds of 74 mph (64 knots) or higher are expected within a specified area within 24 hours or less. All precautions must be completed immediately.

If you Live in a Mobile Home

Check tie-downs, turn off utilities and leave immediately for a safer place. Mobile homes are unsafe in hurricanes, tornadoes or severe thunderstorms. Can you imagine what hurricane-force winds would do to your mobile home?

Prepare for High Winds

Brace your garage door. Lower antennas. Be prepared to make repairs.

Anchor Objects Outside

Awnings, garbage cans, grills, lawn furniture, loose garden tools, toys and all other loose objects can be deadly missiles. Anchor securely or bring indoors.

Protect Windows and Other Glass

Securely board up or shutter large windows. Draw drapes across windows and doors to protect against flying glass.

Move Boats on Trailers Close to House

Fill boats with water to weigh them down. Lash securely to trailer and use tie-downs to anchor trailer to the ground or house. Check mooring lines of boats that must remain in water, then leave them. Accomplish this ahead of the hurricane watch to save time.

Store Valuables and Personal Papers

Put important documents in waterproof containers and store them in the highest possible location protected from potential flooding. If you evacuate, be sure to take them with you. You should have secured most of your valuables and important papers in a safety deposit box during the family planning process.

Prepare for Storm Surge, Tornadoes, High Winds & Flooding

Storm surges, tornadoes and floods are killers associated with a hurricane. In a Tornado Warning, seek inside shelter below ground level if possible. Otherwise, go to the inner-most small room away from outside walls, doors and windows on the lowest level of your structure. If you are outside, seek cover in a ditch or other low spot. Do not attempt to outrun a tornado! Mobile homes and portable buildings are extremely unsafe during a tornado!

The surge of the ocean water plus flash flooding of streams and rivers due to torrential rains cause 90% of the deaths associated with hurricanes. If you anticipate that your family will be at risk, evacuate early before the hurricane watch is issued! Complete evacuation well before the arrival of tropical force winds.

Stay Indoors

Stay indoors within an inner room on the lowest level away from doors and windows. Do not go out in the brief calm during passage of the hurricane's eye. The lull sometimes ends suddenly and winds return from the opposite direction. Winds can increase in seconds to 75 mph or more.

Protect Property

Without taking any unnecessary risks, protect your property from damage. Temporary repairs may reduce further losses from wind and water.

Stay Away from Windows and Glass Doors

Move furniture away from exposed doors and windows.

Keep a Continuous Communications Watch

Keep radio or television tuned to receive information from official sources. Unexpected changes can sometimes call for last minute relocations.

Remain Calm

Your ability to cope with emergencies will help other members of your family. Stay calm, reassuring and use common sense. Use the telephone or cellular phones only in the event of an emergency or life-threatening situation.

Implementing Your Evacuation Plan

Know where you are going, leave early, leaving sufficient time to avoid heavy evacuation traffic. Evacuate in daylight with a full tank of gas. Take only the most valuable possessions with you; otherwise place them in high points away from flooding within your home. Listen to your car radio for additional emergency information or evacuation routing problems.

Going to a Shelter

Take blankets, sleeping bags, flashlights, special dietary foods, infant needs, games, lightweight folding chairs and water. Register every person arriving with you at the shelter. Do not take pets, alcoholic beverages or weapons of any kind to the shelters. Be prepared to offer assistance to shelter workers if necessary, and advise all family members of their obligations to keep the shelter clean and orderly.

Lock Windows and Doors

Turn off gas, water and electricity. Check to see that you have done everything you can to protect your property from damage or loss.

Carry Along Survival Supplies

You should have preplanned what to take within your vehicle (blankets, bottled water, canned or dried provisions, eating utensils, extra family medications, first aid kit, games, hearing aid, manual can opener, prescriptions, sleeping bags, spare batteries, spare glasses and other essential survival items). Take additional changes of clothing and foul weather gear.

Keep Important Items With You at All Times

You should have preplanned to keep in your possession your driver's license, personal identification papers, insurance policies, personal property inventory, medic-alert or device with special medical information, maps to destination, heirlooms, valuable pictures and essential paperwork that may be vital during and after your evacuation. Take cash, since ATMs or credit card machines may not be working.

When To Return

If you evacuated, delay return until authorized by local authorities. Telephone services within the evacuation zone may be overloaded or non-existent for an extended period of time. Listen to radio or television for information concerning returning to your home. Keep in mind that local emergency authorities will be addressing life and safety concerns on a priority basis, as well as trying to clear debris from roadways. There most likely will be electrical power lines down, extensive flooding of roads and other situations that may not allow safe immediate return to your home. It takes time for government, emergency and public utility authorities to clear the way for your safe return.

Beware of Outdoor Hazards

Watch out for loose or dangling power lines. Many lives are lost by electrocution! Treat all downed lines as live and do not touch them. Report the fallen power lines to your local power company or police. Stay inside your car if a wire is touching it, and wait for help to arrive.

Walk or Drive Cautiously

Debris-filled streets are dangerous. Use hard-soled shoes. Poisonous snakes and rodents may be a hazard. Washouts may weaken road and bridge structures that may collapse under vehicle weight.

Guard Against Spoiled Food

Food may spoil if refrigerator power is off for more than a few hours. Freezers will keep food for several days, if doors are not opened after power failure. Do not refreeze food once it begins to thaw.

Do Not Use Water Until Safe

Use your emergency supply or boil water before drinking until officials advise that the water is safe. Check with your local health department or emergency management agency regarding water purification procedures. Report broken water or sewer mains to proper authorities.

Take Extra Precautions to Prevent Fire

Avoid using candles as a light source. Unsafe use of candles can cause tragic fires. Instead use flashlights or lanterns. Fire safety practices are essential to prevent deaths, injuries or more property losses. Keep in mind that you may not have a telephone to call the emergency services if a fire does start.

Loss of Electric Power

If you and others have lost power, call Connectiv using the emergency or "Lights Out" number found in the white pages or your phone book (1-800-375-7117). Give your name, address and the general area of the outage. If the

line is busy, try again later. A busy signal means others are also reporting outages. Disconnect or turn off any major appliances like stoves, televisions, air conditioners and water heaters that could come on suddenly when power is restored. This will help prevent blowing fuses, tripping circuit breakers and fires. Leave a light on so you will know when power is restored. Use a battery-powered radio to obtain up-to-date information on the outage. Consult a professional electrician or your local power company regarding the proper and safe use of generators before the disaster strikes.

Telephone & Cellular Phone Communications

Make only emergency telephone calls. Keep all calls brief. Report emergencies to 911. Identify yourself and your location. Speak clearly and calmly. Be respectful of the fact that emergency agencies and others involved with life or death emergencies will need to use these communications systems. When using a cellular phone, call the non-emergency number listed in the telephone directory. Telephone and cellular phone services will either fail or become overloaded during a major emergency or disaster. Be prepared not to have services available.

Insurance Tips

Insurance representatives will be on the scene soon after a major disaster to speed up the handling of claims. Notify your insurance agent concerning any losses. Leave word where you can be contacted. Be patient. Insurance representatives will settle hardship cases first. Don't assume your settlement will be the same as your neighbor's. Policy forms differ and storm damage is often erratic.

Take Steps to Protect Property

Make temporary repairs to protect property from further damage or looting. Use only reputable contractors, check with the Better Business Bureau. Keep all receipts for materials used. If you observe looting or unscrupulous activities, advise law enforcement.

Building Private and Public Sector Partnerships

Responsibility for the clean up falls to numerous local, state and federal agencies. A local disaster coordinator or representative will be on hand to help residents in this effort. It is a TEAM effort between the private and public sector to bring the community eventually back to normal. Sometimes, it takes years for communities to totally recover from a major disaster. Your preparedness planning and cooperation will go a long way to aid the recovery process. If you and your family are okay, some extra volunteer time can go a long way to aid others.

ADDITIONAL THINGS TO REMEMBER

Keep Tuned In!

Even though meteorologists have made improvements in the forecasting and tracking of severe weather, especially hurricanes, there is no way to predict far enough in advance exactly how a storm will affect coastal Virginia or when it will hit. This unpredictability makes "being alert" a vital factor in protecting your home, possessions and family.

While trained officials and volunteers organize to oversee such things as evacuations and storm preparations, the responsibility for keeping in touch with changes during the threat is the public's. By being aware and staying tuned to local radio and television broadcasts, the public is able to find out what to do, when to do it and where to go. In addition, 24-hour-a-day storm information can be received from the National Oceanic and Atmospheric Administration (NOAA) weather radio. Weather alert radios that are AC/DC battery powered are special weather advisories, watches and warnings.

Evacuate Early!

Flooding can begin well before a hurricane hits land. Plan to evacuate early and keep a full tank of gas during the hurricane season. Learn the best evacuation route before storms form. Make arrangements with friends or relatives inland to stay with them until the storm has passed. Never attempt to drive during a hurricane. Wait until the all clear is given after the storm. Flash flooding can occur after a hurricane has passed. Avoid driving on coastal and low-lying roads. Storm surge and hurricane related flooding are erratic and occur with little or no warning.

Flood... Get Out of the Car!

Never attempt to drive through floodwater on a road. Water can be deeper than it appears and can rise very quickly. A car can be buoyed by floodwaters and then swept downstream during a flood. Floodwaters also can erode roadways. A missing section of road or bridge will not be visible underneath floodwaters. Wade through floodwaters only if the water is not flowing rapidly and only in water no higher than the knees. If your car stalls in floodwaters, get out quickly and move to higher ground. The floodwaters may still be rising and cars can be swept away at moment's notice.

What to Expect Following a Direct Hit of a Hurricane

Polluted water, limited communications, no electricity, storm sewers overflowing, structures undermined, severe erosion to shorelines, debris-clogged roads and more.

Breakers coming ashore in a hurricane travel at about one-half the speed of winds in the storm. Relating this to pressure created by the breakers means an impact of 10,000 pounds of pressure per square inch.