The Official Georgia

HURRICANE Guide

weather.gov

GEMA/Homeland Security

GEORGIA EMERGENCY MANAGEMENT AGENCY
GEORGIA OFFICE OF HOMELAND SECURITY

NATHAN DEAL
GOVERNOR

JIM BUTTERWORTH
DIRECTOR

April 2, 2015

Dear Colleagues:

Hurricanes are nature's most destructive and deadliest threat to communities along Georgia's coastline. Storm surge, high winds, tornadoes and flooding generated by a tropical system can ravage coastal and inland areas. It is crucial to plan and prepare for each type of hazard to prevent and reduce the loss of life and property, and develop community resilience.

This is the second year that the National Weather Service has collaborated with the Georgia Emergency Management Agency/Homeland Security to bring you the Official Georgia Hurricane Guide. This comprehensive guide is user-friendly and provides step-by-step guidance on what to do before, during and after a storm.

As a coastal resident, it is imperative for you to take the time to develop a family disaster plan, review emergency preparation and checklists regularly, build disaster supply kits in waterproof, easy-to-carry containers, and stay aware of current weather situations. Monitor statements from the National Hurricane Center, watches and warnings issued by the National Weather Service offices, and listen to NOAA weather radio and local media broadcasts.

The emergency management community and its partners are committed to keeping Georgians safe when tropical systems threaten our coastal areas. We ask for your help as well. I urge you to read and study this guide to plan and prepare for this hurricane season, and for those to come. Visit Weather-Ready Nation at http://www.nws.noaa.gov/com/weatherreadynation to learn more about building community resilience in the face of increasing vulnerability to extreme weather events. I also encourage you to visit Ready Georgia at http://www.ready.ga.gov for valuable information on how you can start preparing today.

Thank you for your continued dedication to personal preparedness.

Prepare. Plan. Stay informed.

Best,

Jim Butterworth

EMAP Accredited

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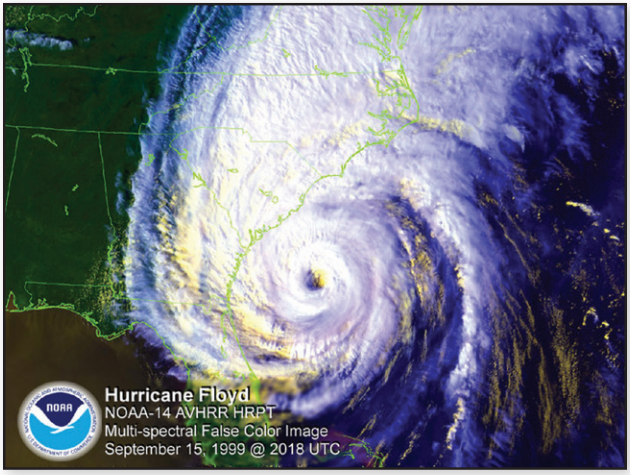
(404) 635-7000 • Toll Free in Georgia 1-800-TRY-GEMA • www.gema.ga.gov

About Hurricanes



Above: Satellite image of Hurricane Floyd, 1999.

Hurricanes are strong tropical cyclones that develop over warm ocean waters with sustained winds of at least 74 mph. They typically occur in the Atlantic Basin (which includes the Atlantic Ocean, Caribbean Sea and the Gulf of Mexico) from June through November, although they can occasionally occur outside of this period if ocean and atmosphere conditions are favorable.

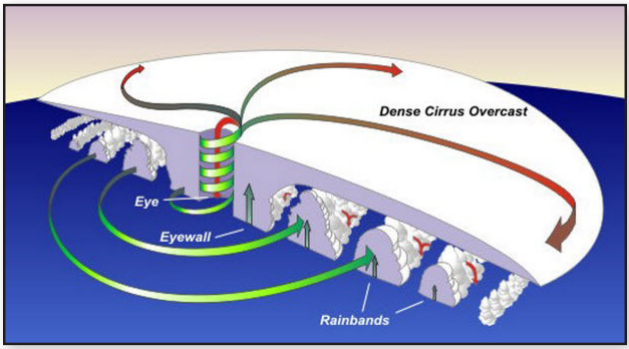
Tropical Storm
Sustained winds 39-73 mph
Watch: Conditions possible within 48 hours
Warning: Conditions expected within 36 hours

Hurricane
Sustained winds 74 mph+
Watch: Conditions possible within 48 hours
Warning: Conditions expected within 36 hours

The structure of a hurricane consists of 3 main parts: the eye, eyewall and rain bands.

Although the eye of the storm in the center is calm with little wind, the surrounding eyewall contains the strongest winds, including possible tornadoes.

This area is typically the most destructive part of the storm. The outer rain bands swirl around the eye and contain rain, gusty winds and sometimes tornadoes.



Above: Diagram of hurricane structure. Photo Credit NOAA.

Storm Surge

Flooding and large waves produced by hurricanes and strong tropical storms pose an extreme threat to life and property along and near the Georgia coast. The storm surge that could affect the Georgia coast could be rather similar to that which occurred along the Gulf Coast from Hurricane Katrina in 2005.

Storm surge is defined as an abnormal rise in sea level accompanying a hurricane or other intense storm, and can be estimated by subtracting the normal or astronomical high tide from the observed storm tide. The storm tide is the actual level of sea water resulting from the normal high tide combined with the storm surge. Because of the shape of Georgia's coast, storm tides up to 32 feet above mean sea level are possible.

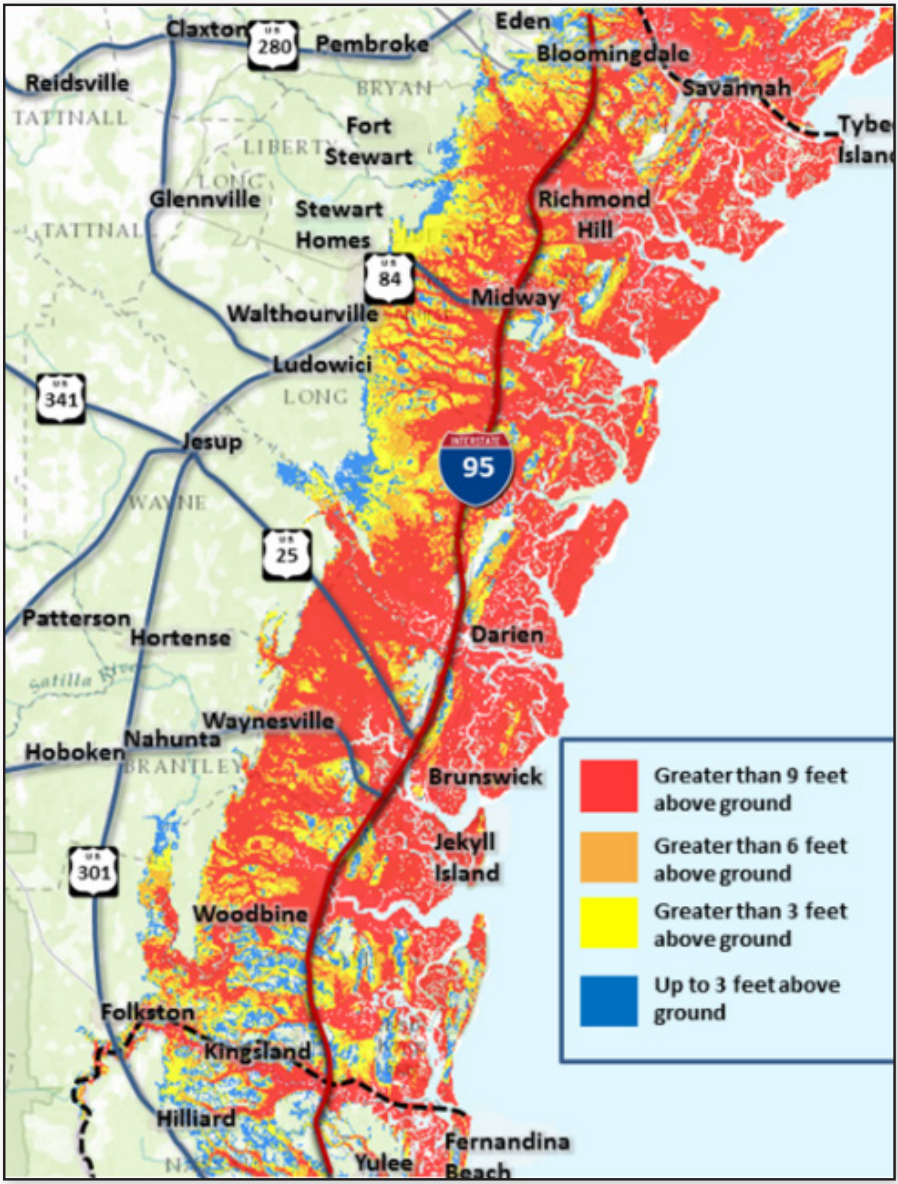
A major hurricane (Category 3-5) can flood, or inundate, almost all of the Georgia coastal counties and can push saltwater as much as 30 miles inland. Inundation is the depth of the storm tide over normally dry land, and a major hurricane could inundate many coastal counties to a depth of 10 to 15 feet above ground level.

Above: Estimated storm surge if a Category 4 hurricane hit today.

Above: Boats were washed into an Isle of Palms, South Carolina yard by Hurricane Hugo's storm tide in 1989.

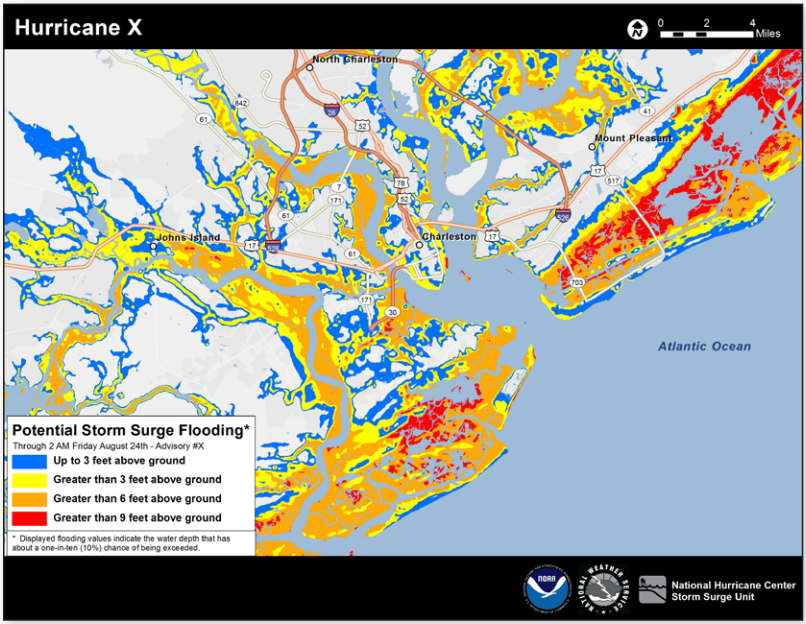
The National Hurricane Center will begin issuing experimental Storm Surge Watches and Warnings for the 2015 hurricane season as well as continue the experimental potential storm surge inundation maps which began in 2014. The next two pages will go much more in depth about these new products.

Potential Storm Surge Areas



This graphic depicts a near worst case storm surge flooding (inundation) scenario using a Category 4 Hurricane. The purpose of this map is to illustrate that storm surge is not just a coastal concern. For the deeply cut estuary system of southeast Georgia, storm surge will travel inland for many miles, up to 25-30 miles in some locations

Potential Storm Surge Maps



Above: This is an example of the Experimental Potential Storm Surge Map from the National Hurricane Center. The first map will be issued when the initial hurricane watch or possibly the tropical storm watch is released for a given storm.

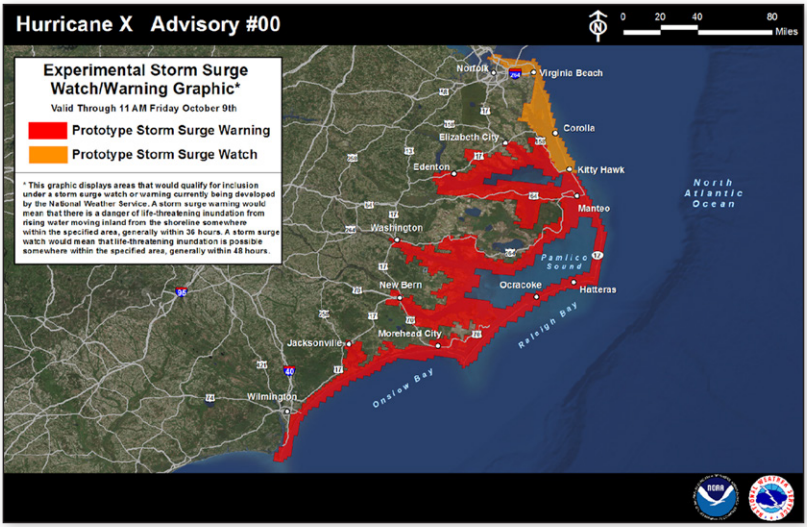
The National Hurricane Center (NHC) will continue to issue the experimental Potential Storm Surge Flooding Map for areas along the Atlantic and Gulf coasts at risk of storm surge from a tropical cyclone. The map shows geographical areas where inundation from storm surge could occur and how high above ground the water could potentially reach in those areas, based on the latest official NHC forecast.

Things to know about the map:

- The first map will usually be issued at the same time as the initial tropical storm/ hurricane watch.
- The map represents a reasonable worse-case-scenario for water levels above ground level (i.e. inundation).
- The map is subject to change every 6 hours in association with each new NHC full advisory package.
- The map will be part of an interactive display made available on the NHC website (www.hurricanes.gov)

Important Note: Isolated areas which are not flooded but that are surrounded by flood waters will be cut-off from rescue during the storm. These areas will be without power, water, and proper sanitation. They will also become refuge areas for wildlife, including insects and reptiles, fleeing from flood waters.

Potential Storm Surge Maps



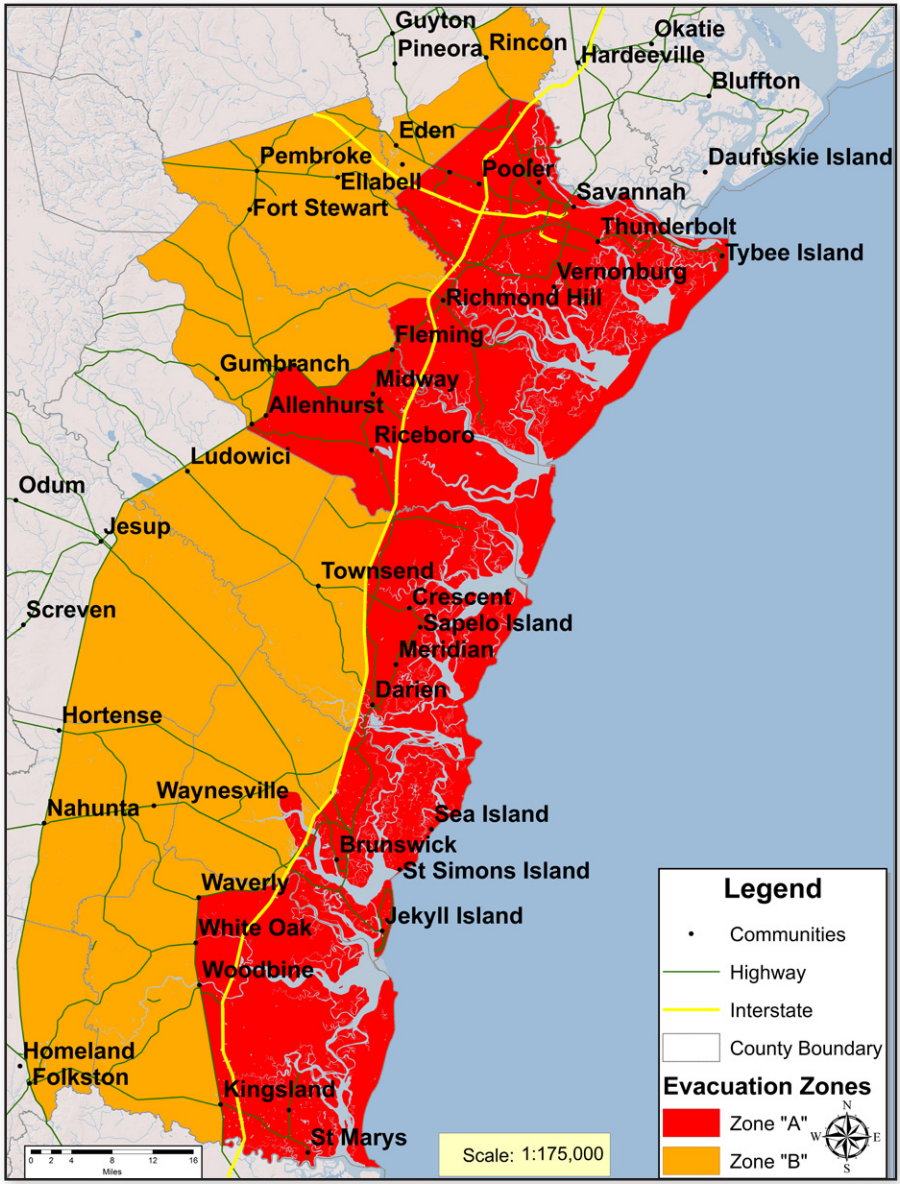
Above: This is an example of the new graphic, which will be available on the NHC website (www.hurricanes.gov).

Beginning with the 2015 hurricane season, NOAA's National Hurricane Center (NHC) will offer an experimental storm surge watch/warning graphic to highlight those areas along the Gulf and Atlantic coasts of the United States that have a significant risk of life-threatening inundation by storm surge from a tropical cyclone.

The new graphic is designed to introduce the concept of a watch or warning specific to the storm surge hazard. Storm surge is often the greatest threat to life and property from a tropical cyclone, and it can occur at different times and at different locations from a storm's hazardous winds.

While most coastal residents can remain in their homes and be safe from a tropical cyclone's winds, evacuations are generally needed to keep people safe from storm surge. Having separate warnings for these two hazards should provide emergency managers, the media, and the general public better guidance on the hazards they face when tropical cyclones threaten.

Evacuation Zones



This image displays the Hurricane Evacuation Zones for coastal Georgia. While the Zones are based on flooding, many other considerations go into creating the evacuations zones and you should always follow the advice of your local officials with respect to evacuations.

Dangerous Surf & Rip Currents

Rip Currents are powerful channels of water that flow seaward from the shoreline, through the surf zone, and past the line of breaking waves. Rip currents can occur at any beach with breaking waves, and can become particularly prevalent and dangerous many days before a hurricane or tropical storm makes landfall. Even if the storm remains offshore, dangerous and deadly rip currents can still form. Over the past 10 years, on average, 45 to 50 people each year are killed by rip currents. For more information about rip currents please visit: http://www.ripcurrents.noaa.gov/

Above: High surf from 2011 Hurricane Irene hit the Isle of Palms Pier, SC. Photo credit to NOAA/National Weather Service.

Rip Current Safety

- Know how to swim, and never swim alone
- If in doubt, don't go out!

If Caught in a Rip Current

- Remain calm, and never swim against the current.
- Swim out of the current, then swim towards shore.
- If you are unable to swim out of the rip current, float or calmly tread water. When out of the current, swim towards shore.
- If you need help, wave your arms, and yell for help.

Rescuing Someone Caught in a Rip Current

- Get help from a lifeguard or call 9-1-1.
- Throw the victim something that floats.

NEVER attempt to rescue a rip current victim unless you know how to escape a rip current yourself.

In addition to deadly rip currents, high surf will develop several days ahead of an approaching hurricane or tropical storm. Beach goers and surfers should never enter the water in areas that have no life guards and/or have been closed due to dangerous conditions.

Rainfall Flooding

There are numerous examples of significant flooding caused by land-falling tropical cyclones in Georgia. Storms with a slow forward motion are the most dangerous as heavy rains persist for a longer period of time.

Five Practical Ways to Protect Yourself and Others From the Dangers of Inland Flooding

Protect Your Personal Documents and Special Items

- Store valuables in plastic tubs with locking tops
- In case of evacuation, you should be able to secure and move all your valuables within 15 minutes

Buy Flood Insurance: A Plan for Replaceable Items

- The National Flood Insurance Program (NFIP) is available from an insurance agent or the NFIP
- For more information see www.floodsmart.gov

Flood Proof Your Home - Take Steps to Minimize Flood Damage

- Shut off the main circuit breaker to prevent short circuiting and eliminate the threat of electrocution
- Raise outside air conditioning units onto platforms above the flood level.
- Store rarely used or expensive items in the attic or on high shelves
- Check your downspout; make sure to drain away from the house.
- Keep debris & pollutants out of ditches & storm drains.
- All projects should be 10 ft from the property line so the drainage between homes is not altered

Develop a Family Flood Plan

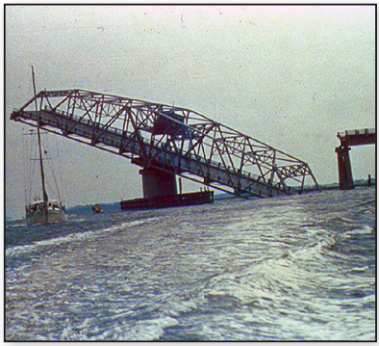
- Develop a plan of action to keep from panicking during an emergency
- Have an evacuation route and alternatives planned in the event you are asked to evacuate
- Communicate your plans with friends or family outside of your home area

Never Drive on Flooded Roads

- Driving into flooded roadways puts your life and the lives of others at risk
- Unless told to evacuate, you are probably safest staying at your current location
- If you encounter flood waters when driving, Turn Around, Don't Drown!

Tornadoes and Destructive Winds

Destructive Winds and Tornadoes



The Ben Sawyer Bridge to Sullivan's Island, SC, was damaged by Hurricane Hugo in 1989. Photo credit NOAA/National Weather Service

Strong, destructive winds are one of the most well-known characteristics of a hurricane. Hurricane strengths are defined using the Saffir-Simpson Scale, which categorizes hurricanes based on their sustained or continuous wind speeds. Sustained winds must be at least 74 mph to for a storm to be classified as a "hurricane", and 111 mph or great to be a "major hurricane". Even a minimal hurricane can cause extensive damage to trees, mobile homes, as well as widespread power outages. In addition, any loose or poorly secured items left exposed to these strong winds become missiles, which can easily rip through walls and roofs of even well-built buildings or homes. The most violent and destructive winds usually occur near the center of the hurricane, in a region known as the "eyewall". Although the distance that hurricane force winds extend outward from the center varies, they can easily reach 100 to 200 miles away.

In addition to the destructive winds, hurricanes can also spawn tornadoes, usually within the rain bands in the right front quadrant (relevant to its motion) of a storm making landfall. Even though these tornadoes are typically weak and relatively short lived, then can still be deadly, and may cause damage in areas where the sustained winds were well below hurricane force.

A mobile home was destroyed by a tornado. Photo credit: NOAA/National Weather Service

Evacuate Mobile Homes in a Hurricane

Mobile homes can become unsafe even with winds below hurricane strength. Once winds become hurricane force, no mobile home provides a safe shelter. If you live in a mobile home, evacuate when told to do so by authorities.

Saffir Simpson Hurricane Wind Scale

- Category 1 - Winds 74 to 95 mph
- Category 2 - Winds 96 to 110 mph
- Category 3 - Winds 111 to 129 mph
- Category 4 - Winds 130 to 156 mph
- Category 5 - Winds 157 mph or higher

Storm Preparedness

Home Preparation

Elevation Matters

- Know the elevation of your home! Are you in a flood and/or evacuation zone?

Mobile Homes

- Check tie-downs for rust or breakage.
- Residents of mobile homes must evacuate when told to do so!!

Landscaping

- Trim trees, shrubbery and dead limbs, especially ones close to your home.
- Repair or replace broken or damaged fences.

Roofing

- Inspect the roof for loose tiles, shingles or debris. Consider replacing old or damaged shingles with new ones rated for hurricane force winds.
- Clear loose and clogged rain gutters and downspouts.

Doors

- Reinforce garage doors and tracks or replace with a hurricane tested door.
- Reinforce double entry doors with heavy duty foot and head bolts.
- Use a security dead bolt with a one inch minimum bolt length.

Windows

- If possible, install tested/manufactured hurricane shutters.
- Inspect existing shutters to ensure they are in good working order.
- Alternative: Use 5/8" or greater exterior grade plywood secured by 2 1/2" screws and/or special clips. Obtain wood and fasteners, cut wood to size, pre-drill holes and place anchors on homes.

Renters Need to Prepare Too:

- Prepare for the possibility of damage or loss of your personal property. Flood insurance and renter's insurance can help to replace your belongings if they are damaged. Remember, A landlord does not provide insurance for a tenant's personal property.
- If you live on a high floor, and your building is outside the evacuation zone, you should relocate to a low floor. Be aware that winds are stronger at higher elevations.
- Ask your landlord questions. Will your landlord take steps to protect the rental property? If not, you will need another place to ride out the storm even if you are in a non-evacuation zone.
- Make sure to reread your lease and related materials!

Business and Employee Preparation

- Identify and protect vital records. Backup and store key files off site.
- Protect electronic equipment from possible water damage.
- Have extra cash and blank checks in case extra money is needed after the storm.
- Develop a 24-hour emergency contact with phone numbers of key employees.
- Set up telephone numbers for employees to check in and receive company information.
- Establish a temporary location for business operations in case your facility is damaged.
- Give employees enough time to secure their homes and families.
- Consider paying employees before they leave to prepare their homes.

Marine Preparations

- Check with the manufacturer for proper ways to secure your boat during a storm.
- Purchase necessary hurricane materials such as additional mooring lines, crew anchors, fenders, fender boards, chafing gear, and anchors.
- Safe storm moorings should consist of good condition ropes of sufficient diameter and length, with at least three or four substantial anchor points.
- Do not moor parallel to bank. Receding tides often capsize boats in this type of anchorage.

Preparing for Your Pet's Safety

Your pet should be part of your overall hurricane preparation plans. Below are a few important things to help you prepare:

- Make sure your pet's vaccinations are current and have proof they are current. DO NOT assume that a public shelter or hotel will accept your pet.
- Be sure to have a current photo of your pet.
- Each animal should have a properly sized pet carrier. The carrier should be large enough for the animal to stand up and turn around.
- Pack enough food and bottled water for the duration of your evacuation. DO NOT let your pet eat food or drink water from outside that may have become contaminated.
- Be sure to pack all medications your pet may need along with a muzzle, collar, leash, paper towels, and trash bags.
- Make sure your pet has a proper ID collar.

Preparing Livestock

- Ensure all animals have some form of identification
- Evacuate animals whenever possible. Map out primary and secondary routes in advance.
- Make available vehicles and trailers needed for transporting and supporting each type of animal. Make available experienced handlers & drivers.
- Ensure destinations have food, water, veterinary care and handling equipment.
- If evacuation is not possible, animal owners must decide whether to move large animals to shelter or to turn them outside.

Functional & Medical Needs

Coastal Georgia's Functional and Medical Needs Registry

All health departments along coastal Georgia (Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long, and McIntosh counties) maintain a Functional and Medical Needs Registry which is made up of residents who may require transport and medical assistance during a hurricane evacuation and have no other resources such as family, friends, neighbors, or church members to help them if they need to evacuate. Functional needs clients are those individuals who may need services to maintain their independence in a shelter. Medical needs clients are those individuals who require support of trained medical professionals. Residents must apply to be on the registry by calling their county health department.

Emergency Evacuation Kit for Functional and Medical Needs Clients

In the event of an evacuation, there are several items that functional and medical needs clients will need to bring with them before being taken to an inland American Red Cross shelter including:

- **Medications:** Supplies of prescription and non-prescription drugs for one month.
- **Personal Items:** Eyeglasses, contact lenses and solution, copies of important papers including identification cards, insurance policies, birth certificates, passports, divorce papers, military papers, and comfort items such as books and games.
- **Clothing:** Changes for at least one week, including comfortable shoes.
- **Sanitary Supplies:** One week's supply of toilet paper, towelettes, feminine supplies, and other personal hygiene items.
- **Contact Information:** Current information, numbers, and names of those who should be contacted should you become ill or injured, including your doctors.
- **Special Equipment:** Extra wheelchair batteries, oxygen, etc.
- **List:** Style and serial numbers of medical devices such as pacemakers.
- **Pillow**

Residents should plan ahead and apply to be on the Registry BEFORE a storm is threatening the coast of Georgia. The Functional and Medical Needs Registry is truly a last resort, but if a hurricane is threatening our area, it is important that local Emergency Management Agency and health department officials know where the most vulnerable residents are located so that evacuation assistance can be provided to them.

For more information on the Functional and Medical Needs Registry, go to http://www.gachd.org/residents-with-functional-or-medical-needs-urged-to-register-with-local-health-department/

Insurance Tips

Before the Storm

- New and existing policies will not be written or modified when a storm impacts the Gulf of Mexico or Western Atlantic Ocean.
- Make sure you fully understand what perils and covered and excluded in your policy.
- Make sure your coverage is adequate to replace your home and contents in today's dollar.
- Determine whether your policy covers additional living expenses for a temporary residence if you are unable to live in your home because of damage from a disaster.
- Before hurricane season, prepare detailed written and/or photographic inventory of your home's contents and store it in a safe place with your policy.
- If your insurance company does not cover flood damage, ask about coverage through the National Flood Insurance Program.
- NOTE: Even if your location does not reside within FEMA Flood Zone X, it does not mean that your location will not flood. Buildings in Flood Zone X could be flooded by severe, concentrated rainfall coupled with inadequate local drainage systems or by hurricane storm surge. All coastal community residents should have a flood insurance policy to protect themselves and their property

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After the Storm

- Give prompt written notice to your insurance company.
- Photograph or videotape damaged structures and all damaged property. Make a list of damaged or lost items.
- DO NOT throw out damaged property before your adjuster has inspected the debris unless it is a health hazard or impedes local cleanup.
- Protect your property from further damage.
- Keep an accurate record of temporary repair and living expenses if a loss of use is suffered.

Important Online Insurance Information

- National Flood Insurance Program
  www.floodsmart.gov

Evacuation Supply Kit

Your local Georgia Chapter of the American Red Cross recommends that you have, at minimum, the items listed on the adjacent page in your Hurricane Supply Kit. Make sure to have a family meeting before hurricane season, and review your communication information and evacuation plan. Make sure contact information such as home, work, school, cell phone numbers, and your "Out of Town" contact person's information is current.

American Red Cross

Additional Items for Hurricane Supply Kits:

- American Red Cross: redcross.org
- FEMA: ready.gov/basic-disaster-supplies-kit

Emergency Contact Information

Out of Town Contact Address: _____

Out of Town Contact Phone Number: _____

Work Telephone Number: _____

Cell Number/Spouse Cell Number: _____

Children Cell Number: _____

School Telephone Number: _____

Doctor Telephone Number: _____

Bank/Credit Card Telephone Number: _____

Insurance Company Information: _____

Whatever comes your way, you'll know what to do.

Red Cross mobile apps put help in your hand.

24 hour number to call for assistance

1-800-RED CROSS (1-800-733-2767)

Download our preparedness apps today. Call **REDCROSS from your mobile phone and we'll send you a link to download the apps, or search the iTunes app store or Google Play for American Red Cross.

Hurricane Supply Kit

Your chapter of the American Red Cross recommends that you have the following items in your Hurricane Supply Kit.
• At least a 7-day supply of non-perishable food and water. One gallon of water per person per day is recommended
• Battery powered portable television or radio with extra batteries
• Flashlight with extra batteries
• First Aid kit and manual
• Sanitation and hygiene items such as instant hand sanitizing gel, moist towelettes, toilet paper, and feminine hygiene products
• Whistle
• Kitchen accessories, cooking utensils, and manual can opener
• Cash
• Extra clothing, blankets, and sleeping bags
• Matches in a waterproof container
• Photocopies of identification, insurance, prescriptions, household inventory, credit cards, and your latest utility bill
• CD or photocopies of important documents such as birth/marriage certificates and titles
• Prescription medications, eyeglasses, contact lens solution, and hearing aid batteries
• Formula, baby food, diapers, and pacifiers
• Pet carriers, leashes, shot records, and food for each animal evacuating with you
• A good map showing county roads and highways
• Tire repair kit, booster cables, pump, and flares
• White distress flag
• Toys and games for children
• List of family phone numbers and addresses outside the area
• Multi-Purpose Tool
• Cell phone with chargers

Hurricane Names

Hurricane Names

2015

- ❑ Ana
- ❑ Bill
- ❑ Claudette
- ❑ Danny
- ❑ Erika
- ❑ Fred
- ❑ Grace
- ❑ Henri
- ❑ Ida
- ❑ Joaquin
- ❑ Kate
- ❑ Larry
- ❑ Mindy
- ❑ Nicholas
- ❑ Odette
- ❑ Peter
- ❑ Rose
- ❑ Sam
- ❑ Teresa
- ❑ Victor
- ❑ Wanda

2016

- ❑ Alex
- ❑ Bonnie
- ❑ Colin
- ❑ Danielle
- ❑ Earl
- ❑ Fiona
- ❑ Gaston
- ❑ Hermine
- ❑ Ian
- ❑ Julia
- ❑ Karl
- ❑ Lisa
- ❑ Matthew
- ❑ Nicole
- ❑ Otto
- ❑ Paula
- ❑ Richard
- ❑ Shary
- ❑ Tobias
- ❑ Virginie
- ❑ Walter

2017

- ❑ Arlene
- ❑ Bret
- ❑ Cindy
- ❑ Don
- ❑ Emily
- ❑ Franklin
- ❑ Gert
- ❑ Harvey
- ❑ Irma
- ❑ Jose
- ❑ Katia
- ❑ Lee
- ❑ Maria
- ❑ Nate
- ❑ Ophelia
- ❑ Philippe
- ❑ Rina
- ❑ Sean
- ❑ Tammy
- ❑ Vince
- ❑ Whitney

This chart is marked with vertical(longitude) and horizontal (latidtude) lines, each representing 1 d
Follow it up where it intersects with the given latitudinal line. I

Stay Connected:

Hurricane Tracking Map

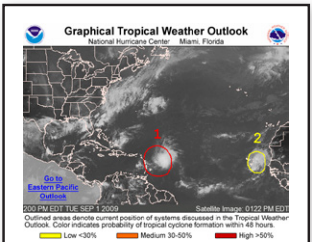
degree. A storm's position is given in these degress. Find the given longitudinal number at the bottom of the chart.
Place a mark on the intersection point (this is the hurricane's current position).

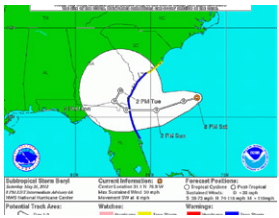
Forecast Information

Important Websites

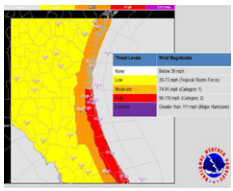
- National Hurricane Center: hurricanes.gov
- NWS Charleston Tropical Webpage: weather.gov/chs/tropical
- NWS Jacksonville Tropical Webpage: srh.noaa.gov/jax/?n=tropical
- NWS Tallahassee Tropical Web Page: srh.noaa.gov/tae/?n=tropical
- NWS Columbia Tropical Web Page: http://www.weather.gov/cae/tropical.html

The National Hurricane Center (NHC) in Miami, FL is the official source for tropical cyclone advisories and forecasts and is responsible for issuing tropical cyclone watches and warnings for the United States.The local NWS forecast offices will provide more detailed forecasts and potential impacts for southeast Georgia.





Tropical Cyclone Impact Graphics



Graphical Tropical Weather Outlook

- NHC product provides an overview of all tropical cyclone activity, indicates areas of interest that have potential for tropical cyclone development.

NHC Forecast Advisory

- Most recent position for a storm along with all coastline watches and warnings. Includes a 3 or 5 day track with error cone.
- Error cone represents a 5 year average error. Storms only stay within the error cone 67% of the time.
- DO NOT focus too closely on the exact track forecast - the little black line.

Wind Speed Probability Graphics

- These graphics show the probability of tropical storm and hurricane force winds for various time periods through the next 5 days.

Hurricane Threats & Impacts

- Issued by local NWS office to summarize potential storm impacts and recommended preparedness actions.
- Click on each colored area to pop up text that describes potential impact.

Actions to Take When a Storm is in the Atlantic or Gulf

- Listen frequently to radio, TV, or NOAA weather radio for bulletins and forecasts of the storm's progress.
- Double check items in your emergency supply kit.
- Fuel and service your vehicles.
- Inspect and secure mobile home tie-downs.
- Board up windows (if shutters do not exist) in case storm moves quickly and you have to leave! **TAPE PROVIDES NO PROTECTION!**
- Store lawn furniture and other loose, light weight objects, such as garbage cans and garden tools.
- Garage or store vehicles that are not being used.
- Follow instructions issued by local officials. **EVACUATE IMMEDIATELY IF ORDERED TO DO SO!**

Final Actions to Take if Leaving

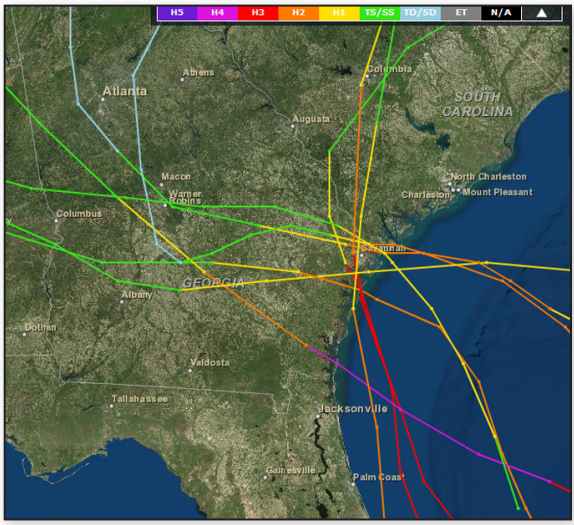
- Turn off propane tanks.
- Unplug small appliances.
- Empty refrigerator and freezer.
- Turn off utilities if ordered to do so.
- Lock home securely.
- Take pets with you.

Final Actions to Take if Staying

- Close storm shutters.
- Notify family members of your evacuation plans.
- Lower water level in swimming pool by one foot.
- Turn refrigerator or freezer to coldest setting and open only if necessary. (25 pounds of dry ice will keep a 10-cubic foot freezer below freezing for 3-4 days.)
- Follow instructions from emergency managers and be prepared to turn off utilities if ordered to do so.
- Board up remaining doors, brace garage door, and remain inside. Stay away from boarded up windows.
- Take refuge in a predetermined safe room, such as an interior closet, bathroom, or hallway.
- **DO NOT EXPECT EMERGENCY RESPONDERS TO BE OF ANY ASSISTANCE DURING A LANDFALLING HURRICANE!**

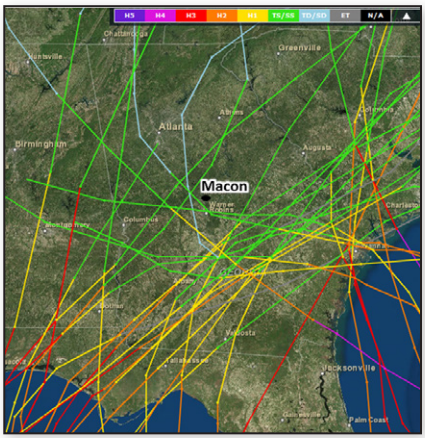
Georgia's Hurricane History

Georgia is no stranger to the dangers from hurricanes, however, the Georgia coast has been relatively quiet in terms of hurricane landfalls compared to the rest of the Southeast U.S. coast. In fact, hurricane return periods acrss Georgia are about half of what they are along the Outer Banks of North Carolina.



Tracks of 9 hurricanes that made landfall along the Georgia coast since 1851. Includes major hurricanes of 1854, 1893 & 1898 (image NOAA).

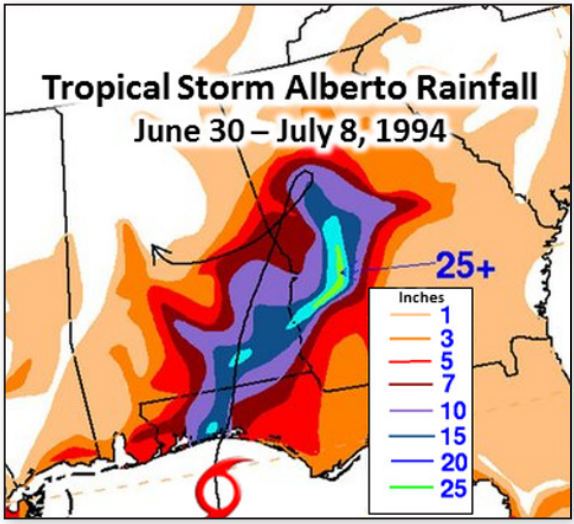
Although many hurricanes made landfall along the Georgia coast since 1851 (when official records began), the last hurricane to strike from the Atlantic was Category 2 Hurricane David in 1979. The most recent "major" hurricane (Category 3-5) to strike the coast directly was a Category 4 storm in 1898. This storm was the last of several significant hurricanes in the mid to late 1890s to affect the area.



Tracks of 32 hurricanes that passed within ~200 miles of Macon, Georgia since 1851 (image NOAA).

Georgia's Hurricane History

Hurricanes do not have to make landfall along the Georgia coast to have significant impacts. In addition to land-falling storms along the Atlantic coast, some storms move over the state from the Gulf of Mexico. In fact, the costliest disaster in Georgia's history came from Tropical Storm Alberto in July of 1994. The storm stalled over western portions of the state and produced 10 to 20 inches over a widespread area, with some areas picking up over 25 inches (see image).



Rainfall amounts from Tropical Storm Alberto, 1994 (image courtesy of the NOAA/NWS/Weather Prediction Center

Flooding in Albany, Georgia as a result of Tropical Storm Alberto, 1994 (image courtesy of the Albany Herald).

For more history of tropical cyclones affecting southeast Georgia, check out weather.gov/chs/TChistory

Evacuation Routes

Evacuees need to consider the projected path of the hurricane when choosing an evacuation route and destination. When evacuating, be sure to check local weather and highway conditions before departing. When local authorities order an evacuation of your area, leave immediately!

Final Actions before Evacuating

- Follow evacuation orders provided by your local officials. Once the evacuation order has been given, LEAVE IMMEDIATELY!
- Take your Hurricane Supply Kit with you.
- Leave as early as possible to avoid heavy traffic and hazardous weather.
- Do not stay in a mobile home near the coast under any circumstance.
- Remember that large boats and travel trailers may not be allowed to cross local bridges and causeways once high winds commence.
- Prepare to stay at your evacuation destination for a week or more, as re-entry into the affected area may be restricted.

Contra-Flow Lanes - I-16 One-Way Driving Guides

Normally, Interstate 16 carries east and westbound traffic. In the event of a mandatory evacuation from coastal Georgia, I-16 eastbound lanes will become "contra-flow lanes," or reverse lanes. All I-16 lanes will be westbound traffic only from Savannah to west of U.S. 441 in Dublin, a total of 125 miles. Georgia DOT also can "contra flow" other interstates in the case of emergencies.

Georgia Public Radio

Georgia Public Radio, in cooperation with Georgia DOT, Georgia Emergency Management Agency (GEMA), Georgia State Patrol (GSP) and the Georgia Public Broadcasting System, will provide updates on road and traffic conditions in the event of a hurricane.

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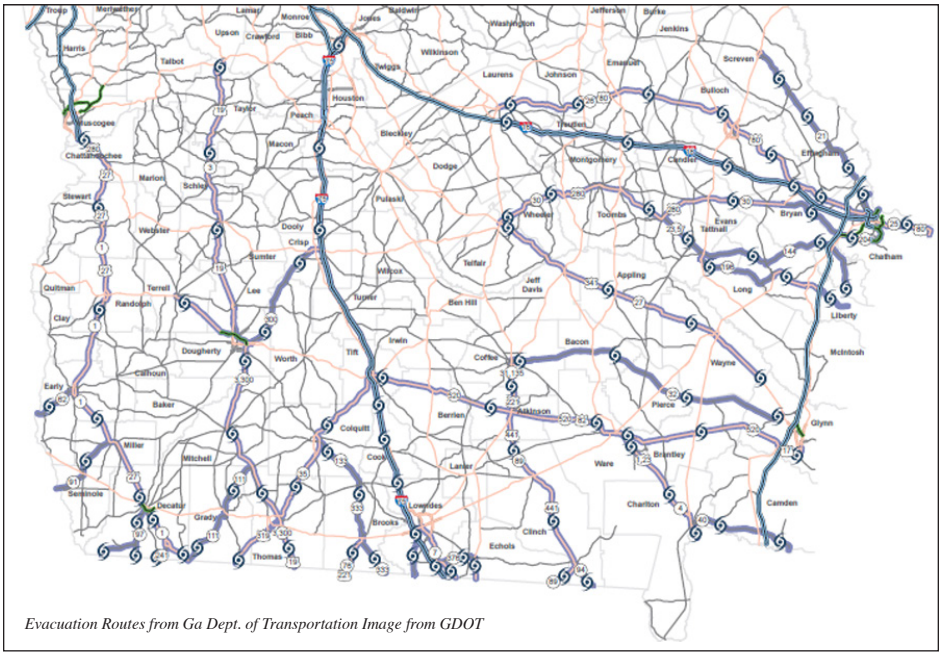
Tune into these FM stations for severe weather and hurricane information:

Albany	91.7	Dahlonega	89.5
Athens	91.7/97.9	Ft. Gaines	90.9
Augusta	90.7	Macon	89.7
Brunswick	88.9	Savannah	91.1
Carrollton	90.7	Tifton	91.1
Columbus	88.1	Valdosta	91.7
Demorest	88.3	Waycross	90.1

Evacuation Routes



Evacuation Routes from Ga Dept. of Transportation Image from GDOT

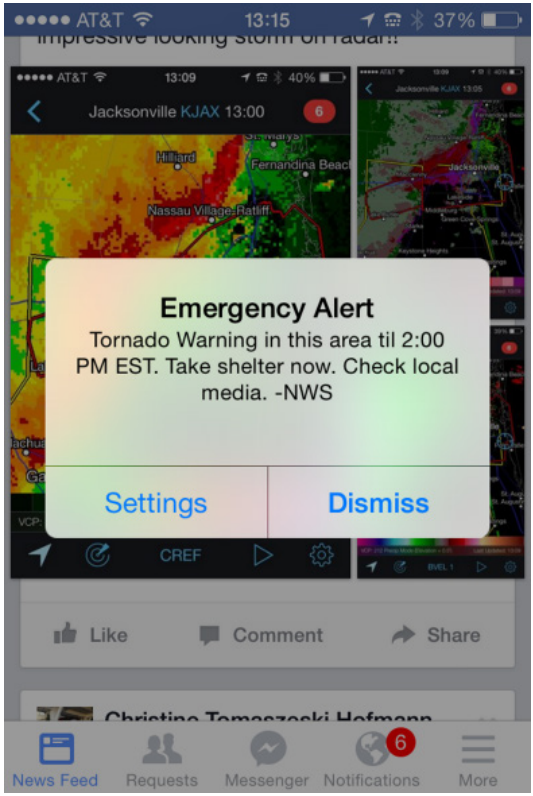
For your evacuation route, visit:
www.dot.ga.gov/travelingingeorgia/severeweather/Pages/HurricaneInfo.aspx

Georgia Road Information & Travel Alerts

- GDOT (Georgia Department of Transportation)
- Call 5-1-1 or 1-877-694-2511
- www.511ga.org
- Twitter: @GADeptofTrans
- Facebook: Georgia Department of Transportation

Channels of Communication

America's wireless industry is building a Weather-Ready Nation through a nationwide text emergency alert system called Wireless Emergency Alerts (WEA).



WEA are emergency messages sent by authorized government agencies, including the National Weather Service, to alert customers of hazards through their mobile carriers. The National Weather Service's WEA will warn you when weather threatens your area.

WEA Messages include:

- Hurricane Warnings
- Tornado Warnings
- Flash Flood Warnings
- Extreme Wind Warning

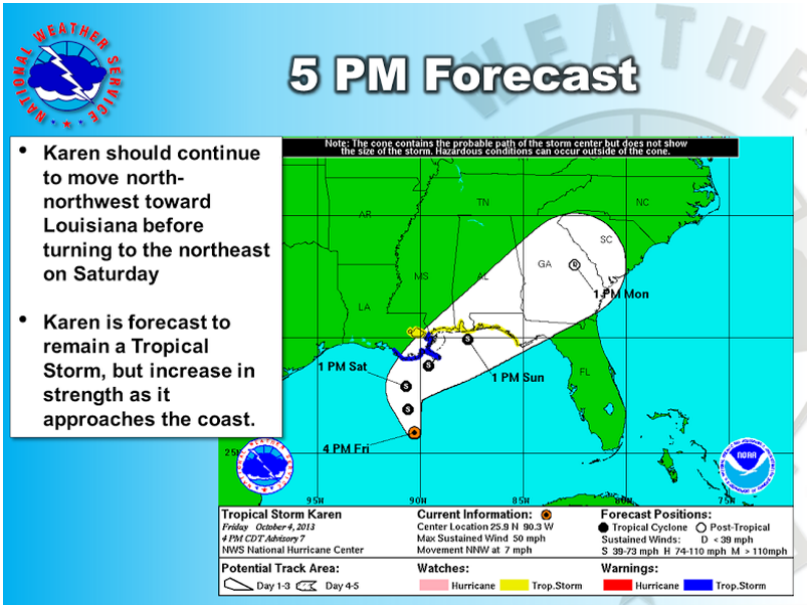
During hazardous weather situations, the NWR will automatically tone alert severe weather watches and warnings using the Emergency Alert System (EAS) which provides emergency notification targeted at specific areas.

NOAA All Hazards Weather Radio (NWR) broadcasts weather forecast , watch and warning information 24 hours a day.

Channels of Communication

NWS Office	Webpage	Twitter twitter.com	Facebook facebook.com	YouTube youtube.com
Atlanta	weather.gov/ffc	@NWSAtlanta	NWS Atlanta	NWSPeachtreeCity
Greer	weather.gov/gsp	@NWSGSP	NWSGSP	NWSGreer
Columbia	weather.gov/cae	@NWSColumbia	NWS Columbia	NWSColumbia
Charleston	weather.gov/chs	@NWSCharlestonSC	NWS Charleston SC	NWSCharlestonSC
Jacksonville	weather.gov/jax	@NWSJacksonville	NWS Jacksonville	NWSJacksonville
Tallahassee	weather.gov/tae	@NWSTallahassee	NWS Tallahassee	NWSTallahassee

The National Weather Service utilizes various communication channels to covey high impacts including social media, enhanced graphics and specific messaging services to provide a continuous stream of weather information from the planning and preparation stages through the entire event and during recovery.



Returning Home

IF YOU EVACUATED THE AREA, WAIT FOR AN ALL CLEAR FROM THE CITY OR COUNTY BEFORE ATTEMPTING TO RETURN TO YOUR HOME. BE PREPARED TO SHOW PROOF OF RESIDENCE BY HAVING A COPY OF YOUR LATEST UTILITY BILL.

PHASES OF RE-ENTRY AFTER EVACUATION

Phase 1:

This restricted phase is the initial phase of re-entry in which teams make the area safe for follow on first responders. Personnel must have an official Local, State, or Federal Government Photo ID.

Phase II A:

This restricted phase consists of life safety operations such as search and rescue, fire suppression, and utility restoration to critical locations. Personnel must have an official Local, State, or Federal Government Photo ID.

Phase II B:

This restricted phase consist primarily of those individuals that support the re-establishment of critical infrastructure and support services (i.e. utilities, medical services, fuel, etc.) Personnel must have an official Local, State, or Federal Government Photo ID. Card; OR a Disaster Critical Workforce Re-Entry Permit.

Phase III:

This semi-restricted phase includes all residents, property owners, and business owners. Local public safety officials will likely ask those attempting to gain access to show a valid state issued identification card and a document or proof that they have a reason to enter the impacted area (i.e. driver's license with address, property deed, utility bill, or other documentation to validate the need for entry).

Phase IV:

This is the final phase of re-entry in which local officials may determine all or portions of their county are relatively safe for the general public to enter. There are no special ID requirements for re-entry in Phase IV. Note, however, Phase IV may likely have specific restrictions in place such as curfews, restrictions to less safe areas, etc.

Utility Cleanup

- Check for gas leaks. If you smell or hear gas leaking, leave immediately. DO NOT use the phone or turn on lights in your home. Call the gas company from a neighbor's phone.
- Report any visible damage of power lines to the electric company. Turn off power at main breaker if any electrical equipment or circuits have been exposed to water.
- DO NOT connect generators to your home's electrical circuits. If a generator is on line when electrical service is restored, it can become a major fire hazard. Also, line workers working to restore power will be endangered if a generator is hooked up to the home's circuits.
- It is likely that an electric company other than your own will reconnect the lines to your home; however, they cannot turn the service back on. Only your electric company can actually turn the power back on to your house.

Sewage Cleanup

- If you suspect water or sewage lines are damaged, do not use your plumbing (toilets, sinks, etc.). Contact the water company or a plumber for repairs.
- A chemical portable commode can be created by the following:
    - Use 5 gallon buckets with tight lids, lined with heavy duty plastic garbage bags.
    - Add kitty litter to the bucket as a disinfectant and deodorizer. Keep lids on firmly.
    - Keep buckets in a cool, dark place. Clean and disinfect buckets immediately.
- Your toilet can also be used by flushing until the bowl has no water. Then, line with heavy duty trash bags and disinfect with chlorine bleach after each use. Remove waste to an outside location.
- If significant sewer outages have occurred, instructions for disposal of human wastes will be announced.
- DO NOT dispose of human waste through your regular trash!

Individual Water Supply System (Wells):

In the event of a natural disaster, individual waters supplies are at great risk of becoming contaminated especially if they are covered by flood waters. The following procedures should be used to determine the safety of individual water supplies:

- Flooded Wells.
- Clean well head thoroughly.
- Flush system until water is clear.
- Chlorinate well (chlorination process: http://aesl.ces.uga.edu/publications/watercirc/ShockChlorination.pdf
- Allow chlorine to remain in the system for at least 8 hrs.
- Flush system to remove chlorine.
- Have water tested for presence of coliform bacteria by either the local health dept. or appropriate agency or available laboratory.

Emergency Information

Liberty County
Emergency Management:
(912) 368-2201

Miller County
Emergency Management:
(229) 758-4122

Seminole County
Emergency Management:
(229) 524-8956

Bryan County
Emergency Management:
(912) 858-2799

Long County
Emergency Management:
(912) 545-2143

Quitman County
Emergency Management:
(229) 334-8865

Lanier County
Emergency Management:
(229) 482-2595

Lee County
Emergency Management:
(229) 759-6090

Mitchell County
Emergency Management:
(229) 336-2072

Chatham County
Emergency Management:
(912) 201-4500

Irwin County
Emergency Management:
(229) 468-9616

Effingham County
Emergency Management:
(912) 754-8200

Decatur County
Emergency Management:
(229) 248-3869

Wayne County
Emergency Management/911:
(912) 427-5992

Grady County
Emergency Management:
(229) 378-2271

Colquitt County
Emergency Services:
(229) 616-7417

Brantley County
Emergency Management:
(912) 462-7874

Cook County
Emergency Management:
(229) 896-2780

Charlton County
Emergency Services:
(912) 496-1081 or 1080

Clay County
Emergency Management:
(229) 768-2505

Glynn County
Emergency Services:
(912) 554-7826

Camden County
Emergency Services:
(912) 729-5602

Early County
Emergency Management:
(229) 723-3029

Brooks County
Emergency Management:
(229) 263-4262

Terrell County
Emergency Manager:
(229) 995-4476

Thomas County
Emergency Management:
(229)225-4190

Tift County
Emergency Services:
(229) 388-6061

Turner County
Emergency Management:
(229) 567-0313

Worth County
Emergency Management
(229) 776-8223

Baker County
Emergency Management:
(229)734-3019

Ben Hill County
Emergency Management:
(229) 426-5088

Berrien County:
911/EMA:
(229) 686-6588

Calhoun County
EMA/Fire Rescue:
(229) 849-4804

McIntosh County
Emergency Management:
(912) 437-6671

Randolph County
Emergency Management:
(229) 732-2525

Lowndes County
Emergency Management:
(229) 671-2790

Do Not Call 911 for Non-Emergencies!

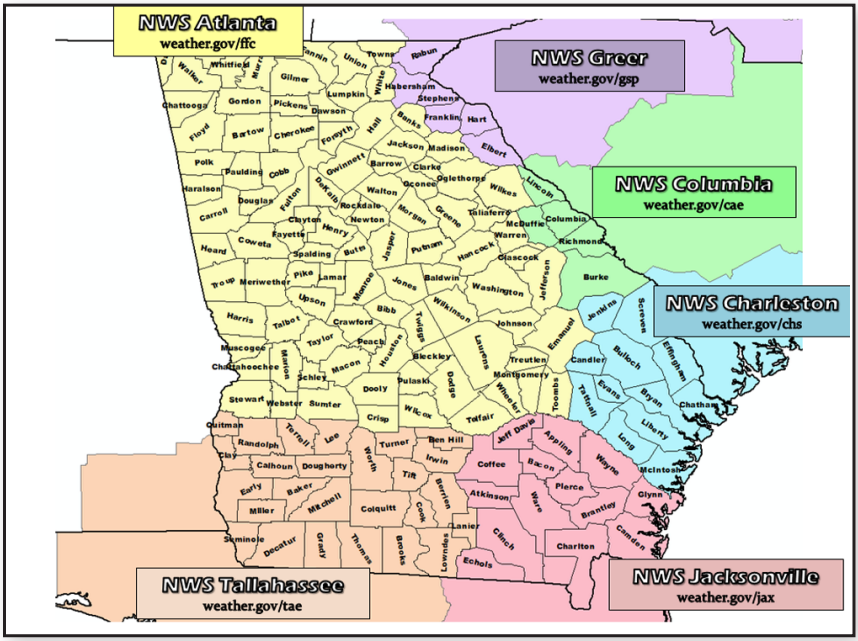
National Weather Service Office

There are 122 local National Weather Service (NWS) forecast offices. No matter where or when you travel in the U.S., including Alaska, Hawaii, Guam & Puerto Rico, there is a NWS office monitoring weather conditions and providing forecast information for that specific area.

weather.gov

Weather-Ready Nation
Saving Lives and Livelihoods

From aviators to educators, forest rangers to mariners, the NWS has the weather information you need to keep you and yours safe and prosperous!



Proudly Serving & Protecting since 1870

Hurricane Season

Complete the crossword below. All the answers can be found in this booklet.

Created on TheTeachersCorner.net Crossword Maker

Across

3. An abnormal rise in sea level accompanying a tropical cyclone.
5. The name of the scale that categorizes hurricane intensity from 1 to 5 based on wind speed.
7. Powerful channels of water that flow seaward from the shoreline.

Down

1. The word that describes a hurricane with winds greater than 111 mph.
2. A tropical cyclone with winds between 39 and 73 mph.
4. Issued when hurricane conditions are possible for a certain area within 48 hours.
6. The K-name of the 2015 season.

How can kids help prepare for a storm?

- Help pick up small things lying around your yard, like toys or games, and bring them inside.
- Make an emergency back pack to keep with you during the storm including things like: sturdy shoes, a sweatshirt, extra water, snacks, a radio, a flashlight, extra batteries, band aids, and a cell phone if you have one.

Weather Jokes…

What did one hurricane say to the other hurricane?

I've got my eye on you.

2015 Art Contest Winner

"My Community After a Hurricane"

Savannah – 4th Grade
Sugarmill Elementary School
St. Marys, GA

ARE YOU READY FOR HURRICANE SEASON?

Don't wait until a storm is headed your way to prepare. Download the *Ready Georgia* app now!

Alerts: Geo-targeted weather and emergency alerts notify you of potential threats.

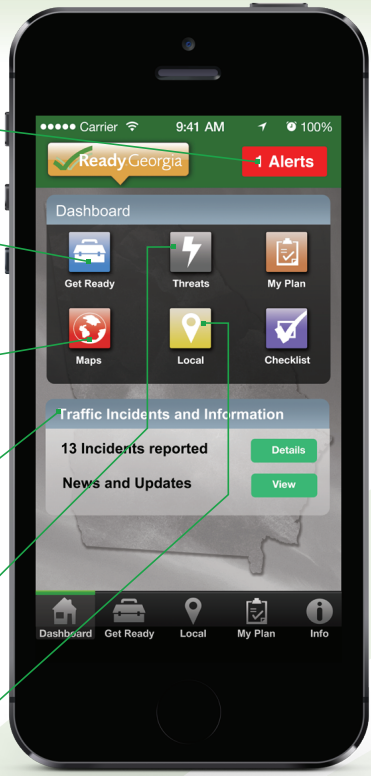
Plan: Create a personalized emergency plan and supplies checklist.

Maps: Live traffic conditions, open shelter locations, evacuation routes and more.

Traffic: Browse recent incidents and traffic-related news.

Threats: Information on how to prepare and what to do during specific threats.

Local: Local disaster history, stream gauge information and emergency contacts.



Ready Georgia can help you prepare for hurricanes and other emergencies. Download our free mobile app or visit our website to create a customized family emergency plan.

Ready Georgia
ready.ga.gov

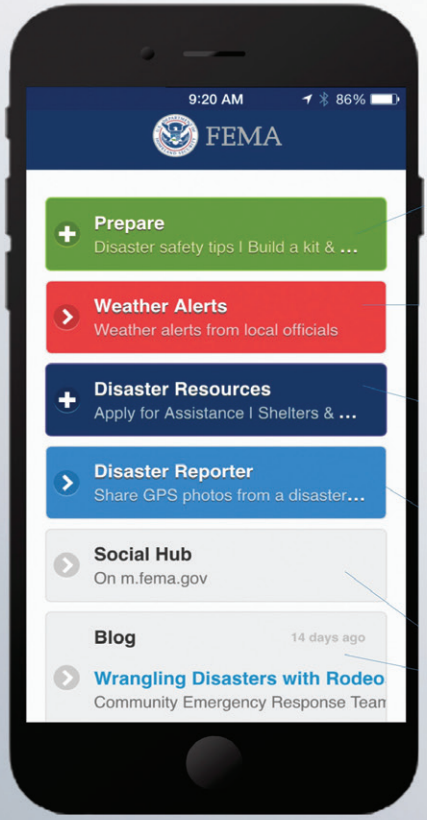
iPhone

Android

GEMA

FEMA

FEMA Launches New Features to Mobile App!



- *Receive weather alerts from the National Weather Service for up to five locations across the U.S.*
- *Get alerts even if the phone is not located in the area, making it easy for family and friends to help each other stay safe from across the nation.*
- *Helps users to take protective action by providing details on what to do to stay safe during severe weather.*
- *Customizable checklists for emergency supplies, maps of open shelters and Disaster Recovery Centers, and tips on how to survive natural and manmade disasters.*
- *"Disaster Reporter" feature, where disaster survivors can upload and share photos of disaster damage.*

The FEMA app is now available for free in the App Store for Apple devices and Google Play for Android devices. Download it today and help your family stay safe in emergencies.

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US Army Corps of Engineers

Preparing for Tomorrow

www.sas.usace.army.mil