# The Official Georgia HURRICANE Guide

GEORGIA EMERGENCY MANAGEMENT ★ HOMELAND SECURITY

GEMA

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## ARE YOU WEATHER-READY?

NATIONAL WEATHER SERVICE
U.S. DEPARTMENT OF COMMERCE · NOAA

weather.gov

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**U.S. DEPARTMENT OF COMMERCE**
**National Oceanic and Atmospheric Administration**
NATIONAL WEATHER SERVICE
Charleston, South Carolina
Jacksonville, Florida

Dear Colleagues,

Hurricanes and tropical storms can be devastating to the Georgia coast. An array of powerful impacts from storm surge, high winds, tornadoes, and flooding could cause catastrophic damage. It is imperative to prepare for each type of hurricane hazard. Advance planning and preparation are essential for protecting property, reducing risk, and ultimately saving lives. Your community's collective efforts improve Coastal Georgia's readiness, responsiveness, and overall resilience against extreme weather, water and climate events.

New tools, techniques, and trusted relationships are implemented throughout the National Weather Service to improve real-world communication well before the first rain drop arrives. Innovative approaches to providing this weather information include plain language confidence forecasts and interactive mapping interfaces which ultimately empower diverse decision makers to make critical and efficient decisions. These proactive weather safety actions are making differences to communities across America, making the country as a whole a Weather-Ready nation. This hurricane guide is one tool that the National Weather Service Charleston and Jacksonville offer the residents of southeast Georgia on our quest to promote a Weather-Ready Nation.

The Official Georgia Hurricane Guide is intended as a user-friendly resource with specific instructions for you to do each step of the way, before, during, and after the storm. It also provides information on ways to improve protection for your home and property.

Please use this guide to learn as much as possible about how to prepare for our most dangerous storms. We hope you will continue your dedicated support to make Georgia and our country a Weather-Ready Nation.

Most sincerely,

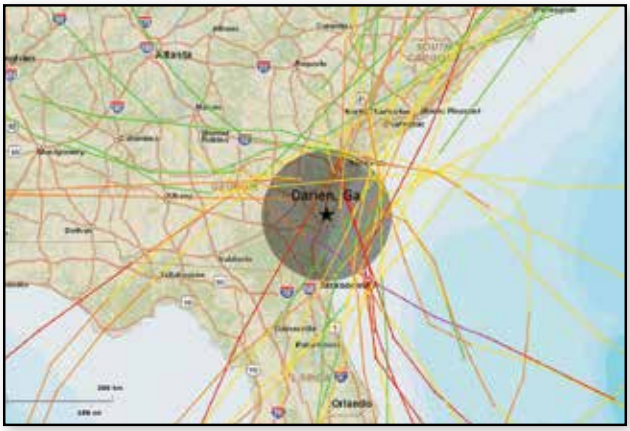
Michael Emlaw
Meteorologist-In-Charge
National Weather Service
Charleston, SC

Scott C. Cordero
Meteorologist-In-Charge
National Weather Service
Jacksonville, Florida

# About Hurricanes

*Above: Satellite image of Hurricane Floyd, 1999.*

Hurricanes are strong tropical cyclones that develop over warm ocean waters. These storms typically occur in the Atlantic Basin (Atlantic Ocean, Caribbean Sea and the Gulf of Mexico) from June through November, but can occur (and affect Georgia) before and after this period. Since official records began in 1851, ~ 24 storms have caused hurricane force winds across southeast Georgia, which is about once every 7 years on average.




*Above: Hurricane tracks since 1851 passing within about a 100 mile radius of Darien, GA.*

**Tropical Storm/ Hurricane Watch:**
Sustained tropical storm (39 to 73 mph)/hurricane (74+ mph) force winds are possible within 48 hours.

**Tropical Storm/ Hurricane Warning:**
Tropical storm (39 to 73 mph)/hurricane (74+ mph) force winds are expected within 36 hours.

**Since 1851, about 24 storms caused hurricane conditions across southeast Georgia. That is roughly one storm every 7 years!**

# 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.

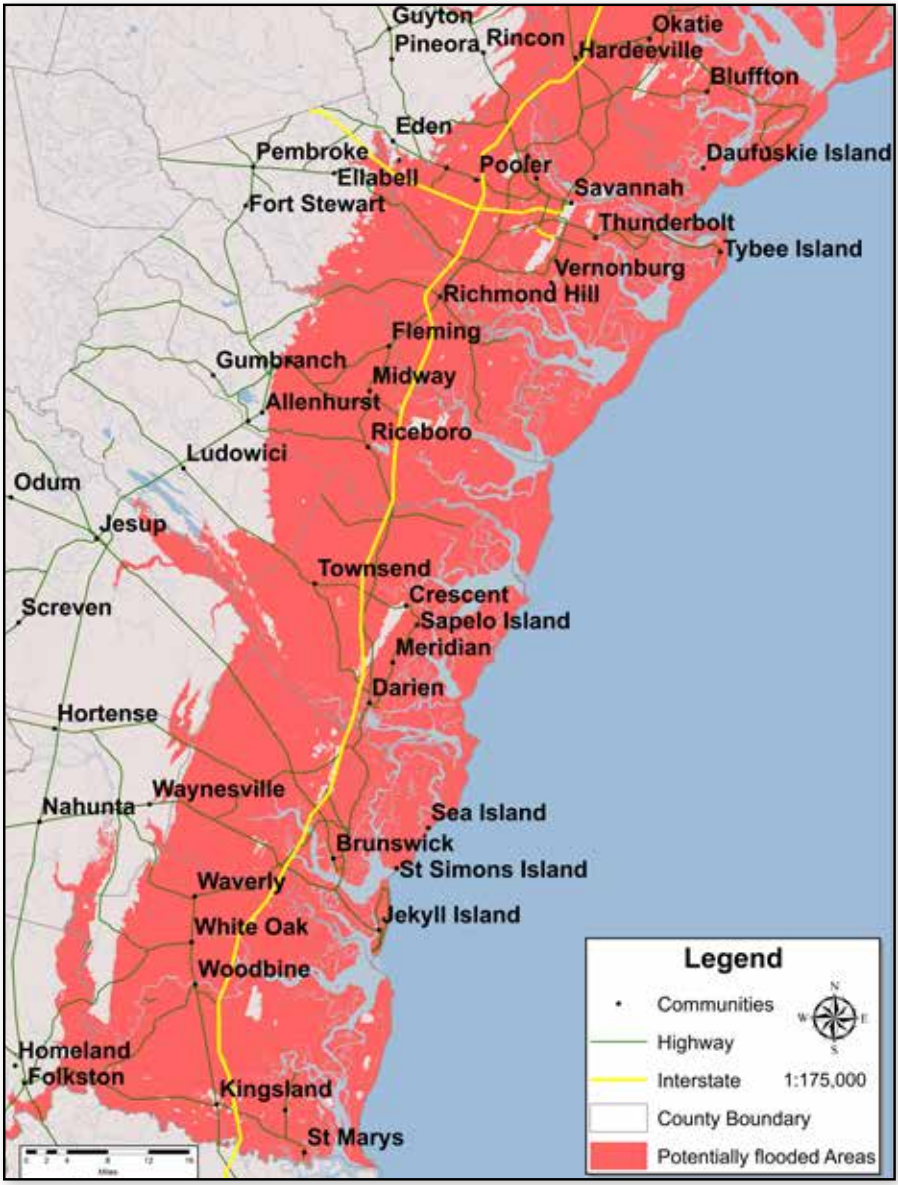
Storm surge is defined as the increase in water levels mainly due to the storm's winds, while storm tide is the actual water rise due to both the storm surge and normal daily tides. Because of the shape of Georgia's coast, storm tides up to 32 feet above mean sea level are possible.

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. Beginning this year, the National Hurricane Center will produce inundation maps. These maps will show, for a given tropical storm or hurricane, approximately which areas could experience inundation and approximately what depth of water may occur.

*Above: Rocks were deposited into a Folly Beach, South Carolina home by Hurricane Hugo's storm tide in 1999.*

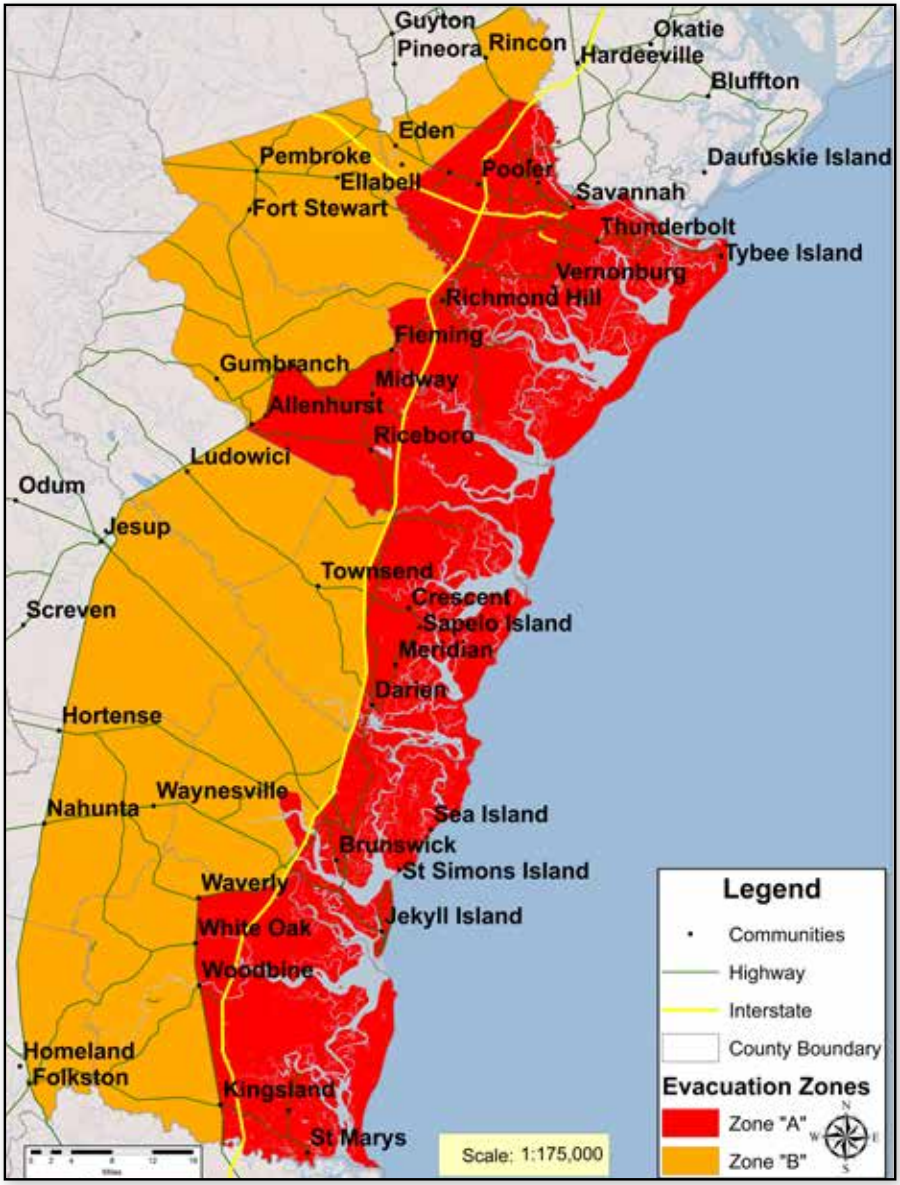
*Above: Boats were washed into an Isle of Palms, South Carolina yard by Hurricane Hugo's storm tide in 1989.*

# Potential Storm Surge Areas



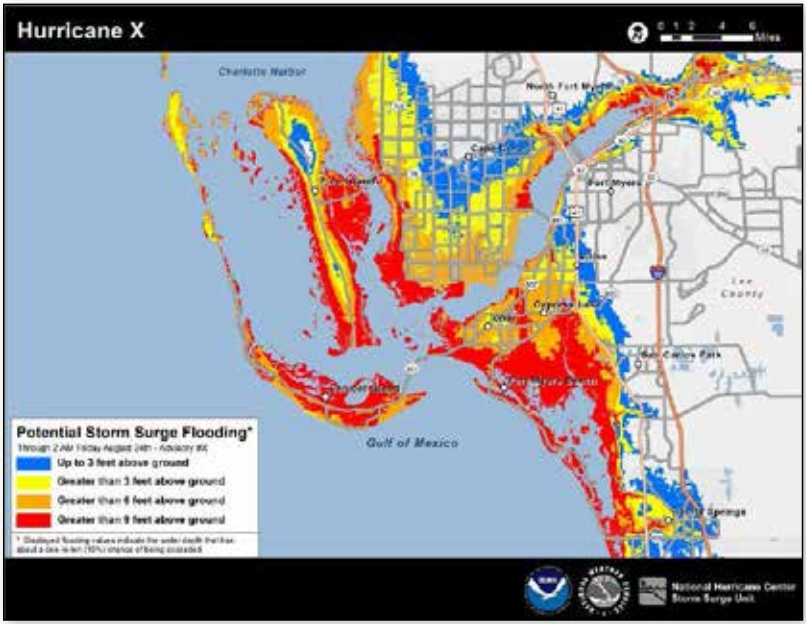

*This map illustrates the area that could potentially be flooded by a hurricane through Category 5. The actual area flooded during a storm will greatly depend up the storm's intensity, size, speed of movement, and track. Always follow the advice of your local officials with respect to evacuations.*

# 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.*

# Potential Storm Surge Maps




*Above: This is an example for the new 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.*

## Potential Storm Surge Flooding Maps

Beginning with the 2014 Atlantic hurricane season, the National Hurricane Center will 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 will show:

- Geographical areas of how high water levels could reach above ground level (i.e. inundation).
- How high above ground the water could reach in those areas.

Other things to know about this 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.

# 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

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 ground level
- Store rarely used or expensive items in the attic or on high shelves

### 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
- Battery powered radios or televisions can be used in the event of a power outage

### 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!

# Storm Preparations

## 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 www.gachd.org/emergency-preparedness

# 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.

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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

# Student Information Checklist

| |
|---|
| • Assure that all contact information and emergency contact information is accurate with your campus' registrar's office. |
| • If your campus offers an emergency management communication system, register as a user of the system. |
| • Plan your method of evacuation and your destination before a storm enters the Gulf of Mexico or the Western Atlantic |
| • Monitor local radio and TV stations for updates. |
| • Contact your campus Student Affairs Office if you need assistance with evacuation. |
| • If you require any assistance due to a disability-related accommodation, please contact your campus Disability Services Office to make necessary arrangements. |
| • Communicate with your family regarding status and location |
| • If your campus is evacuating, you will not be allowed to remain on-campus and it is highly recommended that you leave the city. Do not go to a coastal location. |
| • Take your driver's license, student I.D. card, and a copy of your housing lease as well as medical insurance cards and other important documents when you evacuate. |
| • If you bank with a local bank or credit union whose infrastructure may be damaged by the storm, withdraw some funds as you may not have access to them once you leave the area. |
| • International students must take passports with US student visa inside, I-20, I-94, student I.D. and class schedule. |
| • If using personal transportation, take as many of your valuable or irreplaceable items as you are able. |
| • If driving, make sure all roads that you are driving are open and safe. You can call the Department of Transportation at 1-877-694-2511 or check on-line for conditions at www.511ga.org |
| • Follow baggage limits if participating in an assisted evacuation program. |
| • Take a 30-day supply of medications in original pharmacy containers. |
| • Make a record of any valuables left behind (description, serial numbers, etc). Take pictures of all belongings. |
| • If you are evacuating to a shelter, make appropriate arrangements for pets. Most shelters do not accept pets. |
| • Do not plan to return to campus until an all-clear is given (monitor media and campus web-site). |

# Hurricane Names

## Hurricane Names

### 2014

- ❑ Arthur
- ❑ Bertha
- ❑ Cristobal
- ❑ Dolly
- ❑ Edouard
- ❑ Fay
- ❑ Gonzalo
- ❑ Hanna
- ❑ Isaias
- ❑ Josephine
- ❑ Kyle
- ❑ Laura
- ❑ Marco
- ❑ Nana
- ❑ Omar
- ❑ Paulette
- ❑ Rene
- ❑ Sally
- ❑ Teddy
- ❑ Vicky
- ❑ Wilfred

### 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

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).

# 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

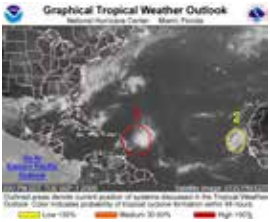
| Your chapter of the American Red Cross recommends that you have the following items in your Hurricane Supply Kit. |
|---|
| • At least a 7-day supply of non-perishable food and water. One gallon of water per person per day is recommended |
| • Battery powered portable television or radio with extra 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 |

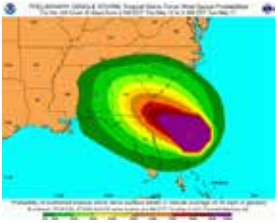
# Forecasts

## Tropical Information

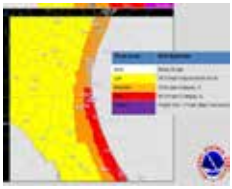
- National Hurricane Center: hurricanes.gov
- NWS Charleston Tropical Webpage: weather.gov/chs/tropical
- NWS Jacksonville Tropical Webpage: srh.noaa.gov/jax/?n=tropical

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 in Charleston, SC and Jacksonville, FL will provide more detailed forecasts and expected impacts for southeast GA.





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.

### Tropical Cyclone Impact Graphics

- 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.
- weather.gov/tcig

## 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!**

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## 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.

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## 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!**

# Hurricane of 1898

The last "Major Hurricane" to strike coastal Georgia was a storm that made landfall at Cumberland Island over 115 years ago in 1898. This category four hurricane had winds of 135 mph and a 20 foot storm surge/tide. The storm killed at least 179 people and was as powerful as Hurricane Hugo in South Carolina in 1989. Most of coastal Georgia was flooded with water chest deep on Newcastle Street in Brunswick, and buildings on Saint Simons Island were swept out to sea. Sadly, most of the deaths occurred on the islands, and on one island approximately 40 people drowned.

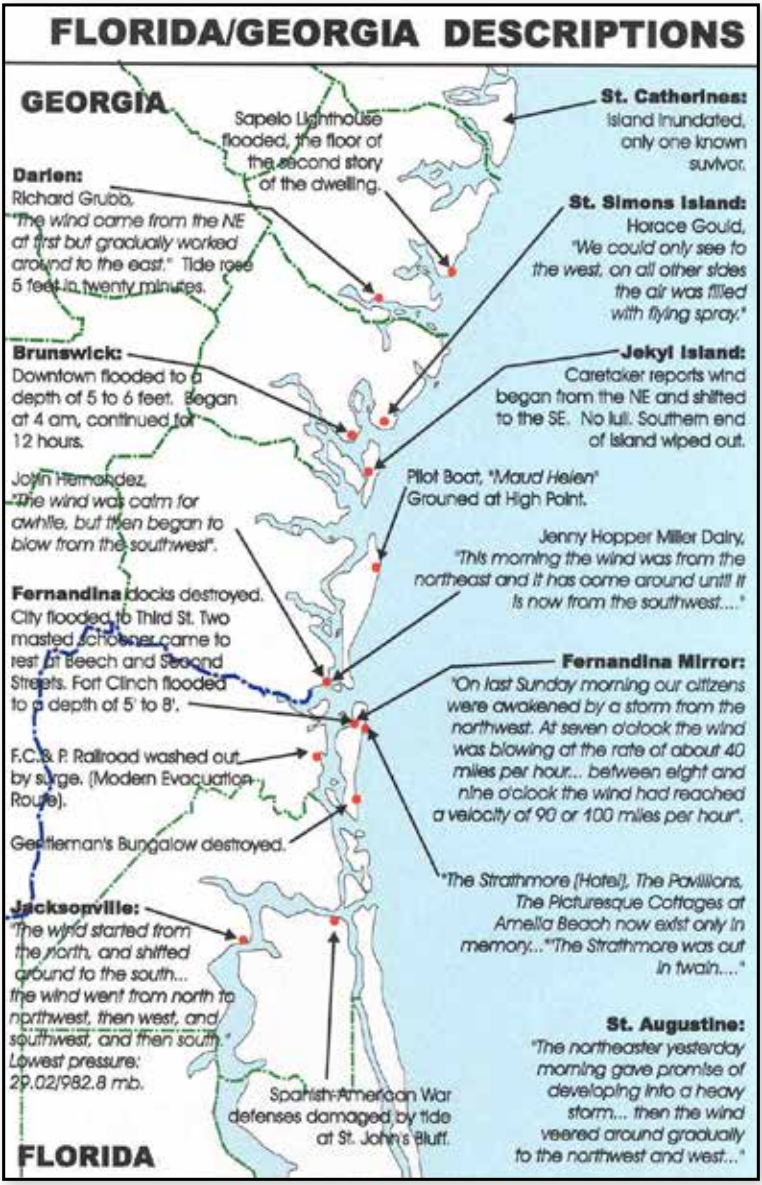
*This image is the path of the last major hurricane to hit coastal Georgia on October 2, 1898. This was a Category 4 storm and was as strong as 1989's Hurricane Hugo in South Carolina.*

*New Castle St. Brunswick, 1898*
*Georgia Archives, Vanishing Georgia Collection, gly225*

*If a Cat 4 Surge Hit Today…*

What if a similar category four hurricane made landfall today? Almost all of the coastal counties would be flooded, and flooding would even extend over inland counties along rivers such as the Altamaha, Satilla, and Ogeechee. Even inland communities including Everett, Riceboro, and Richmond Hill would experience storm surge flooding from the ocean. Low points on the islands would have buildings destroyed by large waves or completely washed away. All island causeways would be cut off from the mainland, and anyone remaining on them would be trapped. Inland, thousands of trees would be blown down, mobile homes and weaker houses would be destroyed, and power could lost for weeks. We have been lucky in coastal Georgia for over a hundred years, but one day our luck will run out!

# Impacts of the 1898 Hurricane




*The above image depicts impacts from the 1898 storm in southeastern Georgia and north Florida. Credit Ms. J. David, National Hurricane Center.*

# 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.

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.

### 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 |

*These are Hurricane Evacuation Routes for coastal Georgia. Signs along the evacuation route inform you where to tune your radio for official information.*

## 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.

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

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NWR continuously broadcasts local weather information, but 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.

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In addition to weather warnings, the All Hazards NWR can also alert the public to chemical releases, wild fires, and civil emergency messages.
**nws.noaa.gov/nwr**

# Channels of Communication

The National Weather Services in Jacksonville and Charleston utilize various communication channels to convey high impacts associated with active Georgia weather. These channels include a combination of innovative technology tools, enhanced graphics, and enhanced messaging to provide a continuous stream of weather information, from the planning and preparation stages through the entire event and during recovery.

| National Weather Service Charleston, SC | |
|---|---|
| Webpage | weather.gov/chs |
| Facebook | facebook.com/US.NationalWeatherService.CharlestonSC.gov |
| Twitter | twitter.com/NWSCharlestonSC (@NWSCharlestonSC) |
| YouTube | youtube.com/user/NWSCharleston |

| National Weather Service Jacksonville, FL | |
|---|---|
| Webpage | weather.gov/jax |
| Facebook | facebook.com/US.NationalWeatherService.Jacksonville.gov |
| Twitter | twitter.com/NWSJacksonville (@NWSJacksonville) |
| YouTube | youtube.com/NWSJacksonville |

*Above: Twitter stream of forecast & weather observations.*

*Example of forecast Graphicast.*

# 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://www.caes.uga.edu/applications/publications/files/pdf/C%20858-4_1.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

**Camden County**
County Emergency Services: 912-729-5602
County Sheriff: 912-510-5100
County Fire Rescue: 912-729-3911

**Glynn County**
County Emergency Services: 912-554-7826
Glynn County Police Dept: 912-554-7800

**Charlton County**
County Emergency Services: 912-496-1081 or 1080

**Brantley County**
Emergency Management: 912-462-7874
County Sheriff: 912-462-6141

**Wayne County**
Emergency Management/911: 912-427-5992
County Sheriff: 912-427-5970

**Chatham County**
912-201-4500
chathamemergency.org

**Effingham County**
912-754-8200
effinghamcounty.org

**Bryan County**
912-858-2799

**Liberty County**
912-368-2201
libertycountyga.com

**Long County**
912-545-2143

**McIntosh County**
912-437-6671

**Do Not Call 911 for Non-Emergencies!**

# National Weather Service Office

## National Weather Service Forecast Office- Jacksonville, FL

Proudly Serving and Protecting Southeast Georgia
and Northeast Florida since 1900

### Stay Connected

- Web address: weather.gov/jax
- Phone: 904-741-4370

### Social Media

US National Weather Service Jacksonville

@NWSJacksonville

### What We Do

- Severe Weather Watches, Warnings and Advisories
- Routine and Site Specific Forecasts
- Speciflized Briefings
- Observational and Climatic Information
- Outreach and Education

NWS Jacksonville forecasts and issues warnings for the 29 counties and the marine areas shown above. The marine zones extend out 60 nm from the shore into the Atlantic Ocean.

From aviators to educators, foresters to mariners, we have the weather information you need to keep you and yours safe and prosperous!

# National Weather Service Office

## National Weather Service Forecast Office – Charleston, SC

Providing Weather Support and Service for southeast SC and southeast GA

### Stay Connected

- Web address: www.weather.gov/chs
- Phone: 843-744-0303

### Social Media

National Weather Service Charleston SC

@NWSCharlestonSC

### What We Do

- Severe Weather Watches, Warnings and Advisories
- Routine and Site Specific Forecasts
- Speciflized Briefings
- Observational and Climatic Information
- Outreach and Education

# Emergency Notes

# We're here for your and after the storm.

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# community before

Walmart
Save money. Live better.

# ARE YOU READY FOR HURRICANE SEASON?

Don't wait until a storm is headed your way to prepare.
Take action now to protect your family and home.

*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.

**Prepare. Plan. Stay Informed.**

Ready Georgia
ready.ga.gov

iPhone

Android

GEMA