



Use this guide to learn about:

Saving money, property and lives

Being prepared for flooding and hurricanes

Ways to greatly reduce our impact on water resources

Contact info for assistance within Savannah & Chatham Co.

## Flooding happens in Savannah, Chatham County, and Surrounding Municipalities

As a flat, low-lying coastal region, the natural landscape of our community puts various locations within the County and City at risk for flooding during any long periods of moderate rainfall or during high volume, short duration rainfalls. Local structural flooding during major storms dates back to 1811 and as recent as July 2007. On June 29, 1999, more than 12 inches of rain fell within

a 24-hour period on areas of Chatham County. Since 1948, Chatham County and the surrounding municipalities have flooded more than 15 times due to storms that produced 4 inches of rainfall or more. There are more than 1,700 dwellings on record that flooded during those same weather events. Areas around local waterways such as the Wilmington, Vernon, Forest Grove and

Ogeechee rivers and Springfield, Casey, Placentia, Pipemakers and Harden canals have increased vulnerability to flooding. With such close proximity to the Atlantic Ocean, we’re also at serious risk for the flooding and damage caused by hurricanes. Your City and County governments have invested hundreds of millions of dollars over the past 20 years to lessen

the risk of structural flooding in our community, but given our geography that risk will never be eliminated. Through emergency preparedness and responsible environmental actions, you can help reduce some causes of flooding and protect your family in the event of a dangerous weather event.

A publication jointly presented by:



# How Prepared are You?

A Guide to Help Keep You Above Water

## FLOOD

### Tips For Protecting Your Valuable Property

In the course of a 30-year mortgage, there is a 26% chance you might experience a flood. Take steps to protect your property from flood or hurricane damage:



- Buy flood insurance well in advance of storm season. Policies often have a 30-day waiting period before going into effect, making it essential to plan ahead for coverage.
- Keep the ditches and drains on your property clear of leaves and debris.
- Elevate or move furniture and electric items such as TV, stereos, appliances and electrical panels.
- Install backwater valves or plugs for drains, toilets, or other sewer connections to keep floodwater from entering your home.
- Schedule a flood preparation site visit from the City or County. Staff will assist property owners with issues related to flooding, stormwater drainage and address any site-specific flooding concerns. The service is provided free of charge. Please refer to the Point of Contacts Table on the flood map.
- Elevation certificates (EC) of newly constructed or substantially improved buildings and benchmark locations may be obtained, when requested in writing, from the Chatham County Department of Engineering. New, EC are downloadable from each community on their Flood webpage. Please refer to the City and County Resources Table.
- Determine if retrofitting your property would be beneficial. Retrofitting means to alter the building to eliminate or reduce flood damage. There are several options to consider: elevation, flood barriers, dry flood proofing, and wet flood proofing. There are several references in the public libraries on retrofitting and additional documents pertaining to floodplain management topics. See the FEMA guide on retrofitting your house against flooding. Visit [www.fema.gov](http://www.fema.gov) for more information. The library at 2002 Bull Street has copies of the Flood Insurance Rate Maps and additional flood protection literature.
- Store materials like sandbags, plywood, lumber and plastic sheeting in case of a serious flooding threat. These materials can help minimize the damage caused not only by flood waters, but also damage by hurricane force winds.

## You Can Help Prevent Flooding in Your Own Neighborhood

Residents can help prevent localized flooding by keeping the ditches, culverts, and storm drains of our stormwater system clear of yard waste,

leaves, trash, and other debris. Simple actions make a big difference in how well this system functions.

You should always properly collect and dispose of yard waste, including leaves. Raking or blowing debris into the street can contribute to flooding. Litter in the street can cause problems with drainage as well. Any type of debris can become entangled in culverts and shallow streambeds and reduce drainage causing the water to back up. Be sure to keep drainage ditches on your property free of debris, foliage



and vegetation that would impede the flow of water.

It’s illegal to dump trash, grass clippings, leaves or other materials including chemicals, oil, gasoline or household products into ditches or other drainage systems. If you see illegal dumping, report it to the local public works department

or local law enforcement agencies. People caught dumping can face jail time and/or a fine as outlined in County Code 24-708 or the City’s Code 4-11004 and 5-2005. *Please refer to the Point of Contacts Table on the flood map for other communities.*

## Be Prepared: Before, During, and After Flood



### Before a flood or hurricane

- **Know your flood hazard.** Check with the Chatham County Department of Engineering at (912) 652-7800 or City of Savannah Development Services at (912) 651-6530 to find out what flood zone you are in and what the Base Flood Elevation is for your lot.

*Note that flood zone determination requests are to be made in writing and can be faxed to Chatham County at (912) 652-7818 and (912) 651-6543 for the City of Savannah. You can get a good idea of your flood zone and risk from the map included with this publication and [www.sagis.org](http://www.sagis.org). Please refer to the Point of Contacts Table on the flood map for your area.*

- **Understand the flood warning system** and know the safest route to high, safe ground.  
  
*Visit Chatham Emergency Management Agency (CEMA): [www.chathamemergency.org](http://www.chathamemergency.org) or call (912) 201-4500 to find out about the flood warning system and what evacuation route you should use.*
- **Prepare a family disaster kit.** Learn more at: [www.ready.gov](http://www.ready.gov)
- **Prepare your home.** Learn how to turn off the gas and electricity to your house and do so if flooding is imminent. Protect your home against high winds associated with hurricanes and tropical

- storms (install storm shutters, reinforce garage doors, etc.)
- **Buy flood insurance.** Flood damage is not covered by homeowner’s insurance. It’s affordable and easy to obtain. Renters can secure flood damage coverage for their personal property.
  - **Do you have questions or concerns?** Evacuation routes and the locations of emergency shelters can be found in the phonebook and online. Check the “Resources on the Web” and “Contacts” tables inside this publication for more information.

### During a flood

Because flood water can rise quickly, be prepared to evacuate before the water level reaches your property.

- **Stay informed** during a weather event.
- **Follow evacuation orders** when issued.
- **Move to higher ground** if you can do so safely—but DO NOT attempt to walk, drive, or swim through moving water or flooded areas. Just 6 inches of fast moving water can knock a person off their feet and less than 2 feet of swiftly moving water can sweep away heavy cars

- and trucks. **Remember: turn around, don’t drown.** Drowning is the number one cause of flood-related deaths, followed by electrocution.
- If you are caught at home by rising water, **move to the second floor or the roof.** Take your disaster supply kit with you.
  - If evacuation is required and you can safely do so, **turn off all utilities** at the main power switch and close any gas valves.
  - **On the road**, watch for and avoid floodwaters, fallen debris and power lines.

### After a flood

Danger does not end when flood water recedes.

- **Return home only when** authorities indicate it is safe.
- **Hidden structural damage** may make a building unsafe.
- **Have a professional check** your heating, electrical system, and appliances for safety prior to using.
- **Don’t use any food or water that was exposed** to floodwaters.
- **Dry your house slowly** but thoroughly. Pump out flooded basements slowly to avoid structural damage.

## Stay Informed: Understanding the Flood Warning System

Locally, the Chatham Emergency Management Agency (CEMA) manages the flood warning system. Once CEMA receives a potentially dangerous warning, sirens will be activated as well as the Local Emergency Information Network system which interrupts television and radio programs to give further instructions. With 95% of Chatham County’s population covered by an emergency warning siren, CEMA can activate individual siren sites in the immediate area to alert individuals who are not near a TV or radio. Information can also be

heard on the NOAA weather radio broadcast at frequency 162.40. Local evacuation routes can be found in the phone book. For additional information, contact CEMA at 912-201-4500 or visit the website at: [chathamemergency.org](http://chathamemergency.org)

### Flood Warning System: Know Your Terms

**Flood Watch**  
*Be on the lookout for flooding*

**Flood Warning**  
*Flooding is occurring*



# What You Need to Know About Flood Insurance

**Does my homeowner’s insurance cover flood damage?** NO. The standard homeowner or commercial policy does not cover damage caused by flooding (rising waters). To protect your property you must buy a flood insurance policy. Flood insurance can cover the structure alone or cover a combination of the structure and contents. Renters can buy coverage for contents, even if the owner does not have structural coverage. A house has a higher percentage of flooding than suffered from a fire, yet many homeowners do not complain about carrying fire insurance. There is normally a 30-day waiting period before flood insurance goes into effect; it is essential to plan ahead. Contact your local insurance agent to get a flood insurance policy.

**How much does flood insurance cost?** The average flood insurance premium in Georgia is less than \$500 per year. Contact your insurance agent to determine exact cost.

**If I rent my home, can I buy any form of flood insurance?** YES. Renters can obtain coverage for their personal belongings and the contents of their home, even if owner of the property does not insure the home itself.

**If I live in a low risk area and my insurance agent says I do not need flood insurance what should I do?** Many times homeowners and renters are misinformed. Flooding can occur outside the high risk area. In Savannah, of the reported 1700 flooded structures, 53% of the buildings were in the Low risk area. Many home owners in a low-lying coastal region like Chatham County could benefit from flood insurance.

**When is flood insurance required?** Anyone can buy flood insurance but it is required in certain conditions. If you buy a house in a designated high-risk flood zone and receive a mortgage loan from a federally regulated or insured lender, your lender is legally bound to require you to maintain flood insurance.

**Will Federal disaster assistance pay for flood damage?** Federal disaster assistance is available only if the President declares a disaster. Typically, assistance is a loan that must be repaid with interest. Following a Federal disaster declaration



some financial assistance is available, but usually for only short-term housing and not repairs. Flood insurance is the only sure way to be reimbursed for some of your flood losses. For more information contact your community flood plan representative listed on the Point of Contacts Table on the flood map.

**What does the City and County do to make flood insurance more affordable?** Because the City of Savannah and Chatham County participate in the National Flood Insurance Program, subscribe to the Community Rating System program and have highly rated flood management programs, homeowners here receive special flood insurance premium discounts not available to homeowners living in neighboring jurisdictions. This means that if you live within the City of Savannah or Unincorporated Chatham County, you are eligible for a 25% discount on their flood insurance premiums. The UCC saved 11,799 flood insurance policy holders in the SFHA a total of \$3,098,642 on premiums last year, or an average of \$263 per policy. The COS saved 2,581 SFHA policy holders \$679,771 or an average of \$263 per policy.

**What is Freeboard and how does it benefit me?** Freeboard is a safety provision that refers to elevating a structure's lowest level a few feet above predicted flood elevations (generally 1-3 feet). Storm waters can and do rise higher than shown on Flood Insurance Rate Maps. Freeboard helps protect buildings from storms larger than those that Flood Insurance Rate Maps are based on, and provides an added margin of safety

to address the flood modeling and mapping uncertainties associated with Flood Insurance Rate Maps. Because the risk of flooding is reduced significantly, Freeboard results in much lower flood insurance premiums. Freeboard is required by both the flood ordinances of the City of Savannah and Chatham County.

**What is the Coastal Barrier Resources Act (CBRA)?** The Coastal Barrier Resources Act (CBRA) protects coastal areas that serve as barriers against wind and tidal forces caused by coastal storms, and serve as habitat for aquatic species. CBRS boundaries are established and mapped by the U.S. Department of Interior’s Fish and Wildlife Service (USFWS) which only Congress can revise CBRS boundaries. To manage development, limit property damage, and preserve wildlife and natural resources, CBRA restricts Federal financial assistance, including disaster relief assistance provided by the Federal Emergency Management Agency (FEMA) under the Robert T. Stafford Act and the NFIP. The NFIP cannot provide flood insurance coverage for structures built or substantially improved after the area is designated as a CBRS unit (initial designations went into effect October 1, 1983). Minimum NFIP floodplain management standards do not prohibit the rebuilding of substantially damaged buildings in CBRS units. However, such structures must meet the community’s floodplain management regulations, and NFIP coverage is not available for such structures. Lenders should exercise special care with properties in or near these areas.

**When and why do FIRM change?** Maps change as money becomes available from congress or a local government performs a detailed study. Developers can produce Letter of Map Amendments (LOMA) in the course of the permitting process. Chatham County has seen maps changes throughout the years to include 2008, 2013 and 2014. Georgia Department of

Natural Resources (DNR) continues to update the maps under the Risk Map program that is currently addressing costal surge inundation for thirteen counties along the Georgia coast. The project is on track for the new maps to take effect in 2016. See the next question and the web site <http://www.georgiadfirm.com/CSLF.html#> for additional information.

**What happens if my property changes from low-risk to high-risk because of new Flood Insurance Rate Maps?** With new maps, you will likely be required to protect your building and its contents with flood insurance if you have a mortgage. Flood insurance rates for high- risk areas are higher, but there are ways to save money with the National Flood Insurance Program “Grandfather Rule”. Under NFIP administrative grandfathering, Post-FIRM buildings in the Regular Program built in compliance with the floodplain management regulations in effect at the start of construction will continue to have favorable rate treatment even though higher Base Flood Elevations (BFEs) or more restrictive, greater risk zone designations result from Flood Insurance Rate Map (FIRM) revisions. Buildings constructed in compliance with earlier maps or continuously covered by flood insurance stay in their original rate class when maps change or properties are sold. See [www.FEMA.Gov](http://www.FEMA.Gov) for more information or contact your local insurance advocate (*see point of contacts table on the flood map*).

**Is there any help to bring non-conforming, flooding structure into compliance with local ordinances?** Yes. Increased Cost of Compliance Coverage is now available through the National Flood Insurance Program and pays up to \$30,000 to help property owners bring a non-compliant structure into compliance with our Flood Damage Protection Ordinance. The structure must have flood insurance, be within the designated “High Risk” flood zone and the community must declare the structure to be substantially damaged or repetitively flooded. Increased Cost of Compliance Coverage claims will only be paid on flood-damaged homes and businesses, and can only be used to pay for costs of meeting the floodplain management ordinance in our community. Increased Cost of Compliance Coverage is part of the maximum \$250,000 payout set by the National Flood Insurance Program. For more information on ICC coverage, call your insurance company or agent, or call the National Flood Insurance Program toll-free at 1-800-427-4661.



Resources on the Web		
Federal Emergency Management Agency		<a href="http://www.fema.gov">www.fema.gov</a>
Flood Smart		<a href="http://www.floodsmart.gov">www.floodsmart.gov</a>
Georgia Environmental Protection Division		<a href="http://www.gaepd.org">www.gaepd.org</a>
Georgia Emergency Management Agency		<a href="http://www.gema.state.ga.us">www.gema.state.ga.us</a>
National Oceanic and Atmospheric Administration		<a href="http://www.noaa.gov">www.noaa.gov</a>
Georgia Department of Natural Resources		<a href="http://www.gadnr.org">www.gadnr.org</a>
The University of Georgia Cooperative Extension		<a href="http://www.ugaextension.com">www.ugaextension.com</a>
Georgia Association of Floodplain Management		<a href="http://www.gafloods.org">www.gafloods.org</a>
U.S. Environmental Protection Agency		<a href="http://water.epa.gov">water.epa.gov</a>
National Wetland Inventory		<a href="http://www.fws.gov/wetlands/data/mapper.html">http://www.fws.gov/wetlands/data/mapper.html</a>
Critical Habitat		<a href="http://ecos.fws.gov/crithab/">http://ecos.fws.gov/crithab/</a>

## Floodplains Benefit Everyone

Natural floodplains generally include marsh areas and low lying areas along canals and rivers. Floodplains provide fish and wildlife habitat, fertile soil for plant growth and act like reservoirs, storing excess rainfall and runoff. Open parks such as the Henderson, Wilmington and Bacon Park.

Golf Courses also act as natural floodplains. Chatham County and the City of Savannah also have barrier islands such as Little Tybee, Ossabaw, Cabbage and Wassaw Islands that serve as natural protective barriers to incoming hurricane forces such as wave attacks, and serve to reduce tidal and wind energies in addition to acting as natural aquatic habitats, wetlands, marshes and estuaries. Continued filling in of these areas for development coupled with environmental contamination incidences, such as the fire and gas release in April 1995 at the Powell Duffryn Terminals, Inc. site, the sewage spills into the Savannah River, and the February 2008 Dixie Crystal (Imperial) Sugar plant explosion have crippling impacts in these conservation zones. Maintaining adequate flood control along the



coast is vital to a healthy and productive community. The natural floodplains that make up much of our county protect human life and property from flood damage in the event of a storm. The beautiful, functioning wetlands, riparian buffers and marshlands offer economic and health benefits as well as their rich and diverse

ecosystems. By making wise land use decisions in the development and management of floodplains, beneficial functions can be protected and negative impacts to the quality of the environment can be reduced. See Water Quality topic on how to protect these natural habitats.

### Building and Developing in Floodplains

Most activities in the floodplain—such as grading, placing fill, building a new structure/addition, or repairing/ remodeling an existing structure—require a permit.

Development within a floodplain has the potential to impact flood levels. If not properly designed, it may make flooding worse on your property and your neighbor’s property. All new construction must be built to current City and County floodplain development standards.

The National Flood Insurance Program (NFIP) and City and County code require that if the cost of reconstruction, accumulated over a five year period, due to any type of damage, addition or other renovations to an existing

building exceeds 50% of the buildings value, the activity is considered a “substantial improvement.” This may require that the building be considered new construction and be brought up to current floodplain development standards. Additional County and City floodplain requirements may apply. Please see the last question in Flood Insurance Frequently Asked Questions section above for additional information.

**Report Illegal Development**

**City residents:** Call 311  
**County residents:** Call Dept of Public Works (912) 652-6840  
**Online:** Chatham County Connect App

For more information or to obtain a building permit within Chatham County, contact your building official at the Chatham County Department of Building Safety and Regulatory Services at 1117 Eisenhower Drive, or phone them at (912)201-4300. For the City of Savannah, contact the Development Service Department at 5515 Abercorn Street or (912) 651-6530. For additional contacts, please refer to the Point of Contacts Table on the flood map.

## Only Rain Down the Drain!



Yard clippings, tree limbs and trash can clog up the storm drains and ditches causing street and yard flooding (even with moderate rainfall).

## Polluted Waters Can Cause:



- Closed recreation areas and beaches due to Enterococci and E. coli levels
- Tainted seafood due to algae blooms
- Oily film or foul smelling wetlands from leaking boats and cars
- Sick or declining bird populations due to improperly used insecticides
- Fish dying from sediment clogged gills
- Aquatic invertebrates fleeing or dying due to increased salt levels
- Car wash detergents increase nitrate levels, promoting the rapid overgrowth of algae







# City and County Resources

For other Chatham County municipalities contacts, see Flood Zone Boundaries map.

Service	Chatham County		City of Savannah	
Stormwater Site Visit	912-652-7800	www.engineering.chathamcounty.org	912-650-7855	www.savannahga.gov/index.aspx?nid=508
Flood Insurance: Determination & Elevation Certificates	912-652-7814	www.chathamcounty.org Michael Blakely	912-651-6530 ext 1895	www.savannahga.gov Tom McDonald
Structural Flood Visit	912-652-7814	Michael Blakely	912-651-6530 ext 1895	Tom McDonald
Clogged Storm Pipe or Ditch	912-652-6840	www.publicworks.chathamcounty.org	311	www.savannah.gov (search word 311)
Grease Separator Inspection	912-652-7800	www.engineering.chathamcounty.org	912-651-6620	
Soil Erosion Guidelines	912-652-7800	www.engineering.chathamcounty.org	912-651-6530	www.savannahga.gov/index.aspx?NID=375
Chatham County Emergency Management (CEMA)	912-652-7800	www.chathamemergency.org	912-201-4500	www.chathamemergency.org
Stormwater Quality	912-652-7800	www.engineering.chathamcounty.org www.mpcnaturalresources.org www.savannahga.gov	912-650-7855	www.savannahga.gov/index.aspx?nid=508
Septic Tanks (Health Depart.)	912-356-2441	www.gachd.org	912-356-2441	www.gachd.org
Recycling Center	912-661-4960	www.chathamcountyrecycles.com	912-651-1967	www.savannahga.gov
Watering Restrictions	912-651-2221	www.savannahga.gov	912-651-2221	www.savannahga.gov
Water Wise Landscaping (Xeriscape)	912-652-7981	www.bamboo.caes.uga.edu/xeriscape1.html Laura Walker	912-651-2221	Laura Walker

## Vernon River Revealed

The Truman Parkway now crosses the Vernon River revealing what appears to be a healthy and pristine river. But a closer inspection of the marsh would reveal tons of litter mostly styrofoam and plastic bottles. The litter flows from feeder ditches and creeks in the headwater region near Montgomery Crossroads. The City of Savannah, Chatham County, and the Town of Vernonburg are working to bring the headwaters back to a healthy state. With funding support from the Georgia Environmental Protection Division the effort focuses on the reduction of human sources of pollution.



prevent wastewater from bypassing treatment;

- Do not wash any fats, oils, and grease down the drain. Cool and dispose in the trash.
- Do not let litter from the street or your yard get into a stormdrain or ditch.

For more information on the Vernon River Project visit the Ogeechee Riverkeeper website at: <http://ogeecheeriverkeeper.org/vernon-river/>

## Where's Your Watershed?

When rain falls in Savannah it goes one of two places. It either flows to the Savannah River or the Ogeechee River.

Did you know that most of the City of Savannah lies within the Ogeechee River Watershed? That's why the City and the Ogeechee Riverkeeper recently began installing signs that inform citizens of just that. The signs promote the close connection we have on the land with this important river. In this watershed, each stormdrain, ditch, and canal leads to the Ogeechee River and her tributaries like the Vernon River.

For more information go to [ogeecheeriverkeeper.org](http://ogeecheeriverkeeper.org).



Let's all do our part! It is easy to help our waterways stay clean and healthy for everyone.

Healthy water resources are important to the economy and quality of life in Chatham County.

# Here are 3 easy ways YOU can help keep our water clean

### 1 Pick Up Pet Waste



Picking up your pet's waste is not just a common courtesy, it is a health necessity. Picking up after your pet helps reduce the likelihood of its waste ending up in our waterways. Considering pet feces are common carriers of nasty things like heartworms, whipworms, parvovirus, and E. coli, it's important to do your duty! If left on the ground the rain will carry the feces to the nearest stormdrain which goes straight to a waterway.

**How does that impact everyone in Chatham County?** The State and the Environmental Protection Agency requires Georgia's coastal waterways to average less than 200 counts of fecal bacteria in a water sample. Pet waste can have counts above

**NOTE:** The best way to dispose of your pet's waste is in the toilet. The most common way is using a special pet waste bag or plastic grocery bag that you put in your trash. Composting pet waste is tricky business and not recommended for the average city home owner.

160,000! When a waterway exceeds the average the State requires the City and County to test the water. They also require new codes to restrict certain activities until the waterway returns to normal. Both testing and new regulations cost money for all citizens.

### 2 Collect Rain Water



There are so many ways to catch rain to use for your garden and indoor plants. It is the best and it is free! But did you know that collecting rain helps reduce pollution in our waterways? When you capture rain on your property you keep it from flowing into the street stormwater drains. When it flows to the drain it will carry with it things left on the ground like fertilizer, oil, gas, litter and any other pollutants. So not only can you feel good about giving your plants nutritious rain you can feel great about protecting our waterways too!

**NOTE:** You can purchase a rain barrel from your local garden store or learn how to make your own [www.savannahga.gov](http://www.savannahga.gov)



### 3 Create Backyard Habitats



How many of us are gardening these days? How many of us have created special spaces in backyards, courtyards, patios and balconies? While these spaces bring us personal rewards they can also help protect our waterways. All wildlife needs habitat with food, water, and shelter. When the only habitat is close to the waterway, wildlife will congregate and fecal pollution

can increase. By providing other places for food, water, and shelter wildlife can spread out and away from the water. So think about adding a plant in your outdoor space that attracts wildlife. Why not add a water source that provides fresh, clean water free of mosquitoes. You can find the perfect plants at your local nursery but please make note of these important tips:

- It is always best to stick with native plants. Visit your local garden center or [www.coastscapes.org](http://www.coastscapes.org) for selections.
- Check to be certain your plants do not contain any insecticides that may be harmful to wildlife like neonicotinoids.
- Read the label carefully to ensure your plant(s) will thrive in your space.

If you want great step by step instructions on how to make wildlife habitats at home visit the National Wildlife Federation website and the Garden for Wildlife page.