### For Local Weather Information

### **Area Television Stations**

Channel 3 (ABC) WEAR TV Channel 5 (CBS) WKRG TV Channel 10 (NBC) WALA TV Channel 15 (FOX) WPMI TV Channel 44 WJTC TV

### **Area Radio Stations**

WABB AM/FM (1480)

WABF AM (1220)

WAVH FM (106.5)

WBCA AM (1110)

WBHY AM (840)

WBHY FM (88.5)

WBLX FM (92.5)

WBUB FM (104.1)

WDLT FM (98.3)

WDLT AM (600)

WGOK AM (900)

WHEP AM (1310)

WHIL FM (91.3)

WJLQ FM (100.7)

WKSJ FM (94.9)

WMXC FM (99.9)

WMOB AM (1360) WNTM AM (710)

WNSP FM (105.5)

WPCS FM (89.3)

WQUA FM (102.1)

WRKH FM (96.1)

WTKK FM (TK-101)

**WUWF FM (91)** 

WXBM FM (102.5)

WXWY AM (100)

WZEW FM (92.1)

### **Survive Severe Storms!**

### A Weather Radio Can Be a Good

**Investment** Protect yourself and your family from disasters! During or after an emergency, it might be several days before vital services are restored. NOAA emergency alert weather radios acti-



vate to provide you with immediate information about life

threatening events, giving you extra time to prepare and evacuate if necessary.



### **Important Contact Information**

**Baldwin County Building Inspection** (251) 972-6837

**Baldwin County Planning and Zoning** planning@baldwincountyal.gov (251) 580-1655

**Baldwin County Highway Department** 

**Baldwin County Highway – Permitting (Subdivision) Division** (251) 580-1655

(251) 937-0371

**Baldwin County Emergency Management** 

Central Region (251) 972-6807 (251) 937-0317 North Region (251) 990-4605 Eastern Shore

**Community Rating System Program** (CRS) Coordinator

(251) 972-6837ext. 2879

Baldwin County Building Department

### **Main Office**

201 East Section Ave. **Foley, AL 36535** (251) 972-6837

**Robertsdale Office** 

22251 Palmer Street Robertsdale, Al. 36567

Fairhope Office

1100 Fairhope Ave. Fairhope, AL 36532

**Bay Minette Office** 312 Courthouse Sq. Ste. 14 Bay Minette, Al. 36507

If you would like to be notified of other information on zoning and development in your area and throughout Baldwin County, please sign up to receive our "Get Notified" emails. Once subscribed you will receive via email our quarterly newsletter, agendas for upcoming meetings, action reports and other news and information. To subscribe, visit https// open.baldwincounty al.gov/ pandzsubscribe. The service is free and users will be able to subscribe or unsubscribe the list at will.



# **Baldwin County Commission Building Department**

## Flood Hazard Protection Newsletter

**May 2024** 

### Sink or Swim? Bringing Communities Together to Tackle Flooding

Flooding affects all communities in coastal Alabama. It's important to have a forum or "user group" where local communities can meet, share, learn, and communicate information about flooding and how to improve flooding management and outreach. To help meet this need, a flooding user group, the South Alabama Flood Engagement Team (SAFE -T) was formed as part of the Community Resilience Initiative (CRI). CRI began in 2016 and is a collaborative effort led by the Alabama Department of Conservation and Natural Resources and Weeks Bay Reserve with funding from the National Oceanic and Atmospheric Administration or NOAA. An advisory team that includes the Alabama Department of Economic and Community Affairs, Baldwin County Soil and Water Conservation District, City of Orange Beach, Coastal States Organization, FEMA, Grand Bay National Estuarine Research Reserve, MS-AL Sea Grant, NOAA, Smart Home America, and South Alabama Regional Planning Commission collaborates with communities in Mobile and Baldwin Counties to address flooding and floodplain management problems. SAFE-T was created as a network of practitioners to increase floodplain management capacity through shared challenges, solutions, and resources.

To establish SAFE-T, partners in the project reached out to floodplain managers, consultants, and community officials to establish the group's foundation and the first meeting was held in July 2018 with a goal to meet quarterly thereafter. Since that inaugural gathering, 15 meetings and trainings have been held with a range of participant expertise from both sides of Mobile Bay, including municipal and county floodplain managers, engineers, emergency managers, surveyors, insurance agents, and realtors. Throughout 2018 and 2019, SAFE-T met in-person, typically over a good hot lunch. Topics discussed have included government versus private market flood insurance, elevation certificates, datadriven flood research, and how local communities are using drones to communicate post-disaster conditions.

SAFE-T organizers faced a challenge in 2020 amidst the COVID-19 pandemic. How do you keep the ball rolling on an initiative whose goal is to bring people together during a time when in-person gatherings are discouraged? To keep up SAFE-T's momentum and also continue to offer professional education credit opportunities for the group's attendees, SAFE-T has transitioned to a virtual forum (for now). When asked about training needs over the past several years, learning more about FEMA's process to revise flood insurance rate maps has been a consistent theme among the group. This past October, SAFE-T organizers partnered with Alabama Department of Economic and Community Affairs and Wood Consulting to offer two, 3-hour virtual trainings for community officials and those making flood map change requests. In total, nine webinars and virtual trainings have been held so far, on topics including sea-level rise, hurricanes and global warming, environmental justice, and facilitating virtual meetings.

Most recently, a virtual introduction to FEMA's Community Rating System was held this January. The Community Rating System is a program that rewards communities for taking flood management actions that go above and beyond minimum standards. Communities received "points" for these efforts, and property owners in that community are rewarded with a discount on their flood insurance premiums. Of the 27 communities in coastal Alabama, five are currently participating in the program—Dauphin Island, Baldwin County, Foley, Gulf Shores, and Orange Beach. Alabama lags in participation compared to nearby states, so a long-term goal of the Community Resilience Initiative project has been to encourage more participation.

For the immediate future, SAFE-T will continue to bring flood management professionals together over our computer screens and telephones. We look forward to the day we can meet (and eat) together again in person to tackle flood is-

Article courtesy of Mike Shelton and Amy Gores

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# Baldwin County Special Flood Hazard Areas Map

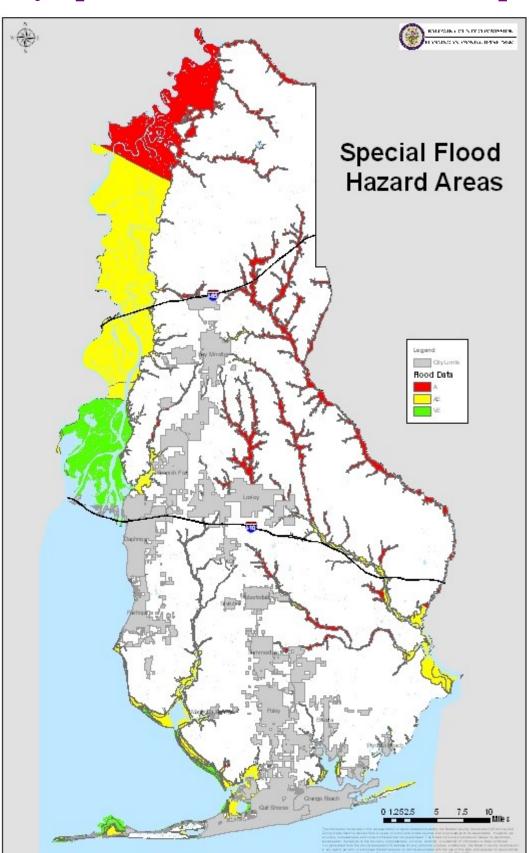
Baldwin County is comprised of approximately 1,596.3 square miles (1,067,231 acres) of which 188,628 acres is in the A, AE and VE flood zones.

The Baldwin County Inspection Department maintains FIRM maps. These maps are available for public inspection during normal business hours. They may also be viewed at your local library. Elevation Certificates for the past few years may also be obtained at the Baldwin County Inspection Department. Staff is available to assist you with the following information:

- \* Whether a property is located within an NFIP or County mapped flood zone.
- \* FEMA flood zone and regulatory base flood elevation.
- \* FEMA Elevation Certificate, if available. The Elevation Certificate is an essential tool used to accurately rate flood insurance policies.
- \* Information on mandatory flood insurance purchase requirements.
- \* Regulatory provisions that may apply to your property.
- \* If available, whether or not the property has ever suffered any flood damage.

  Upon written request, you may obtain a map of your property as it relates to a local flood hazard area.

  Contact the Baldwin County Planning & Zoning Department or visit their website at <a href="https://www.planning.baldwincountyal">www.planning.baldwincountyal</a>



Page 1

Track the Tides is a citizen science project led by Weeks Bay Reserve that aims to increase awareness and local knowledge of nuisance flooding among residents of Fish and Magnolia Rivers and provide researchers with valuable data on these flood events. Nuisance flooding, sometimes referred to as high tide flooding, occurs when local sea level temporarily rises above the minor flooding threshold set locally by NOAA's National Weather Service. These floods happen in the absence of storm surge or riverine flooding. When water levels surpass the threshold, different threats to public safety arise. Communities might be faced with road closures, damage to infrastructure, and overwhelmed storm drains (Alabama - State Summaries 2019 (ncics.org).

The project utilizes educational trainings to fill in the gaps concerning what nuisance flooding is and the regional impacts on coastal communities. Following the trainings, willing participants host a stream gauge that is used by the homeowner to monitor and report water depth during flood events. Stream gauges, also known as staff gauges or water depth gauges, are vertical boards with graduated markings – like a large ruler - that indicate water depth. The gauges are installed by Reserve staff during periods of low precipitation and calm conditions at a water correlating with water level measurements at the Weeks Bay Tide station. These low-profile gauges are installed on waterfront owner's decks or boathouses and project participants simply snap a photo of the water level reading and submit the image via text to researchers at the Reserve. An additional project goal is to record how often and to what extent localized flooding occurs due to rainfall and storm events outside of what would be considered a "nuisance" flood. Therefore, select sites are asked to host rain gauges to collect precipitation data at key locations throughout the Weeks Bay watershed.

Finally, the Track the Tides project also aims to increase awareness about marine debris and steps homeowners can take to prevent litter from entering waterways. Anything from coolers to those colorful flamingo lawn ornaments can be swept up in a flood event. Many man-made materials are persistent and, when they are either intentionally or unintentionally introduced into the watershed, contribute to the larger plastic pollution problem that plagues our estuaries and world oceans. Marine debris can impact shorelines, disrupt food webs, and significantly decreases the aesthetic value of waterfront property and the ability to appreciate nature's beauty and restorative properties.

All the data collected from this project can be used to track the timing and influence of tides and rainfall events on water depths within the rivers. When it is compared to precipitation data, researchers can better understand the timing and extent of localized flooding from storm events. A better understanding of these dynamics will help inform management decisions for protecting homeowners and the environment during nuisance flood events. If you think you might be interested in learning more or hosting a staff gauge, contact the Reserve at (251) 928-9792 or e-mail Stewardship Coordinator Eric Brunden at eric.brunden@dcnr.alabama.gov

Nuisance flood - Flooding that causes public inconveniences such as road closures and overwhelmed storm drains, etc. sometimes referred to as high tide flooding. Generally localized, a high-tide flooding event occurs when local sea level temporarily rises above an identified threshold height for flooding, in the <u>absence of storm surge or riverine flooding</u>.

Want to mention our interest in all flood events – track changes in height, periodicity, length of time.

Soliciting volunteers who live on the Fish and Magnolia Rivers willing to help us track water depth over time by hosting site to install stream gauge - Volunteers will photograph stream gauge and send image to Reserve. Rain data stored within rain gauge periodically collected by Reserve staff.

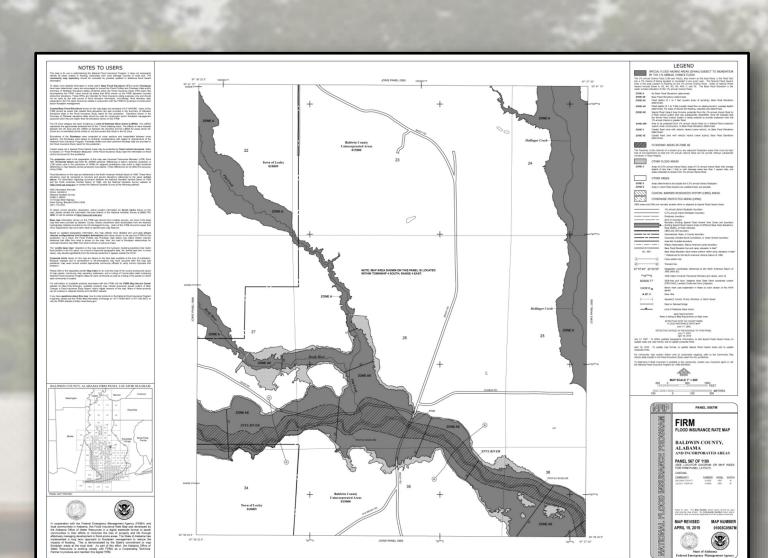
Stream gauges installed by Reserve staff at a level that correlates with measurement recorded at the Weeks Bay Tide station.

Rain gauges installed at volunteers homes at key locations throughout watershed.

Will use data to track timing and influence of tide on the water depths within rivers, record time and extent of localized flooding caused by storm events and compare with precipitation data.

Possible use with future modeling efforts

**Article courtesy of Eric Brunden** 



New flood maps for Baldwin County were approved in April 2019. All property owners should check with the Baldwin County Building Department to see if the flood zone on their property has changed. Many parcels were included in the New maps and will now require flood insurance.. <u>Baldwin Co. Bldg. Dept. 251-972-6837/251-990-4641/251-580-1886</u>

Page 3

Baldwin County is an active participant in the National Flood Insurance Program (NFIP), which provides federally backed flood insurance in communities that enact and enforce floodplain regulations. Since its inception in 1968, the program has been successful in helping flood victims get back on their feet. This is important since property owners who hold a federally backed mortgage must purchase flood insurance if the property is located within a Special Flood Hazard Area (SFHA).

Baldwin County began its participation in the NFIP Community Rating System (CRS) Program in 1994. The CRS Program was developed by the Federal Insurance Administration to provide incentives for NFIP communities to implement more stringent floodplain standards than the minimum NFIP requirements. The CRS rewards these efforts with discounts on flood insurance premiums. The CRS uses a rating system to determine the amount of discount - the better the rating, the more the discount will be. Baldwin County currently holds a <u>Class 7 CRS</u> rating, which equates to a <u>15% discount</u> on new or renewing flood insurance policies for all SFHA properties.

Since flooding is the most common natural disaster, it is important that you obtain the maximum protection. You can purchase flood insurance irrespective of where you reside in high, moderate, or low risk areas, and there is no exclusion as to what type of ownership you represent (i.e. homeowner, renter or business owner).

To help protect property and reduce potential losses due to flooding, please refer to this fact sheet in the event of an impending hurricane, tropical storm or notification of projected heavy rainfall. During extended periods of heavy rainfall, low-lying areas within the County are at risk for flooding. Visit the FEMA website (www.fema.gov) for more information on the National Flood Insurance Program (NFIP).





## Baldwin County's Storm Ready Flood Warning System

Baldwin County has been designated as a StormReady Community by the National Weather Service. Storm-Ready communities are better prepared to save lives from the onslaught of severe weather through advanced planning, education and awareness. No community is storm proof, but StormReady can help communities save lives.

Baldwin County's Emergency Management Agency uses several warning devices to warn residents and visitors of storms and potential rising water hazards.

A REVERSE 911 system was purchased in 2004 and allows Emergency Management to link its E911 telephone databases and existing GIS Mapping Systems to target a precise geographic area and quickly notify individuals in the event of a disaster or threat. Reverse 911 mes-

sages are prerecorded messages sent to home phones that are nonrestrictive and cell phones that are registered with the Emergency 911 Agency. The system has the capability to send messages via text and TTY/TDD calling for the hearing impaired.

Flood warnings are disseminated by the Emergency Alert System through local radio and television stations and by NOAA Weather Radio at 162.400 or 162.550 MHz depending on your location.

In the event of flood hazards, tune into local Radio and TV Stations for information. (See back page for complete listing of local station identification numbers)

The County provides real-time information regarding high water, road closures, and evacuation routes through

Changeable Message Signs. Warnings may also be issued to affected businesses and residences by mobile public address systems on emergency vehicles. When you hear these messages you should follow the instructions and tune to your radio and TV stations for more

information.

For additional information regarding Baldwin County's flood warning program, contact Baldwin County Emergency Management Agency at 251.972.6807.

# Flood Monitoring Stations Aid in Early Detection of Rising Waters

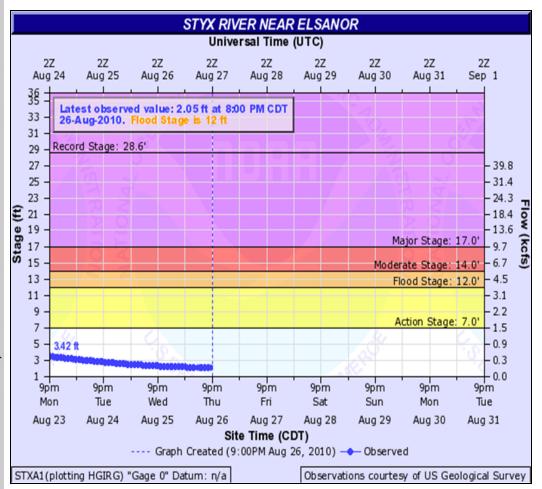
Flood monitoring stations are located on the Fish, Magnolia, Styx, Mobile and Perdido Rivers. These stations are monitored by the National Weather Service and Baldwin County Emergency Management Agency. This information is used to monitor stream flow and stream height for early detection of rising water. This monitoring allows emergency personnel to make better decisions about warning people in flood prone areas.

You can access forecasts online as well as weather discussions, radar information, and satellite photos through the National Weather Service flood forecast site which can be viewed at:

http://www.srh.noaa.gov/mob/?n=rivers

Additional USGS stream gages are located on the Fish River near Silverhill; the Magnolia River at US Highway 98; Wolf Creek below Foley; and the Styx River near Loxley. Data from these sites can be found on the USGS website at

http://waterwatch.usgs.gov/



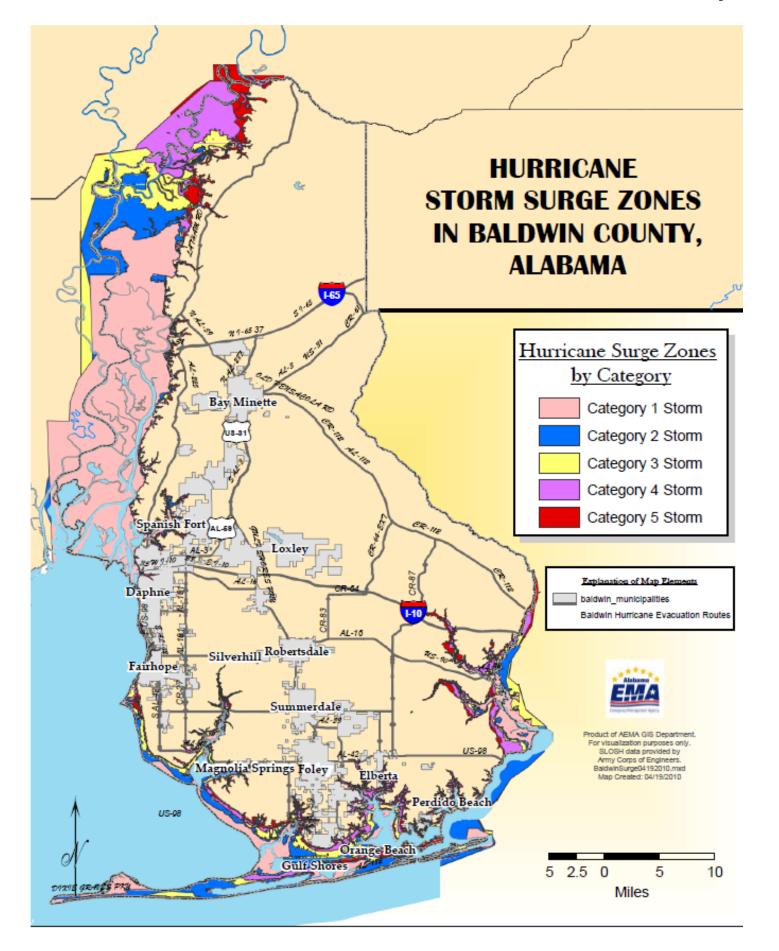
### Flood Terms to Know!

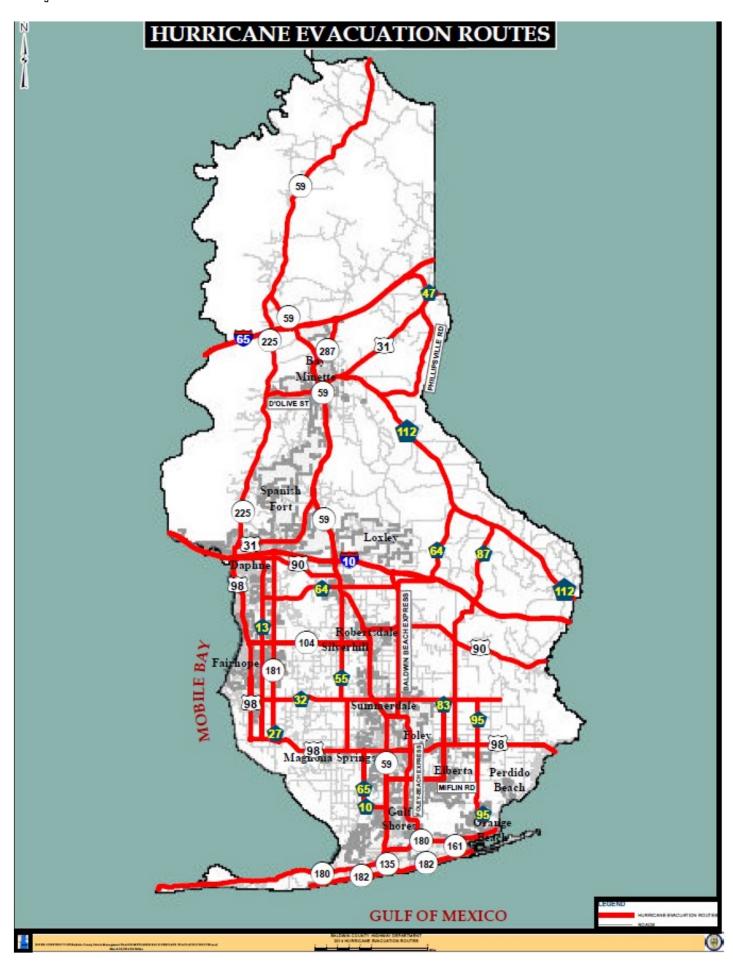
**FLOOD WATCH:** Flash flooding is possible within the watch area.

FLASH FLOOD WARNING: Flash flooding is imminent or has been reported in the warning area and evacuation is advisable.

\*A flash flood is caused by excessive rainfall in a short period of time, generally less than 6 hours.

\*When a flash flood warning is issued you may have 30 minutes or less to act. Therefore, you should preplan the actions you will take when a flood warning is issued.





# **Baldwin County Flood Hazard Facts**



Baldwin County is located in southwestern Alabama on the Gulf of Mexico. The county encompasses an area of approximately 1,596.35 square miles and is bordered to the northwest by Washington County, to the north by Clarke and Monroe Counties, to the east by Escambia County, Florida, to the south by the Gulf of Mexico, and to the west by Mobile County. The County seat is in the City of Bay Minette which is located in the north central part of the county. A majority of Baldwin County is entirely surrounded by water, except for a 17– mile stretch along the northeastern border.

- It is surrounded by Mobile Bay, the Tensaw River, and Mobile River to the west; Little River to the north; Perdido River and Perdido Bay to the east; and the Gulf of Mexico to the south.
- There are approximately 1800 miles of streams and rivers in Baldwin County identified in the United States Census Bureau (USCB) TIGER files.

Some of the more prominent water bodies internal to the county include: Bay Minette Creek, Styx River, Blackwater River, Fish River, Magnolia River, Weeks Bay, Bon Secour River, the Gulf Intracoastal Waterway, Oyster Bay, Wolf Bay, Soldier's Creek and Palmetto Creek. Approximately 22 percent of the land in Baldwin County is considered wetland.

Baldwin County has suffered from numerous major flood events brought on by intense or prolonged rainfall and resulting in loss of life and millions of dollars in property damage. Based on historical information, the county can expect an average of 2.5 flood events per year.

Most flooding occurs along the Fish River located in the southwestern portion of the county and Styx River in the central eastern portion of the county. Other rivers and creeks in the county include the Mobile River, Perdido River, Bay Minette Creek, Hollinger Creek and their tributaries. The cities of Gulf Shores and Orange Beach and the Fort Morgan Peninsula are at the greatest risk for coastal flooding.

# Hurricane & Tropical Depression Events that have affected Baldwin County since 2004

Hurricane Ivan -2004
Hurricane Katrina -2005
Hurricane Gustav-2008
Tropical Storm Ida-2009
Heavy Rains-March 26-27-2009
Historic Flooding-April 29-30, 2014
Hurricane Sally - September 16, 2020

Pana 15

# Flood Insurance Is For Your Financial Protection It's Never Too Early to Purchase A Flood Insurance Policy



Being prepared for a flood includes having flood insurance. With floods, there is usually some resulting loss or damage of property. Unfortunately, homeowners' insurance policies do not cover flood damage. However, flood insurance coverage is available under the NFIP for participating communities with the exception of the Coastal Barrier Resources Act (COBRA) areas along the Fort Morgan Peninsula. In these areas, private flood insurance may be available.

Many people think they don't need flood insurance because federal disaster assistance will bail them out. But floods are not always declared a federal disaster area. Even when they are, aid is usually in the form of a loan, which must be paid back with interest. Flood insurance on the other hand, pays for all covered losses, and unlike loans, that money doesn't have to be paid back. You can cover your home's structure for up to \$250,000, and its contents for up to \$100,000. For businesses, structural coverage is available up to \$500,000, and up to \$500,000 for contents.

As a result of participating in the Community Rating System Program (CRS), Baldwin County has successfully reduced flood insurance premiums by 20% resulting in a savings to the citizens of Baldwin County. A 10% discount is provided for non-SHFAs. Instead of paying higher premiums, the money saved hopefully stays in the community.

Currently Baldwin County has 9,783 flood insurance policies in force which estimates to \$2,126,335,400 respectively. Since inception into the NFIP, there have been 6,985 losses paid totaling approximately \$204,410,128.

There are 6,080 policies in force in the SFHA, with an average premium (after 15% discount) of \$621 which is a savings of \$110 and a savings to the citizens of Baldwin County of \$666,617. There are 1929 policies in force in the Non-SFHA, with an average premium (after 5% discount) of \$334 which is a savings of \$33,948.

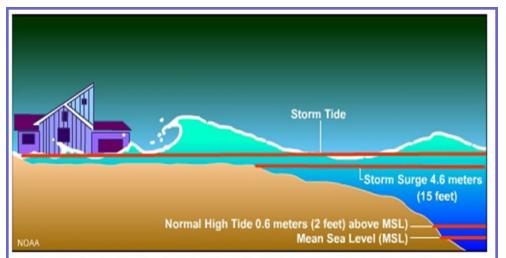
For more information about flood insurance, property owners and potential buyers should contact their local insurance agent or call the toll-free information line for the National Flood Insurance Program (NFIP) at 1-800-427-4661.



# Storm Surge Can Cause Sweeping Damage

Wave and current action associated with the tide cause extensive damage. Water weighs approximately 1,700 pounds per cubic yard; extended pounding by frequent waves can demolish any structure not specifically designed to withstand such forces.

The current created by the tide combine with the action of the waves to severely erode beaches and coastal highways. Many buildings withstand hurricane force winds until their foundations, undermined by erosion, are weakened and fall.



Storm surge is a large dome of water, often 50 to 100 miles wide, that sweeps across the coastline where a hurricane makes landfall. The storm tide is the combination of the storm surge and the astronomical tide.



The level of surge in a particular area is also determined by the slope of the continental shelf. A shallow slope off the coast will allow a greater surge to inundate coastal communities. Communities with a steeper continental shelf will not see as much surge inundation although large breaking waves can still present major problems. Storm tides, waves, and currents in confined harbors severely damage ships, marinas, and pleasure boats.

In general, the more intense the storm, and the closer a community is to the right-front quadrant, the larger the area that must evacuate. The problem is always the uncertainty about how intense the storm will be when it finally makes landfall. Emergency managers and local officials balance the uncertainty with the human and economic risks to their community. This is why a rule of thumb for emergency managers is to plan for a storm one category higher than what is forecast. This is a reasonable precaution to help minimize the loss of life from hurricanes.

# Top 10

Everyone Lives in a Flood Zone

You don't need to live near water to be flooded. Floods are caused by storms, melting snow, hurricanes and water backup due to inadequate or overloaded drainage systems, dam or levee failure etc.

Flood Damage Is Not Covered by Homeowner's Policies

You can protect your home, business, and belongings with flood insurance from the National Flood Insurance Program. You can insure your home with flood insurance for up to \$250,000 for the building and \$100,000 for your contents.



It doesn't matter whether your flood risk is high, medium or low, you can buy flood insurance as long as your community participates in the National Flood Insurance Program. And, it is a good idea to buy for low or moderate risks— almost 25 percent of all flood insurance claims come from low and moderate risk areas.

The average flood insurance policy costs a little more than \$300 a year for about \$100,000 of coverage. In comparison, a disaster home loan can cost you more than \$300 a month for \$50,000 over 20 years.

Contents Coverage Is Separate, So Renters Can Insure Their Belongings Too

Up to \$100,000 contents coverage is available for homeowners and renters. Whether you rent or own your home or business, make sure to ask your insurance agent about contents coverage since it is not automatically included with building coverage policies.

# Facts Everyone Should Know About The National Flood Insurance Program (NFIP)

### Flood Insurance Is Affordable



The average flood insurance policy costs a little more than \$300 a year for about \$100,000 of coverage. In comparison, a disaster home loan can cost you more than \$300 a month for \$50,000 over 20

years.

### There Is a Low-Cost

Policy for Homes in Low to Moderate Risk Areas

The Preferred Risk Policy is available for just over

The Preferred Risk Policy is available for just over \$100 a year. You can buy up to \$250,000 of coverage for your home and \$60,000 of coverage for your contents.



There is Usually a 30-Day Waiting Period Before Coverage Is Effective

Plan ahead so you're not caught without flood insurance when a flood threatens your home or busi-

ness.

### **Federal Disaster Assistance is Not the Answer**

Federal disaster assistance is only available if the President of the United States declares a disaster.

More than 90 percent of all disasters in the United States are not presidentially declared. Flood insurance pays even if a disaster is not declared.

Up To \$1 Million of Flood Insurance Coverage Is Available for Non-Residential Buildings and The Contents
Up to \$500,000 of coverage is available for non-residential buildings and up to \$500,000 of coverage is available for the contents of non-residential buildings.

For more information about flood insurance, property owners should contact their local insurance agent or call the toll-free information line for the National Flood Insurance Program (NFIP) at: 1-800-427-4661.

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# The Four Stages of Flood Safety

Flood safety protection measures should be taken in four stages: Preparatory Flood Warning, Flood Warning, During the Flood and After the Flood.

### **Preparatory Flood Warning**

- ♦ Have a stock of food that requires no cooking.
- ♦ Have a first aid kit available.
- ♦ Have your vehicle fueled.
- Consider purchasing flood insurance for your home and belongings. Homeowner's insurance does *NOT* cover flooding.
- Tune in to a radio, television or NOAA Weather Radio for flood warnings.
- Obey warnings from officials evacuate when a notice is issued.
- ♦ Know your evacuation zone and route to a place of safety.
- ♦ Know what supplies to take with you.
- Be cautious and avoid flood-prone areas when leaving.
- Steps should be taken to reduce property losses:
- Move outdoor furniture and carry downstairs furniture to upper floors or higher locations.
- Sandbags can help slow down floodwaters to keep them from reaching your possessions.
- Know what your current insurance policy does and does not cover. By retrofitting, you can minimize loss prior to floods by building floodwalls, elevating a structure, etc.

### **Flood Warning**

- Store drinking water in sterile, covered containers.
- Move valuable objects higher. Place them on shelves, tables and countertops.
- Shut off electricity, gas and water to your home prior to leaving.
- ♦ Leave early enough to avoid traffic congestion.

### **During the Flood**

- Stay on higher ground.
- ♦ Do not drive on a flooded road more people drown in their cars than anywhere else. Do not drive around road barriers; the road or bridge may be washed out.
- If your vehicle stalls, abandon it immediately and seek higher ground.
- Do not attempt to wade across a flowing stream that is above your knees. Drowning is the number one cause of flood deaths, mostly during flash floods. Currents can be deceptive; if you walk in standing water, use a pole or stick to ensure that the ground is still there.
- Stay away from power lines and electrical wires. Electrical current can travel through water.
- ♦ Look out for Animals. Consider shelters where animals are allowed.

### After the Flood

- Do not eat food that has come into contact with floodwater.
- Drink only bottled water or previously stored water.
- ♦ Look before you step. The grounds and floors may be covered with debris including broken bottles and nails. Floors and stairs that have been covered with mud can be slippery.
- Stay away from disaster areas. You may hamper rescue or recovery operations.
- Do not handle live electrical equipment.
- Do not allow children to play in standing water. It may be contaminated with chemicals or sewage.
- Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns or open flames unless you know the gas has been turned off and the area has been ventilated.
- Report downed power lines to the local power company, Emergency Management Agency or local law enforcement authorities.
- Keep tuned in to local radio and television stations for instructions on how to obtain medical care and emergency assistance, such as water, food, clothing, shelter and further weather reports and conditions.



# The Natural & Beneficial Functions of Wetlands and Storm water Management



The wetlands within Baldwin County are indispensable and fragile natural resources with significant development constraints due to flooding, erosion and soil limitations. When portions of floodplains are preserved or restored to their natural state, they provide many benefits to both human and natural systems. Open space resource areas adjacent to floodplain areas increase aesthetics and recreational opportunities; reduce the number and severity of floods, help handle storm water run-off, and minimize non-point water pollution.

Protecting freshwater and coastal wetlands is a critical goal of Baldwin County. Not only do wetlands add significant fish and wildlife habitat to the shore land area, but wetlands play an essential role in preserving water quality by functioning as a buffer for associated water bodies. According to the Southeast Watershed Forum, one acre of fresh water wetlands are val-

ued at \$630 each year for water quality, \$594 for flood retention, \$539 for recreational fishing and \$1,832 for bird watching. Baldwin County has a wetland protection overlay district in all zoned areas covers approximately 280,831 acres. The purpose of the wetland protection overlay district is to promote wetland protection, while taking into account varying ecological, economic development, recreational and aesthetic values.

Wetlands also mitigate flood damage by serving as flood storage areas, minimizing erosion damage to shorelines by slowing the velocity of runoff and replenishing groundwater supplies. American Rivers, a non-profit conservation organization, found that one wetland acre saturated to a depth of one foot holds 333,000 gallons of water, which can flood thirteen average homes thigh-deep. This wetland function protects downstream property owners from flood damage. The velocity of floodwaters decreases when met with resistance from the wetland vegetation, this decrease reduces the water's erosive potential and results in smaller, less severe flooding events.

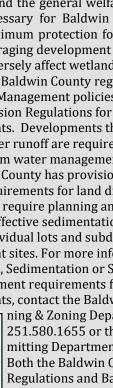
Wetlands within Baldwin County are indispensable and fragile natural resources with significant development constraints due to flooding, erosion and soil limitations. In their natural state, wetlands serve man and nature. They provide habitat areas for fish, wildlife

and vegetation; water quality maintenance and pollution control; flood control; erosion control; natural resource education; and many other causes. Damaging or destroying wetlands threatens public safety and the general welfare. It is therefore necessary for Baldwin County to ensure maximum protection for wetlands by discouraging development activities that may adversely affect wetlands.

Baldwin County regulates Storm water Management policies through the Subdivision Regulations for all new developments. Developments that increase storm water runoff are required to construct storm water management facilities. Baldwin County has provisions that impose requirements for land disturbing activities that require planning and implementation of effective sedimentation controls for individual lots and subdivision development sites. For more information on Erosion, Sedimentation or Storm water Management requirements for new developments, contact the Baldwin County Plan-

> ning & Zoning Department at 251.580.1655 or the Subdivision Permitting Department at 251.937.0278. Both the Baldwin County Subdivision Regulations and Baldwin County Zoning Ordinances are available online at

www.planning.baldwincountyal.gov



# **Help Reduce Your Risk Of Damage**

County Inspection Departments and local libraries. To learn more about property protection measures, visit FEMA's website at <a href="https://www.fema.gov/rebuild/mitigation.shtm">https://www.fema.gov/rebuild/mitigation.shtm</a> and Baldwin County's website under

www.planning.baldwincountyal.gov

FEMA provides grants, in certain situations, for property protection measures that reduce disaster losses and protect life and property from future disaster damages. Projects must provide a long-term solution to a problem. These grants are made to the state or local government rather than to the homeowner directly and often have a cost-share requirement. To learn more about these programs, contact the Baldwin County Inspection Department or visit FEMA's website at <a href="http://www.fema.gov/">http://www.fema.gov/</a> government/grant/hma/index.shtm



A new 3-foot concrete slab foundation was poured before elevating this house on cinder block piers to mitigate against flooding.

# Flood Safety Measures Every Family Needs to Know

To reduce your risk of injury during a flood:

- Do not attempt to cross a fast flowing stream where water is above your ankles.
- Keep children away from rivers, ditches, culverts and storm drains.
- Do not travel on flooded roads or through dip sections.
- Never drive past a "Road Closed" barrier.
- If your home will be affected by flood waters, turn off all electric circuits at the fuse panel or disconnect
- Evacuate the flood hazard area in times of impending flood or when advised to do so by the Sheriff, Police or Fire Departments.
- Prepare a family plan that covers activities before, during and after flood emergencies.

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# **Flood Protection Measures Can**



New Construction MUST be elevated to Base Flood Elevation. A finished elevation certificate must be provided prior to final inspection.

When elevating a structure to mitigate against flooding, it is important to elevate all outdoor appliances as well, like water heaters and this air conditioning unit.



Every year, flooding causes more property damage in the United States than any other type of natural disaster. While construction practices and regulations have made new homes less prone to flooding, many existing structures remain susceptible. You can protect your property through a variety of measures that can vary in complexity and cost. Raising a house above the flood level is the best property protection method short of moving the building entirely out of the floodplain. If a building cannot be removed from harm's way, it can be protected on site. In areas of low flood threat, such as infrequent shallow flooding, barriers, and dry and wet flood proofing, can be effective approaches. Other property protection measures you can take include:

\*Annually inspect your hurricane straps for corrosion and replace them if necessary.

\*Annually inspect your pilings and floor system for splitting, rotting, termite damage, or rusted connecting bolts if your home is on pilings.

\*Raise your furnace, water heater, and electric panel to higher floors or the attic if they are in areas of your home that may be flooded. Raising this equipment will prevent damage. An undamaged water heater may be your best source of fresh water after a flood.

\*Avoid backflow of sewer lines by closing off all sewer line entries into the house. As a last resort, when floods threaten, use large corks or stoppers to plug showers, tubs, or basins.

\*Seal walls in basement with waterproofing compounds to avoid seepage through cracks.

\*Move furniture and any other valuables to higher floors.

\*Keep materials like sandbags, plywood, plastic sheeting, and lumber handy for emergency waterproofing.

\*Keep insurance policies, documents, and other valuables in a safe-deposit box.

\*Keep watercourses free of fill/debris. Many people fail to recognize how regarding their yard, filling a wetland, or discarding debris in a watercourse can cause a problem to themselves and others.

There are publications and assistance in property protection available at the offices of the Baldwin



The unique natural water resources that distinguish Baldwin County as a top choice for living,

recreation and employment, also require unique land use measures to protect and maintain them for future generations. Baldwin County's floodplain regulations are intended to protect private and public property, protect the environment, encourage responsible development and prevent the degradation and deterioration that results from unrestricted use and development.

Always check with the County Planning and Building Inspection Departments before you build, fill, alter, or grade on your property. All new developments, or any alterations, additions, or modifications to your building or land require a permit. Before you begin construction find out which permits and building standards apply by contacting the Baldwin County Building Inspection Department, Planning and Zoning Department, or the Highway Department to determine if you will be required to obtain a permit or to report any possible unauthorized development within the flood-

plain.

In addition to regular building permits, special regulations apply to construction in the floodplain and in floodways. No construction, including filling, is allowed in the mapped floodway without an engineering analysis that shows the project will not increase flood damage elsewhere. Any activity outside the floodplain but within a natural or man-made watercourse also requires a permit.

Elevation or flood-proofing may be required if you plan to substantially improve your existing structure located within a FEMA flood zone (the cost of the improvement or addition is 50 percent of the value of the existing structure). If your property is substantially damaged, Federal regulations may require you to elevate or floodproof as you rebuild. The document titled - "Answers to Questions about Substantially Damage ings" (FEMA-213, May 1991) will help answer questions on this topic and can be obtained free by calling 1-800-480-2520 or by online access at <a href="http://">http://</a> www.fema.gov/library.

If you suspect suspicious activity on whether or not a site obtained a permit, or was required to obtain a permit, contact the Baldwin County Planning & Zoning Department, Building Inspection Office or the Highway Department.







Photos courtesy of AL.com and Alabama Media Group

# Increased Cost of Compliance (ICC) Coverage an Important Part

After a flood event, flood insurance policyholders are assured their claim will be paid and They will have additional options to fund rebuilding.

Flood insurance policyholders also may be eligible for Increased Cost of Compliance (ICC) coverage benefits. ICC coverage is an important part of most flood insurance policies. .ICC coverage provides:

- Up to \$30,000 to help property owners who have been substantially damaged to reduce the risk of damage from future floods by elevating, flood proofing (for nonresidential structures), demolishing or relocating their building or home
- ICC coverage in addition to the building coverage for the repair of the actual physical damages from flooding; however, the total payout on a policy may not exceed \$250,000 for residential buildings and \$500,000 for nonresidential buildings.

To be eligible for ICC funds, a building must be insured under the National Flood Insurance Program (NFIP) and must also either (1) be determined by a local build-

official TO BE substantially damaged or (2) qualify as a repetitive loss structure.

Substantial damage is floodrelated damage that equals or exceeds 50 percent of the value of the building. When repaired, the structure must comply with local floodplain management ordinances. If the total damage from flooding is less than 50 percent of the market value of the building, ICC coverage is not available under the substantial damage provision.

Repetitive loss is flood-related damage that occurs twice over a period of 10 years, with the cost of each repair averaging 25 percent or more of the preflood market value of the building. Because the 25 percent cost is an average, it need not be equally distributed.

For example, if the damage was 35

ue of the building in the first event and 15 percent of the value in the second event, the policyholder would qualify for ICC coverage. A flood insurance claim must have been paid in both cases, and it applies only if the community has adopted a repetitive loss

percent of the val-

provision in its floodplain management ordinance.

ICC coverage can help pay for four different types of mitigation activities to bring a building into compliance with the community's floodplain management regulations. These activities include elevation, flood proofing, relocation and demolition.

**Elevation** is the most common means of reducing a building's flood risk. The process consists of raising the building to or above the Base Flood Elevation (BFE). While NFIP policy requires only the lowest floor of the building to be raised to the BFE, some states and communities enforce a "freeboard" requirement, which mandates that the building be raised above the BFE to meet the community's flood protection level.

\* For example, if the BFE for a structure is 4 feet, and the community adopts a 3-foot freeboard requirement, ICC coverage would help pay the cost of elevating the building to meet the 7 foot requirement.

Flood proofing applies only to nonresidential buildings. For a building to be certified as flood proof, it must be watertight to a level 1 foot above the BFE, or to the level of the freeboard requirement (if the community enforces one). Flood proof means that the walls must be substantially impermeable to water and designed to resist the stresses imposed by floods. Flood proofing techniques include installation of watertight shields for doors and windows, drainage collection systems, sump pumps

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# **Drainage System Maintenance Crucial To Reduce Flooding and Protect Road Systems**

Baldwin County's drainage system is used to carry water away from homes and businesses into rivers and streams. It is important to consistently maintain this system so it can be used to full capacity. Proper drainage helps to reduce the risk of flooding and maintain the integrity of the road system. Baldwin County maintains all drainage ways and structures located on the County rights of way and County owned property.

Baldwin County prohibits any dumping of trash or yard debris in these areas, which could result in increased flooding or damages in areas that would otherwise be protected. Owners whose property is located within an identified flood area must ensure that their drainage infrastructure is kept in working order and free from any obstruction that could impede the free flow of water. If you experience problems in any of the County rights of way or wish to report any violations, you are encouraged to contact the County Engineering Department at 251.972.6897; 251.937.0371 or 251.990.4635.

Please help Baldwin County to ensure the capacity of this system. Keep streams and other conveyances that carry rainfall runoff through your property free of obstructions and debris such as trees, tall bushes, and trash.



Drainage systems obstructed with trash or other debris can cause an increased risk of flooding since the floodwaters have no place to drain. The increased flooding caused by those obstructed drains can severely undermine the local roadway infrastructure structure, leading to potential health and safety hazards.

Never dump or throw anything into the streets or storm drainage system. To do so is a violation of the Baldwin County Storm Water Quality Management Ordinance. If you see trash or debris in the storm drainage system, contact the Baldwin County Engineering Department immediately.

## **ICC Coverage**

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and check valves; reinforcement of walls to withstand floodwater pressures; use of sealants to reduce seepage through and around walls; and anchoring the building to resist flotation, collapse and lateral movement.

Relocation involves moving the entire building to another location on the same lot or to another lot, usually outside the floodplain.

Relocation can offer the greatest protection from future flooding; however, if the new location is still within the Special Flood Hazard Area, the building must still be NFIP-compliant, meaning it must be elevated or flood proofed (if nonresidential).

**Demolition** may be necessary in cases where damage is too severe to warrant elevation, flood proofing or relocation; or the building is in such a poor condition

that it is not worth the investment to undertake a combination of the above activities.

- All applicable permits must be obtained prior to demolishing the building.
- The property may be redeveloped after demolition is complete, subject to all applicable federal, state and community laws and requirements.



A FEMA/State Disaster recovery center set up in Bay Minette