

## **ESCAMBIA COUNTY** **FLOOD WARNING PROGRAM**

### **Purpose:**

The purpose of this plan is to provide information for the safety of residents and visitors in the event conditions create a flooding hazard.

### **Hazard Analysis:**

Escambia County is the far western most county in the panhandle of the State of Florida. Escambia County is considered a coastal county surrounded on its' borders by water bodies on three sides, with two distinct barrier islands. Perdido Key and Santa Rosa Island (Pensacola Beach)

Heavy rainfall from tropical storms, hurricanes, or just our typical Florida winter and summer thunder and rainstorms can also be a potential threat for flooding. Heavy rainfall and runoff into the rivers, streams, creeks, and closed basin areas have the potential to flood property and homes, threatening property damage and loss of life.

Escambia County also has to be concerned with rainfall and river activity to the north of us in Alabama where the Perdido and Escambia Rivers originate. Rain activity in Alabama can effect what happens here in Escambia County. There are no dams or other water control issue that need to be planned for, but water flows downhill and we are at the bottom of the hill.

Flood depths and stages for the two rivers are in the following pages. Velocities are monitored and maintained by the US Geological Survey and a sample of the historical information is attached.

Time is usually available to respond to flood potential in the County. Flash floods are really not a concern here in the County and thunderstorms and tropical events that cause flooding are usually known with significant lead-time. Specifically, times for when flooding hits the county and how it travels downstream is provided in the river height impact description on the following pages.

### **FLOOD VULNERABILITY:**

The considerations are storm surge, riverine and closed basin flooding.

### **FLOOD THREAT RECOGNITION:**

Escambia County has several ways to monitor and gather information about potential

flood threats. Again, flood situations are usually not a surprise and allow for several hours, if not days of response monitoring and preparation. The systems we use are as follows:

EMWIN-The National Weather Service (NWS) produces weather comments, forecasts, watches, and warnings for our geographic area. Those notices are sent out through the EMWIN software, which is found on a computer located in the EOC. The actual text that was created is what we receive. The system also allows us to forward the notices on to members of our disaster committee through e-mail or pager systems, also utilizing the full text of the notice as it was created by NWS. This allows for 24-hour monitoring of any situation that may arise. The notices that are created by NWS also include specific geographic references to include the specific rivers in the area that are experiencing rising levels.

NOAA Radio-Those same messages that NWS put out and received through EMWIN are also received through the NOAA radio system.

EAS-Emergency Alert System may also be activated by various agencies to send out a notice of warning or watch to the public under specific circumstances.

Our office would also monitor the NOAA and NWS websites as the need arises. These sites provide river height forecasts and graphical representations of the area that may be impacted by flooding. Maps are shown with watch and warning areas identified. The site also accesses river gauges that have been placed in four locations in our county, which can also be accessed electronically over the internet. A sample of each site in this document. The locations of the river gauges are as follows:

- Escambia River near Molino
- Escambia River near Century
- Perdido River at Barrineau Park
- Eleven Mile Creek Near Pensacola

Note: River gauges are maintained by the USGS.

Direct phone communications with NWS would also transpire to get more specific information and impressions of the situation that can be used for the decision making process.

Should a situation become serious, the local fire department and law enforcement personnel are also notified to begin frequent monitoring at known flood points to provide information for the decision making process.

Community citizens calling into the communication center will also keep us abreast of very specific areas of potential flooding.

There are also weather stations throughout the County that are accessed electronically through the Weatherlink program in the E.O.C. These weather stations include rain gauges and can be found in the following locations:

Town of Century	Perdido Key
E.O.C.	Walnut Hill
Molino	Warrington
Pensacola Beach	

Using rain information and weather/rain forecasts will help provide valuable information as to the likelihood of flooding in certain areas based on history. An additional compliment is our direct contact with National Weather Service in Mobile, Alabama, which monitors flooding situations and has the responsibility for putting out flood warnings over the NOAA radios, which we also have in the E.O.C. and in the hands of countless members of our community.

All storm surge heights are based on the SLOSH model data provided by the National Hurricane Center and the Army Corps of Engineers Mobile District in the 1999 Northwest Florida Hurricane Evacuation Study. Storm surge maps are maintained and distributed by the Emergency Management Office and are available to the public via the internet or CD that is produced for public information. In concert with the surge maps, Emergency Management utilizes the HURREVAC software. Within that software, we can predict rainfall and a storms projected path and intensity which can be used to provide predictions for the impacted areas.

Monitoring of all of these systems is done 24-hours a day. During business hours, EM staff regularly monitor information throughout the day. After hours, the communications center, 911, monitors the situation and has notification protocols to follow for various types of events.

### **EMERGENCY WARNING DISSEMINATION:**

The Emergency Management Office maintains a GIS database and map that identifies historical flood problems. NFIP repetitive loss structures are also identified.

When there is a potential for flooding in any of these areas as determined by the Flood Recognition System, the Emergency Management Office will warn the affected areas by one or more of the following methods:

1. Activate the emergency telephone notification system to warn only the affected area residents.
2. Activate the Emergency Alert System. Currently an EAS notification will warn all county residents, not just the affected area.

3. Activate the Cox Cable interrupt system. Cox Communications serves all cable television customers from Cantonment south, excluding Pensacola Beach. Any EAS activation will also be transmitted on all cable television providers.
4. If necessary, fire department and law enforcement personnel will drive through the affected area making announcements using public address systems or door to door contact. This is usually done only for hurricane evacuations.

A list of critical facilities and emergency contacts is updated annually and maintained by the Emergency Management Office and these facilities are notified of any potential flooding threat. These facilities will also be included in the emergency telephone notification system call out if occupied during the time of call.

#### **MAINTENANCE AND TESTING:**

The Emergency Telephone Notification System is automatically test each week.  
EMWIN notification system is tested weekly.  
EAS system is tested weekly  
The Weatherlink information is monitored daily and any problems are automatically made known.

River flood stage history and information as follows:

**ESCAMBIA RIVER DATA  
FOR ESCAMBIA COUNTY**

<b><u>GAUGE NAME</u></b>	<b><u>GAUGE HEIGHT</u></b>	<b><u>IMPACT/ RESPONSE ACTIONS</u></b>
Century	17.0	Flood Stage - Considerable overflow begins
Century	19.0	Low pasture land floods - Cattle need to be moved
Century	23.0	Water begins to reach Mystic Springs Road, Worley Road, Bamer Holley Ln and River Bend Road. Approximately 5 homes become isolated in the McDavid and Molino areas. Public boat ramps at Mystic Springs and Fairground Rd are submerged.
Century	23.7	Second highest flood of record - Approximately 8 more homes become isolated and sections of Mystic Springs Road, River Bend Road and Fairground Road are impassable. Water from the river flows into ponds at B&L Catfish Farm on Mystic Springs Road.
Century	24.2	Flood of record (3/18/90) - Up to 1 foot of water enters several homes on Worley Road, Daffin Road and Fairground Road.
Century	37.8	Pre-Record Flood (3/15/29) - No recent history available for levels of flooding above 24.2.

**Note:**

It takes approximately 12 hours for the water at the gauge in Century to reach the McDavid area and approximately 24 hours to reach the next gauge at Quintet Road. With the exception of the barge loading docks at Solutia and Gulf Power's Crist Generating Plant, there are no flooding problems south of Quintet Road.

There are a number of local creeks that flow into the Escambia River south of the gauge. Recent history has shown that the reading in Century may not reflect the potential for flooding problems in the McDavid and Molino areas due to heavy local rainfall.

**PERDIDO RIVER DATA  
FOR ESCAMBIA COUNTY**

There are no official records maintained on this river by the NWS. The USGS does maintain records and it is my understanding that the flooding associated with Hurricane Georges in September 1998 was a record flood. During that event there were 5 homes on River Annex Road that were flooded, at least on business (Ruby's Fish Camp and residence) that were flooded and approximately 25 homes on Hurst Hammock Rd that were flooded. Prior to that event, only the homes on River Annex Rd had reported any flooding. Effective September 2000, the River Forecast Center will begin issuing forecasts for the Perdido River with the established flood stage of 18.5 feet as measured by the gauge at Barrineau Park.

<b><u>GAUGE NAME</u></b>	<b><u>GAUGE HEIGHT</u></b>	<b><u>IMPACT/ RESPONSE ACTIONS</u></b>
Barrineau Park	18.5	The river leaves its banks at Adventures Unlimited on River Annex Road and approaches the building.
Barrineau Park	20.0	Water reaches the edge of Adventures Unlimited Building on River Annex Road.
Barrineau Park	20.5	Water reaches the western edge of River Annex Road at Adventures Unlimited.
Barrineau Park	21.0	Water covers River Annex Road and it becomes unsafe to pass.
Barrineau Park	26.30	<b>Flood of Record.</b> September 29, 1998 (Hurricane Georges) Approximately one foot of water entered the elevated residence to the north of Adventures Unlimited. This was the first time in recent history that residents at Hurst Hammock at the mouth of the Perdido River and Perdido Bay reported any flooding.

**Note:**

It takes approximately 6-8 hours for the water at Barrineau Park to reach the River Annex Road area.

## **Warnings Provided to the Public**

Warnings can be provided in several ways. There is a reverse 911-Dialogic system that can isolate specific geographical areas and locations of homeowners, and then make a phone call directly to them providing a message of warning and what actions to take. There is the use of television and radio, as well as the NOAA radio transmissions for those that have radio receivers. The other means of notification would be physical door-to-door notification, if the situation dictated that action.

## **E.O.C. Actions and Authority**

Any actions taken to notify, warn, evacuate, respond, and recover from flooding events will be provided through the all disaster Comprehensive Emergency Management Plan (CEMP). The plan has been adopted by Board of County Commissioner through County ordinance 37-39. It can be found in the CEMP document. The Director of Public Safety, the Emergency Management Chief, and any other authorized designee, as defined by the CEMP, will determine the authority for any actions taken.