

North Florida Flooding

Spring 2009

FLOOD DAMAGE ASSESSMENT

**A study of the installation of manufactured/mobile homes
and the effects of flooding.**



prepared by the



Bureau of Mobile Home and RV Construction
Division of Motor Vehicles
Department of Highway Safety and Motor Vehicles

MOBILE\MANUFACTURED HOME DAMAGE ASSESSMENT FROM NORTH FLORIDA FLOODING SPRING 2009

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MOBILE/MANUFACTURED HOME DAMAGE ASSESSMENT FROM THE NORTH FLORIDA FLOODING SPRING 2009

The Purpose for Mobile/Manufactured Home Assessments

In 1996, the Bureau of Mobile Home and RV Construction implemented the Mobile Home Licensed Installer's program in accordance with Section 320.8249, Florida Statute. This program includes the testing, licensing and sanctioning of individuals who install mobile homes. A major function of this program is training county and city building officials on how to inspect the set-up of a mobile home to ensure it meets the department rules. In addition to this training responsibility, staff also investigates complaints relating to improper installation of homes.

The Bureau also serves as an inspection agency for the U.S. Department of Housing and Urban Development (HUD) and monitors the construction of mobile/manufactured homes built in Florida. In July 1994 HUD amended its regulations governing mobile home construction to ensure that they were more resistant to wind damage.

The assessment of mobile home damage from different storms gives the Bureau insight as to the effectiveness of its Installation Program and HUD's Manufactured Home Construction and Safety Standards. The effectiveness of installation components, building department training and installer training is also measured.

Limitations of the Report

The purpose of this report is strictly for the use of the Florida Department of Highway Safety and Motor Vehicles to determine the effectiveness of current department administrative rules governing the installation of mobile/manufactured homes.

All statistics reported here are from a sampling of mobile homes inspected. In addition, due to flooding, entry into most mobile/ manufactured homes was not possible making more specific determinations difficult. Consequently, the statistics reported here are estimates. There may be differences between what is reported here and determinations by local building departments, insurance companies or other government agencies.

**DEPARTMENT OF HIGHWAY SAFETY AND MOTOR VEHICLES
DIVISION OF MOTOR VEHICLES
BUREAU OF MOBILE HOME AND RV CONSTRUCTION**

NORTH FLORIDA FLOODING

SPRING 2009

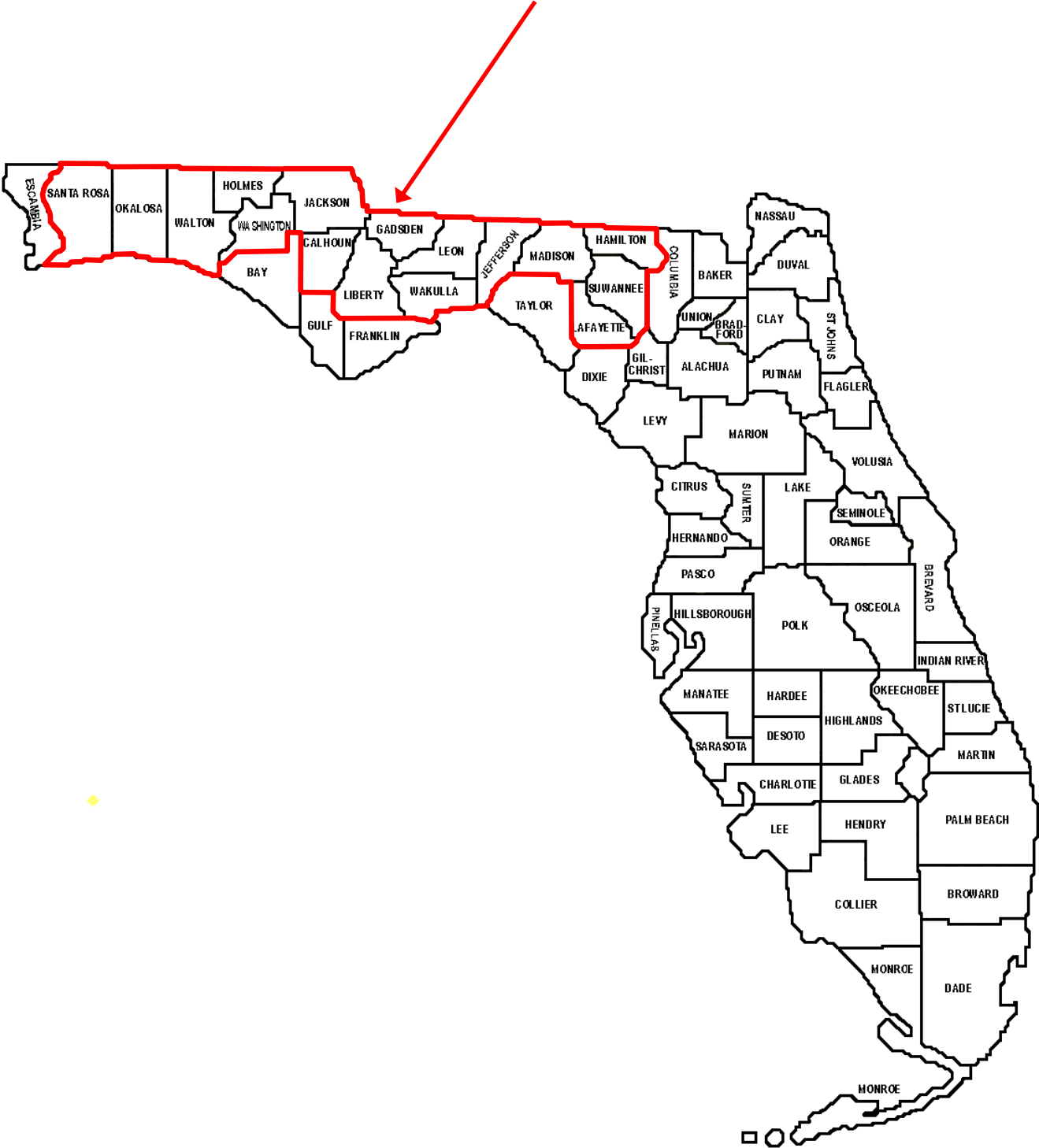
ASSESSMENT

A series of heavy rains in late March and early April 2009 in Southeastern Alabama and all of South Georgia and North Florida caused major flooding of many rivers and streams of several Florida counties in the panhandle and eastward. During an 11-day stretch, the National Weather Service in Tallahassee reported six separate severe weather episodes. In addition to the severe weather, excessive rainfall produced widespread area flooding with many areas receiving in excess of a foot of rain during this period. The counties in Florida reporting flooding along rivers and streams were Santa Rosa, Okaloosa, Walton, Holmes, Washington, Jackson, Calhoun, Gadsden, Liberty, Leon, Jefferson, Madison and Hamilton. Madison County received the highest recorded flood levels along the Withlacoochee River near Pinetta.

Emergency Operations Centers (EOC) and Building Departments in each one of the Florida counties listed above reported record or near record flood levels along many rivers and streams during this time. Flooded roadways along the rivers and streams made it impossible to investigate all the areas flooded and some of the photographs and statistics in this report are from the local EOCs and building departments. It was reported 253 roads and 23 bridges were closed at some time during the flooding in the panhandle. Building Officials in several counties said many mobile homes that received flood damage along the rivers and streams had been placed there long before the flood elevation certification was required. No mobile homes directly on the rivers and streams were tied down to current installation standards. All are older homes built in the 60's and 70's with few or no ground anchors and some have some type of unapproved method of tying the mobile home down. Most residents interviewed said this flood event was not the first time their mobile homes were flooded and will repair them again rather than replacing and/or raising them above the maximum flood level. Some mobile homes in low land areas next to the rivers experienced flood waters inside the home, but did not shift on their foundations (piers). The slow rising flood waters had little movement or velocity. No shifting of the homes on their foundations or undermining the piers or pier footers were found in the areas investigated.

The Bureau worked with many emergency operation centers and building departments. No evidence from any source was found of any mobile homes either shifting on their foundations or being displaced from their foundation as a result of these flood waters. All homes investigated were on private property.

AREA OF COVERAGE



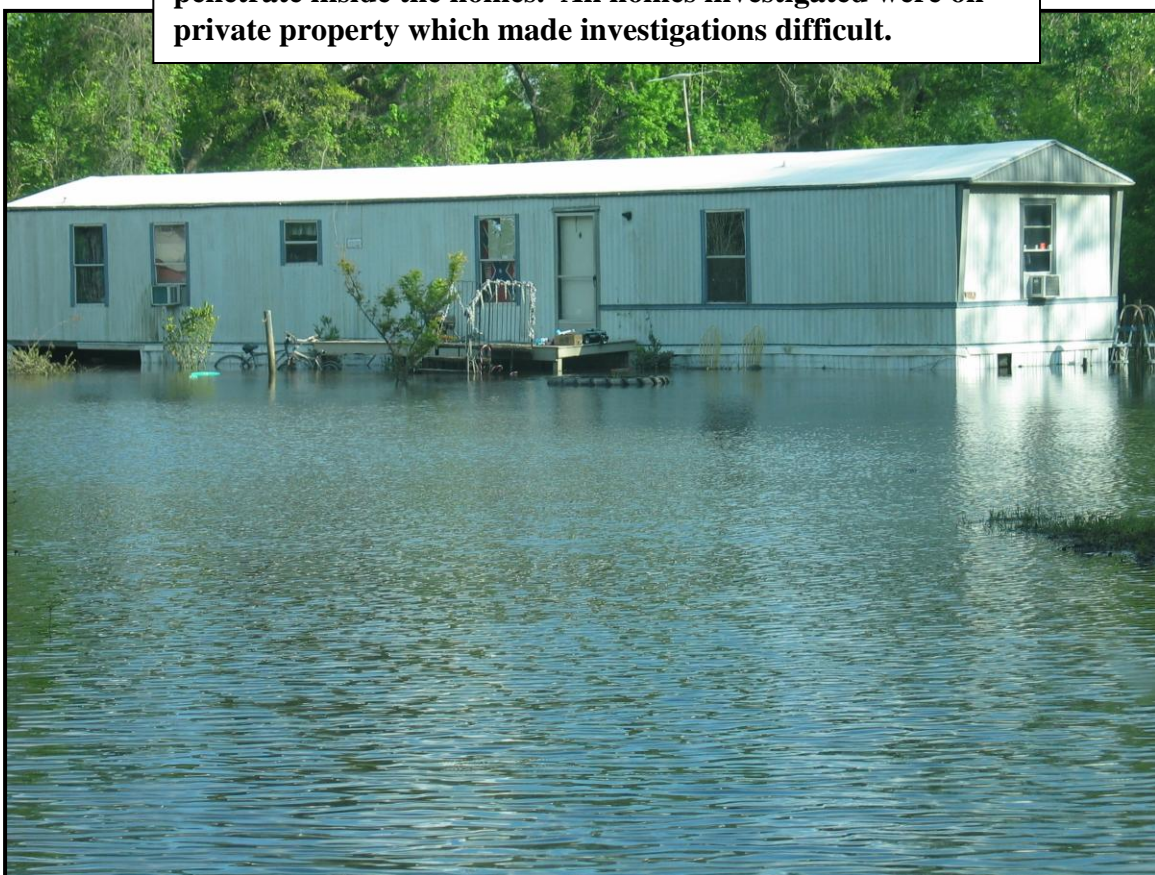


Older model homes with very few tie-downs. With Florida's flooding, which is slow rising water, no mobile homes were found with any movement on their foundation.



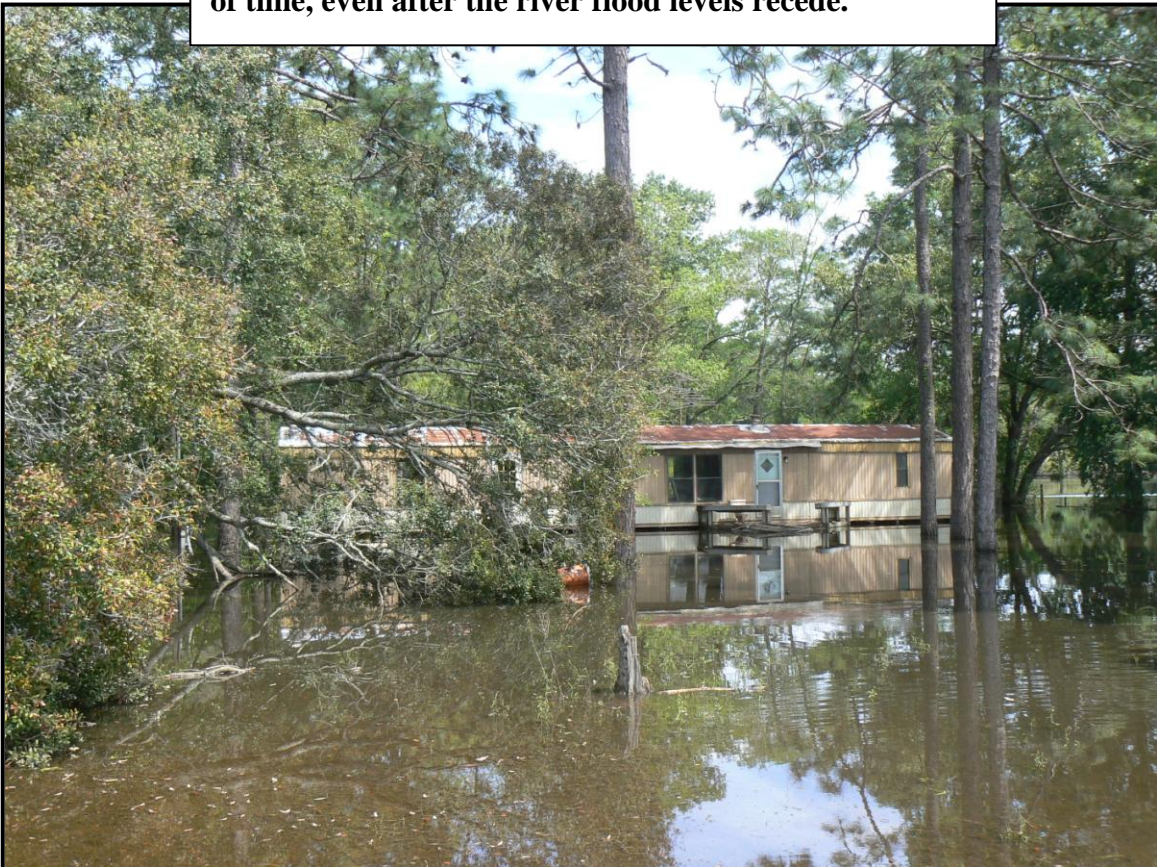


Most homes had water under the homes, but a few had water penetrate inside the homes. All homes investigated were on private property which made investigations difficult.



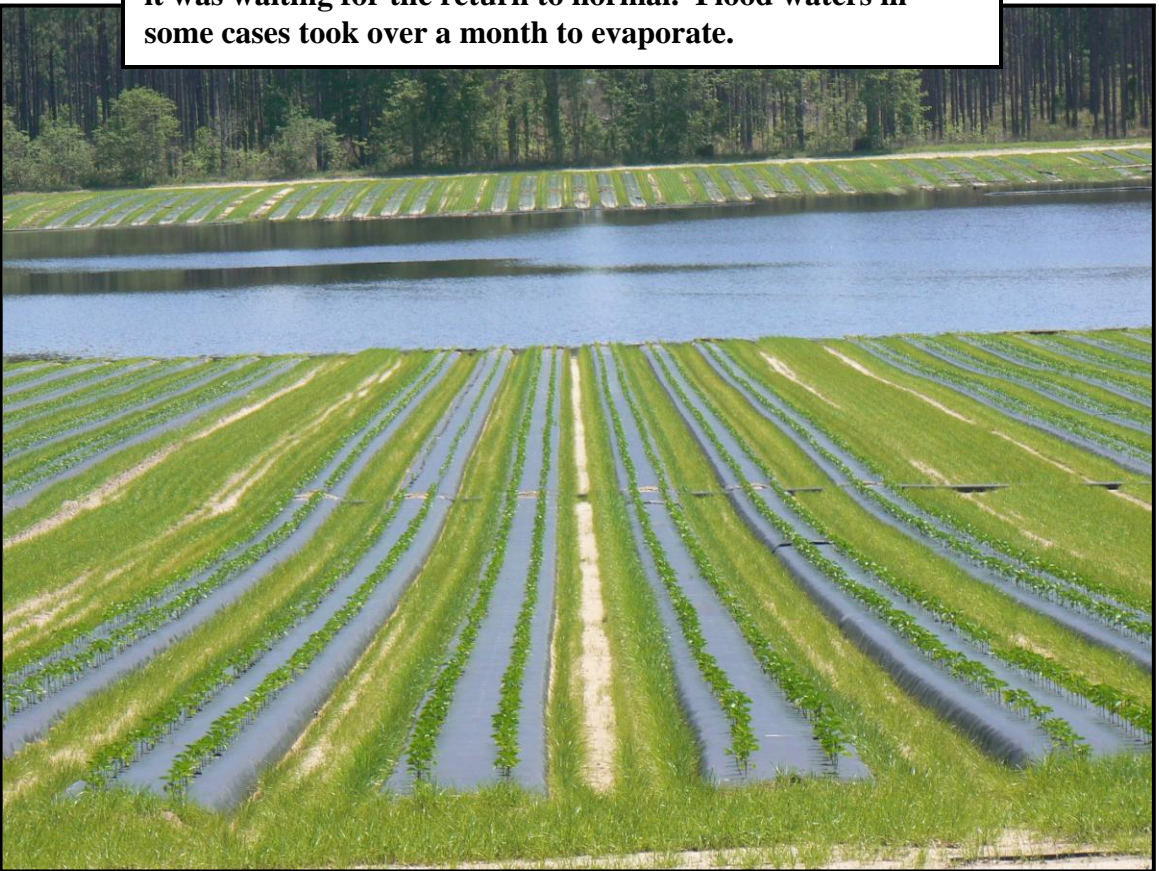


Low land areas where water stays for extended periods of time, even after the river flood levels recede.



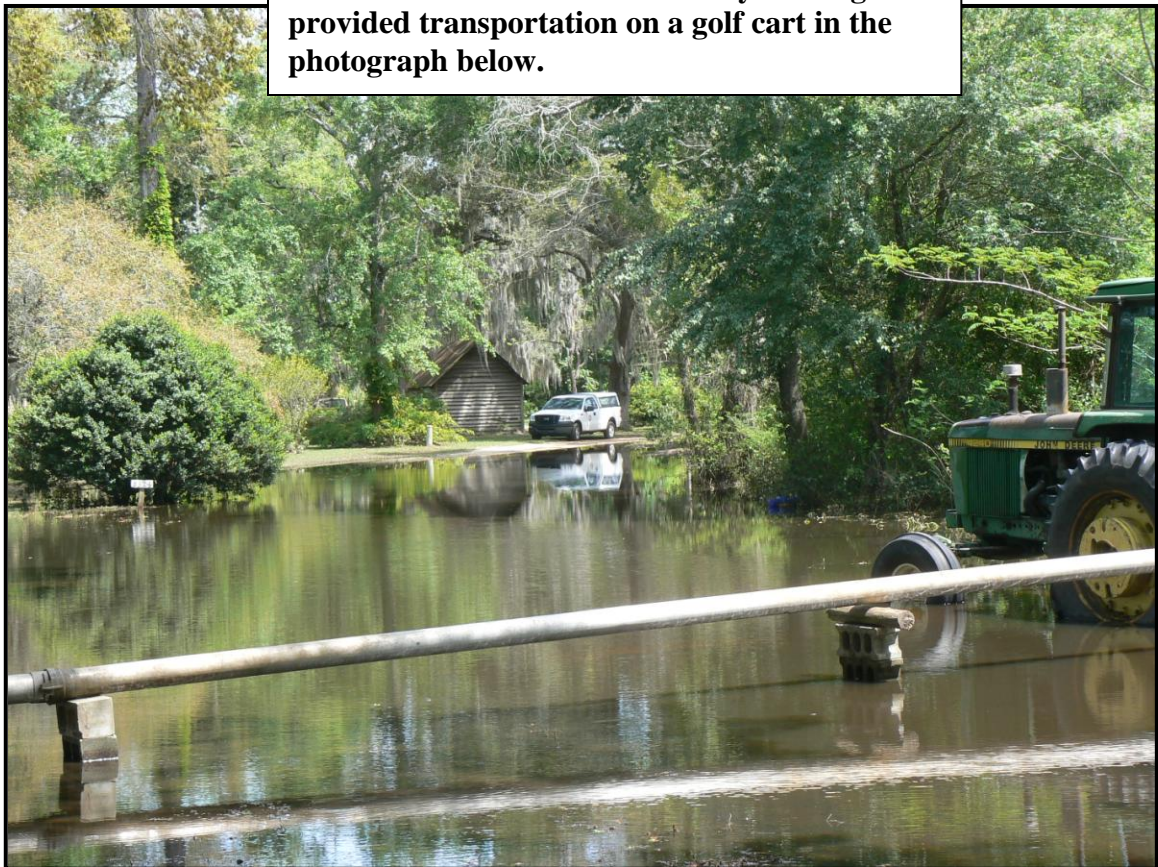


The problem wasn't always the cresting rivers and streams; it was waiting for the return to normal. Flood waters in some cases took over a month to evaporate.





Flooded roads in Madison County. A neighbor provided transportation on a golf cart in the photograph below.





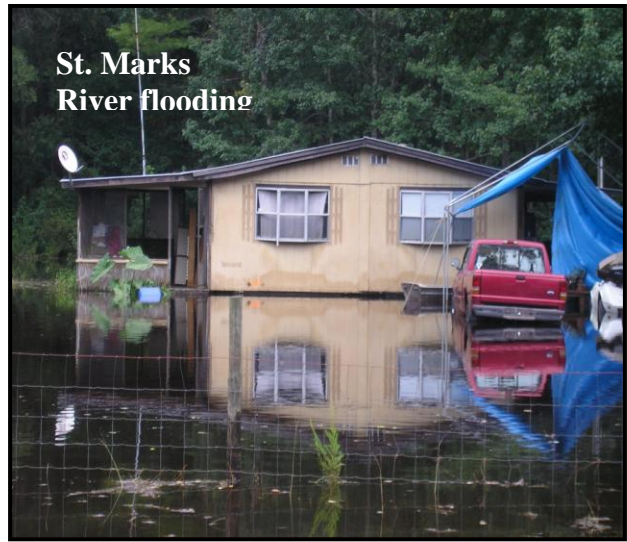
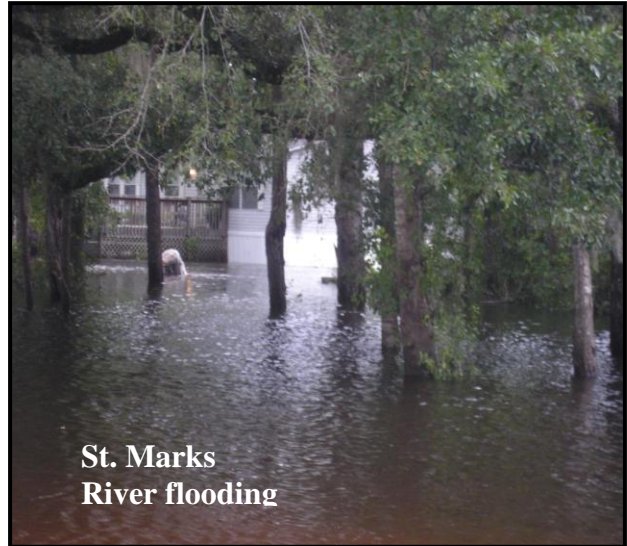
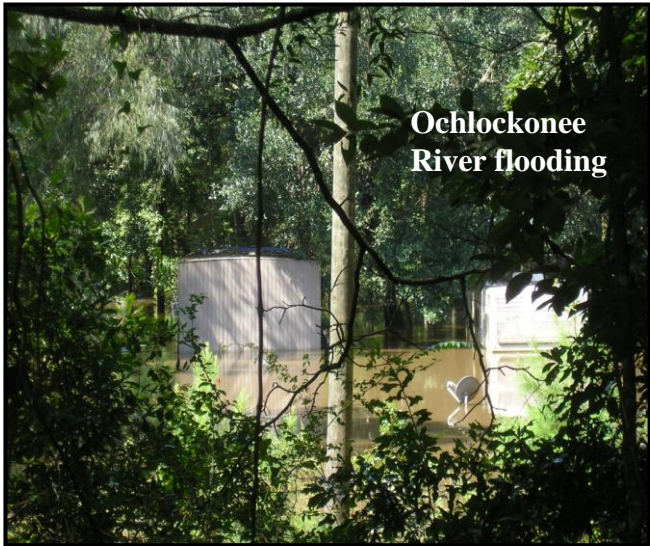
Flooded roads hampered our investigations.





A farmer's fence along this highway disappeared under flood waters approximately nine feet deep in the lowest place.





These five photographs were taken just after Tropical Storm Faye in September 2008. The results found with the Spring Flooding 2009 are very similar. Flood waters mostly go under the home with some occasional intrusion into the homes. However, no evidence was found of the homes moving or being forced from their foundations as a result of the flood conditions from the Spring flooding of 2009 or Tropical Storm Fay.