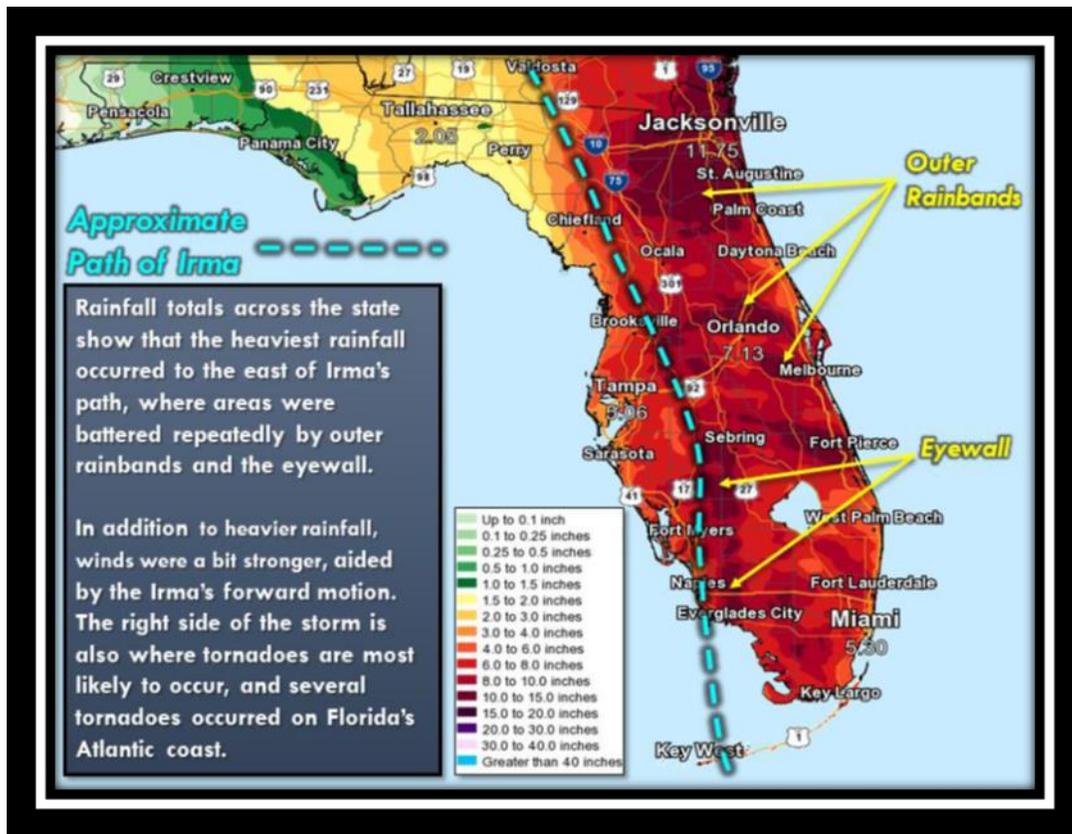


Hurricane Irma

STORM DAMAGE ASSESSMENT

A study of the construction and installation of manufactured/mobile homes and the effects of storm damage.



Prepared by the



**Manufactured Housing Section
Division of Motorist Services
Department of Highway Safety and Motor Vehicles**

MOBILE/MANUFACTURED HOME DAMAGE ASSESSMENTS FROM HURRICANE IRMA

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 sample of mobile home parks inspected. In addition, due to debris, entry into some mobile/ manufactured homes is not possible to make more specific determinations. Consequently, any 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

When reporting the number of homes "destroyed or non-repairable", the totals represent homes with severe roof damage to the point of the roof being blown from the home, one or more exterior walls being separated from the home or water completely penetrating the unit.

Department of Highway Safety and Motor Vehicles

Division of Motorist Services

Manufactured Home Section

Manufactured Home Damage Assessment After Hurricane Irma – September 2017

Hurricane Irma was once ranked as one of the most powerful hurricanes recorded in the Atlantic; a Category 5 with sustained winds of 185 mph. The massive storm first made landfall in the Florida Keys near Cudjoe Key and then came ashore south of Naples and headed up the western section of Florida.

Irma seemed to be a wind event on the West Coast of Florida and more of a rain and flood event in the middle of the state and east coast. Moving northward Irma was downgraded from a hurricane to a tropical storm. Naples highest wind gust was recorded at 142 mph. By the time it reached the Tampa Bay area, the highest wind gusts were recorded at 88 mph in Pinellas County and 68 mph in Hillsborough County. Irma flooded several east coast Florida cities with heavy rain and high storm surge. Power was cut to 6.2 million homes or more than 60 percent of the state.

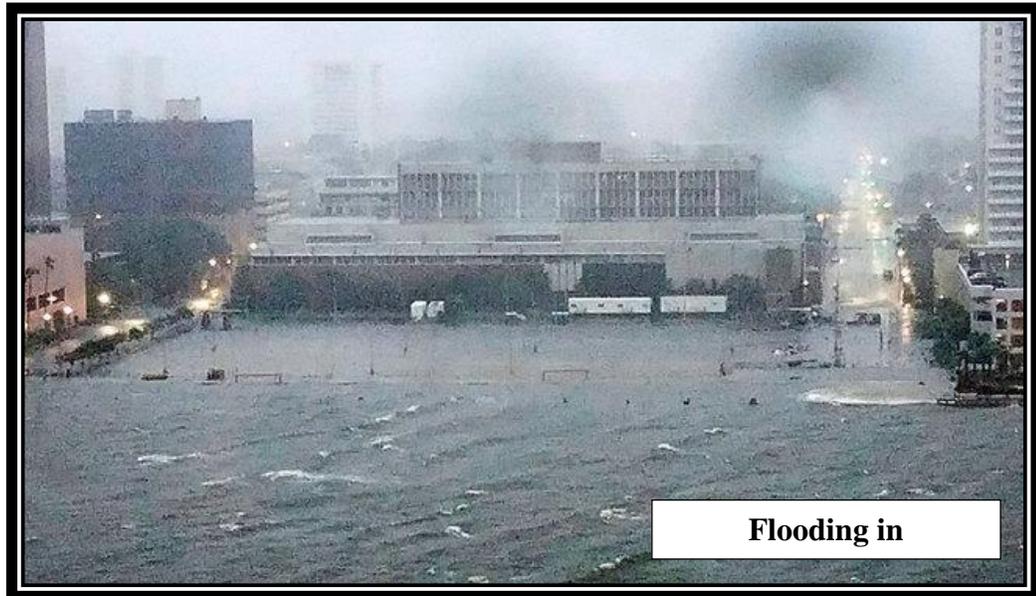
The department's research into manufactured home damage involved inspections in nine counties; Collier, Lee, Charlotte, Desoto, Highlands, Manatee, Sarasota, Polk and Pinellas. The most damage was in Collier County followed by Highlands with minimal damage being reported in the remaining counties. No investigations were performed in the Florida Keys due to heavy damage and the roads being closed.

Homes found heavily damaged were all older homes and usually pre-HUD homes. Most of these were where the old style, lightweight, aluminum carports were blown from the homes. These old style carports were always attached to the fascia boards or to the edges of the home. Accordingly, when the carports were blown away, the old metal roofs were peeled away from the trusses. Many counties in the southern part of the State lost a few homes for this reason.

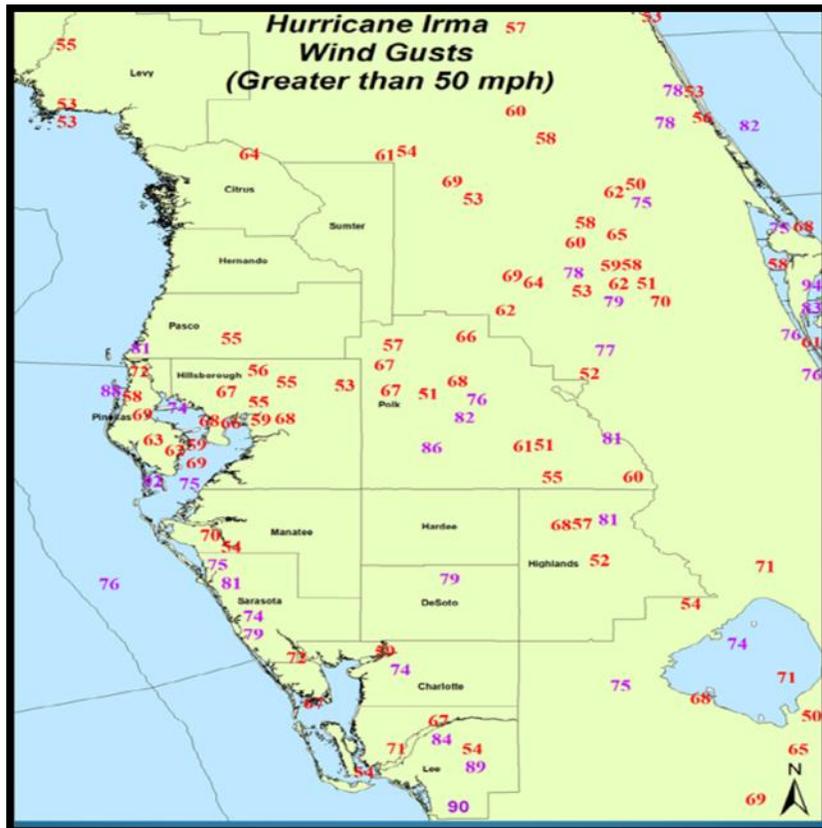
Two surprising findings were discovered by the department's investigations. One was the mobile/manufactured homes whether intact or heavily damaged, newer or older, remained on their foundations. Homes in Naples all the way up to north Florida remained on their foundations. The other surprise was how well the new carports performed in the Naples area. These are the newer heavier duty aluminum carports usually attached to a host beam underneath the fascia board and built to the strengthened Florida Build Code requirements.

It is evident; the homes built after July of 1994 fared much better. It is also evident the homes installed after Florida's installation standards changed in March of 1999

performed excellently. A New York Times article headline summed up the manufactured homes in Florida after weathering Hurricane Irma, “*Considered Vulnerable, Mobile Homes Are Battered but Largely Intact.*”



Coming ashore
Marco Island/Naples
Highest wind gust recorded at 142 MPH.



NAPLES

Older carport damage and screen room damage.
All homes stayed on their foundations.



NAPLES

Newer carports with heavy gauge aluminum performed much better.



Naples - older manufactured homes
with lighter weight carport damage causing extensive damage to the homes.



Sebring – Highlands County
All homes stayed on their foundations.

