

HURRICANE WILMA AFTER ACTION REPORT

I. DEPLOYMENT: The Triage Team deployed on Tuesday (October 25, 2005) under Tracker Msn # 752, with two members (Ashworth & Hammers) scheduled to fly from Tallahassee into Fort Lauderdale Airport; one member (Dixon) driving in from Okeechobee; one member (Chuck Anderson) flying in; and one local roofer (Billy Cone, President, Rooftech) joining us at a designated rendezvous point in Broward County. Due to a loss of electrical power over a majority of the affected area, phone contact from was impossible with local hotels. Upon arriving at Tallahassee Airport we learned that Ft. Lauderdale Airport was closed, which cancelled our flight. We flew to Tampa, rented a car and drove to Naples, to survey the affected area on the west coast before driving over to the East Coast of Florida.

After surveying Naples, we drove over to Boca Raton. Upon arriving at our destination hotel, we found it closed, leaving us without accommodations for the night. Due to a local curfew that was about to go into effect, we had to quickly find sleeping accommodations at the Marriott Courtyard in Boca Raton, albeit, without electrical power. Thanks to a Godsend cold wave over the area, South Florida was in the low 60s at night, enabling us to sleep in the hotel room with the window open, without air conditioning. Deploying into an area without electrical power is not a normal operating procedure for the Triage Team for a number of reasons; primarily: no HVAC, no landline phones, no hot water, no ability to charge our computers, cell phones and iPacs, no gasoline/diesel available from local stations, and no food available.

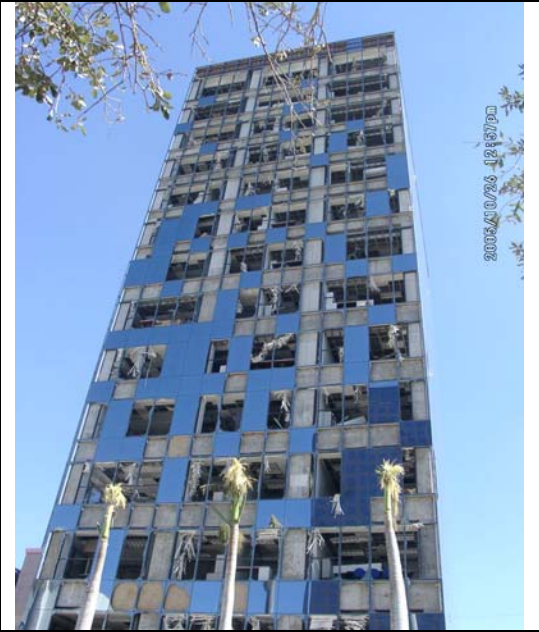
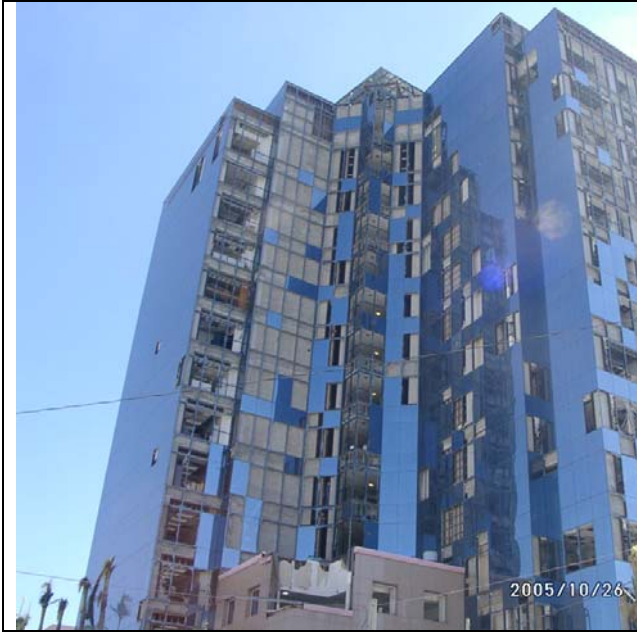
II. FINDINGS:

NAPLES, FL: Naples was on the west side of the eye wall of the storm and received approximately +100mph winds, but suffered minimal damage to recent FBC built houses. We surveyed several high end neighborhoods, and even older, pre-2001 FBC constructed homes suffered little damage. The ridge caps on the pre-2001 FBC barrel tile roofs suffered some damage, as shown below. Numerous trees, especially Live Oaks, and non-indigenous Ficus, Australian Pines and Melalukas caused major damage to the electric power grid and some residences, as shown below. Flying coconuts become missiles in 100 mph winds. Debris removal will present a challenge to local governments. The only damage observed was to older residential barrel tile roofs (where leading edge and ridge cap failures were common), and older shingled roofs that were subjected to the stronger winds. It should be noted that a majority of the older, upper scale homes in Naples are very well constructed, possibly considered "code plus" construction, regardless of age. The FBC is being vigorously enforced in Collier County.



PALM BEACH & BROWARD COUNTIES: Widespread power outages were observed, causing major interruptions in services to residents and businesses, including food, and gasoline. Water was not interrupted in these counties, but was a problem for portions of Miami-Dade County. Some intersections had traffic signals controlled by emergency generators, with the rest becoming four way stops or police controlled. Trees downed by the high winds caused major damage to the power grid. Some older residences, subjected to the stronger winds, did not fair well, as expected. Numerous privacy fences and pool enclosures, came down in the winds, creating a potential danger to small children in the neighborhood. Some tree-damaged homes were observed, and older pre-2001 FBC construction suffered wind damage. Leading edge and ridge barrel tiles on residential construction continue to be a problem, either from poor installation or inadequate code/mmanufacturer's requirements on both pre and post 2001 FBC construction.

Ironically, most of the damage observed in the storm was to commercial high rise buildings in downtown Ft. Lauderdale. Major glass/plexiglass panel destruction was observed on high rise buildings, apparently not directly attributable directly to windborne debris, as depicted in the Broward County School Board Administration Building, shown below. Detailed forensic analysis of these failures by others may reveal a weakness in the building code, yet to be determined. The FBC is being vigorously enforced in this area.



One major structural failure was observed on an older steel open, covered boat storage building in Ft. Lauderdale, shown below.



MIAMI-DADE: Aside from wind damage to pre-2001 FBC constructed residences, most of the major damage that the team observed in Miami-Dade County occurred in downtown Miami to high rise commercial buildings, both new and old construction, similar to Ft. Lauderdale; only more extensive. It was impossible for the team to determine whether this damage was caused by overpressure, debris or tornado winds. In some cases, it was obvious that windborne debris damage occurred at the lower 3-4 floors, but glass/plexiglass panels blown out above the 20th to 30th floor level indicated some other force(s) were at work, e.g. unusual swirling/venturi effect winds, tornado activity or inadequacy of the building code. Leading edge and ridge barrel tiles on residential construction continue to be a problem, either from poor installation or inadequate code/mmanufacturer's requirements on both pre and post 2001 FBC construction.



Some older apartment buildings in downtown Miami, near the scene of major destruction fared very well, with only minimal damage to patio glass panels.



Unlike other regions of Florida previously affected by hurricanes, South Florida was ill prepared for electrical power outages, with filling stations & eateries not having emergency generators for backup power. One percent of the service stations were reported to be in service in Miami-Dade County following the storm, which accounted for the long lines at the few pumps in service, as shown below. Gas lines exceeded one mile in Ft. Lauderdale and Miami. The apparent lack of preparation by citizens was

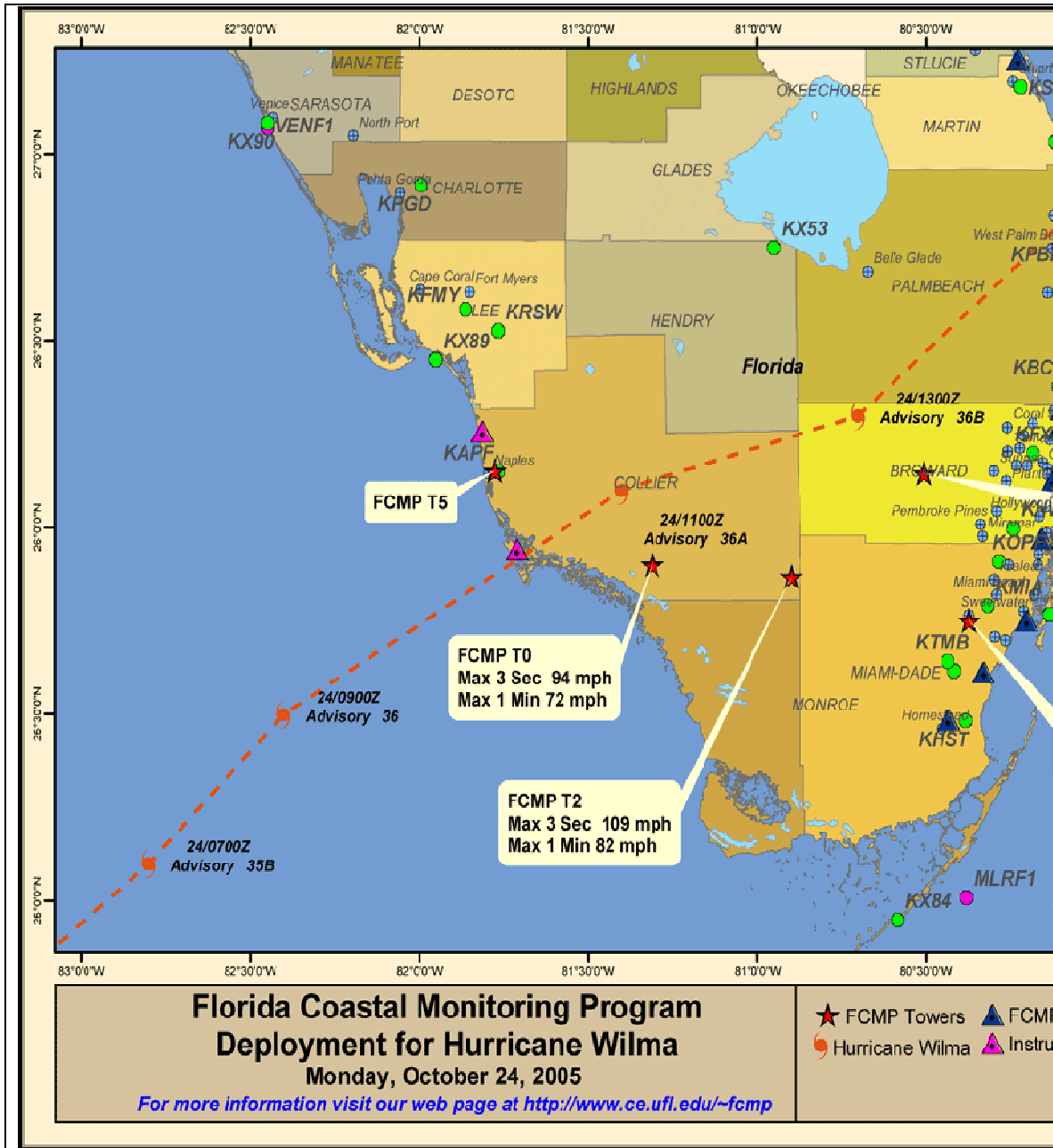
obvious. Had it not been for police on scene at the service stations, pandemonium most certainly would have prevailed.



Water outages occurred in portions of Miami-Dade County, with a boiling water mandate in effect for Miami Beach area. FP&L had established priorities for restoration of the power grid, but it became obvious that restoration of power to many areas would take several weeks. The Ft Lauderdale Airport suffered enough damage from debris to close the airport for two days, with the general aviation building sustaining some roof damage, as shown below. Due to closure of the airports, the window/glass industry member of our team was unable to attend.



The measured winds from this storm were recorded on numerous stations in the affected area.



END OF REPORT