

Presented by:
Robert G. Bailey Jr, ENP
National Emergency Number Association
Harrison County Emergency Communications Commission
Gulfport, MS

During the early morning hours of August 29, 2005, Hurricane Katrina, the worst natural disaster to ever occur in the history of our country was announcing its arrival on the Mississippi Gulf Coast. Katrina would bring hours and hours of 125 – 150 mph winds and tidal surges of over 35 feet to our communities. This combination punch was about to wrack havoc on many of the 911, telephone, cellular, and public safety radio systems serving the citizens of Hancock, Harrison, and Jackson County in South Mississippi.

The impact in Hancock County, which borders our sister state of Louisiana was catastrophic. The 911 PSAP's located at the Hancock County Sheriff's Department and Waveland Police Department were totally flooded, destroying their 911, telephone and public safety radio systems. The Bay St. Louis Police Department, while it did not flood, received extensive structural damage, once again destroying their 911, telephone, and public safety radio systems. The Hancock County Emergency Operations Center which would normally serve as a backup for the affected PSAP's was also flooded and unusable. In addition to destroying the two PSAP's the flooding also rendered useless numerous switches belonging to Bell South, in addition to cellular and public safety radio tower sites. This resulted in very limited short distance point to point radio communications with no interoperability, no 911 or telephone service, and very limited cellular service which were supplemented by a single satellite phone. This situation continued until September 1st when members of the Florida Department of Law Enforcement arrived with a communications trailer and began establishing temporary radio sites and a military Communications Unit arrived to provide telephone connectivity via a military satellite link. It was not until September 19th that 911 and wire-line telephone service was re-established at the temporary consolidated PSAP.

On the Eastern end of the Gulf Coast in Jackson County, which borders our sister state of Alabama, the situation was almost as bad. Once again the tremendous tidal surge took its toll as it flooded the Jackson County Sheriff's Department PSAP, and the 800 MHz public safety radio site adjacent to the Emergency Operations Center. As in Hancock County the 911 infrastructure took a tremendous hit and one by one the PSAP's in Moss Point, Pascagoula, Gautier, and Ocean Springs went off-line. The 911 service was returned to normal operation after a period of one (1) week following the repair of infrastructure and the re-routing of services to the affected PSAP's. While the response by the 911 service provider was immediate the frequent boring through of fiber optic cables by utility crews replacing broken poles was at the very least extremely frustrating and resulted in no cellular service for a period of two (2) days. The 800 MHz public safety trunked radio system utilized by numerous local public safety agencies reverted to a "Failsoft" mode as the microwave connectivity was lost between the various sites. This

“Failsoft” mode resulted in the system losing its trunking ability and causing all users to revert to a single repeater resulting in a “party line”. The loss of the radio systems ability to properly trunk resulted in an extremely congested single frequency until the afternoon of August 30th when technicians were able to return the system to trunking mode.

While faring slightly better than its neighbors to the East and West, Harrison County was not spared from the wrath of Katrina. Due to building structural concerns and proximity to the Gulf of Mexico two PSAP’s were relocated to alternate locations prior to the storms arrival. The City of Biloxi PSAP was relocated to the Biloxi Emergency Operations Center where backup 911, administrative telephone lines and desktop radio consoles had previously been activated. The City of Gulfport PSAP was relocated inland due to its proximity to the Gulf of Mexico and once again backup 911; administrative telephone lines and desktop radio consoles were activated at the alternate location. The primary PSAP’s located at the Harrison County Sheriff’s Department and Long Beach Police Department remained operational in their normal facilities. The City of Pass Christian PSAP located in the western section of Harrison County was not a fortunate as the other PSAP’s. The Pass Christian PSAP was evacuated just prior to Katrina’s arrival and the 911 and administrative phone lines were rerouted to a pre-designated backup PSAP. This same PSAP also assumed control of the police and fire dispatch talk groups for Pass Christian. The resulting tidal surge totally destroyed the Pass Christian PSAP along with all of the 911 and radio console equipment. Even though their PSAP had been totally destroyed a temporary dispatch center with desktop radio consoles, cellular phones and county-wide interoperability was established by noon on August 30th. While 911 service was disrupted by damage to the local telephone infrastructure the PSAP’s continued to receive both wire-line and cellular 911 calls throughout the storm. Sadly, this good fortune soon passed as the batteries in the telephone switches began to run down and the switches started failing. It was not until generators were placed at these switches that 911 and telephone service begin to come back on line to many of the PSAP’s.

The M/A-Com EDACS 800 MHz trunked radio system operated by the Harrison County Emergency Communications Commission (HCECC) which is utilized by all local public safety first responders in Harrison County performed extremely well before, during and after the storm. The temporary loss of one site due to a microwave dish being blown out of alignment was resolved by noon on August 30th returning the system to full operational capacity in less than 24 hours. Upon the arrival of the Florida Department of Law Enforcement Communications Response Team and an analysis of the current state of communications capabilities in the three coastal counties it was determined that the Harrison County radio system would serve as the backbone for coordinating the deployment of communications resources within Harrison, Hancock, and Jackson County.

The large capacity and seamless interoperability capabilities of the HCECC radio system allowed over 800 additional public safety users to be placed on the system during the two weeks following the arrival of Katrina. These additional users were provided seamless direct communications with all public safety first responders operating within Harrison County including local, state, and federal agencies. Even with over 3,850 radios operating on the system it easily handled over 4 million push-to-talk requests during the

month of September. This was four times the normal amount of activity seen by the system on a monthly basis.

Even though the wire line, cellular, and radio providers had prepared for the storm the sheer size of the devastation was overwhelming to everyone. The total destruction of a telephone switch is not easily resolved and impacts landline, cellular, radio and even internet services.

The following list represent suggestions of items that need to be addressed, reviewed, or improved and hopefully will assist this panel in resolving the many issues it faces.

- Identify critical communications networks and provide generator support prior to the storm.
- Pre-approval of diversified routing of services particularly for 911. The current FCC restriction preventing pre-configuring the re-routing of 911 data across LATA's (local access transport areas) resulted in delays in restoring some 911 services.
- The lack of knowledge or membership by many agencies to Telephone Services Priority, Government Emergency Communications Service, and Wireless Priority Access.
- Establishment of comprehensive local, state, and federal emergency communications response plans. This will allow the standardization of an emergency response communications system nationwide.
- Establishment and equipping by the telecommunications industry, Office of Homeland Security, and FEMA of Communications Response Teams composed of public safety, 911, telephone, cellular, and internet specialists to respond with equipment to disaster sites and assist the affected area.
- The ability to more easily utilize the communications resources of our military in the civilian environment.
- Utilize the resources of NENA, APCO, telephone companies, wireless providers, state emergency management and FEMA to develop a comprehensive communications preparedness package for local agencies.

Thank you.