

Katrina: Geologic, Disaster, and Personal Perspectives

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Katrina was “born” on August 24 as the twelfth storm of the 2005 Atlantic hurricane season. After raking southern Florida she became an extraordinary large category 5 (Safer-Simpson scale) storm covering about half of the Gulf of Mexico. Katrina made a second landfall, the first in the northern Gulf, as a category 4 at Burris, Louisiana. She then made an additional landfall near the Louisiana-Mississippi state line. The large size and prior strength, coupled with the geography of the shoreline, resulted in a record high storm surge. The storm surge affected coastal areas from Louisiana to Florida while spawning tornadoes in Georgia. Katrina’s impacts were disastrous. In addition to the devastation by the storm surge, coastal landforms were altered. Some offshore islands are nearly gone, while new sediment has been deposited in other areas. Landform also appears to have limited the inland distance of the storm surge in some areas. Debris deposited by Katrina’s storm surge was found inland to the first marine terrace in coastal Mississippi. Having witnessed the second and most destructive to date hurricane landfall along the Mississippi coast, there are many direct and personal impacts – astounding, amazing, miraculous, and horrendous. Hurricane Camille in 1969 destroyed the Mississippi coast, but even worse destruction occurred from Katrina. Many structures which survived Camille were destroyed by Katrina, primarily due to Katrina’s higher storm surge – about thirty feet in western Mississippi. The initial impact along the Mississippi coast was total destruction. Several towns no longer exist. The impact on New Orleans came later from flooding as a result of failed flood walls, that could not withstand the surge forces from Lake Pontchartrain. In northern Mississippi the direct impacts were trivial, compared to those at the coast, but there was damage and power outages over 250 miles from the coast. However, many at Mississippi State had personal impacts. One of our student’s parents swam to safety from a top story window – in the storm surge. Another student lost his entire family in Gulfport. Most considered the legend of Camille as the ultimate possible hurricane in terms of its destruction along the Mississippi coast. Katrina has now replaced that legend.