

Hurricane Warning Procedures: 1900 vs. 2003

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What do radar, satellites, television, the Internet, NOAA radio, even television and radio have in common? All of these modern advances to help warn the public of an approaching hurricane weren't available in 1900 to save the people of Galveston, Texas. Thousands of people died in the great hurricane because they had very little warning of the approaching storm. The only ways to communicate any warnings of the hurricane came via telegraph, telephone, word of mouth, and any signs that the sky or ocean may have provided. The best way to converse information back then was via the telegraph.

Although the telephone had been invented a quarter-century earlier, not much of Galveston's population had access to a phone. Instead, the telegraph was heavily relied upon to send information regarding the progress of the hurricane back then. To send out a message via telegraph, the message had to be Morse Coded. If the person sending out the message wasn't good at using Morse Code, the message may not be properly transcribed. Then the coded message was sent to a telegraph company, where a message boy had to transcribe the message and then have it delivered by someone to the party who it was sent to. This could take a very long time. Messages could easily have been lost during transportation; moreover, telegraph lines and poles easily toppled over in a wind storm, making them unreliable. For those lucky few who owned a telephone, it wasn't much better.

Today, when somebody wants to make a phone call to the National Hurricane Center to report information on hurricanes, they pick up the phone, and simply dial the number. The call is automatically connected to the party on the other end of the line. However, back in 1900 this wasn't the process to make a phone call. Back then, someone had to work the dial button on the old fashioned rotary phone to try and dial the number. After the number was dialed, instead of being automatically connected to the other party, the caller had to speak to an operator who worked the switchboard to be able to connect the call. This process could take a very long time, especially considering one operator having to connect hundreds (if not thousands) of telephone wires into the correct whole on the switchboard. This process sometimes came to be very unreliable as well. With the phone and telegraph being the only modern technologies back then to warn the public, the only other ways the public might have some idea of threatening weather came in the form of cloud observation and old-fashioned folklore.

There are many folklore sayings such as "Red moon at night, sailors delight." Some folklore sayings are actually true, while others are just simply false. But how could somebody who isn't familiar with weather supposed to know which are true and which are false? Today, it's much easier to disregard some of them because modern technology is available to tell people what is really going on. However, try doing that back in 1900 when people had only folklore available to use as a sign of a hurricane to come. The "technology" back then also made it difficult to relay hurricane information.

Even if the technology available today was available in 1900, it still may not have helped matters. In 1900 the National Signal Service (forerunner to the National Weather Service) was going through severe turbulence. The NSS was full of corruption

and people who had no clue had to make an accurate forecast. This caused some people to not believe that the NSS could be construed as a reliable source of information. A major reason why the great hurricane hit without warning was because the NSS stop listening to Cuba's Meteorology Bureau. Willis Moore, then the director of the NSS, accused Cuba of stealing various pieces of information during the year 1900. He decided to ignore anything that Cuba would say weather related. Furthermore, Moore decided to stop all contact with Cuba's Meteorology Bureau, including hiding weather information from Cuba. The great hurricane of 1900 hit Cuba first before heading into the Gulf of Mexico. Cuba sent telegraphs to Moore, warning that the hurricane was heading toward Galveston. Moore dismissed this thought and decided that the hurricane would move up the Atlantic Coast of the U.S., and doing little harm to the mainland. Back then, it was very difficult to relay hurricane information to the public.

First, observations had to be received via telegraph from ships out in the Gulf and in the Atlantic. Somebody in the NSS had to know how to translate the information from "Maritime Language" into simple terms that the general public could understand. If the telegraph system went down, nobody's weather information could not be sent to the NSS. Next, with satellites not around back then, there was no way to see a potential hurricane in the Atlantic until it moved close enough to land such that its outer winds or clouds could be seen. Whereas today satellites can help forecasters warn the public days in advance of a hurricane, back then there was nothing to give forecasters any warning of a major storm until it was close enough to the U.S. coast that its outer effects could be felt. This severely cut down on the amount of warning time that the general public could be given.

Add that along with dirt roads instead of paved roads and horse carriages instead of cars, and you have a situation where thousands of people are unable to evacuate the Galveston area. One other thing: there was no seawall protecting Galveston from a hurricane. Had a seawall been built, this may have prevented some of the flood waters from rising so high and so fast, and might have kept out some of the storm surge the hurricane brought. This is why Galveston was so heavily destroyed, why the land was left bare, and why so many people died in the hurricane. Those reasons are also why even a major hurricane such as Hugo in 1989 and Andrew in 1992 caused so much property damage, yet the loss of life was so small. People had several days of warning time which enabled them to leave areas where the hurricane struck.

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