

Wireless E9-1-1 Services

Many Individuals are choosing to eliminate their traditional “wireline” home phones in favor of wireless (cellular). This has resulted in many changes in how 9-1-1 Centers (PSAP) obtain information for assisting citizens in an emergency.

One such change was the **Wireless Communications and Public Safety Act of 1999 (911 Act)** that took effect on October 26, 1999. The 911 Act directs the FCC to make 911 the universal emergency number for all telephone services. To this end, the FCC established rules for instituting enhanced wireless 911 services.

“The wireless E911 program is divided into two parts - Phase I and Phase II. Phase I requires carriers, upon valid request by a local Public Safety Answering Point (PSAP), to report the telephone number of a wireless 911 caller and the location of the antenna (cell tower) that received the call. Phase II requires wireless carriers to provide far more precise location information, within 50 to 300 meters in most cases.”

With **Wireless Phase I** implementation, a wireless 9-1-1 call comes into the PSAP with the wireless phone call back number. This is important in the event the cell phone call is dropped, and may even allow PSAP employees to work with the wireless company to identify the wireless subscriber. However, Phase I does not help PSAP call takers locate emergency victims or callers.

Wireless Phase II implementation uses several technologies to locate wireless 9-1-1 callers. The basic technologies used are GPS, triangulation, or a hybrid of both GPS and triangulation. The technology used is left up to the cellular providers for obtaining the caller’s location. Phase II allows the PSAP call taker to receive both the caller's wireless phone number and latitude / longitude coordinates of the caller’s location. A mapping program at the PSAP call taker’s workstation displays the location of the wireless caller. The accuracy of the caller’s location is dependent on the cellular provider’s technology, and the caller’s cell phone.

Wireless E9-1-1 technology does not provide the PSAP’s call taker with a specific address of a caller as wireline (traditional) phone service. The PSAP call taker can only go by a mapping location that is as good as the coordinates provided by the cellular technology. Signal strength of both the cellular tower and cell phone, and many other factors determine how close the “proximity” is.

It is very important for the caller to be able to provide the call taker with an address. However, if the caller is unable to provide an address, the PSAP can get the responding agency to within a close proximity of the caller’s location. The PSAP’s call taker will attempt to keep all 9-1-1 callers on the phone as long as necessary to get the location and other critical information.

All cellular providers serving Chesterfield County have implemented Wireless E911 Phase II and Chesterfield County Emergency Communications is equipment to handle the Wireless E911 Phase II data.