While much of our 24/7 operations is focused on creating an accurate and timely forecast and issuing life-saving warnings, the meteorologists at the National Weather Service in Des Moines are also working to better serve central Iowans by strengthening our relationships with local community partners. One way that this is accomplished is through our County Visitation Program, or CoViP. Each meteorologist is responsible for meeting with key stakeholders within their counties throughout the year. Partners typically include the county’s emergency management coordinator, law enforcement dispatchers, conservation departments, engineering or public works departments, airports, newspaper, radio, or television media partners, and other federal or state partners.

On January 10, 2020, one such CoViP visit took place at the Fonda Fire Station with Alex Leu, who is the Police Chief in the city with a population of around 630 people. Alex also runs the Twitter account, @Fonda_IA, which has been an excellent source of real-time ground truth in a very rural location. Since the weather around Fonda, which is in the northwestern part of our forecast area of responsibility, may impact those that we serve across much of central Iowa. Alex’s tweets often include important information such as weather impacts on road conditions, time, and the location (this is often around Fonda). We often retweet or share his pictures as a way to enhance awareness of weather that is occurring and may move into other communities later on in the day or night.

Beyond Twitter reports, we also discussed the best ways to communicate with one another, methods to receive our forecast and warning information such as mobile.weather.gov and NOAA Weather Radio, our Situation Reports that highlight high-impact weather, snow squall warnings, and the Fonda electronic message board that displays current weather warnings or advisories. Further, Alex is also planning to apply to become a Weather-Ready Nation Ambassador, which is a way to further the relationship between the local community of Fonda and the National Weather Service by promoting seasonal weather safety information.

Alex runs the @Fonda_IA Twitter account and passes along real-time weather information to our office, which we can then share with other central Iowans for their awareness.
What is an Enhanced Fujita Unknown (EFU) Rating?

An EFU tornado rating is a valid tornado classification, assigned when there are no impacts to damage indicators (DI). DIs consist of a variety of objects that when damaged by a tornado, provide an estimated wind speed and associated EF rating. If no impacts occur to DIs during the life of a tornado, then a rating from EF 0-5 cannot be assigned. This also means that if a tornado produces damage, but does not involve a DI, then an unknown rating is assigned. An example would be a tornado crossing a cornfield. Corn is currently not a damage indicator, therefore no rating can be assigned. More information on the Enhanced Fujita Scale and DI's can be found here.

Why Change?

Historically, the National Weather Service (NWS) assigned a rating regardless of impacts, or lack thereof, to DIs. Most of these tornadoes were rated EF0s from the 1980s until very recently. However, a given EF-rating can only be assigned to a tornado which has caused damage to a DI; therefore, the practice is inconsistent with rating standards. The implementation of the EFU rating solves this problem.

When Does This Occur?

The EFU rating has been used by some offices in the NWS since 2016. Most of these offices have been located in the plains or mountainous areas where DIs are much more sparse. However, the practice has recently expanded to other NWS offices across the country and this trend will likely continue.

Will This Affect Tornado Climatology?

The tornado database has been evolving since its inception in 1950. Changes in technology, reporting standards, verification practices, and to the rating scale itself have led to shifts in climatology through the years. The database will continue to evolve as new technologies and standards come online in an effort to provide better data. The most likely change to tornado climatology would be a greater number of EFUs and less EF0s.

Additional background

The period from the 1950s-1970s had several unassigned tornado ratings, in effect becoming EFUs. The tornadoes of this period were rated well after the fact upon formal adoption of the Fujita Scale by the NWS in the mid 1970s. Many events had little information upon which to rate them, hence the lack of a rating.