On the morning of August 9, 2009, an impressive supercell thunderstorm rolled across northern Iowa leaving roughly a 150-mile path of destruction that folks still talk about today. The storm began in west-central Iowa and quickly produced baseball size hail at 8:18 a.m. CT in Wall Lake, Iowa. This is somewhat unconventional given the time of day as strong storms of this nature typically develop during the peak heating of the day. Not long after the baseball hail, 75 mph winds (with the large hail) destroyed crops and broke many windows in and around the town of Somers, Iowa. Further east, an amazing video caught this wind-driven hail in Otho, Iowa. A 2-mile wide swath of hail damage to crops was found near Interstate 35 north of Ellsworth and that wasn’t even the strongest part of the storm. The cover photo above was taken shortly after the storm near Callender, Iowa (south of Fort Dodge).

At 10:32 a.m. CDT, 102 mph winds were measured in Eldora with hail up to 3 inches in diameter! This combination caused devastating damage to every home in town and any vehicle not in a garage as well as severe tree and crop damage near Eldora. Prior to the storm, the corn was 6 feet tall and the beans were fully mature but were both completely shredded. Just northeast of Eldora, Pine Lake State Park received considerable amount of tree, building, and vehicle damage throughout the park (See Figure 1). The hail damage path was clearly visible from the air (See Figure 2).

Speaking of viewing the damage from the air, MODIS (Moderate Resolution Imaging Spectroradiometer) took some amazing images from space. MODIS is aboard NASA’s Aqua and Terra satellites which are part of the Earth Observing System (EOS) program by NASA. These NASA satellites are polar orbiting satellites (polar vs geostationary) and the Terra and Aqua captured the crop damage swath across northern Iowa (See Figures 3 & 4). 45,000 acres of crops were deemed completely lost while 60% or greater loss of crops occurred on another 55,000 acres. In Hardin County alone, a 150 square mile area had substantial crop damage. The total estimated damage to crops were over $175 million across northern Iowa and 8 counties were declared a federal disaster area. Damage to the homes and vehicles in the town of Eldora were greater than the EF-5 tornado that struck Parkersburg in 2008. Wind-driven hail storms can and do produce catastrophic damage and in some cases even worse damage than tornadoes.

Full event summary

Figure 1 (top) shows the devastating hail damage done to vehicles in Pine Lake State Park near Eldora, Iowa.

Figure 2 (bottom) shows the widespread tree damage at the Pine Lake State Park campground from an airplane. Both photos are courtesy of Don Primus.
Excellent Weather for RAGBRAI 2019

Brooke Hagenhoff, Meteorologist

After hot and muggy conditions with heat indices well into the 110s leading up to RAGBRAI a cool front pushed across the state on the Saturday before the start of the event, helping to drop temperatures back to a more comfortable level just in time for the ride. Temperatures warmed through the week, with highs in the upper 70s to start off the week and concluding in the mid to upper 80s. RAGBRAI 2019 was off to a rainy start Sunday morning in Council Bluffs, however by the end of the day the rain had moved out and the rest of the NWS Des Moines collaborated with NWS Omaha and NWS Davenport to provide daily weather briefings, with on-demand notification as needed to county emergency managers, Iowa Homeland Security and Emergency Management Department (HSEMD), and the Iowa Highway Patrol for each stop so that they could make informed decisions about participant safety as it relates to weather. With a full week of quiet weather and comfortable temperatures, coordination between the NWS and safety partners remained minimal.

Other than a rainy start on Day 1, the rest of the week remained dry, leaving behind excellent riding weather!