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FEATURED

Sioux County drone aids at train crash

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Sioux County emergency manager and chief deputy Nate Huizenga opens up the storage container for the smaller of the county's two drones, a Mavic 2 Enterprise. Drones have played an important part in county responses to many kinds of accidents.

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ORANGE CITY—When 47 Union Pacific Railroad railcars derailed in Sibley a few minutes after 2 p.m. Sunday, May 16, agencies from beyond Osceola County's borders responded to assist.

The site quickly became a hot spot for emergency coordinators and fire departments from neighboring counties.

Sioux County chief deputy and emergency manager Nate Huizenga said that the different county emergency managers seem to have their own specialties that they bring with them to scenes like this. For Sioux County, that specialty is drones.

He and Sioux County information technology director Micah Van Maanen arrived at the site around 3 p.m. with the county's DJI Matrice 210 drone to get in close to the burning wreckage and monitor the scene without endangering personnel.

"We got it around the smoke and zoomed in on the railcars that were on fire and we could read the car numbers. The railroad people could look at their manifest and say what was in that," Huizenga said. "That helped them make decisions on if they needed to evacuate farther, what is on fire, what's not on fire. All those things allow the hazmat people to make better decisions. That's what was nice about that."

The heat from the fire forced Huizenga to keep the drone about one-quarter mile away.

"The drone that was flying, all of a sudden it gave us a heat warning," Huizenga said. "The camera sensed that, and we were still quite a ways away. I just had to back it up a little bit."

Fortunately, the cars burned out without further issue although it took until Tuesday to do so.

Huizenga said they have had to respond to several train derailments in recent years, but this was the first one with a fire, providing them with a new learning experience.

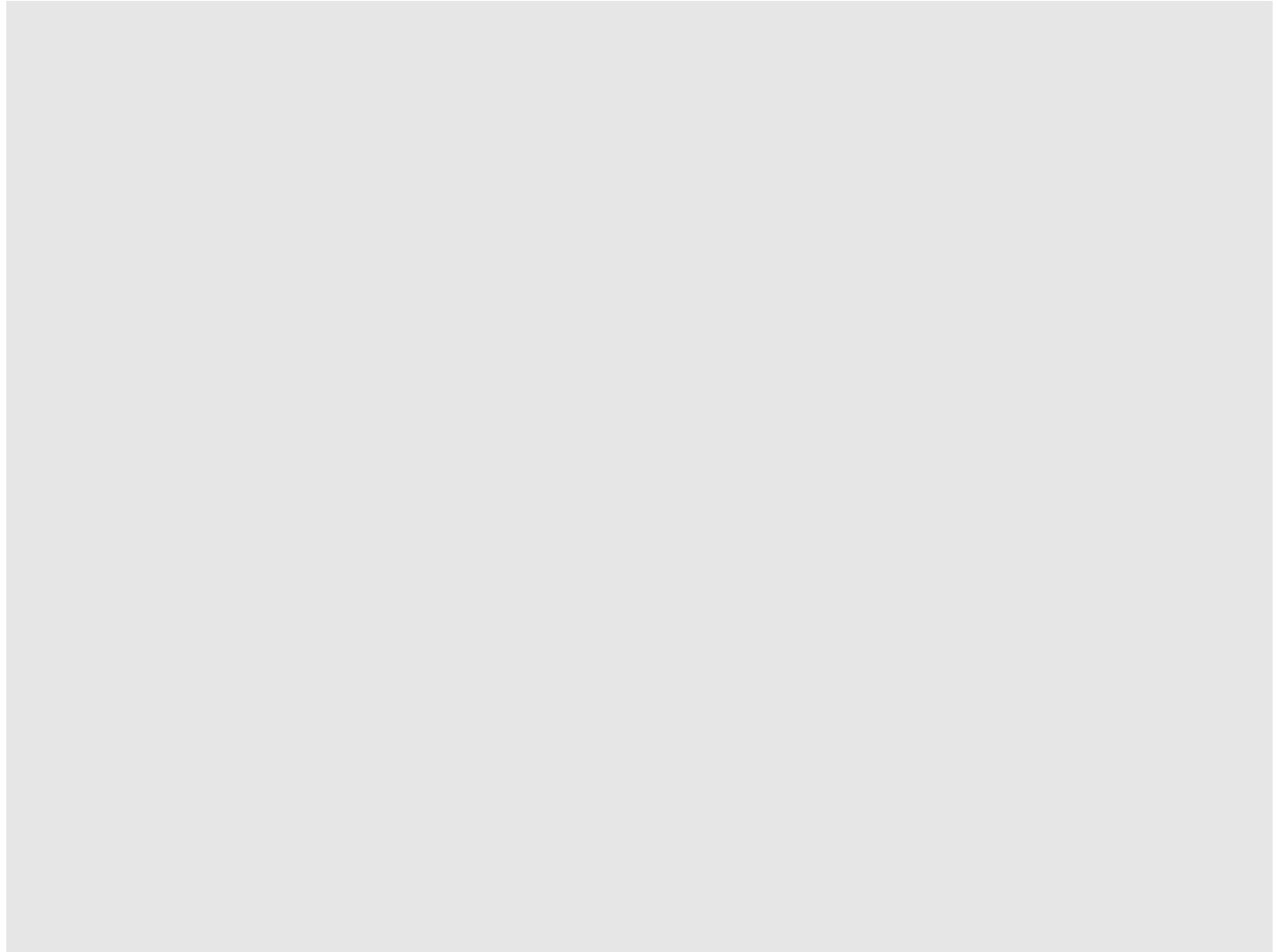
In addition to using the drone to identify the numbers of the burning railcars, the drone was able to examine the bridge the train was crossing and the waterway beneath it, looking out for damage to the structure or any spilled material.



Sioux County emergency manager Nate Huizenga is one of four county personnel certified to work with drones. This drone is taking off to get a closer look at the scene of the May 16 train derailment in Sibley.

Although the cause for the derailment is not yet known, pending investigation, the bridge was ruled out.

Huizenga said that Sioux County has used drones since 2017, when it purchased the Matrice. The county also has a smaller drone, a Mavic 2 Enterprise that has a wide range of attachment options such as a spotlight that can help illuminate a scene for photographs and a speaker for transmitting messages.



The Mavic 2 Enterprise is the smaller of Sioux County's two drones. Although it can't handle the cold or winds as well as its bigger counterpart, it can have different attachments fixed to it to help officers in a variety of situations.

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"The limitations to the smaller drone is you are limited by wind a little more and by temperature a little more," Huizenga said. "The Matrice can fly in winds up to about 40 mph. It can fly in cold weather because it has heated batteries. It seems in Iowa it's never 60 degrees and 10 mph winds. It's windy. The bigger drone gives you more capacity to fly in different weather."

Since acquiring them, the drones have become a regular feature at the scenes of accidents and disaster responses. Huizenga has used them for personal injury and fatality vehicle accidents, flood damage and structure assessments, missing person searches and tactical situations that would otherwise have put an officer at risk.

To pilot them as part of work, Huizenga, Van Maanen and two others went through the Federal Aviation Administration's Part 107 certification process that needs to be renewed every two years.

Huizenga said training is a must when it comes to using the drones, and they do their best to take them out for a fly at least once a month to maintain their skills.

"It is a perishable skill," Huizenga said. "If you don't fly it for a few months, you feel that. Putting a few hours into that, you remember where all the buttons are and the menus to change the cameras."

Flying at night is especially challenging as it becomes difficult to see power lines and tree branches.

However, drones have become more user-friendly through the years, Huizenga said, with the menus more straightforward and easy to use when flying.

He noted drones are basically flying computers, and that means they do sometimes have unexpected glitches come up. At the Sibley train derailment, they had a moment when flying the drone that the screen suddenly cut out, going black. They quickly rebooted the screen, not sure if this meant the drone was in some kind of trouble.

"But there it was, just hanging there, waiting," Huizenga said. "But you don't know that because you can't see it. It's a computer, and that's why having the IT guys is so good."

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