



PREPARE FOR THE WORST

Of course you hope for the best—but when severe weather threatens, you'd better have a plan in place. *First of two parts.*

BY JUDY NAUSEEF

SEEKING SAFETY: Horses try to find higher ground in the wake of catastrophic flooding



LAURA STONE/SHUTTERSTOCK

As I write this, it's been a little more than three weeks since a tornado ripped through our 10-acre Iowa farm in late March. I was already working on the article you're reading, but now the topic of disaster preparedness has particular relevance.

Thankfully, in our case, the two horses, the dog, and my husband and I survived without injury. The farm itself wasn't so lucky, although the damage could have been much worse. The 30-year-old run-in shed stood, keeping the horses safe. The fencing enclosing the horses was nearly down in some places, but it kept them in. The rest of the fence was torn out. The hay barn lost part of its roof and one side collapsed, but the hay was still there and stayed dry.

The entire property, especially around the house, was littered with large pieces of metal that had wrapped themselves around trees. Our 50-year-old maple trees stopped a neighbor's dumpster and one-ton steel bin from crashing into our house. The house itself sustained porch and roof damage but otherwise was intact. The debris was from a friend's farm a half-mile away; he lost nearly everything. We lost many large trees and much of my garden.

The aftermath of the storm stretched from days to a week and more. Cleanup and repairs are ongoing, and we've spent hours contacting insurance agents and contractors. I think back on our preparation on the day of the event, as well as in the months and years prior, and I am sure we should have done more. Here's what I learned for next time—because in today's increasingly volatile climate, it's wise to assume there will be a next time.

Make a Plan

Don't wait until an ominous forecast to get your horses and your farm ready to weather a storm, or to evacuate if it becomes necessary. Get your emergency plan in order well in advance. Here's what you need to do.

Invest in several sturdy flashlights, and keep fresh batteries on hand. Check them regularly and replace batteries as needed. Spotlight models throw extra light, and headlamp styles are handy when you need both hands free.

Make an evacuation plan. If you don't own a truck and trailer, or if your rig alone isn't enough to remove all horses from the property, work with boarders or other area horse and farm owners to create a list of people willing to evacuate horses. Include drivers' mobile-phone numbers and how many horses their trailers

hold. Review the list periodically to ensure that it's up to date.

Identify farms, show grounds, or other facilities within driving distance that are willing to take evacuated horses. Make a list of names, addresses, and contact information.

Get paperwork in order. Keep personal and farm records up to date and in a safe and easily accessible place. Include health and medication records for both humans and horses.

All horses should have a tetanus toxoid vaccine within the past year. Due to the increase in mosquitoes

after massive rainfall, all horses should receive West Nile virus and Eastern/Western encephalitis vaccines at the beginning of the hurricane season, if your area is prone. A negative Coggins will be necessary if the horse needs to be evacuated to a community shelter or across state lines, and a health certificate is required to cross state or international lines. If you live near a border, you may need one. Check state regulations.

The North Carolina State University Extension Service offers a list of necessary documents for traveling

with horses, as well as tips on disaster preparedness, evacuation, first aid, and other useful information, at ncdisaster.ces.ncsu.edu/2016/10/horses-and-horse-farms-hurricane-preparedness. (For additional disaster-preparedness resources, see "Important Resources" on page 51.)

Collect emergency-contact information. Maintain an up-to-date list of horses' names, owners' names, horses' identifying information (see "Equine-Safety Action Plan" on page 50), and any specific handling instructions. Keep a list of phone numbers and e-mail addresses for owners, grooms, and riders. Take detailed identifying photographs of each horse.

Also have on hand: contact information (and account numbers, if applicable) for insurance companies (farm, home, medical, equine, vehicle), utility companies, telecommunications providers, emergency services, and fence and building contractors. You may need to have a name for a contractor who can repair a broken water line.

Consider investing a standby electric generator. In the event of severe weather, you may lose power. Decide what must stay on—the well-water pump, lights, refrigerator, and so on—and purchase a unit that will generate sufficient electricity to power these items. (See "Choosing a Generator" at left for more.)

Keep enough hay and grain on hand. Have enough grain, supplements, and medications to last at least one week—although some farm owners have learned to stockpile more.

"I learned from experience that I really need to have one month of hay and grain on hand" in case a storm disrupts the supply chain, says Jean Kaplan Thornton, a

CHOOSING A GENERATOR

When power goes out, the need to supply horses with drinking water is of primary concern. Many farms rely on well pumps, so no power = no water. That's why lots of farm owners invest in standby electric generators, either smaller portable models or permanently installed units.

How big and powerful a generator your farm needs depends on the property size, number of horses, typical length of outages and how common they are, amount of power needed to run the well pump (and what else you want to be able to operate during an outage), how portable the generator needs to be, and how much space you have to safely store fuel. Talk to an electrician, the well service, and generator vendors to help you select the type, size, and fuel type that's best for your situation.

For an overview on choosing and operating standby electric generators, including a safety video, see this information page from North Dakota State University: ndsu.edu/agriculture/ag-hub/ag-topics/ag-technology/machinery/standby-electric-generators.

The Outdoor Power Equipment Institute (OPEI), a manufacturers' trade association, offers information about buying and using generators safely, as well as storm-preparedness tips, at its website, opei.org (type "generator" into the search box).



BACKUP PLAN: Standby electric generators—either portable or permanently installed, like the one pictured—can power essentials (or even entire buildings) during outages

USDF gold medalist and USDF-certified instructor/trainer through Second Level who owns and operates Equivale in DeLeon Springs, Florida. As a 24-year central Florida resident, Thornton has experienced many hurricanes, and has found that advance-warning times can vary wildly, from as much as five days to as little as three hours, in the case of Hurricane Charley in 2004.

Assemble a supply of tools and first-aid items for horses and humans. Fence-repair materials, chain saws, wire cutters, heavy work gloves, crowbars—these and more may be needed to deal with storm damage to buildings, trees, or fencing. The NCSU Extension's hurricane-preparedness webpage listed above includes a suggested list of tools to have on hand.

Veterinarians and emergency services may not be able to reach your property as quickly as usual, so be sure you have well-stocked equine and human first-aid kits, as well (see “Important Resources”).

When a Storm Looms: Final Preparations

You have an emergency plan in place, and now the weather forecast isn't looking good. As you monitor the weather reports, see to the following while there's still time.

Have a trusted weather app on your phone. Buy a weather radio—especially important if at your farm you cannot hear sirens activated in your county or nearest town.

Take safety precautions as advised by the apps and TV/radio reports. Secure all items that high winds could turn into weapons. Store jumps and lawn furniture in a safe place. Park trucks, trailers, and farm equipment in areas where trees will not fall on them. Remove items



GO TIME: When one of these (or a tornado, or a wildfire, or...) is bearing down, it's time to execute your disaster-preparedness plan. Satellite image shows Hurricane Ian approaching southwest Florida in September 2022.

hanging in hallways and barn aisles.

Bring pets indoors. Secure barn cats in the tack room or other indoor space.

Charge all cell phones, portable electronic devices, and power packs. Make sure your supply of batteries for flashlights and other devices is ample.

Fill water troughs, buckets, and other clean or lined containers with fresh water. An idle horse of average size drinks six to as many

as 15 gallons each day, and more if it's hot or he's working, according to the American Association of Equine Practitioners (AAEP). Fill plastic-lined garbage cans, as well. If necessary, adding two drops of chlorine bleach per quart will purify contaminated water; let it sit for 30 minutes before allowing animals to drink, according to North Carolina State University Extension animal-science representative Alaina Cross.

As part of Jean Thornton's hur-

LUCKY BREAKS AND LESSONS LEARNED

Sometimes severe weather arrives with very little warning. Just ask Tammy Lisi, owner of the dressage facility Tamarack Stables in Anamosa, Iowa, which was nearly flattened by a surprise severe storm in 2020.

Summer thunderstorms are a way of life in the Midwest, and Lisi heard a typical forecast of storms predicted for that August afternoon. “I did my normal bring-in of horses about an hour before it hit,” she recalls. There was no warning that something far more dire was approaching until her husband, Tom, texted her from work, urging her to “Take cover *NOW!*” Less than five minutes later, as Lisi sat on her couch frantically searching for weather information, her windows blew out.



DEVASTATED: What was left of Tamarack Stables in Iowa after an August 2020 derecho

What hit was a derecho, a long-lived, widespread storm characterized by powerful straight-line winds, usually in conjunction with fast-moving severe thunderstorms. “Our farm experienced winds in excess of 120 miles per hour for an estimated 45 minutes,” Lisi recalls. The winds destroyed the barn roof (the horses survived), indoor arena, fencing, and stored hay; the house was rendered uninhabitable.

In one incredible stroke of luck, “We had found out in July that our carrier had dropped insurance on our indoor riding arena” due to some previous storm damage, Lisi says. “We put [a new] policy in place and paid for it in full at 10:30 a.m. the day of the derecho. By 1:30 p.m., [the structure] was leveled.”

Lisi sums up the lessons learned and steps taken as a result of the storm.

1. If she had it to do over, “I would have chatted with my insurance agent every year. I now have an excellent lawyer and can identify the best private adjuster in the area. I fully understand my insurance policy and how to deal with adjusters.”

2. After the storm, the Lisis purchased “a full farm generator.”

3. “We rebuilt and reinforced the power station that feeds all our buildings.”

4. “Always keep cash on hand in a locked safe. When power is out for multiple days and communication is down, cash is king.”

5. Keep all fuel tanks full.

Nearly three years later, the Lisis are still living in a camper because their house remains structurally unsound, she says. The main barn has been rebuilt, but “We are gearing up for another construction season after a long battle with our insurance company; we won, but it was a slow process.” Lisi remains grateful for the help and support they received from friends and neighbors, saying, “The people in our lives made it bearable.”

ricane prep, “I have always filled all of my water troughs, but I learned through experience that they should either be covered or brought under cover,” she says. “You should fish all the sticks and debris out of the water immediately after the storm passes.”

Fill clean jugs with tap water for human consumption. If power goes out, households that rely on well water will lose access to water.

Store grain in watertight containers. Protect hay from wind and rain by stacking bales on pallets and covering tightly with water-repellent tarps.

Equine-Safety Action Plan

Before disaster looms, think about how best to keep the horses in your care safe.

Will they be best off in your well-built barn, with stalls and doors you can secure? In an indoor arena? Or might they be safer outside in pastures or paddocks? Opinions vary, as do individual circumstances. There is always the chance that a barn or other building could collapse in a storm, or that a horse outdoors could be injured by flying debris or a falling tree. Know your horses, your farm, and your neighborhood. Are there obstacles or dangers beyond the fences? Are there any potential hazards in turnout areas? If heavy rain is predicted, is there a location on the property that’s especially flood-prone?

Whatever you decide, before the storm arrives, place identifying information on each horse. Options include a breakaway halter with identifying and contact information sealed in a zip-lock bag and duct-taped to the halter; owner’s name and phone number written on the horse’s body in livestock marker;



THE AFTERMATH: After a tornado went through the writer's farm, debris from neighboring properties was scattered around the landscape

and a waterproof luggage tag containing contact info, braided into the horse's tail. Use more than one method. Thornton now braids cow ear tags into horses' manes.

After the Storm

That fateful March day, my husband and I were working from home, but after a point we could no longer concentrate, so we turned on the television to watch the weather reporters track the storms. As the red boxes of bright colors moved through towns closer and closer to us, we could hear our weather radio and cell phones alerting us to seek shelter.

The power out, we took refuge in our basement family room with blankets and flashlights. As the tornado came through, the sound was of rain and persistent wind. Eventually the noise stopped, and we ventured upstairs to assess the damage.

After a storm passes, inspect each horse for injuries, including its eyes. Check legs and feet carefully for punctures, cuts, abrasions, and heat. Look for signs of lameness. If a horse is missing, notify local police and sheriff, and post a notice with

photo on social media, including your personal and farm's pages and any area horse-related groups.

Check the property for hazards, such as hanging or downed utility lines. Do not try to move lines yourself; report the damage to your local utility company. Shut off electricity in any damaged buildings. Look for damaged fencing, and relocate horses to a secure area if needed. Move debris that poses an immediate threat to horses or people, but take photos of all damage for insurance-claims purposes before cleanup begins.

In part 2 of this series, we'll delve into what show management and competitors need to know in the event of an impending severe-weather threat at a dressage show.



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IMPORTANT RESOURCES

The **American Association of Equine Practitioners (AAEP)** publishes links to national resources and disaster-planning advice on its Owner Emergency and Disaster Preparedness page: aaep.org/horse-owners/owner-guidelines/owner-emergency-disaster-and-preparedness. Suggested equine first-aid items are listed in the Disaster Planning links. Discuss any additional or special needs, such as tranquilizers, with your veterinarian.

Assemble your human first-aid kit with help from the **American Red Cross**: redcross.org/get-help/how-to-prepare-for-emergencies/anatomy-of-a-first-aid-kit.html.

See the **Federal Emergency Management Agency's (FEMA)** list of "10 Items to Include in Your Emergency Kit": fema.gov/blog/10-items-include-your-emergency-kit.