Stable Equine Disaster and Emergency Evacuation Plan

Compiled by Wanda Smith
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Disasters

Disasters that can affect horses include: fire, flood, earthquake, storm force winds (hurricanes and tornados), lightening, infectious diseases, drought, infectious diseases, and terrorist attack.

The leading causes of death to large animals during disasters are:

- Collapsed barns
- Kidney failure due to dehydration
- Electrocution from downed power lines
- Fencing failures

Determine disaster risk

- Find out the location of your property on a disaster map (see Sonoma County Risk Zone Maps at end of document). Plan accordingly.
- Consult local emergency-management agencies (see Useful Links section).
- Watch weather channels.
- Install disaster- and weather-related applications on your smartphone or electronic tablet (see section below).
Notifications and Postings

- Inform boarders that it is their responsibility to have a plan to take care of their horse(s) in the event of a disaster.
- Create a bulk email list so that you can send an emergency email to boarders without entering each one’s email address.
- Create a bulk texting list so that you can send an emergency text message to all boarders without dialing each one’s phone number. (see Useful Links section)
- If not possible, assign a dependable person to call or text message all boarders. Don’t rely on a multi-person calling tree to “get the word out.”
- Post detailed instructions in several locations (including the barn entrances, office or tack room) to ensure the Emergency Plan is available to boarders, employees, emergency workers, and volunteers.
- Put emergency contact information in an easy-to-find location and make sure that employees and boarders know where it is. The list should include first responders, veterinarian, boarder and ranch owner contact information, and volunteers who are willing to assist during an emergency.

Severe Weather & Natural Disasters

- Disasters that can most likely result in equine evacuations are: fire, floods, storm force winds, and earthquakes.
- Horses in barns are subject to the flying debris, fire, or building collapse.
- In most disasters horses are safer in large, well fenced pastures (higher than a flood area).
- Horses should be removed from the ranch at least 3 days before of a major storm that might require evacuation.

Flood

- Have an electrical generator and supply of fuel ready on higher ground.
- Watch for down power lines.
- Look for debris deposited by flood waters before returning horses to stalls, paddocks, and pastures.
- Locate horses on high ground (higher than the flood zone).
- Flash floods rarely allow time for evacuation. Be prepared to quickly move horses to higher ground.
Storm Force Winds (58+ mph)

- Horses in a barn are likely to be hurt if the barn is damaged by high winds.
- Horses outside have greater risk of being struck by flying debris and falling trees.
- If storm force winds (58 mph+) are forecast, suggest horses be evacuated before winds get to 40 mph which is considered dangerous for trailering horses.
- Trees with shallow roots will fall easily under storm-force winds and can injure horses and destroy fencing and shelters.

Horses will find cover in a grove of trees if they need it, but normally will stand with their rear to the wind; their hindquarter muscles will absorb any serious injury from flying debris, but these injuries heal well.

Lightening

- Lightening is attracted to the tallest point in an area.
- Horses outside have greater risk of being struck by lightning.
- The safest place for horses during a lightening storm is inside a building. If this is not possible, move horses away from the most elevated location and keep them out of standing water.
- To minimize lighting damage to a barn, install a lightening rod and ground system on the barn.
- Keep horses out of pastures/paddocks with or under power lines.

Earthquake

- Locate horses in areas distant from buildings and potential falling debris.
- Keep horses outside until aftershocks have subsided.

Drought

There is time to prepare for a drought situation. However, the length and severity of the drought is unpredictable.
- Stockpile hay if possible. Identify backup sources for hay.
- Have alternate water sources. This is especially important if you rely on surface water or a shallow well. A horse's water intake needs increase during hot, dry periods.
• **Be alert to fire hazards.** The risk of fire increases during a drought.

• **Rotate horses between pastures and paddocks to maintain the health of the ground and horses.**

• **Look for and destroy poisonous plants** (like Oleander on the right). When feed is short, or horses are hungry, plants normally avoided become a tempting source of feed (see Useful Links section).

**Infectious Disease Outbreak**

Infectious equine diseases include: Strangles, Tetanus (lockjaw), Equine Encephalomyelitis (sleeping sickness), Equine Influenza, Equine Herpesvirus (rhinopneumonitis, rhino, viral abortion), West Nile Virus, Rabies, and Potomac Horse Fever.

• **Have a quarantine area.** Isolate infected horse(s) at least 200 yards from healthy horses. Use separate grooming equipment and tack for infected horses.

• **Have materials available to sanitize grooming equipment and tack.** Soak what you can in disinfectant solution. Do not soak leather in bleach. Wash blankets when possible.

• **Prepare a bleach foot bath and hand sanitizer.** Have a 10% bleach foot bath at the barn door for everyone going into and out of the infected area.

• **Wear disposal gloves when attending infected horses.**

• **Wash clothes before handling healthy horses.**

• **Listen for reports of infectious disease outbreaks.** Outbreaks of diseases can occur among animals in some areas of the country, particularly during hot weather that immediately follows a flood.

**Fire Prevention**

1. **Identify and locate on a barn map all fuel and ignition sources.**

2. **Separate fuel and ignition sources as much as possible.** For example,
   - Move hay away from wiring.
   - Move stored liquid fuels away from ignition sources.
   - Remove any fuel or ignition sources that do not have to be in the barn.

3. **Check hay temperature before storing it in the barn.** Hay as baled too wet can become hot and ignite due to microbial activity and spontaneous combustion.

4. **Post and enforce No Smoking signs.**
Fire Detection Systems

Fire detection is not a substitute for fire prevention. The three main types of fire detection are smoke, thermal, and flame.

- **Smoke detectors** are **not good choices for barns** due to the amount of dust and other aerosols in the environment. They can be used in relatively clean areas like tack rooms or lounges.
- **Thermal detectors** are activated either by a rapid increase in temperature or when the temperature reaches a certain point.
- **Flame detectors** are the most expensive but the most accurate. They detect the wavelength of light emitted by flames.

A fire detection system can be connected to a telephone dialer, which can automatically place calls to homes, cell phones, and/or emergency responders. This technology can allow time to evacuate the barn, speed emergency response time, and is an investment that can reduce damage from a fire.

Fire Containment

- **Separate fuel sources from where horses are housed.** For example, move hay and other flammable materials to a separate structure. This can greatly reduce the size of a fire. Insurance companies may not provide coverage to barns without proper separation between animals and fuel sources.
- **Install fire extinguishers.** Extinguishers should be placed in easily accessible areas throughout the barn with instructions for use.
- **Install sprinklers.** While this is not cost effective for everyone, sprinklers are very beneficial at providing time for an evacuation. Cold weather must be considered when choosing a sprinkler system. (See the section on Sprinklers Systems below for details.)
- **Install fire walls or fire curtains.** These structures can slow or stop the spread of fire from one part of a building to another.

Sprinkler Systems

- **Wet pipes.** Water is held in the pipes under pressure and will flow immediately when triggered. This is a problem in cold weather conditions and they are generally not used in unheated barns.
- **Dry pipes.** In a dry pipe system, pipes are pressurized with an inert gas and the water supply is pumped into the pipes as needed. This prevents water from freezing in the pipes. Besides being more expensive, dry pipe systems require more water pressure to force the water through the pipes quickly.
• **Preaction pipes.** In this system, the line is also pressurized with gas, and the valve is controlled electronically. This is the least prone to accidental tripping, but is the most expensive.

**Barn Design Factors to Minimize Disaster Impact**

- Multiple exits
- Good ventilation
- Easy access to water
- Segregated quarantine area
- Facility and ground cleanliness
- Hay storage separate from horse housing
- Holding facilities located above the flood plain and other water holding areas
- Fire resistant curtains or firewalls and building materials

**Supplies**

**Ranch**

Keep these items together in an easily accessible place. Make sure everyone who lives, works, or boards at your ranch knows where these items are located.

- 50 foot cotton rope
- Battery or wind up portable radio
- Duct tape
- Fire extinguisher
- Flashlight with extra batteries
- Ladder long enough to reach the barn roof in case of roof fire
- Rake for clearing vegetation and shovel for throwing dirt
- First-aid supplies for horses and humans
- Chain saw
- Hammer and nails
- Pry bar
- Materials for quick temporary fence repairs
- Plastic trash barrels with lids
- Sharp knife
- Wire cutters
- Tarps
- Lime and bleach
- Plywood (2’x4’) and can of spray paint
• Minimum of 100 feet of pre-connected garden hose (of adequate length to reach your structures) with spray nozzle
• List of emergency contacts (veterinarians, state and county animal-welfare and emergency-response teams)

Horses

• At least 3 day supply of hay, grain and, if possible, water for each horse
• Horse’s medications and instructions
• Feed and feed instruction for each horse
• Clean towels
• Leather halters and cotton lead ropes. Nylon halters and leads may melt and cause serious burns to your horse and its handler.
• Extra halters (leather or breakaway) and lead ropes (with stud chains for extra control)
• Ask boarders to place a permanent tag with their name and phone number and the animal’s name on the horses halter, neck or ankle band.
• Require boarders to place a halter and lead rope for each horse at the gate to each paddock or at each stall door in the barn.
• Identification papers for each horse
• Photos of each horse with boarder
• Equine first aid kit including cotton and cotton rolls, disposable surgical gloves; Vet wraps, Duct tape, Telfa pads, Betadine, instant cold packs, Easy boot, Diapers, antibiotic ointment, scissors, hoof pick, tweezers
• Vick® Vaporub (for horse’s nostrils to camouflage smoke smell
• Animal marketing crayon or spray paint
• Sheets or blankets
• Water buckets
• Leg wraps, horse blanket or sheet

Ranch Preparation

• All horses should have a tetanus toxoid vaccine within the last year. Due to the increase in mosquitoes after massive rainfall, all horses should receive West Nile virus and eastern and western equine encephalitis vaccinations at the beginning of storm season.
• Obtain assurances that all horse can be trailer loaded.
• Ensure all horses have halters and lead ropes located at barn stall doors and paddock gates.
• Encourage boarders to have emergency leather halters.
• Have a supply of spare halters and lead ropes located away from the barn.
• Obtain photographs of boarders horses with identification information (see enclosed form). Keep these documents in a binder at home or in a safety deposit box - not where the horses are housed.
• Review stable property and identify the best location for horses in each type of disaster.
• Have everyone at the facility practice the evacuation plan.
• Discuss the Emergency Plan with all boarders so that everyone knows what to do. Have an annual meeting to discuss fire contingency plans. Have periodic practice evacuations.
• Record or videotape assets in the barn. Post the records on an off-site server, such as an Internet cloud.
• Develop a priority list of which animals to save if all cannot be saved. Familiarize all farm personnel with the list.
• Create a Checklist specific to the actions that must be done before the ranch is vacated. Include turning off the electricity, gas, and water, unplugging all appliances, etc. Keep the list handy so it’s easy to find if a crisis occurs and post it in the barn.
• Keep the area around barns and paddocks well cleared of brush and other combustible materials (at least 30 feet) and rake perimeter areas.
• Make sure human and animal escape routes are not blocked by equipment, hay, bales of shavings, etc.
• Store gasoline, paints, solvents, hay, straw, shavings, scrap wood, and other flammable materials in an approved safety container away from occupied buildings.
• Clean roof surfaces and gutters regularly.
• Keep one hose (at least 100') with nozzle connected at a strategic location at all times.
• Post "No Smoking" signs in and around the barn, and in vegetated areas as appropriate.
• Make sure chainsaws and other equipment have approved spark arrestors.
• Have first-aid kits (one for horses, one for humans) available at all times.
• Leave important contact information with neighbors.
• Have all boarders complete an emergency contact form (see form enclosed).
• Keep trailers in a location that can be quickly accessed by towing vehicles, horses quickly loaded, and vehicles removed.
• Place large vehicles, tractors and trailers in an open field where trees cannot fall on them.
• Turn off electrical power to barn.
• Unlock all tack and equipment rooms.
• Have a plywood board and can of spray paint available to display messages to helicopters (e.g., “Have horses, Need Help” or “Have horses, OK for now”) if someone decides to stay on the property.
• Become familiar with neighbors with horses as they can be an important resource during an emergency.

During the Emergency

LISTEN to the Emergency Broadcast System station on a portable radio or cell phone for information about how to locate horse care providers offering services during the disaster and for any special instructions about actions to protect horses.
Feed & Water

Dehydration is a major cause of death for horses in disasters of all kinds. Storm runoff may contaminate natural water supplies; power failures may knock out a well pump, and municipal water supplies may be interrupted.

- Have enough hay stored for 5-7 days in a dry, secure area.
- Put out free choice hay for at least 2 feedings in holding area.
- Put feed and hay on pallets and cover with water-repellent tarps to reduce the chance of water damage.
- Leave enough water \((12 \text{ to } 20 \, \text{gallons per horse per day})\) for the length of time horses will be unattended (at least a three-day supply).
- Line garbage cans with plastic trash bags and fill them with water.
- Have chlorine bleach on hand to purify water if necessary. Add two drops of bleach per quart of water and let stand for 30 minutes.
- Provide for alternate water sources in case of power outage and pumps and automatic watering systems stop working.
- Put tubs in the holding area to catch and store clean rain water.

Readying Horses for Relocation

- Remove blankets. Do not leave synthetic (nylon or plastic) gear (including blankets) on horses.
- Put halters on all horses. Use leather or breakaway styles, as all-nylon halters could snag on debris and trap horses or melt on their face.
- Check that each horse has some form of identification (halter tag, neck or ankle ID band).
- Spray paint horse’s name on it if it does not have ID tag.

Staging Area:

- Locate horses in an area most appropriate for the type of disaster anticipated.
- Put horses to be evacuated in a small holding pen so they can be easily caught.
- Use sand arenas, bare ground paddocks, or similar bare areas for horses in times of fire.
During a fire, ensure horses are placed far from the burning facility to avoid illness from smoke inhalation and injury from embers.

Practice using all exits occasionally to acclimate horse to using a variety of exits.

Do not lock horses in stall or barn.
Do not leave horses in a small corral/paddock/arena if they have to be left.
Do not leave horses in electric or barb wire fenced paddocks or pastures.

Relocating horses

Identify to ranch personnel which horses should (and can) be evacuated first. Those difficult to load into trailers should be loaded and evacuated last.
Remove horses from the barn first.
When all horses are out of the barn, shut all entrances.
If moving horses to a central staging area, put halters on horses and lead them to the staging area. Make sure gates are closed and latched. Hang lead ropes on gate.
If horses cannot be evacuated, turn them loose on the ranch so they have access to the lake water.

Power

Have a gasoline-powered generator on hand so that you can power critical equipment (such as your well pump).
Be sure that the pasture is free of debris and far from power lines, and that fences and gates are secure. (Do not rely on electric fencing, which could easily be knocked out.)

Closing Up

Shut barn doors, secure pasture gates, turn off power, and get to safety before your own life is in danger.
Put signs at gates that there are “Loose horses inside.” Have these signs made up before an emergency in a quickly accessible place. Metal signs with information written with magic markers are best; paper will burn quickly.
Secure gates with clips (not locks) in case horses can be
evacuated later.

- Never cut fences along roadsides. Loose horses can cause road accidents, particularly when visibility is low due to smoke haze.

Post Disaster

- Check property for sharp objects that could injure your animal.
- Be cautious of downed power lines that could present dangers to horses.
- Be cautious of wild animals (raccoons, skunks, bobcats, deer, etc.) that may have entered the area and could present dangers to people or horses. Snakes will search for high ground during flooding. Carefully look over the premises and look for these potential dangers.
- Use extreme caution when approaching and handling unknown or frightened horses. Work in pairs when handling strange horses.
- Be sure fences are in good repair and have not been damaged by the disaster.
- Remove horses from standing water (6” or more).
- Check with veterinarian and Department of Agriculture for information about any disease outbreaks that may occur as a result of the disaster.
- Consider establishing security measures on your ranch to protect it from looters and exploiters.
- If you find someone else's horse after the disaster, isolate it from boarded horses until it is returned to its owner or examined by a veterinarian.
- Carefully inspect each horse for injury to eyes and limbs.
- Inspect the property for downed power lines.
- Contact the local animal control or disaster response team for missing horses.
- If another person's horse is on your property, isolate it from your horse(s) until it can be returned to the owner.
Useful Links:

ID neck and ankle bands: http://www.infohorse.com/horseidentification.asp

Sonoma County Emergency Management: http://sonomacounty.ca.gov/FES/Emergency-Management/

Sonoma County Community Emergency Response Team: http://www.sccert.org/

When Disaster Strikes, What will You Do? UC Davis Horse Report

Disaster Preparedness, The Humane Society:
http://www.disastersrus.org/MyDisasters/pets/DIST_DisasterHorseBrochure.pdf

Guidelines for securing buildings against various disasters, Federal Alliance for Safe Homes (FLASH):
http://www.blueprintforsafety.org/search/search.php?q=Guidelines+for+securing+buildings+against+various+disasters+

Fire Safety in Horse Sables, Penn State, College of Agricultural Sciences:
http://www.equineguelph.ca/pdf/facts/G100.PDF

Plants Poisonous to Livestock, Cornell Unitverity:

Free online disaster-training courses including "Animals in Disasters" and "Livestock in Disasters."
Federal Emergency Management Agency (FEMA):
http://usasearch.fema.gov/search?query=animal+disasters&op=Search&affiliate=fema

How to send group texts from Android and iPhone:
http://www.pcadvisor.co.uk/how-to/mobile-phone/how-send-group-texts-from-android-iphone-3472964/
Equine Evacuation Ranch Emergency Information

Ranch / Property Owner Name: ____________________________________

Ranch Name: ___________________________________________________

Location: ______________________________________________________

Phone Number: ________________________________________________

Number of horses at the ranch: __________

Number of stallions: ___________

Number of large/draft horses: ___________

Number of horses that can be evacuated: _________________

Number of trailers needed to evacuate all horses in one trip: __________

Types of trailers that can access the property: _________________

Size constraints: _________________

Location of trailer turn around area: ___________________________

Will trailers need backing: Yes  No
Equine Medical Emergency Contacts

Keep this sheet near your horse in case of emergency.

Owner: ________________________________

Address: ________________________________

City, State, Zip: __________________________

Phone 1: ________________________________

Phone 2: ________________________________

Email: ________________________________

If owner is unavailable, contact:

Name: ________________________________

Phone: ________________________________

Veterinarian:

Name: ________________________________ Alternative: ________________________________

Phone 1: ________________________________ Phone 1: ________________________________

Phone 2: ________________________________ Phone 2: ________________________________

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Special Medical Needs or Instructions:

Horse name: ________________________________

________________________________________________________________________________

Horse name: ________________________________

________________________________________________________________________________
Fire Risk Zones in Sonoma County:

Click here to see larger map.
Flood Zones in Sonoma County:

Click here to see larger map.
Earthquake Ground Shaking Hazard Zones in Sonoma County

Click here to see larger map.
WAIVER OF LIABILITY: Any person or entity who boards or otherwise houses a horse on Stable property, or any person or entity having ownership or other interest in a horse left unattended on Stable property, hereby releases Stable, its employees, and any person who is assisting in the evacuation of horses from Stable property, each of them individually and collectively, (The Parties) who is/are participating in the evacuation of horses from Stable property, in accordance with horse evacuation plan, hereby releases The Parties from all and every claim for damages which may occur through or by reason of any matter, thing, or condition, including injury to a horse, which may or may not include a claim of negligence of any kind, which may accrue and arising out of the execution of said evacuation plan. This waiver of liability is adopted by Stable and cannot be waived in whole or in part except by approval of the owners of the Stable.

All persons with horses housed on the property acknowledge this waiver of ALL liability, and sign below to accept responsibility for any action taken on behalf of others pursuant to this plan, and with the intent of protecting animals on Stable property.

Acknowledge the foregoing by initial here: ____________

**Scenario 1** – At least four (4) hours exist before a mandatory evacuation of people from the area is announced, allowing time to trailer horses to other locations.

**Scenario 2** – Sufficient time exists (1 to 4 hours) to put halters on all horses to ready them for evacuation or relocation to lower field.

**Scenario 3** – Insufficient time to organize horse evacuation or relocation and law enforcement requires all people to leave the area. Horses are to be turned loose on the ranch (paddock gates, barn doors, and main property gates closed) to allow horses to save themselves from impending blaze.

ASSUMPTION: This plan anticipates the ranch owners will be engaged in saving their belongings and dwellings, will not be available to assist in horse evacuation, and the responsibility to fulfill this plan will reside with the boarders and other volunteers and attempt to perform the evacuation in good faith.

**SCENARIO 1 – 4 hours before mandatory evacuation**

NOTE: No horse trailers are to enter the property without permission from the owners or appropriate law enforcement personnel.
Loading coordinator: Person with most experienced in horse loading shall be the Loading Coordinator. Horse who know how to load will be loaded first. The loading coordinator will consider the input of the horse owner and trailer owner, but is authorized to exercise his/her independent judgment, and if the horse will not load within a reasonable period of time, the next horse in line should be loaded and the problem horse returned to a holding pen until it can be safely loaded. In no event shall the loading of horses be unduly delayed for a problem horse because of limited space for trailers to wait to be loaded, and risk placed on people by the untrained horse.

Notification: Boarders will be called and sent emails.

Action #1 – Boarded horses will remain at the ranch until they are ready to load.

Action #2 – All horses boarded on the property will be relocated to upper paddocks as trailers become available. Note: Boarders with a trailer on the premises are authorized to load their own horse(s) and proceed to public roads, subject to the traffic control. If you have room in your trailer, you are encouraged to fill up your trailer with other horses.

Action #8 – If evacuation becomes immediate, revert to Scenario #2.

**SCENARIO 2 – 1-4 hours to evacuate/relocate horses, imminent evacuation**

There is insufficient time to evacuate all the horses via trailer, but mandatory evacuation required by law enforcement is imminent. All horses will be haltered and readied to be loaded into trailers and moved to the lower field if trailers are not available. Field gates will be closed and water buckets hung if time allows.

**SCENARIO 3 – Immediate Evacuation**

Firestorm is imminent and law enforcement has ordered mandatory evacuation, or there is insufficient time to execute Scenario 1 or 2.

To the extent it is safe and authorized by appropriate law enforcement personnel, turn ALL horses loose, beginning with those closest to the fire. If possible, and it is safe to do so, herd the horses in the opposite direction of the fire. It is believed the horses will herd up and save themselves.

(NOTE: Be sure to securely close paddock gates and barn doors.)

**PRE-EVACUATION FIRE SUPPRESSION**

In no event should any person undertake any action that will place themselves or others at risk of injury. No person should attempt to operate a fire hose without training.
No person should interfere with instructions of fire suppression personnel or other law enforcement authority.

I am a horse owner/boards on [ranch] property and I hereby acknowledge the foregoing.

Signature: ____________________________________________

Print name: __________________________________________

Address: ____________________________

City, State ____________________________

Date: ________________________________