



Checklist and common
condition List
for Vets involved in flood
rescue/treatment of horses

As a veterinarian, it is important to plan well in times of natural disaster events and this checklist may aid in planning a safe, successful, and rewarding exercise in helping animals during a Flood Disaster Event.

Essential – General	Ideal but not always possible
Skilled boat driver with good local knowledge	Sailing Dry suit to protect your skin and not risk drowning or getting cold as waders and wet suits can
Reliable boat with enough size and power	Training in TAELR
Life Jackets – proper size & fit for all those in boat	Flood Maps
Helmet, wide brimmed hat, sunglasses	Note book to write down how to improve in future
Sunscreen , mosquito repellent	
Flood Maps and GPS	Knowledge of a Livestock recovery online log service so owners can list lost and found
Carcass Management and disposal plans	Involve military or helicopters for fodder drops to cattle and horses
Knowledge of common flood disease and local knowledge of toxic sites, sewer plants etc	
Knowledge of where further treatment can be accessed if needed eg referral hospital, evacuation centre if possible and safe to move horse.	
Knowledge of how to set up a Shelter in Place site if horse cannot be moved	
Appreciation for what toxins, pollutants could be in the flood water	

Sound horse handling skills and water safety skills		
Sound understanding of the at times life threatening risks involved in attempting to rescue animals in floods.		
Understanding of the danger of floor affected buildings, the risk of infection/toxicity to humans and animals in flood waters etc		
Knowledge of how to euthanase animals in various ways		
Sound knowledge of biosecurity		
Good communication skills and animal handling skills		
Good understanding of chain of command amongst the first responder teams etc		
Plans in case of liability issues involving personal injury, animal injured further in the rescue, property damage during the rescue.		
Current Professional Indemnity and Public Liability Insurance		
IDEAL LIST TO ITEMS TO TAKE		NICE TO TAKE BUT NOT ALWAYS POSSIBLE
Euthanasia Kit/methods eg captive bolt, rifle, xyl +/- ketamine followed by K Cl 60 gms in 120 ml water IV via 14 G catheter		Hoof knife and nippers
Tow straps, horse halter and 10 foot lead		Rebecca Gimenez's Book
Antibiotics – Pen/Gent, Metronidazole, TMPS		Microchips
NSAIDS's - bute, flunixin		Biosponge, vaseline
Needles and syringes		Dexamethasone
Bin and sharps container		TAT
Eye ointment – opticlox, atropine, triclin		Euthanasia Consent Forms
Fluorescein stain for corneal ulcers		Kinzie Splint, or Red Boot for splinting legs – or 2 half cut PVC pipes and bandages/tape.
Gloves		
Sedatives – detomidine and xylazine		
Phone and recharger, with video capacity for record keeping, communication etc		
Note book for record keeping		
Nikko pen and 3 different colour cattle tags to plait into mane or tail – red, black and green.		
Electrolyte paste		
Hay – 1-2 bisc per horse per day		
Buscopan		
5 ltr paraffin oil, twitch, stomach tube and		

funnel		
Scalpel blades		
Surgical kit		
Local Anaesthetic		
Tetanus toxoid		
PPE Kits – disposable overalls, masks, glasses, vicks for smell dilution under mask		
Disinfectant – eg betadine scrub and solution		
Microchip scanner and charger		
Head lamp and spotlight		
Grey tape		
Dishwashing liquid to hose off horse, bucket and sponge, towels		
Fresh water in 20 ltr drum/s		
Epsom salts for drench of impaction colics		
Malaseb (ideally with Tris EDTA added)		
Flamazine		
Fluconazole ??? to give systemically for fungal infection.		
Tetanus toxoid		
Sterile saline bags		
IV Catheters and Giving Sets		
Bandages		
Copper Sulphate powder and Vaseline for thrush, seedy toe etc		
Additional Items		

Flood Injury to Horses

Natural disasters have the unique ability to take people by surprise. Although it is difficult to prepare for every scenario, horse owners who plan prior to a “surprise” will typically reduce the stress and health risks their horses may experience. Recent flooding events in southeastern Louisiana have endangered horses, making it even more important to understand the necessity of preparation.

Disease Prevention

- During a disaster, animals will be stressed and are likely to come in contact with other horses and livestock during rescue, which can enable the transfer of diseases.
- Prior to the storm season, horses should be vaccinated with current strains for Equine Herpes I & IV, Equine Influenza I & II, encephalitides (EEE, WEE, WNV), rabies and tetanus.

- Providing food and fresh water to rescued animals is a priority. Adult horses need 5-15 gallons of water per day and enough emergency hay available to last at least seven days.
- Planning ahead to have adequate food stores is important to minimize severe diet changes. Horses fed a pasture-based diet will require more attention if they do not have access to fresh forages to prevent gastrointestinal upset. Access to quality forage is more important than concentrates. If your horse is not already on a grain ration, do not add concentrates unless necessary. The addition of concentrates may increase the risk for gastrointestinal dysfunction.

Response Plan

- Do your part to evacuate ahead of a flood, and make sure your horses can be haltered and amenable to being led. These actions will help prevent injury during restraint and transportation.
- Make sure your horse can be identified during an emergency in case evacuation is necessary. This can be done by painting contact information on the horse. Microchip and or brand identification also can be helpful for the rescue team when trying to locate owners.
- Equine emergency field response during a flood should be carried out by an experienced team (including veterinarians, first responders and trained handlers) for the safety of both humans and horses.

Triage and Medical Treatment

- For horses stranded in a flood, stress is a major contributor to flood-related equine medical problems and commonly include those discussed in the following sections.
- Injured horses should be examined by a veterinarian in the field and stabilized prior to transport. It is important to move the patient to an area for initial triage and assessment as soon as possible.
- Equine flood victims should be decontaminated by bathing with detergent soaps (such as Dawn dish soap) and require thorough cleansing to clean toxins, debris or microorganisms from skin and to identify additional sites of trauma. Debris and mud should be picked out of all four hooves, and feet should be cleaned. Handling and Restraint
- Chemical restraint (injectable medication) is often advised to calm the horse and safely manage the rescue and medical evaluation and treatment of flood-stranded horses. This restraint can minimize further injury to the horse and prevent human injury as well. Medication administration should be under direct veterinary supervision because some medications are unadvised with certain conditions.

Integument and Musculoskeletal Injury

- Limb, head, neck and trunk lacerations and abrasions are commonly seen in equine flood victims. If a horse exhibits lameness, a detailed exam to localize and prevent further exacerbation will be necessary.
- If a fracture is suspected, stabilization prior to transport will likely be necessary. This requires padded bandages and splinting material (PVC pipe cut in half, 2x4 boards, broom sticks). Veterinarians should be contacted for directions on how to splint fractures correctly.
- Flood-affected horses may develop dermatitis (skin infection) and cellulitis (limb swelling) due to breaches in the skin's barrier capabilities from standing in contaminated water for long periods of time. This can lead to more serious complications such as septic arthritis and lameness if not treated appropriately.
- Horses with cellulitis will have swelling and heat in affected areas and show signs of pain and lameness. Fungal infections also can occur after being exposed to floodwater; this may manifest itself as ulcerative and oozing lesions with a potentially foul odor.
- Horses that are recumbent (down) for long periods of time can develop myositis (severe muscle inflammation/cramping) that can be life-threatening. This condition should be treated by a veterinarian.

Hoof Problems After standing in mud or water for extended periods of time, horses may suffer from thrush, soft soles and sloughing of the frog, which may predispose them to other hoof problems such as laminitis.

Ophthalmic (eye) Injuries Traumatic corneal ulceration and uveitis (inflammation within in the eye) are common medical emergencies seen in equine flood victims due to flying storm debris and damaged stable and pasture environments. After rescue and transport, equine eyes should be irrigated with sterile eyewash solution

followed by a close detailed eye exam by the veterinarian. Squinting and excessive tearing and swelling around the eye suggests these conditions.

Gastrointestinal Dysfunction

- Horses that are stressed from being stranded, injured or unattended during a flood or have ingested contaminated water may develop colitis (severe diarrhea) or other forms of colic or systemic toxemia (sepsis).
- Common signs include lethargy, inappetance, colic and fever; some may develop mild to severe diarrhea.

Neurologic Disease

- Equine flood victims are at increased risk of developing head and neck injuries and are more susceptible to infectious diseases such as viral encephalitis or clostridial infections (tetanus and botulism).
- During patient triage, immediate action, including prevention of further progression of neurological abnormalities and emergency treatment, should be implemented. If vaccination status is unknown, a tetanus toxoid booster in addition to tetanus antitoxin may be beneficial.

Respiratory Disease

- Aspiration of water into the lungs of horses exposed to floodwaters may cause acute pulmonary edema and pneumonia, which are usually life-threatening.
- Horses that have been stuck in deep mud or floodwaters and struggle for long periods of time can develop upper respiratory tract inflammation resulting in swelling and obstruction of airflow.
- After evacuation and rescue, horses may commingle and become infected with respiratory diseases from other horses. The best way to prevent this is to provide herd immunity optimization prior to storm season. Horses affected by floodwaters face a variety of issues varying in degrees of seriousness. While exposure to all disaster situations cannot be prevented, it is important for horse owners to have a plan in place that includes all pets and livestock to increase survival rate and minimize losses.

Visit our website: www.LSUAgCenter.com Authors Neely Walker, Courtnee Morton, Quynchi Tran, Britta Leise, Rebecca McConnico LSU AgCenter and LSU School of Veterinary Medicine Pub. 3563 (online only) 11/16 William B. Richardson, LSU Vice President for Agriculture Louisiana State University Agricultural Center Louisiana Agricultural Experiment Station Louisiana Cooperative Extension Service LSU College of Agriculture The LSU AgCenter and LSU provide equal opportunities in programs and employmen

Special thanks to Dr Olivia James, Rebecca Gimenez Husted and Dr Rebecca McConnico for the Webinar from which some of this information was sourced