LIVESTOCK EMERGENCY RESPONSE GUIDE

County of Warner, Alberta

November 2025

Sustainable Canadian Agricultural Partnership

COUNTY OF WARNER

Alberta

Canada

Contents

1. INTRODUCTION 2
2. RISK IDENTIFICATION AND MITIGATION 3
3. LIVESTOCK DISASTER RESPONSE GUIDELINES 5
3.1 General Livestock Handling 5
3.2 Housing and Containment 7
3.3 Transportation of Livestock 9
3.4 Evacuation 13
3.5 Biosecurity 15
3.6 Identification 16
3.7 Triage 17
3.8 Euthanasia 20
3.9 Dead Stock 24
4. LIVESTOCK INCIDENT RESPONSE 27
4.1 Tornado or High Winds 27
4.2 Building Collapse 30
4.3 Flooding 32
4.4 Thunderstorm / Lightning Strikes 34
4.5 Winter Storm / Blizzard 36
4.6 Grass Fires 37
4.7 Barn Fires 39
4.8 Drought 42
4.9 Hazardous Material Spill 43
4.10 Motor Vehicle Incidents 44
4.11 Animal Neglect / Seizures 45
Appendix A: Livestock Evacuation Documentation Form 46
Appendix B: Biosecurity 47
Appendix C: Mental Health 48

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1. INTRODUCTION

The information in this Response Guide is designed to supplement the County of Warner's existing emergency preparedness plan, focusing specifically on livestock management during an incident or response. It is strongly recommended that all personnel and first responders involved in active animal handling—whether during motor vehicle accidents, evacuation center operations, or disaster response—receive training in emergency livestock response and handling.

The following sections offer important considerations for managing livestock during a disaster or emergency. These guidelines are general in nature, and their applicability may vary depending on the specific circumstances of each event, as every disaster presents unique challenges. This resource aims to equip responders with the knowledge to make informed decisions, ultimately reducing danger, risk, and confusion, and thereby enhancing the safety of responders, the public, and the animals.

2. RISK IDENTIFICATION AND MITIGATION

	RISK IDENTIFICATION	RISK MITIGATION
HUMAN RISK	• Loose livestock • Scared livestock are a hazard to first responders and the public • Injury or death of handler by animal (i.e. struck, kicked, bit or trampled) • Disease exposure • Psychological stress to first responder's due to high loss of animals	• Train first responders in livestock handling during emergencies • Utilize experienced livestock handlers • Use low stress safe livestock handling methods • Wear appropriate footwear for livestock handling • Contain all loose animals as quickly as possible
ANIMAL RISK	• Injury or death to animal • Pain and suffering of animal • Injury from facilities • Feed or water source contamination • Animals may be trapped in the building • Mass animal casualties • Animals trapped in buildings, paddocks or on flood created islands	• Utilize experienced livestock handlers • Use low stress safe livestock handling methods • Site inspection to ensure all facilities are free of projectiles and areas where animals can injure themselves • Provide emergency triage care • Euthanize animals as required as quickly as possible • Identify temporary housing for animals • Evacuate or relocate animals to evacuation site with feed and water available • Animals trapped in buildings, paddocks or on flood created islands • Water testing during time of drought • Toxic plant monitoring program
BIOSECURITY	• Disease exposure • Spread of disease • Poor health and potentially loss of life • Increased veterinary costs, clean-up costs • Loss of production ability of individual animals	• Implement biosecurity procedures • All animals identified upon arrival • Refer to industry biosecurity guidelines • Identify entry and exit points • Ensure all visitors log in and out of evacuation site • Limit co-mingling of animals from different properties when possible • Dispose of carcasses as soon as possible
PROPERTY RISK	• Property damage • Abandoned animals • Inability to confirm ownership of animal(s) • Theft of animals • Soil or water contamination	• All animals identified upon arrival • Security at evacuation sites • Proof of ownership for release • Ensure all visitors log in and out of evacuation site

	RISK IDENTIFICATION	RISK MITIGATION
TRANSPORTATION	• Injury during active loading or unloading • Transport of unfit animals • Motor vehicle incident during evacuation • Injury during transport • Owner at risk, refusing to evacuate with animals • Livestock owners with no trailers • Animals that refuse to load • Unable to evacuate all animals	• Preferable to utilize professional transporters • Ensure all vehicles are in good working condition and travel only on safe roads • Ensure all transport vehicles are free of projectiles and areas where animals can injure themselves • Be aware of regulations pertaining to the transport of animals. Full regulations can be found at: http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._296/page-16.html#h-70 • Prioritize and group experienced animals • Ensure all animals are identified and evacuation sites are secure and reported • Have plan on management of animals left behind
EUTHANASIA AND DEAD STOCK REMOVAL	• Worker / volunteer injury by the animal thrashing and /or striking out • Risk of gunshot ricochet when using firearm • Risk of injection of barbiturates • Risk of injury with captive bolt gun • Spread of disease • Contamination of soil or water • Injury during handling of carcasses • Human illness due to exposure • Specified Risk Material (SRM) when handling cattle carcasses	• Experienced handlers • Only trained individuals to deliver euthanasia • Proper facilities available • Proper equipment available • Equipment maintained and stored properly • Equipment safely stored away and only accessed by authorized personnel • Implementation of biosecurity • Identification of proper disposal options and locations • Consultation with government specialists on disposal options • Proper Personal Protective Equipment (PPE) (i.e. coveralls, boot covers, gloves, masks and eye protection) • Proper equipment for handling carcasses • Follow all regulations as they pertain to SRM handling when disposing of carcasses

3. LIVESTOCK DISASTER RESPONSE GUIDELINES

3.1 General Livestock Handling

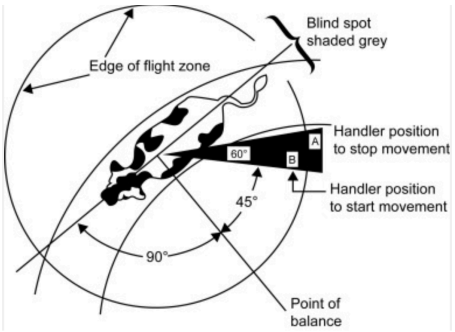
This is intended to provide guidance to first responders until experienced handlers arrive or if handlers are not available.

- Livestock are prey animals; their natural instinct is to flee when frightened. If they become cornered and feel threatened, they will attack until they are able to flee.
- Public safety must always take priority over anything else. If an animal is a threat to the public, it must be euthanized as soon as you can safely do so.
- Always have an escape route – do not get trapped by an animal. Stay alert, as you may have to move quickly. Never turn your back on an animal.
- Livestock are herd animals; isolation is one of the strongest stressors and should be avoided whenever possible. Livestock will calm quicker if left in a herd and may also readily play "follow the leader" when together. They are motivated to keep continual visual contact with each other. Animals need to be left in herds or flocks to keep them calm.
- Animals have a sharp sense of sight, smell and hearing. They have a wide angle of vision and are easily frightened by shadows. They will often balk, refusing to walk through a puddle, over a shadow or on a change of surface. They will also shy away from bright sunlight if they are not used to being outside. They have a tendency to move from a dimly lit area to a brighter area, granted the light is not glaring. Though they are reluctant to move into dark spaces, they will calm once inside. Lights (headlights, flashlights, floodlights) should never be shown directly into an animal's face and moving or flapping objects will spook or slow an animal.
- Never walk up behind an animal, whether it is standing up or lying down. They have very accurate aim when kicking. Horses can strike and kick with both their front and rear legs.
- When approaching livestock, try to avoid approaching them head on or directly from behind (they cannot see you) unless you must protect an injured person. Approach from the side, around the area of their hip, so you are within their line of vision.
- If an animal is somewhere unfamiliar or where it does not want to be, it will revert back to 'wild' instincts. Livestock involved in emergency events are frightened. Frightened animals are dangerous animals.

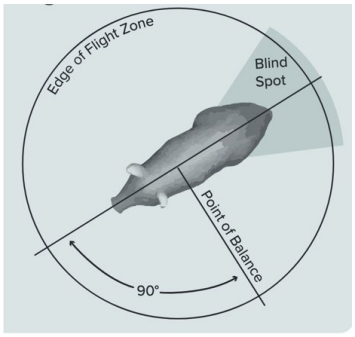
- All animals must be worked calmly. Do not shout, yell or wave arms wildly at animals. When you chase an animal, you become a predator. DO NOT chase livestock in vehicles – you will not catch them.
- Allow an animal to calm down before attempting to handle them. If you spook them, it will take 20-30 minutes to calm them down.
- If the animal(s) is standing calmly in one place or grazing, do not approach. Keep everyone away from the animal until a plan is established and a containment area can be created or found.
- If the animal is standing along a fence line or corral near other animals, open the gate or find a way for the animal to get back in.
- When you move livestock, move them in a group slowly and calmly.
- Do not enlist the help of bystanders and keep all people (including the media) away from the animals – ideally out of the area completely. If assistance is required, bring in handlers you are familiar with.

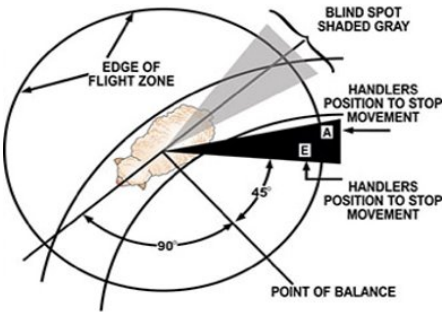
Flight Zone:

The flight zone is how you apply visual pressure to animals to move them in a calm, low stress manner.



- Do not stand in the animals blind spot
- Stand off to the side of their hips as indicated in the diagrams
- Stand behind their shoulder to make them go forward
- To make them go backwards stand in front of their shoulders
- Never stand directly in front of them
- To determine the size of their flight zone, start approaching the animal and as soon as the begin to move away you have entered the flight zone. Do not go any closer to the animal or it will cause them to flee.





3.2 Housing and Containment

Livestock that are evacuated, or loose during an emergency event may require temporary containment or housing. Livestock must be properly contained for both animal welfare and public safety.

Supplies

- Signage for housing (i.e. hospital pen, owner information)
- Temporary panels/fencing and gates to create extra penning
- Bedding (straw)
- Grass hay
- Water
- Water troughs and buckets
- Halters and leads (if horses present)
- Camera
- First aid supplies

Implementation

This is intended to provide guidance to first responders until experienced handlers arrive or if handlers are not available.

- Facility must have the ability to accommodate the number of animals being evacuated or recovered.
- Assemble temporary containment if necessary (i.e. portable livestock panels, cross fencing) to accommodate or segregate animals.
- Sight or facility must be inspected for sharp or protruding objects where a limb or head can get stuck.
- Sight or facility must be accessible during an emergency event.
- There must be unloading ramps available if animals will be arriving on a commercial livestock trailer.
- Sight or facility should have the ability to segregate herds/flocks or species groups if necessary.
- The facility must have fences, gates, panels to effectively contain the animals.
- Sheep and pigs cannot be effectively contained with cattle panels and will require sheep fencing around the panels. Other options for temporary containment can include hog panels or snow fence.
- There must be access to potable water at the facility. If the pumping of water requires power to distribute water (rural well) a back-up power source must be available.
- If there is no water source available, a water truck will be needed to bring in water.

Each pen or stall must have a water trough or buckets for water.

- Animals that are raised in climate-controlled barns (i.e. pigs, dairy cows, newborn animals) must be housed in indoor facilities in colder weather conditions.
- Facility must be clear of trees, power lines or structures that could collapse.
- Designate unloading area and trailer parking area.
- Check in animals upon arrival. Obtain owner information, animal information (type, number) and the location they were found if loose livestock.
- Identification system for arriving animals (i.e. paint branding, livestock markers, tags for halters, neck bands).
- Segregate animals as needed (i.e. sick animals, incompatible by nature).
- Hay must be provided for animals that are staying longer then 24 hours. Animals should only have mold free grass hay.
- A veterinarian and / or certified animal health technician (AHT) should be present if injured animals are expected.
- Label pens or stalls with owner information if available.

3.3 Transportation of Livestock

Large animals are more challenging to evacuate then smaller animals, such as dogs or cats, as large animals require trailers. There may also be owners who do not have trailers to transport their animals or have more animals than their trailers can hold.

Livestock can be difficult in times of panic or during a bad storm and be too frightened to load or this may instigate a flight instinct.

Overview of Transport Regulations

Examples of provisions that apply to evacuations that are contained in the **Health of Animals Regulations Part XII - Transportation** include:

- Prohibition of overcrowding of animals during transport
- Prohibition of transportation of animals that are unfit to travel
- Carriers cannot load, transport or unload animals in a way that would cause injury or undue suffering.
- Protection from adverse weather and adequate ventilation
- Use of proper containers and transport vehicles, segregation of incompatible animals

Full regulations can be found at: http://laws-lois.justice.gc.ca/eng/regulations/C.R.C., c. 296/page-16.html - h-70

Implementation

- Large ground load trailers are preferred due to ease of loading (i.e. no loading ramp required) and ability to easily maneuver around. Appropriate for all species.
- Determine trailer type and number of trailers required based on number of animals that need evacuated, type of animals and access to loading facilities.
- Dependent on current weather conditions, protection from the elements may need to be provided in the form of bedding and/or winter boarding. This is particularly true for hogs and dairy cows.
- Animals must not be overcrowded in a trailer.

- Commercial liners / trailers – number of animals determined by the size of animals and the size of trailers. See loading density chart on the next page to determine actual number of animals for specific trailers. You will need the available floor space of the trailer.
- For commercial livestock trailers (i.e. cattle liners):
    - Consideration must be given to road restrictions and ability to maneuver trailer around,
    - Loading ramps (permanent or portable) will be required.

Capacity: The following are average loading capacities for a 53' pot belly/drop center trailer. Actual numbers will vary based on animal size and number of decks in a trailer. This is intended to allow for estimation of number of trailers required. Professional drivers should be able to tell you how many animals that they can load for each species type.

SPECIES	TYPE OF ANIMAL	AVERAGE LOAD SIZE 53' TRAILER
Cattle	Fat or Mature	45-52
	Feeders	75-95
	Replacement Heifers	60-70
	Calves	120-200
Goats		Up to 500 head depending on decking in trailer and size of animal
Hogs	Market	180-220
	Feeders	400-1,400
	Weanlings	Up to 4,000
Horses	Meat	28
		Pot belly 45
Poultry	Broiler Chickens	Up to 8,000 (22/crate)
	Turkeys	1,700
	Poults (Feeders)	10,000-30,000
Sheep		Up to 500 head depending on decking in trailer and size of animal

- Notify predetermined transporters of where they need to pick up animals and where they need to be delivered.
- Ensure all transporters have livestock manifests and are aware that the form must be filled out for the transport of cattle, sheep and bison. A copy of the manifest must

remain with the animals upon delivery. If the Brand Inspector is present, it must be given to him.

- Inspection of loading and unloading facilities should occur before process begins. Ensure that all facilities are safe with no sharp or protruding objects that can harm an animal, not gaps where heads or legs can get stuck or an animal can escape, sides of the loading ramp are high enough to contain the animals being loaded and there is solid flooring.

Fitness to Transport

The following conditions are the definition of **Unfit** as per the **Health of Animals regulations Part XII**.

> **Unfit animals** can only be transported under the recommendation of a veterinarian. They must be transported directly to a facility where they can and will receive veterinary care. They cannot be transported to a slaughter facility, auction market or assembly yard. They must be segregated on the trailer in a compartment by themselves, without having to negotiate any ramps inside the trailer.
>
> An **unfit animal** cannot be unloaded from a trailer if it is non-ambulatory unless it is rendered unconscious first or humanely killed before unloading. If the animal is ambulatory, it must be unloaded individually, in a way not likely to cause unnecessary suffering, injury or death or it is rendered unconscious first or humanely killed before unloading.

Is **non-ambulatory**;

(b) has a fracture that impedes its mobility or causes it to exhibit signs of pain or suffering;
(c) is lame in one or more limbs to the extent that it exhibits signs of pain or suffering and halted movements or a reluctance to walk;
(d) is lame to the extent that it cannot walk on all of its legs;
(e) is in shock or is dying;
(f) has a prolapsed uterus or a severe rectal or severe vaginal prolapse;
(g) exhibits signs of a generalized nervous system disorder;
(h) is a porcine that is trembling, has difficulty breathing and has discoloured skin;
(i) has laboured breathing;
(j) has a severe open wound or a severe laceration;
(k) has sustained an injury and is hobbled to aid in treatment;
(l) is extremely thin;
(m) exhibits signs of dehydration;
(n) exhibits signs of hypothermia or hyperthermia;
(o) exhibits signs of a fever;
(p) has a hernia that

(i) impedes its movement, including when a hind limb of the animal touches the hernia as the animal is walking,

(ii) causes the animal to exhibit signs of pain or suffering,

(iii) touches the ground when the animal is standing in its natural position, or

(iv) has an open wound, ulceration or obvious infection;

(q) is in the last 10% of its gestation period or has given birth during the preceding 48 hours;

(r) has an unhealed or infected navel;

(s) has a gangrenous udder;

(t) has severe squamous cell carcinoma of the eye;

(u) is bloated to the extent that it exhibits signs of discomfort or weakness;

(v) exhibits signs of exhaustion; or

(w) exhibits any other signs of infirmity, illness, injury or of a condition that indicates that it cannot be transported without suffering.

Compromised

If an animal meets the below definition of compromised, it must be isolated; it is individually loaded and unloaded without having to negotiate any ramps inside the conveyance; measures are taken that are necessary to prevent the animal's suffering, injury or death during loading, confinement, transport and unloading; and it is transported directly to the nearest place, other than an assembly center, where it can receive care or be humanely killed.

(a) is bloated but has no signs of discomfort or weakness;

(b) has acute frostbite;

(c) is blind in both eyes;

(d) has not fully healed after a procedure, including dehorning, detusking or castration;

(e) is lame other than in a way that is described in the definition unfit;

(f) has a deformity or a fully healed amputation and does not demonstrate signs of pain as a result of the deformity or amputation;

(g) is in a period of peak lactation;

(h) has an unhealed or acutely injured penis;

(i) has a minor rectal or minor vaginal prolapse;

(j) has its mobility limited by a device applied to its body including hobbles other than hobbles that are applied to aid in treatment;

(k) is a wet bird; or

(l) exhibits any other signs of infirmity, illness, injury or of a condition that indicates that it has a reduced capacity to withstand transport.

3.4 Evacuation

Evacuation is often a necessity during a disaster event. Evacuation of people is taxing enough on a municipality, but the evacuation of livestock adds an entirely different set of challenges and risk factors to an already volatile situation. Quite often animal owners are reluctant to leave their animals behind, putting their own safety at risk.

Large animals can be much more challenging to evacuate then smaller animals, such as dogs or cats, as they require trailers.

Evacuation and Site Selection

- Evacuation sites must remain accessible during the event.
- Evacuation sites must be logistically close to the event, yet out of harm's way.
- Identify the most direct and safest way out.
- Alternate routes must be identified.
- Stock or commercial trailers must be accessible during event.
- Identify trailers located outside of municipality for backup if local trailers are unavailable or inaccessible.
- Select larger trailers to accommodate numerous animals. Ground load trailers are the most efficient to load.
- If commercial liners are to be utilized, access to loading ramp will be necessary.
- Animals may need segregated so ensure trailers have divider gates.

Implementation

- Identification of evacuation locations by probable priority. List of evacuation destinations created.
- Identify CFO's within incident parameters.
- Determine most appropriate locations for livestock to be moved to and as determine food and water availability at these locations.
- Livestock owners/producers or facilities put on alert for possible evacuation recommendations.
- Post publicly all available evacuation destinations once established.
- Livestock owners should be provided copies of a map with the evacuation routes and temporary evacuation destinations indicated.
- Supervision and manning of evacuation routes if required.
- Identification and contact official evacuation vehicles.

- Contact Alberta LIS to man evacuation centers for identification of livestock arriving.
- Contact pre-determined livestock handlers to assist with animal movements and manning of evacuation facilities if required.
- Alert pre-determined veterinary services of evacuation sites. Request assistance if needed or just place on call.
- Assess biosecurity needs with animal movements.
- Dispatch evacuation and recovery vehicles to pre-determined areas.
- Notify receiving destinations that evacuation has begun.
- Document all animals that were unable to evacuate and their locations.
- Work with owners on providing necessary supplies (i.e. food, water, bedding) for animals not evacuated.

3.5 Biosecurity

Biosecurity is about keeping animals healthy. It is the principles, actions, precautions and protocols that protect the health of animals by preventing the transmission of disease through physical barriers and hygiene practices.

Biosecurity Supplies

The following is a list of supplies you may need to access for biosecurity:

- Rubber boots
- Boot covers
- Scrub brush
- Disinfectant
- Bucket or pan to mix disinfectant
- Hand soap
- Disposable coveralls
- Face mask
- Safety glasses
- Latex gloves
- Sign-in sheet

Implementation

- Biosecurity needs will vary depending on emergency event.
- Contact the individual identified to oversee biosecurity.
- Identify level of biosecurity required and for what species.
- Obtain necessary biosecurity supplies.
- Identify access and options for penning, segregation, isolation and/or quarantine when or if those options are advisable.
- Post biosecurity procedures at evacuation sites.
- Circulate biosecurity expectations to all effected personnel.
- Print off sign-in sheets as needed.

3.6 Identification

Proper and effective identification of each animal is critical to biosecurity, animal health, ownership and inventory.

Traceability including distinct and accurate animal identification, premises identification and movement records is fundamental to disease response and emergency preparedness protocols. Cattle, bison and sheep must be identified with an industry approved RFID tag (CCIA, CSIP) at all times.

All livestock will require a means of identification upon arrival at the evacuation center, including those found as stray or abandoned.

Acceptable/common methods of permanent identification for equine include microchips, hot iron brands, freeze brands, lip tattoos, registration papers and photos (both sides, from front and from back).

The Alberta **Livestock Identification Services (LIS)** oversee and enforce the **Alberta Stray Animals Act** and should be present at all receiving sites.

Supplies

Following is a list of supplies you may need to access for identification:

- RFID scanner
- Markers or nontoxic spray paint
- Camera (ideally Polaroid or similar so photos can be attached to paperwork immediately)
- Livestock marking crayon
- Elastics, duct tape and a tag braided into a horse's mane with contact information
- Necessary paperwork – evacuation sheets, identification sheets, movement records

Implementation

- Contact Alberta LIS (www.lis-alberta.com) or an Alberta Agricultural Fieldmen to engage for identification and owner confirmation.
- Set up check-in station for receiving.
- Have all necessary paperwork and forms available for check in and identification.
- Take photographs of equine as necessary to go with paperwork, especially equine that are brought in as strays or abandoned.
- Keep all records accessible.
- Do not release equine to individuals without proof of ownership or contracted custody.
- Temporary identification for livestock may include paint brands, tags on halters, descriptive markings, spray paint.
- If animals are deceased, photographs should be taken of the animal along with any forms of identification and the location they were found.

3.7 Triage

Triage is a process for assessing and sorting injured or diseased animals into groups based on their need for, or likely benefit from, immediate medical treatment. Triage stations may be set up at evacuation or temporary housing sites during an emergency or implemented in other events such as barn fires, building collapses or motor vehicle incidents.

Livestock arriving at evacuation/temporary housing sites will need to be assessed upon arrival. There may be a need to have provisions to triage animals that arrive injured or ill to determine need for emergency medical care, isolation or quarantine. The Animal Health Risk Assessment table on the next page lists incident specific health impacts and the indicators.

Supplies

- First aid kit
- Camera
- Water
- Triage / treatment sheets
- Large tarps
- Signage
- Effective lighting
- Equipment for removing dead stock

Implementation

- Ideally, triage is overseen by a veterinarian and certified animal health technicians (AHT).
- Biosecurity practices implemented when possible.
- Triage should be located in an area that can protect the animal from the elements (i.e. indoors).
- Set up triage area in the same general area as the check-in station so animals can be inspected before entering facility.
- Set up barriers or flow system so animals have to pass through inspection before entering general population. Animals will be examined / inspected while being identified and checked into the evacuation destination.
- Ensure there is plenty of room and assistance for animals to be safely examined by a veterinarian or a certified animal health technician.

- Establish isolation area for animals requiring treatment. Area must allow for isolation and ease of access for animals and medical practitioners. Area should be clearly marked as isolation area and be segregated from general population.
- If animals are deemed in need of treatment, move animals to isolation area for treatment.
- If animal is healthy and clears triage, check-in sheets should reflect the animal was inspected upon arrival.
- All treatment and diagnostics will be under the guidance of a veterinarian.
- All animals that receive treatment must have a treatment sheet filled out by attending veterinarian.
- Escalate care and treatment off site when required.
- In cases of motor vehicle incidents, animal will need to be assessed (triaged) at the scene. Production livestock (i.e. cattle, pigs, sheep, poultry, meat horses) will be assessed as either fit to transport or require euthanasia at the scene. Animals not fit to transport cannot be transported for euthanasia. For companion horses, a veterinarian should be called to the scene to evaluate the condition of the horse and can request the transport of an injured horse to a veterinarian clinic for further treatment under the care of the veterinarian.

ANIMAL HEALTH RISK ASSESSMENT

HAZARD	HEALTH IMPACT	INDICATORS
Fire	• Smoke inhalation, burns	• Nasal Discharge, coughing, swelling
Thunderstorm	• Burns from lightning strike (check under halters)	• Burns on skin
Floods	• Drowning, hypothermia	• Indicators of hypothermia include shaking / shivering, body temperature below 37.8° C (100° F), irregular heartbeat
Tornados	• Injuries including broken bones, lacerations, internal injuries, paralysis, unconsciousness, amputations impalement	• Visually observed lacerations and breaks, inability to bear weight on leg(s), inability to stand up, bleeding out the mouth, nose, anus, missing limb, excessive bleeding. Foreign objects protruding from body
Winter Storm	• Hypothermia, starvation, dehydration, frost bite, freezing of feet, ears and tails	• Hypothermia will see shaking / shivering, body temperature below 37.8° C (100° F), irregular heartbeat. Dehydrated equine's skin will stay up in a ridge, while healthy skin should spring smoothly back into place. Lethargy, depression, dullness in the eyes, dry skin and mouth, thick and sticky saliva
Drought - Extreme Heat	• Heat stress, dehydration, starvation	• Body temperature 40° C (104° F) or above • Excessive panting or difficulty breathing • Collapse • Increased heart and respiratory rate • Salivation • Depression, stupor
Motor Vehicle Incident	• Injuries including broken bones, lacerations, internal injuries, paralysis, unconsciousness, amputations	• Visually observed lacerations and breaks, inability to bear weight on leg(s), inability to stand up, bleeding out the mouth, nose, anus, missing limb, excessive bleeding
Building Collapse	• Injuries including broken bones, lacerations, internal injuries, paralysis, unconsciousness, amputations	• Visually observed lacerations and breaks, inability to bear weight on leg(s), inability to stand up, bleeding out the mouth, nose, anus, missing limb, excessive bleeding
Hazardous Materials	• Burns, lung damage, poisoning	• Visually observed burns on the body of the animal, nasal or eye discharge, difficulty breathing, coughing, open wounds, disoriented behaviour
Explosion	• Burns, impaled, lacerations, internal injuries, broken bones	• Visually observed burns on the body of the animal, lacerations, inability to stand up, bleeding out of the nose, anus, missing limb, excessive bleeding. Foreign objects protruding from body
Neglect Cases	• Poor body condition	• Extremely emaciated, bone structure visible, difficulty walking

3.8 Euthanasia

Euthanasia – Humane death that occurs without pain and distress

There may be requirement for euthanasia. In the case of mass euthanasia, the provincial or federal veterinarians will oversee the process. Municipalities may be asked to assist in the process of disposal. In other circumstances such as motor vehicle incidents, fires or weather events, individual animals may require euthanasia due to injuries.

In such events, the **Alberta Animal Protection Act** allows the euthanasia of an animal under the direction of the owner or a peace officer. Though veterinarians are the most commonly utilized professional for animal euthanasia, peace officers and other trained and experienced individuals (i.e. brand inspector) are qualified and may be utilized. Such individuals should be identified as part of the disaster response team.

Consideration

Response will be based on circumstances in the following considerations:

- Utilization of only an approved method – gunshot, penetrating captive bolt, barbiturate overdose for livestock.
- Means and location of disposal.
- Number of animals requiring euthanasia.
- Disease concerns.
- Safe accessibility to animal.
- Availability of methods.
- Restraint requirements (cloth, tarp or material to cover the animal's head / eyes).
- Condition of animals (i.e. barbiturates may not be effective on an animal with internal bleeding).

Application of Euthanasia

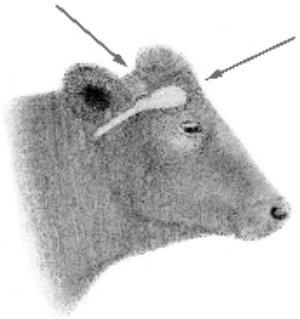
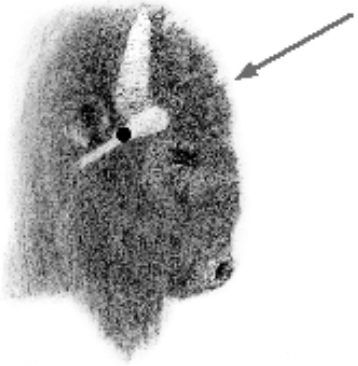
By law, only veterinarians can administer barbiturates. Euthanasia by firearms or captive bolt guns can be performed by veterinarians, peace officers, brand inspectors or the owner of the animals.

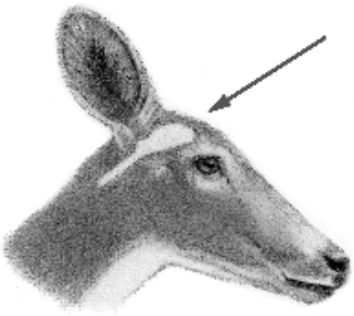
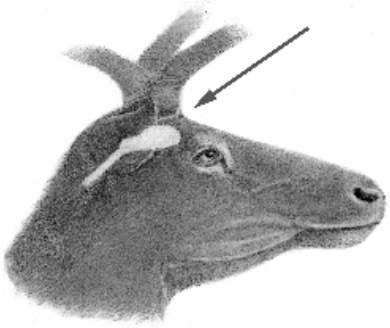
Proper procedure for euthanasia with a captive bolt gun or firearm:

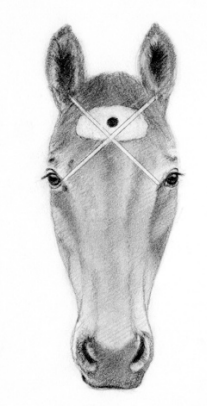
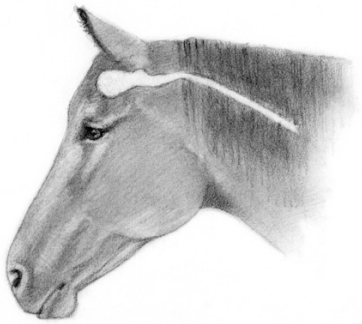
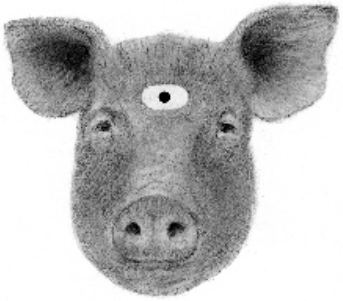
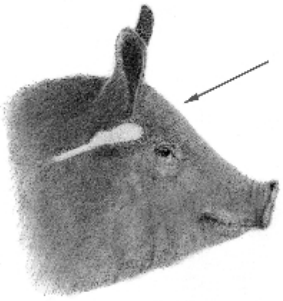
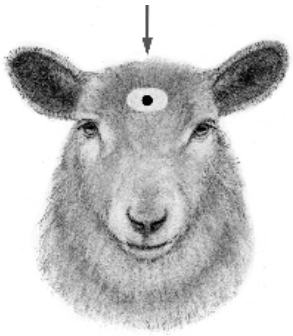
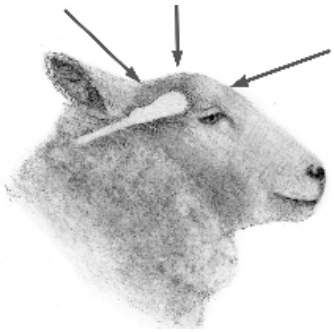
- Allow animal to calm down if necessary.
- When shooting an animal with a firearm:
    - Ensure a weapon is powerful enough to get the job done.
    - For firearms, the muzzle cannot be held flush to the animal's head. Rifles should be held approximately 2 inches away from the point of entry. Shotguns 10 - 12" away.
    - Do not shoot without a clear background.
    - Do not shoot over long distances or into a group of animals.
    - Do not shoot while driving down the road.
    - Do not shoot where a missed shot can ricochet off a hard surface.

- When shooting an animal with a captive bolt gun:
    - Ensure the type and strength of the captive bolt gun is appropriate to the species.
    - The animal must be restrained when circumstances require (i.e. mobile, combative).
    - The gun must be held firmly and flush to the animal's head.
    - A secondary procedure may be required such as a second shot, exsanguination or pithing.
    - Make sure the animal is dead before walking away from it. Check for vital signs – pulse, breathing, etc. An animal will "wiggle" for 2-3 minutes following death, but it should not raise its head.
    - The point of entry is in the following diagrams – the point between the eyes is not the appropriate point of entry. It is very important to learn the point of entrance in order to ensure euthanasia is performed properly.

POINT OF ENTRY FOR FIREARM AND CAPTIVE BOLT GUN

BEEF		
BISON		

DAIRY		
DEER		
ELK		
GOAT		

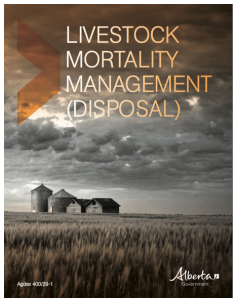
HORSE		
PIG		
SHEEP		

3.9 Dead Stock

Disposing of dead stock can be quite challenging based on several factors including accessibility to disposal locations, number of animals and climatic conditions.

The disposal of dead animals in Alberta is regulated under the **Animal Health Act - Disposal of Dead Animals Regulation 132/2014** (www.qp.alberta.ca/documents/Regs/2014_132.pdf). This regulation is applicable to the disposal of individual animals, diseased animals and disaster or emergency situations.

Acceptable Methods of Dead Stock Disposal



Dead stock can be disposed of pursuant to the government of Alberta (www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex6081/$FILE/400_29-1.pdf) and municipal regulations through:

- Burial – bury animals per the **Animal Health Act - Disposal of Dead Animals Regulation**.
- Composting – the biological breakdown of organic materials in an aerobic (presence of oxygen) environment. www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex13509/$file/400_29-4.pdf
- Landfills – dead stock can be disposed of at landfills where allowed. **Disposal of Dead Animals Regulation** still apply.
- Incineration – the destruction of carcasses by burning.
- Scavenging – allow dead stock to be disposed of via scavengers (i.e. coyotes, birds, etc.).
- Rendering – a company that collects dead stock to render them into inedible products or dispose of them. This is a user pay service.

Implementation

Contact officials at Alberta Agriculture and Forestry for guidance and approval of mass disposal as per the **Alberta Disposal of Dead Animal Regulation**.

The following are considerations when disposing of dead animals (see table on following page):

- Disease or health conditions
- Cause of death
- Number of animals
- Biosecurity

Identify disposal method and disposal site.

- Take photos of all dead animals to allow for identification by owners.
- Heavy equipment (i.e. backhoe) will be required if animals are to be buried.
- Carcasses must be covered with either:
    - A minimum of 1 m (3.3 ft) of compacted soil
    - 0.15 m (6 in) of soil, 0.5 kg (1 lb) of quicklime for every 10 kg (22 lbs) of mortality and a lid.
- Secure a front-end loader and truck if needed for transport of dead stock.
- All trucks must be leak proof and carcasses should be covered.
- Ensure all handlers wear the proper PPE's during handling of dead stock.
- In winter months, carcasses can be stored frozen until the ground thaws to allow for burial.
- Arrange for direct delivery to renderer or pick up of carcasses if rendering is selected as the disposal method.
- If an animal is suspected of being diseased, they must be reported to authorities. They cannot be disposed of naturally or through rendering.
- **Specified Risk Material** (SRM) regulations must be followed when disposing of cattle. A permit is required to receive, remove from any premises, use, convey (other than from one area to another on the same premises), treat, store, export, sell, distribute, confine or destroy SRM in any form, including bovine dead stock from which SRM has not been removed. The location receiving the SRM must have a separate permit. The SRM permit application form is available online at: www.inspection.gc.ca/bse

CONSIDERATIONS WHEN DISPOSING OF DEAD ANIMALS

DEATH	OPTIONS BASED ON MUNICIPAL / GOVERNMENT REGULATIONS	RESTRICTIONS
Injury including euthanasia by firearm or captive bolt gun	• Rendering • Burial (within weight restrictions) • Composting • Incineration • Landfill	• Carcasses in excess of 2500 kg will require special permits for burial, composting and landfill disposal • Carcasses must stay intact during handling for rendering
Fire	• Burial (within weight restrictions) • Composting • Incineration	• No rendering • Carcasses in excess of 2,500 kg will require special permits for burial, composting and landfill disposal
Barbituate overdose by veterinarian	• Incineration • Disposal where no animals can be scavenging	• No rendering • No burial • No scavenging
Disease	• Per governing regulations or guidance only	• Cannot be disposed of through rendering, burial, composting or at a landfill

4. LIVESTOCK INCIDENT RESPONSE

4.1 Tornado or High Winds

Alberta averages 15 tornadoes per year and numerous severe thunderstorms. Tornado season extends from April to September with peak months in June and July. Tornadoes usually hit in the afternoon and early evening, but they have been known to strike at night.

Livestock are often victims of these weather events.

Definitions

- **Wind Warning**: A sustained wind of 60 km/h or greater is expected to last for 1 hour or more, or a wind gust of 90 km/h or greater is expected.
- **Tornado Watch**: Conditions are favorable for the development of severe thunderstorms with the potential to produce tornados.
- **Tornado Warning**: There is a confirmed sighting of a tornado on the ground, when weather spotters report funnel clouds with a rotating thunderstorm, or a tornado signature is detected on Doppler radar.

Entities Impacted

- All animals in immediate area or path of tornado activity.
- Moderate to catastrophic Impact on animal health and welfare may include pain and suffering, loss of housing/containment, loss feed and water source.

Response

Tornado warning or watch issued

Watch for tornado danger signs:

- Dark, often greenish sky
- Wall cloud, an isolated lowering of the base of a thunderstorm
- Large hail
- Cloud of debris
- Funnel cloud
- Roaring noise
- Tornadoes may occur near the trailing edge of a thunderstorm and be quite visible
- Livestock sense tornadoes in advance. Be aware: animal behavior may change before, during and even after a disaster
- Identify CFO’s in the path of the tornado
- Issue standby notice to veterinary response team, Alberta LIS and livestock response team

After a tornado has passed:

- Dispatch veterinary response team for site triage at impact area (Section 3.7 Triage).
- Request brand inspectors respond to lose livestock in impact area and owner identification at site of temporary housing and containment (Section 3.2 Housing and Containment).
- Dispatch livestock handlers to impact area if needed.
- If determined that temporary housing is required, implement the housing and containment aspect of this plan (Section 3.2 Housing and Containment).
- Dispatch trailers to transport loose animals to temporary housing (Section 3.2 Housing and Containment and Section 3.3 Transportation of Livestock).
- Ensure access to euthanasia tools and personnel to euthanize animals are available at the facility and at temporary housing area (Section 3.8 Euthanasia).
- Dead stock disposal site to be identified (Section 3.9 Dead Stock).
- Watch out for fallen power lines or broken gas lines and report them to the utility company immediately. Livestock are very curious and will be drawn to downed powerlines. Herd them away from all power lines.
- Be alert at all times of loose livestock. These animals will be very frightened and may charge or attack first responders or other people in the area.
- Utilize low stress, safe livestock handling practices (Section 3.1 General Livestock Handling).
- Assess building structures. Survey damage to barns and other structures; assess the stability and safety.
- When entering damaged barns or farm structures, use extreme caution. Be on the lookout not just for building damage, but also frightened animals.
- Examine animals closely. Injuries may include impalements and lacerations from flying debris. Notify veterinary response team of location of injured animals.
- Animals that are loose or unable to be contained at the impact site will need to be relocated to the designated temporary housing facility.
- Animals that require euthanasia must be euthanized as soon as it is safe to do so. Animals cannot be transported for euthanasia; they must be euthanized where they are located.
- Injured animals that meet standards for transport can to be moved to designated triage site.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Long term temporary housing and feed supplies may need to be established until animals can return home.
- Animals may need to be sold if the provision for temporary housing is unable to be secured.

- Feedstuff may need to be accessed for producers who lost source of feed source during the event.
- Dead stock will need to be disposed of as soon as possible to prevent disease spread, public health and environmental issues.
- All housing areas in the impact area will need to be thoroughly cleaned and cleared of debris. Fencing and facilities repaired or replaced before animals can return to farm.

4.2 Building Collapse

It is not uncommon for farm structures to collapse. This can occur due to heavy snowfall or due to adverse weather such as tornados or high winds. Livestock that are commonly housed inside a farm building structure include hogs, poultry, dairy cattle and stabled horses. Livestock event centres that may also be at risk of collapse are riding or livestock show arenas.

Long term temporary housing and feed supplies may need to be established until animals can safely return. Animals may need to be sold if the provision for temporary housing is unable to be secured.

Entities Impacted

- All animals in the effected building and any animals that required access to it.
- Possible catastrophic impact on health and welfare including pain and suffering, loss of housing/containment, loss of feed and water source.

Response

- Identify facility affected by building collapse.
- Locate facility on municipal and determine type and number of animals housed in facility.
- If event facility, confirm if animals are currently present and if so type and number.
- Issue standby notice to veterinary response team, Alberta LIS and livestock response team.
- Dispatch veterinary response team for site triage (Section 3.7 Triage).
- Dispatch livestock handlers to impact area if needed.
- If determined that temporary housing is required, implement the section 3.2 Housing and Containment of this plan.
- Dispatch trailers to transport loose animals to temporary housing (Section 3.2 Housing and Containment and Section 3.3 Transportation of Livestock).
- Ensure access to euthanasia tools and personnel to euthanize animals are available at the facility and at temporary housing area (Section 3.8 Euthanasia).
- Determine requirement for disposal of dead stock and means.
- Upon arrival, obtain information on whether there are people inside the building. As an example, was the collapse during the milking process at a dairy? How many competitors were present at competition?
- Never enter an unstable structure to rescue animals. Human safety always takes precedent over that of an animal.

- Be alert at all times of loose livestock. These animals will be very frightened and may charge or attack first responders or other people in the area.
- Utilize low stress, safe livestock handling practices (Section 3.1 General Livestock Handling).
- Assess building structures. Survey damage to barns and other structures; assess the stability and safety.
- For partial collapses, only evacuate animals from areas where animals are accessible, and building is stable.
- When entering the structure, use extreme caution. Be on the lookout not just for building damage, but also frightened animals.
- Examine animals for injuries. Only mobile animals can be removed from the facility. Non-ambulatory animals must be euthanized where they are found. Animals that require euthanasia must be euthanized as soon as it can safely be done. Animals cannot be transported for euthanasia but must be euthanized where they are located.
- Injured animals are to be moved to designated triage site. If triage has been established away from the incident site, only animals that meet standards for transport are to be moved to designated triage area.
- Remove dead stock to designated disposal site (Section 3.9 Dead Stock).
- All animals that are loose or unable to be contained at the farm or facility will need to be relocated to the designated temporary housing facility.
- Means and methods of dead stock will need to be determined and animals removed to designated disposal site (Section 3.9 Dead Stock).
- Long term temporary housing and feed supplies may need to be established until animals can return home.
- Animals may need to be sold if the provision for temporary housing is unable to be secured.

4.3 Flooding

Floods are the most frequent natural hazard in Canada. They can occur at any time of the year and are most often caused by heavy rainfall, rapid melting of a thick snowpack, ice jams, or the failure of a natural or man-made dam.

Entities Impacted

- All animals in impacted area.
- Moderate to catastrophic impact on animal health and welfare may include pain and suffering, hypothermia, loss of housing / containment, feed and water.

Response

Flood Warning/Watch Issued

- Identify all livestock facilities on floodplain. Determine animal type and the number of animals in impact area.
- Identify and confirm livestock evacuation facilities in unaffected area of the municipality (Section 3.4 Evacuation).
- Issue livestock evacuation alert to all producers as soon as risk of flood risk identified.
- Initiate municipal evacuation response if need to assist producers.
- If deemed necessary implement the Housing and Containment aspect of this plan (Section 3.2 Housing and Containment).
- Issue standby notice to veterinary response team, Alberta LIS and the response team.

Active Flooding

- Dispatch livestock handlers to impact area if required.
- Continue evacuation alert or elevate to evacuation order of livestock from all accessible flood areas.
- Determine requirement for disposal of dead stock and means.
- If animals are unable to be evacuated, ensure that they are able to get to higher ground on their own. Do not lock them up in barns or paddocks. Never release animals on roads unless the roads are closed to traffic.
- All animals have the ability to swim except for chickens.
- Horses are able to withstand water up to their bellies from 48 - 72 hours.
- Livestock have a natural instinct to move away from flood waters. They generally seek higher ground if possible.

- Utilize low stress, safe livestock handling practices (Section 3.1 General Livestock Handling).
- All animals that are loose or unable to be contained at the farm or facility will need to be relocated to the designated temporary housing facility.
- Any animals that become stranded will have to be provided feed until rescue can occur or water subsides.
- Water rescue is the most dangerous of all technical rescues. If animals require rescue from water, there must be a risk assessment performed and only performed by individuals trained in water rescue.
- Dead stock to be moved to designated disposal site (Section 3.9 Dead Stock).
- Allow animal owners back in when deemed safe.
- Facilities (barns, pastures and paddocks) will need to be inspected and repaired before animals return.
- Feed may need to be sourced if feed supplies and pasture were lost in flood.
- Water quality will should be tested before animals resume consumption in flood affected areas.
- Alternative power sources may need to be provided if farms are without power in order to access water, fans, ventilation or milking equipment.

4.4 Thunderstorm / Lightning Strikes

Thunderstorms are a very common weather event in Alberta. These storms are often accompanied by lightning strikes, heavy rains, strong winds and hail. Livestock are killed by lightning strikes every year and it is not uncommon for multiple animals huddled together to be killed by one strike. The high winds that may accompany the storm can also impact livestock in the vicinity.

Thunderstorms can be extremely dangerous when they occur during an outdoor livestock event (i.e. 4-H show, jumping event, rodeo). Animals will react and may act up or try to flee during a storm injuring handlers and spectators.

Entities Impacted

- All animals in impact area.
- Moderate to catastrophic impact on animal health and welfare may include pain and suffering, loss of housing/containment, risk of injury, loss of feed and water sources.

Response

- Identify CFO's or livestock events in the path of the thunderstorm.
- Issue thunderstorm alert of possible to affected areas.
- Livestock sense weather changes and it does impact their behaviour. Be aware animal behaviour may change before, during and even after a storm.
- Be alert at all times of loose livestock. These animals will be very frightened and may charge or attack first responders or other people in the area. Utilize low stress, safe livestock handling practices (Section 3.1 General Livestock Handling).
- Assess building structures. Survey damage to barns and other structures; assess the stability and safety. Be on the lookout not just for building damage, but also frightened animals.
- Examine animals closely. Common injuries may include impalements and lacerations from flying debris or burns from lightning strikes. Request veterinary care if required.
- Animals that require euthanasia must be euthanized as soon as can safely be done. Animals cannot be transported for euthanasia but must be euthanized where they are located.
- Ensure access to euthanasia tools and personnel to euthanize animals are available within the impact area and at temporary housing area (Section 3.8 Euthanasia).
- If determined that temporary housing is required, implement the Housing and Containment aspect of this plan (Section 3.2 Housing and Containment).

- Dead stock will need to be disposed of as soon as possible to prevent disease spread, public health and environmental issues. Producers may need assistance if animals exceed the 2,500 kg limitations or they do not have access to a burial site.
- Dead stock disposal method and means to be identified if mass animal casualty.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Temporary housing may need to be identified if structural damage prevents animals from being housed in their existing facilities.

4.5 Winter Storm / Blizzard

Winter weather condition in Canada create many challenges for livestock producers. Blizzards can easily reach disaster status if conditions are right.

Entities Impacted

- All animals in impact area.
- Moderate to catastrophic Impact on animal health and welfare may include starvation, dehydration, death, hypothermia, power loss, suffocation and loss of housing.

Response

- Monitor weather conditions – snowfall amounts, winds, drifting.
- Possible municipal assistance provided to producers:
    - Provide heavy equipment to assist producers in accessing animals.
    - Rescue/recovery of stranded animals.
    - Airdrop feed.
    - Disposal of dead stock.
- Livestock will often move away from the force of an oncoming storm, unless they are moving toward shelter that is known to them.
- Extreme conditions during blizzards can cause both livestock and humans to become panicked or confused.
- Livestock may avoid traveling directly into the force of an oncoming storm.
- Livestock may resist or be hesitant to leave even limited shelter behind during storm conditions.
- Dead stock disposal site or method to be identified if mass animal casualty.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Dead stock may not be identified or accessible until snow melts.

4.6 Grass Fires

Grass land or prairie fires are very common in Alberta. These fires can happen year-round and are often fueled by drought conditions and high winds. Common causes of grass fires are burn barrels, tractors and cigarette butts. These fires can move very quickly across open lands and farms and ranches are often the most vulnerable facilities.

Entities Impacted

- All animals in impact area.
- Moderate to catastrophic Impact on animal health and welfare may include pain and suffering, loss of housing/containment and access to feed and water.

Response

- Issue alert identifying affected areas.
- Grass fires normally happen with no warning and will travel very quickly due to high winds. In many instances, there is no time for evacuation of livestock.
- If there is time to issue evacuation alert to producers in the fire path, assistance will most likely be needed for transport and loading due to the time restraints. Producers will most likely be able to transport one trailer load of animals, unable to return for the balance of the animals.
- Evacuation site will need to be identified if owners are able to evacuate animals in fire path.
- Municipality will need to provide safest route out and notify evacuees of any closed roads.
- Open gates or cut fences to allow animals to escape if necessary but only do so if safe and not onto a road. If able to so, spray some indication of ownership on animals such as horses. This will allow for easier identification when animals are captured.
- Remove nylon halters or blankets from horses, if possible, as they will melt to the animal if the animal is near the fire.
- Livestock do not begin to fear fire until it comes within their sensory range. Once smoke and heat enter this sensory range it can invoke varying reactions from nervousness, to panic, to aggressive and resistive escape attempts.
- Horses, llamas and alpacas in particular will panic at approaching fire. Their instinct will be to flee. They are often not easily handled or managed. This elevated fear level can last for several days after the fire.
- Animals are often injured fleeing from the fire and from the first responders.

- If animals are burned or exposed to excessive smoke, veterinary care will be required. Veterinarian response team will need to be dispatched to site of fire, evacuation location or animals transported to veterinary clinic.
- If a grass fire destroys barn and fencing, temporary housing may be necessary (Section 3.2 Housing and Containment).
- Feed sources may be destroyed by fire. This can include hay, grain and pasture. Emergency sources may need to be identified and provided.
- Dead stock method and means need to be identified if mass animal casualty.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Loose animals will need to be rounded up and either returned to owner, if known, or taken to evacuation / temporary holding facility.

4.7 Barn Fires

It only takes 3 to 4 minutes for a barn to be filled with smoke and only 6 minutes for it to be completely engulfed. Combined with the facts that barn fires often start at night, are not immediately detected and the response time of the fire department is longer due to distance to farms, barn fires normally will result in total loss of structure.

Dependent on number of animals and type of production, loss of animal life is often high. Animals kept in individual stalls are challenging and time consuming to remove from the facility (i.e. pigs, horses). Other animals are impossible to get out of housing style they utilize (i.e. layers).

Entities Impacted

- All animals in impact area.
- Catastrophic impact on animal health and welfare may include pain and suffering from burns and smoke inhalation, loss of housing/containment and access to feed and water.

Response

- Instruct dispatch to ask if any stock persons are in the barn and to direct the owners and staff to stay out of the barn and wait for fire responders to arrive.
- If possible, have dispatch obtain extra information, such as type of animal involved and number of animals.
- Be on the lookout on the way to the fire for animals that may have gotten loose or have been released from the site of the fire.
- Upon arrival ask about, or look for, other hazards, such as gas or diesel tanks, stored fertilizers, hay or dangerous animals.
- If owner present, find out how many animals are still in the barn.
- Ask where the closest water source is, including a pond or dug out.
- If there is a chance of the structure fire spreading to a nearby field, request the farmer begin plowing a dirt fire barrier around the barn area, without getting too close to the barn.
- **AT NO TIME SHOULD A FIRE FIGHTER OR ANYONE ELSE PUT THEIR OWN PERSONAL SAFETY IN JEOPARDY TO SAVE AN ANIMAL FROM A BARN FIRE.**
- If a barn has exterior stall doors, whenever possible use these for evacuating animals instead of going inside the barn.
- Once barn roof is on fire, animals should only be accessed from outer walls. This can be done by using existing doors or possibly cutting a large hole in the side of the barn. **DO NOT GO INSIDE THE BARN – THE ROOF MAY COLLAPSE!**

- Animals become quickly frightened and disoriented in a fire. They will not run out of the barn on their own. Rescuers need to use extreme caution and judgement when attempting to vacate a burning barn. You must never put your own life in danger for the animals.
- If there is a series of connected barns or other barns in close proximity, it may be more effective and safer to evacuate the animals in those barns versus the barn that is on fire.
- The animals closest to the doors should be the first ones evacuated as they are the easiest to get to.
- It takes at least one minute per horse to catch, halter and lead a minimum of 100 feet. A horse will be easier to move if it is blindfolded. Using a towel under a halter works very well if the horse is halter broke and not panicking.
- Pig barn fires are the most difficult to deal with. Due to the design of the barns, the high number of pigs in the barn and the difficulty moving pigs, these barns are almost impossible to evacuate.
- One of the most difficult parts of barn fires for owners and first responders is the smells and sounds that occur when animals are involved, especially pig barn fires. Barn fires have the potential for loss of thousands of animals. Prepare yourself and your team.
- Livestock will run back into a burning barn. When removing animals from a barn they should be taken clear of the incident scene. Preferably to corrals or trailers where they can be locked up and kept out of harm’s way.
- If there is a chance any of the animals have embers under their hair, they must be hosed off. Embers can smolder under their hair for several hours leading to burns. Hose all animals off as they are removed from the structure.
- Pigs in confinement are especially afraid of light, which makes them difficult to move out of a barn into the sunlight or bright lights of a truck.
- In the case of a poultry barn fires, the birds are almost impossible to evacuate. Virtually all poultry barn fires result in a 100% loss. Laying hens are commonly housed in cages. Chickens raised for meat, turkeys and ducks are usually loose in the barn.
- Pigs, poultry and dairy cows from a heated barn must be protected from the cold if they are evacuated in the winter.
- The leading cause of death in barn fires is smoke inhalation. Horses can experience a delayed reaction to smoke inhalation. For this reason, all horses involved in a barn fire should be directed to veterinary care, even if they look healthy.
- An evacuation location for surviving animals will need to be determined and temporary housing established for all animals involved in the fire as they will be unable to be housed in the facility that was loss. Rarely do producers have empty barns or enough space in remaining facilities to house the animals on their own farm (Section 3.4 Evaluation).
- Feed sources may be destroyed by fire. This can include hay, grain and pasture. Emergency sources may need to be identified and provided.

- Dead stock disposal method and means need to be identified if mass animal casualty.
- Dead stock to be removed to designated disposal site or temporary holding area (Section 3.9 Dead Stock).
- Loose animals will need to be rounded up and either returned to owner if known or taken to evacuation / temporary holding facility.

4.8 Drought

Drought is a recurrent feature of climate involving a deficiency of precipitation over an extended period of time, resulting in a water shortage. Drought may be caused by combinations of insufficient snow accumulation, hot and dry weather, or a delay in rainfall. Drought can impact crop production (feedstuff such as hay), pasture availability and water availability and water quality.

Entities Impacted

- All animals in impact area.
- Moderate to Catastrophic impact on animal health and welfare may occur due to starvation, dehydration, toxic plants and water toxicity.

Response

- Monitoring of drought conditions around the municipality.
- Signs of dehydration in livestock:
    - rapid, shallow breathing.
    - reluctance to move.
    - weight loss.
    - drying of mucous membranes (e.g., eyes, nose, mouth).
    - decreased skin flexibility.
- Signs of heat stress in livestock:
    - increased respiration rate or panting.
    - excessive salivation.
    - elevation of the head to make it easier to breathe.
    - open mouth breathing.
- Signs of water toxicity: Salivation, increased thirst, vomiting (regurgitation), abdominal pain, diarrhea, ataxia, circling, blindness, seizures, wandering aimlessly, bumping into things and partial paralysis.
- Lack of rain and evaporation due to hot weather can cause high concentrations of sulphate in water. Sulphate concentrations over 1,000 milligrams per litre can cause neurological trauma in cattle and can kill at levels over 7,000 milligrams. Toxic algae can also grow in low water situations.
- Monitor toxic plants in the area and notify producers of livestock risk plants.
- Municipality may be asked to assist in accessing emergency feed supplies or emergency water resources.
- Request for assistance with an animal seizure in the case of neglect.

4.9 Hazardous Material Spill

Livestock can be exposed to hazardous material through train derailments, motor vehicle incidents, chemical spills, failure of containment, equipment failure. Hazardous material can be in the form of flammable and combustible materials, toxic materials, corrosive material, oxidizers, aerosols or compressed gases.

Entities Impacted

- All animals in impact area.
- Moderate to Catastrophic impact on animal health and welfare may occur due to chemical burns, exposure to noxious gases and water toxicity.

Response

- Immediate notification of all producers in immediate vicinity of incident.
- Determining if evacuation or shelter-in-place is required for livestock producers.
- Facilitating evacuation orders or shelter-in-place protocols for livestock producers.
- If evacuation of producers is required, the municipality may need to coordinate with other agencies the feed and checking of livestock left to shelter in or develop plan to allow producers in for daily care.
- Arrangement for transportation for evacuation may be required.
- Monitoring of water and air quality in affected areas may be required. Communication of results will need to producers.
- Decontamination of animals may be required.
- Testing of dead stock before disposal to ensure they are not contaminated.
- Long term contamination will need to be monitored. Testing of water, soil and feed sources may be required after the event has ended.

4.10 Motor Vehicle Incidents

Motor vehicle incidents involving livestock is the most common livestock emergency event to occur in Alberta. Everyday Alberta highways have hundreds of vehicles transporting thousands of animals. Motor vehicle incidents can range from a pickup truck transporting one animal in a stock rack to a commercial livestock trailer transporting thousands of chickens. These events are also unique in that first responders are directly involved in all incidents and are incident command.

Entities Impacted

- All animals involved the incident.
- Minimal to catastrophic impact on animal health and welfare may include pain and suffering due to injury, death and fear-based stress.

Response

- These are general guidelines for response to motor vehicle incident. Details for extrication techniques and trailer specifics can be obtained through livestock emergency response training.
- See Section 3.1 General Livestock Handling.
- Be alert for loose livestock on way to the incident. Animals that escaped the vehicle may have traveled away from the scene.
- Before exiting the vehicle, evaluate the scene for loose and dangerous animals or any other hazards.
- If there are loose animals on the roadway, move them off the roadway and gather them in one place.
- Request the assistance of Alberta LIS for all livestock related incidents.
- Once the necessary resources are identified, request the assistance of dispatch to notify the pre-established livestock resources and request their assistance.
- Keep all bystanders and media away from the scene and the animals.
- Set up containment before releasing any animals from the trailer.
- If the animal(s) cannot be removed through a door, the trailer must be examined to determine the best way to dismantle the trailer and remove the animal.
- When removing animals from a trailer never allow people to become trapped with no way out. Animals, gates, walls, etc. must never block an escape route of a handler.
- When unloading animals try to keep people and other distractions out of their line of vision. Tarping panels can be beneficial to animal movements.
- Following a motor vehicle incident that involves livestock dead animals may need to be removed from the scene and the area cleaned.

4.11 Animal Neglect / Seizures

Though not a common part of most disaster plans, there are instances where cases of animal neglect or seizure of flocks or herds have required the assistance of municipalities and communities. There have been several cases in Alberta where numerous animals, at times in excess of 100, have been seized and removed from a premises. In such cases the producers themselves cannot or will not assist with the handling or care of the animals. Enforcement agencies have required local assistance for transport of seized animals, temporary housing, access to feedstuff and disposal of dead stock.

Entities Impacted

- All animals involved in neglect or seizure event.
- Moderate to catastrophic impact on animal health and welfare may occur due to starvation, dehydration and poor body condition.

Response

- Assist in securing temporary housing facilities and transporters identified through disaster plan.
- Assist in accessing a local feedstuff source.
- Assist with identifying method and means of dead stock removal.
- Assist with the identifying producers to assist with removal and handling of animals.

Appendix A: Livestock Evacuation Documentation Form

Date:			
OWNER INFORMATION			
Owner's name:			
Address:			
Premises Identification Number (PID):			
Telephone number:			
Owner signature:			
TRANSPORTER INFORMATION			
Transporter's name:			
Telephone number:			
Type of livestock:		Number of livestock transported:	
Identification (brand, tattoo, etc.)			
Location livestock picked up from:			
Transporter signature:			
Was owner present for transport? Yes/No			
RECEIVER INFORMATION			
Receiving name:			
Receiver location:			
Premises Identification Number (PID):			
Telephone number:			
Receiver signature:			
Was owner present for delivery? Yes/No			

Appendix B: Biosecurity

Biosecurity is about keeping animals healthy. It is the principles, actions, precautions and protocols that protect the health of animals by preventing the transmission of disease through physical barriers and hygiene practices. Use this form to record personnel movement on and off the premises during an emergency. Visit www.albertaanimalhealthsource.ca/category/biosecurity for biosecurity information and resources.

PERSONNEL CHECK IN SHEET

DATE	NAME	COMPANY / ORGANIZATION	LICENSE PLATE NUMBER	PURPOSE OF VISIT	HAVE YOU BEEN IN CONTACT WITH INJURED OR DISEASES LIVESTOCK?

Appendix C: Mental Health

Emergency events can significantly impact the social well-being of equine owners, custodians and other personnel involved. Equine owners or custodians may face many different stresses during an emergency that can personally impact their mental well-being. As well, the mental well-being of associated staff may also be affected. It is important that organizations provide resources to staff and members of the industry to help them identify symptoms and cope properly with the situation. These resources might come in different forms.

Many people often neglect to confide their internal struggles to others, it is important that others around them observe potential symptoms of inability to cope. The checklist below is provided to act as a resource for persons to assess their own, as well as others state-of-mind and determine whether they should seek help.

People react in different ways to trauma, experiencing a wide range of physical and emotional reactions. Some reactions or symptoms endured as a result of a traumatic event are:

EMOTIONAL & PSYCHOLOGICAL SYMPTOMS	PHYSICAL SYMPTOMS
Shock, denial, or disbelief	Insomnia or nightmares
Confusion, difficulty concentrating	Fatigue
Anger, irritability, mood swings	Being startled easily
Anxiety and fear	Difficulty concentrating
Guilt, shame, self-blame	Racing heartbeat
Withdrawing from others	Edginess and agitation
Feeling sad or hopeless	Aches and pains
Feeling disconnected or numb	Muscle tension
	Loss of appetite

Source: https://www.helpguide.org/articles/ptsd-trauma/emotional-and-psychological-trauma.htm

If you notice yourself or someone else experiencing these symptoms, it might be time to talk with them and discuss qualified medical attention.

Alberta Health Services provides a 24/4 Mental Health Help Line for those who are looking for further direction in dealing with their mental well-being. The Mental Health Help Line provides:

- Confidential, anonymous service
- Crisis intervention
- Information about mental health programs and services
- Referral to other agencies if needed

They can be reached by calling **1-877-303-2642** www.albertahealthservices.ca/findhealth/Service.aspx?id=6810&serviceAtFacilityID=1047134#contentStart