

Emergency Management Guide for BC Beef Producers

ONLINE EDITION



Emergency Management Guide for BC Beef Producers

**How to prepare for and respond
to an emergency impacting
your ranch**

Prepared for
British Columbia Ministry of Agriculture
and
British Columbia Cattlemen's Association

Prepared by Risk Reduction Strategies
Victoria, BC
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Disclaimer

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Emergency Management Guide for BC Beef Producers

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Emergency Events

- 1. Wildfire
- 2. Flooding
- 3. Animal Disease
- 4. Power Outage
- 5. Severe Winter Weather
- 6. Extreme Heat / Drought
- 7. Hazardous Material
- 8. Structure Fire

This Emergency Management Guide provides an important tool for small and large beef producers in British Columbia. It can be used both to educate and to guide responses on a number of natural and human-caused threats to your operation.

Ranchers continually face emergencies. Most producers instinctively know what to do without the need to open a manual. However, documenting the actions needed to protect your most important assets is valuable for two reasons:

- An emergency guide for your ranch operations helps inform others on how best to assist during an emergency, including family members, ranch staff, neighbours, and first responders.
- An emergency guide adapted specifically for your ranch demonstrates the “due diligence” you have taken in managing your risks.

This Guide has two parts. Following this Introduction, you will find general material on the value of document ranch information, contacts, mapping, insurance, and additional resources.

The second part consists of a series of eight tabs, containing preparedness and response actions you can adapt to best fit your ranch and business situation.

Each tabbed section prompts you for information specific to the premise, and allows you to assemble specific “action items.”

The Guide is placed in a three-ring binder so you can easily update your response information. Sections can be removed for use in other manuals such as *WorkSafe BC*, or other materials can be added to this binder.

This format invites you to record your own plans for managing emergencies before, during, and after events occur. The goal is to have a ranch-specific Emergency Management Guide that is simple enough for any family member or ranch employee to understand and use.

You can download an interactive version of this *Emergency Management Guide* to include your own ranch information, if you wish, and to print copies of each page. See the Ministry of Agriculture website at: <http://www.agf.gov.bc.ca/emergency/> .

Hard-copy workbooks are available through the British Columbia Cattlemen’s Association or at the nearest Ministry of Agriculture office.

The BC Ministry of Agriculture and other sponsors hope this Emergency Management Guide will help you prepare for and minimize the impact of threats to your home and ranch, as well as protect your family, employees, and animals.

1

Beef producers are ultimately responsible for taking action to provide for livestock under their care and control.

2

A completed Emergency Management Plan is one way to demonstrate due diligence and may be helpful in receiving insurance compensation.

3

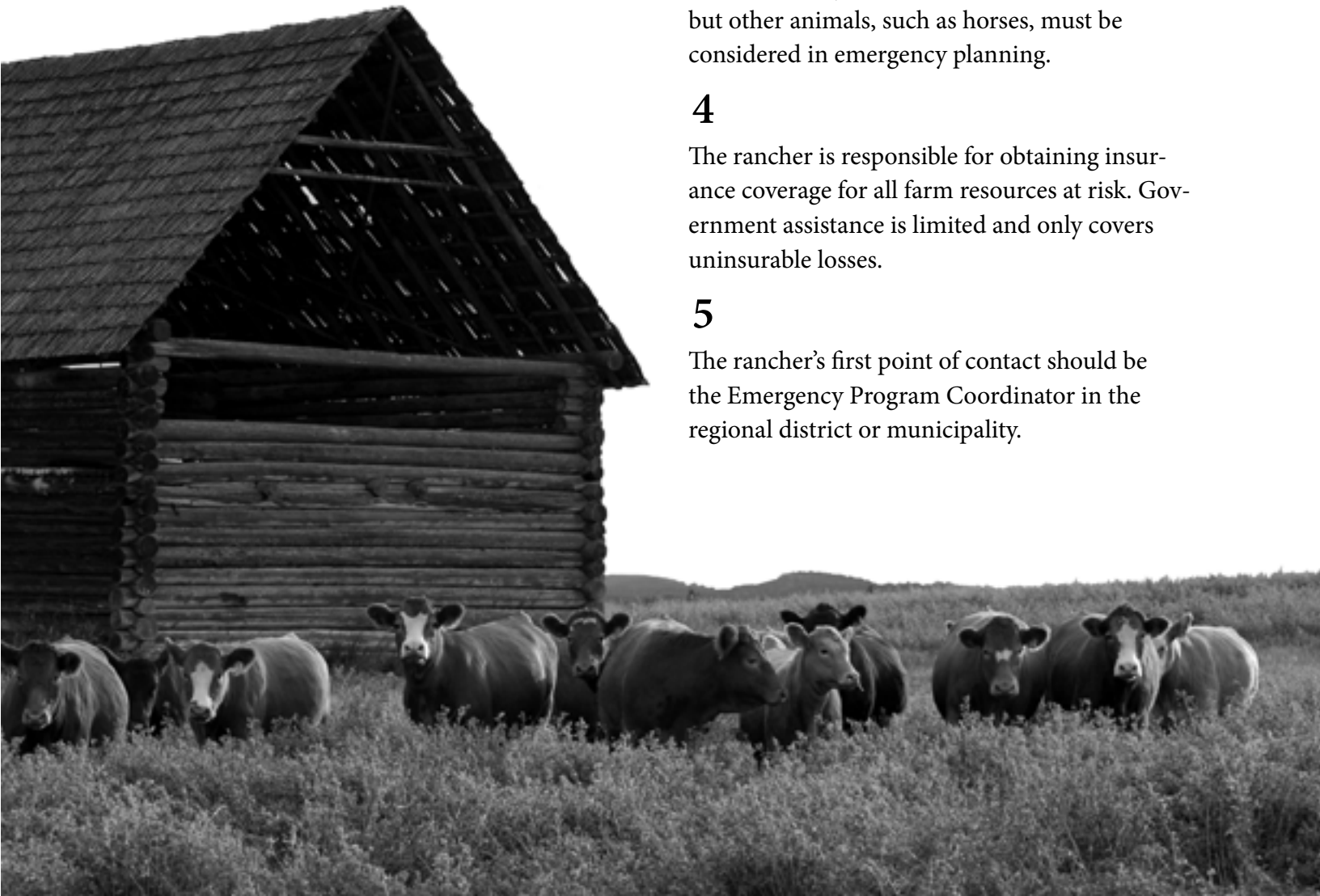
Beef cattle may be the central focus of the ranch but other animals, such as horses, must be considered in emergency planning.

4

The rancher is responsible for obtaining insurance coverage for all farm resources at risk. Government assistance is limited and only covers uninsurable losses.

5

The rancher's first point of contact should be the Emergency Program Coordinator in the regional district or municipality.



is no need to reproduce ranch information you may have elsewhere, ensure the following details are readily available.

Premises ID

Address

Directions

Landline

Mobile

Email

Address (if different than above)

Home phone

Mobile

Email

Manager's name *(if different than above)*

Address

Home Phone

Mobile

Email

How many individuals are normally on the ranch?

Family

Staff

Tenants

Other information

[illegible]

Emergency 7 Contacts

Contacting outside agencies and organizations for assistance is usually one of the most helpful actions when emergencies strike. These days, many ranchers carry important contact information on their

mobile devices. However, a printed list of emergency contacts may allow family members or staff to make important contacts on behalf of the owner/operator.

Organization	Name	Telephone
Ambulance		9-1-1
Bank		
BC Cattlemen's Association, Kamloops		250-573-3611
Doctor		
Electrical Company		
Electrician		
Emergency Management BC, Regional Office		
Faith-Based Organization		
Feed Supplier		
Fire / Rescue		9-1-1
Friend / Neighbour		
Fuel Dealer		
Insurance Agent		
Internet Provider		
Machinery Dealer		
Min. of Agriculture, Local Office		
Min. of Environment, Local Office		

A map on the wall may be all that you require for day-to-day operations. However, dealing with actual emergencies often calls for assistance from others who may not share your mental vision of your ranch. Maps are essential for engaging other agencies, such as the local fire department, flood response teams, or the provincial Wildfire Management Branch.

A map is also indispensable in planning for emergencies. It can show the relationship between

hazards on your land, such as flooding, and your assets. Maps help you develop practical response steps, such as moving animals to high ground or areas of natural shelter.

Useful maps contain simple features that communicate the essentials of your ranch operations. Depending on your situation, a map for your *Emergency Management Guide* should include the elements shown in the sidebar.

Elements of a Ranch Map for Emergency Planning

- North Arrow
- Scale
- Fuel-reduced areas (i.e., plowed or heavily grazed field) where animals can be sheltered from wildfire
- High ground areas for herd location during flood threats
- Property boundaries, Crown land
- Pipelines and wells, oil or gas, if applicable
- Railways, if applicable
- Roads and road access, showing gates and on-site vehicle access ways
- Sandbag locations to protect structures from surface flooding
- Slope of land (drainage directions)
- Structures, including main house, barns, storage buildings, and equipment storage yards
- Watercourses (ponds, streams, wetlands), with floodplain boundaries, if applicable
- Water wells, existing or abandoned

As a rancher, you likely have maps and know their value. The challenge comes with creating maps that are readily shared with others, whether with farm workers, neighbours, or first responders.

Here are a few ideas:

Existing Map: One simple way to include an existing map in your Emergency Management Guide is to photograph or scan it, and include a printed copy in this binder. If you participate in the Environmen-

tal Farm Program, you may already have a map of your ranch and operations. Consider adding a copy to your Emergency Management Guide.

Obtain a Map: You may be able to obtain a map from a local government office, such as your municipality or regional district, or from a provincial agency, such as the Integrated Land Management Branch (ILMB). The ILMB website is located at: www.ilmb.gov.bc.ca/about.html

Google Earth: You may wish to create a new map using readily available resources, like Google Earth. Google Earth is a free, downloadable program that allows you to not only zoom in to every section of your ranch, but to tag, label, and draw a boundary around a piece of property. To download Google Earth, see: www.google.earth/earth/download/ge/agree.html

The Provincial Government offers a number of useful files that can be used with Google Earth. One service

is the “Integrated Land Resource Registry” through the DataBC site. It can show with accuracy the boundaries of your private land, Crown leases, and range licenses. Note that this feature is only available in Google Earth, not Google Maps. The DataBC site can be accessed at: www.data.gov.bc.ca/

Additional information to include with this section:

- ☐ Existing map of ranch and operations

The consequences of a major emergency on an individual ranch may be catastrophic. Some impacts cannot be prevented regardless of preparedness. Therefore, insurance plays an important role in protecting you from low-probability, high-consequence disasters such as floods, wildfires, or animal disease emergency.

Ranchers in BC have access to several approaches to managing their financial risks, as noted below. Refer to the specific links for detailed program information.

Commercial Insurance

Private insurance is generally available to cover beef production losses from emergencies, such as those addressed by this Guide. Coverage may include losses due to livestock injuries or mortalities, temporary livestock relocations, and infrastructure losses (i.e., barns and equipment).

As an important step in managing risk, cattle producers in BC should understand what is covered under their insurance policies and what may be excluded. Talk with your insurance broker or agent about the details.

The Insurance Bureau of Canada can help ranchers find available coverage for business losses through private insurance programs. Its member companies represent 90% of the property and casualty insurance market in Canada. Their website: www.ibc.ca/

Federal/Provincial Government - Risk Management Programs

The federal and provincial governments provide a suite of cost shared risk management designed to build the productivity, profitability, and competitiveness of the agricultural sector in the province.

AgriStability: This federal-provincial risk management program helps producers cope with declines in farm income due to market variability, production losses, and increased costs of production. AgriStability covers losses associated with increased feed costs, or decreased revenue from the sale of livestock.

AgriRecovery: This program provides a coordinated government framework for disaster relief on a case-by-case basis. Funding may be available for losses not covered by other programs, and may be cost-shared between the province and the federal government.

AgriInvest: This program offers a “savings account” approach for producers, supported by various levels of government. It covers small income declines and allows for investments that help ranchers prevent losses and improve market income.

More information on these risk management programs is available at:

www.agf.gov.bc.ca/rm/index.htm

Emergency Management BC

Under the BC Emergency Program Act, ranchers may be eligible for financial assistance for losses incurred in disasters for which insurance was not available. For details, see the information available through Emergency Management BC at: www.embc.gov.bc.ca/em/dfa_claims/dfa.html

Emergency Management BC recognizes three phases of evacuation:

1. Evacuation Alert
2. Evacuation Order
3. Evacuation Rescind

Moving livestock to safety is encouraged during the Evacuation Alert phase when time is available. During an Evacuation Order, the local police of jurisdiction may strictly enforce traffic flows that move residents to safety. An Evacuation Rescind is issued when it is determined to be safe for residents and livestock to return home.

Livestock Evacuation Assistance

The BC Ministry of Agriculture may be able to help ranchers during an evacuation, such as loading, trucking, and sheltering. Cattle producers who incur costs in moving their herds off-site due to hazards, such as flooding or wildfire, may be eligible for financial support. This includes expenses incurred during both the Evacuation Alert and the Evacuation Rescind phases. It is essential to keep detailed records and receipts to receive financial assistance.

You can confirm your eligibility for evacuation assistance by phoning toll free the BC Ministry of Agriculture: 1-888-221-7141. The following website contains fact sheets on the topic:
www.agf.gov.bc.ca/emergency/

Inventory Importance

An emergency illustrates the importance of having an up-to-date ranch and cattle inventory. Ranchers should document any loss of livestock, ranch buildings or equipment in writing, using the inventory to verify losses. Consider taking photographs and videos of damage, if possible, noting the time and date.

Additional information to include with this section:

- ☐ Insurance coverage and exclusions
- ☐ Account information for existing provincial and/or federal risk management programs

This Guide complements other emergency guides, reports, and documents that may be of interest. Some of the more useful resources may be accessed through the websites listed in this section.

Agriculture and Agri-Food Canada Programs

www.agr.gc.ca/index_e.php

**Code of Practice for the Care
and Handling of Beef Cattle**

www.nfacc.ca/codes-of-practice/beef-cattle

BC Cattlemen's Association

www.cattlemen.bc.ca/

**BC Ministry of Agriculture, Sustainable
Agriculture Management**

www.agf.gov.bc.ca/resmgmt/

www.agf.gov.bc.ca/rm/index.htm

DataBC

www.data.gov.bc.ca/

Emergency Management BC

www.embc.gov.bc.ca

www.emergencyinfobc.gov.bc.ca/prevention-preparation.html

www.embc.gov.bc.ca/em/dfa_claims/dfa.html

Environmental Farm Plan

www.bcac.bc.ca/ardcorp/program/environmental-farm-plan-program

FARSHA Safety Materials

www.farsha.bc.ca

FireSmart Manual

www.bcwildfire.ca/Prevention/firesmart.htm

Google Earth

[*www.google.com/earth/*](http://www.google.com/earth/)

Insurance Bureau of Canada

[*www.ibc.ca/*](http://www.ibc.ca/)

Integrated Land Management Branch (ILMB)

[*www.ilmb.gov.bc.ca/*](http://www.ilmb.gov.bc.ca/)

Livestock Evacuation

[*www.agf.gov.bc.ca/emergency/Evacuation/Evacuation.htm*](http://www.agf.gov.bc.ca/emergency/Evacuation/Evacuation.htm)

Livestock Waste Tissue Initiative

[*www.iafbc.ca/funding_available/programs/livestock/livestock.htm*](http://www.iafbc.ca/funding_available/programs/livestock/livestock.htm)

On-farm Contingency Plan

[*www.agf.gov.bc.ca/resmgmt/EnviroFarmPlanning/390100-1_Contingency_Plan_Template.pdf*](http://www.agf.gov.bc.ca/resmgmt/EnviroFarmPlanning/390100-1_Contingency_Plan_Template.pdf)

Premises ID

[*www.agf.gov.bc.ca/foodsafety/bc_pid.htm*](http://www.agf.gov.bc.ca/foodsafety/bc_pid.htm)

Range Use Management Plan

[*www.for.gov.bc.ca/hra/*](http://www.for.gov.bc.ca/hra/)

WorkSafe BC

[*www2.worksafebc.com/Portals/Agriculture/Home.asp*](http://www2.worksafebc.com/Portals/Agriculture/Home.asp)

[*www2.worksafebc.com/Portals/Agriculture/Ranching.asp*](http://www2.worksafebc.com/Portals/Agriculture/Ranching.asp)

1

Wildfire

Key Messages

1. The Emergency Coordinator for your municipality or regional district is a point of first contact.
2. The phone number to report a wildfire is: 1-800-663-5555 or *5555 (mobile).
3. Animal movement options may be appropriate, depending on the wildfire.

Wildfires can spread at an astonishing rate. In British Columbia, approximately half of the wildfires are caused by human activities and half occur naturally from lightning strikes. If your ranch or operation is in a wildland region, sooner or later you will probably contend with the spread of a wildfire. The first line of defense is knowing steps to minimize risks and reduce losses.

Cattle Behavior in a Wildfire

- Cattle may not become as nervous or panicked as other livestock around fire, but they can become disoriented.
- Cattle may wander into the hot ashes and cinders left by freshly burned grass or bush, become confused on a direction of escape, and burn their hooves beyond recovery.

Additional Information

Wildfire Loss Prevention: <http://bcwildfire.ca/Prevention/>

Current Wildfire Situation: <http://bcwildfire.ca/>

Wildfire Information: 1-888-3FOREST (1-888-336-7378)

2013 British Columbia Wildfires

CENTRE	FIRES REPORTED
1. Coastal	244
2. Northwest	141
3. Prince George	353
4. Cariboo	323
5. Kamloops	459
6. Southwest	331



1

Wildfire

Wildfire Preparedness

My preparedness steps for wildfire include the following:

- ☐ Review the wildfire history in my area, such as neighbours, local emergency coordinator, forestry, etc.
- ☐ Identify and maintain the equipment (i.e., harrow, plow, water truck, tools) needed to fight an approaching grassfire or wildfire.
- ☐ Clear vegetation and wood debris at least 10 metres away from my home and ranch structures.
- ☐ Reduce fuels from 10 to 30 metres away from home and structures by thinning and pruning vegetation.
- ☐ Reduce the timber fuel load elsewhere on ranch and Crown land to help mitigate the risk of wildfire.
- ☐ Maintain vegetation control around buildings, fence lines and haystacks by grazing or other means.
- ☐ Store hay away from roads and fences, and surround bales with a bare area or fuel-reduced strips.

Action Items / Notes

Wildfire Response

My response steps for wildfire include the following:

Evacuation Options

Option 1: Move animals to a safe on-ranch location.

On-site movement of my animals is the best option because:

- ☐ I have a site on my ranch where the herd will be safely away from the wildfire (i.e., distant hillside, heavily grazed fields).
- ☐ I have sufficient time, personnel, and equipment to round up and relocate my animals to this area.

Option 2: Free my animals.

Freeing my animals is the best option because:

- ☐ I am unable to move livestock into a safer area. I will open gates and/or cut fences to allow my animals to avoid the wildfire.
- ☐ I determine that there is no danger to people or vehicular traffic from freeing my animals.
- ☐ I am contacting local authorities of my decision to free my livestock and am aware that firefighters may open gates and cut fence lines.

Continued on reverse

Option 3: Evacuate my animals to off-ranch locations.

Evacuation is the best option because:

- ☐ I have located and prearranged off-ranch evacuation sites.
- ☐ I can determine routes to these locations, considering alternate routes.
- ☐ I can arrange for trucks, trailers, drivers, and handlers, if necessary.
- ☐ I can arrange for feed, water, and veterinary care at the site.

Notes

Additional information to include with this section:

- ☐ Location and contact information for prearranged off-ranch evacuation sites.
- ☐ Map of evacuation sites and routes that may be used for animal movement.

Flooding

Key Messages

1. Unconfined animals can usually take care of themselves during a flood.
2. The rancher's goal is to keep the herd high and dry.
3. Your local Emergency Coordinator can provide up-to-date flood information and forecasts.

Floods can impact both animal and human health. The beef producer can plan more effectively by assessing the flood risk on various parts of the ranch. Response options for flooding will depend on several factors, such as current snow load, ground conditions, and current and forecast precipitation. Options also depend upon local ranch topography and distribution of the beef operation.

Common Flooding Terms

- **High Streamflow Advisory:** River levels are rising or expected to rise rapidly, but no major flooding is expected. Minor flooding is possible.
- **Flood Watch:** River levels are rising and will approach or may exceed bankfull. Flooding of areas adjacent to affected rivers may occur.
- **Flood Warning:** River levels have exceeded bankfull or will exceed bankfull imminently. Flooding will occur in areas near affected rivers.

Additional Information

River Forecast Centre: <http://bcrfc.env.gov.bc.ca/>

Emergency Management BC: <http://embc.gov.bc.ca>

Floodplain Maps

Floodplain maps are available for your area at the

BC Ministry of Environment website:

http://www.env.gov.bc.ca/wsd/data_searches/fpm/reports/index.html

Sample of Floodplain Map
Kettle River near Grand Forks, B.C.





Flooding

Flood Preparedness

My preparedness steps for flooding include the following:

Long-Range Preparedness (when flooding is possible)

- ☐ Update information about my cattle by numbers, type identification, and location.
- ☐ Consult the Ministry of Environment floodplain map nearest my operations.
- ☐ Mark a specified height on local watercourse(s) to trigger response action when water reaches this point as necessary.
- ☐ Stock supplies and fuel for auxiliary power in case of isolation or loss of power.
- ☐ Determine most appropriate locations for my stock to be moved, either on-site or off-site.
- ☐ Visit these locations and determine security, supplies, safety, fencing, etc. Assure food and water availability.
- ☐ Examine appropriate evacuation routes for livestock and determine availability of truck liners, portable chutes, and alternative forms of transportation vehicles.
- ☐ Determine possible locations that could shelter horses, i.e., barns and stalls.
- ☐ Assemble a supply of emergency materials, i.e., rope, sandbags and sand, plywood, plastic sheeting, lumber, etc.
- ☐ Store all chemicals above flood levels and secure from livestock access.
- ☐ Confirm list of contacts that could assist during a flood, such as my regional district or municipality.
- ☐ Confirm cattle are properly immunized in case of exposure to floodwaters.

Short-Range Preparedness (when flooding is probable)

- ☐ Develop a plan for moving forage out of reach of floodwaters.
- ☐ Move fuel or propane tanks and other equipment to high ground, or strap and anchor them to prevent uncoupling or floating away.
- ☐ Plan for sandbagging or building berms to protect ranch structures.
- ☐ Make sure standby generators are in working condition.
- ☐ Secure copies of insurance policies and other essential farm documents and records.
- ☐ Arrange for moving my livestock to pre-determined location, per options below.

Action Items / Notes

Flood Response

My response steps for flooding include the following:

Option 1: Move animals to a safe on-ranch location.

On-site movement of my animals is the best option because:

- ☐ I have a site on my ranch where the herd is safely away from flooding (i.e., high ground).
- ☐ I have sufficient time, personnel, and equipment to round up and relocate my animals to this area.

Option 2: Free my animals.

Freeing my animals is the best option because:

- ☐ I am unable to move livestock into a safer area. I will open gates and/or cut fences to allow my animals to avoid floodwaters.
- ☐ I determine that there is no danger to people or vehicle traffic when freeing my cattle.
- ☐ I am contacting local authorities of my decision to free my livestock and am aware that flood responders may open gates and cut fence lines.

Option 3: Evacuate my animals to off ranch locations.

Evacuation is the best option because:

- ☐ I have located and prearranged off-ranch evacuation sites.
- ☐ I can determine routes to these locations, considering alternate routes.
- ☐ I can arrange for trucks, trailers, drivers, handlers, if necessary.
- ☐ I can arrange for feed, water, and veterinary care at the site.

Animal Welfare in Evacuation

Moving livestock to safety when threats arise takes time. An announcement of an “Evacuation Alert” may be the appropriate trigger to consider relocating your animals.

Any decision to move animals from a hazardous area, such as potential flooding, must account for the welfare of the animals at risk. Specifically, producers consider the possibility that abandoned animals may suffer from exposure to the hazard.

Notes

Additional information to include with this section:

- ☐ Ministry of Environment floodplain map.
- ☐ Map of locations where stock can be moved, on-site and/or off-site. Include evacuation routes.
- ☐ Locations that could shelter horses, i.e., barns and corrals.

Animal Disease

Key Messages

1. CFIA is the lead agency for federally-reportable animal diseases.
2. Response to a foreign animal disease in BC will immediately involve local, provincial and federal agencies in an effort to control the disease spread.
3. The rancher is ultimately responsible for disposal of herd carcasses.
4. Local authority will provide guidance in waste disposal options.

Some disease threats are of special significance because they are highly contagious, spread rapidly, and cause severe animal illness and often death. They are often called foreign animal diseases (FADs), emerging, or “exotic” diseases. The effect on ranchers can be devastating and result in loss of public confidence, restrictions on cattle movement, and disruption of trade. Animal disease outbreaks can cost British Columbian ranchers millions of dollars. Even an outbreak in another province or country can impact the entire province.

How Animal Disease Spreads

Understanding how disease-causing organisms spread may help you identify ways to reduce transmission. Depending on the type of disease, methods of transmission may include:

- **Direct contact:** Entry of disease agent into open wounds, mucous membranes, or skin; may occur by contact with blood, saliva, nose-to-nose contact, rubbing, or biting from an infected animal.
- **Indirect contact:** Transfer by inanimate objects (i.e., equipment, vehicle, clothing, footwear).
- **Aerosol:** Infectious droplets passed through the air from one animal to another.
- **Ingestion:** Consumption of disease agent in contaminated feed or water or by licking or chewing contaminated objects.
- **Vector-borne:** Spread by insects (i.e., mosquitoes, ticks, biting midges, flies).

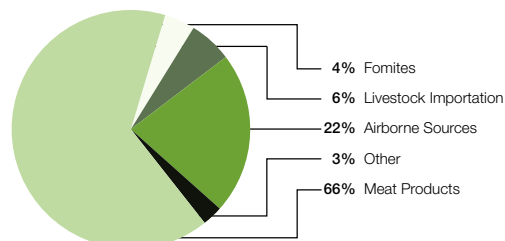
Additional Information

Diseases Reportable to CFIA:

<http://www.inspection.gc.ca/animals/terrestrial-animals/diseases/reportable/2014/eng/1329499145620/1329499272021>

College of Veterinarians of BC: <http://www.cvbc.ca/cfm/index.cfm>

Global Sources of Foot and Mouth Disease 1870 - 1993



Animal Disease Preparedness

My preparedness steps for animal disease include the following:

- ☐ Provide facilities for isolating new or returning cattle.
- ☐ Restrict access to property and animals.
- ☐ Allow only essential workers and vehicles near livestock.
- ☐ Require ranch workers to use protective clothing to minimize disease spread.
- ☐ Require off-ranch personnel and visitors to use clean footwear and clothes (coveralls) near animals.
- ☐ Clean and disinfect equipment and clothing that comes in direct contact with animals from other ranches, livestock markets, etc.
- ☐ Recognize that the sharing of equipment with other ranches, unless cleaned and disinfected, increases the risk of disease transmission.

Action Items / Notes

Animal Disease Response

My response steps for animal disease include the following:

- ☐ Contact my local vet; alternates are Provincial Veterinary office or CFIA District Office.
- ☐ Isolate animal(s), but do not move any livestock off the ranch or grazing sites.
- ☐ Cooperate with veterinarians / officials and follow guidance to prevent disease spread.
- ☐ Monitor herd for signs of illness, and report any observations.
- ☐ Be aware of carcass disposal protocols in my area and where disposal is allowed, both on- and off-site (see inset).

Mass Carcass Disposal Options in BC

Emergency burial of animal carcasses and waste material may not be a suitable option in all locations in BC. Burial of significant carcass volumes requires specific site conditions to ensure adequate environmental and human health (drinking water) protection, and biosecure containment of disease agents. Burial is not an appropriate emergency disposal option for the Lower Mainland, the flood plains of Southern Vancouver Island, or the Okanagan due to various combinations of high water table, high rainfall, unsuitable soils, and dense human populations. For other areas, the suitability of burial as a disposal option will depend on specific conditions determined in a site assessment.

The BC Ministry of Agriculture is the lead agency in developing protocols for appropriate disposal. In addition, your municipal or regional district Emergency Program Coordinator may be aware of disposal options available.

Notes

Additional information to include with this section:

- ☐ Procedures for acceptable mass carcass disposal options.

4

Power Outage

Key Messages

1. Some herds rely on a source of electrical power for their water supply and fencing.
2. Many ranchers consider an emergency generator a wise investment.

Power outages can result from a variety of events, such as a severe winter storm or other hazards addressed in this Guide. Preparation and appropriate response will minimize the impact of prolonged power outages, and protect your equipment and herd.

Know Your Ranch Equipment

- Ranch operations often require equipment for feeding, watering, heating, or fencing. Equipment may rely on supplied electrical power.
- A ranch equipment list is helpful for turning off and on appliances during an outage.
- Power may be interrupted during weather conditions such as a heat wave or severe winter storm, when certain equipment is essential.
- Ranchers should consider the length of time their operations can function without power.
- Backup measures to power essential equipment will help reduce the risk of your cattle during these conditions.
- Consider showing the location of essential equipment on the Ranch Map.

Additional Information

Farm and Ranch Safety and Health Association (FARSHA): www.farsha.bc.ca

WorkSafeBC: www2.worksafebc.com/Portals/Agriculture/Home.asp

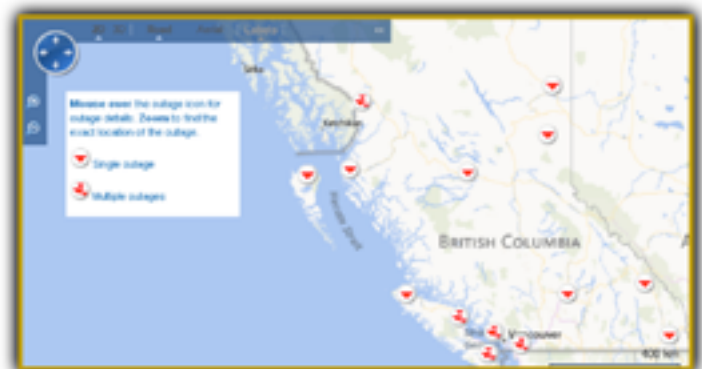
BC Hydro Outages: www.bchydro.com/outages 1-888-769-3766 or *HYDRO (*49376) on mobile

Fortis BC Outages: www.fortisbc.com/Electricity/CustomerService/Pages/default.aspx

Power Outage Maps

Power outage maps are available at the BC Hydro website:

<http://www.bchydro.com/outages/orsMapView.jsp>



4

Power Outage

Power Outage Preparedness

My preparedness steps for power outage include the following:

- ☐ Acquire a standby or backup power source, such as a portable generator, that is easily accessible by ranch workers at all times.
- ☐ Keep a fuel supply on-hand to run the generators for at least three days.
- ☐ Ensure electrical panels are well-marked and breakers can easily be turned off.
- ☐ Test the connection of my backup power with important electrical equipment on my ranch.
- ☐ Ensure sensitive electronic equipment has surge protectors and/or battery back-ups and is protected when power is restored.
- ☐ Install protection devices for three-phase equipment, and record instructions on how to reset them.
- ☐ Identify the equipment that should be turned off during an outage.
- ☐ Determine emergency feeding procedures for use during a power failure, if applicable.
- ☐ Identify back up measures needed to provide heat for livestock.
- ☐ Keep battery-operated lights (flashlights, lanterns) easily accessible, and test the batteries regularly.
- ☐ Include emergency phone numbers, such as my energy supplier and electricians in my ranch contact list.

Action Items / Notes

Power Outage Response

My response steps for power outage include the following:

Equipment Safety

- ☐ Turn off sensitive electronic equipment following a power outage.
- ☐ Contact emergency suppliers or services to assist with the power outage at my ranch.

Watering Livestock

- ☐ Hook up generator or start petrol-powered pumps to ensure animal access to water.
- ☐ Arrange to haul water, if appropriate.
- ☐ Relocate cattle to alternate water sources.

Heat for Livestock

- ☐ Apply back-up heating measures to select buildings, if appropriate.

Fencing for Livestock

- ☐ Use back-up power for electrified fencing, if appropriate.

When Power is Restored

- ☐ Disconnect any generators completely from the electrical system.
- ☐ Turn on the most essential equipment first. Wait 10-15 minutes before reconnecting other equipment to avoid an overload and give the system a chance to stabilize.
- ☐ Reset any protection devices for three-phase equipment.

Notes

Additional information to include with this section:

- ☐ List of electronic equipment that should be turned off during an outage.
- ☐ Power back-up measures needed to provide water or heat for livestock, including equipment and buildings.

5

Severe Winter Weather

Key Messages

1. Winter wind is a greater stress factor than cold temperatures.
2. Cattle dehydration is often a more important hazard than cold temperatures.
3. Animals require additional feed to meet increased energy requirements.

Cold temperatures alone will seldom injure beef animals that are on full feed ration. However, severe wind-chill causes additional stress, increasing their needs for shelter, food and water. Some natural livestock shelters (canyons, draws, and windbreaks) can start out as protection in a snow storm and quickly become “drift over” hazards. In short, animals need a close watch during severe winter weather.

Animal Welfare

Cattle extremities of both young and old are subject to freezing during temperature drops. Dehydration is a threat because cattle cannot consume enough snow to satisfy their water requirement. Young animals are at greater risk since they are smaller, have less strength, get buried in snow more easily, and are less resistant to cold. Young animals should be moved into sheltered areas.

Additional Information

Emergency Info BC: <http://www.emergencyinfobc.gov.bc.ca/prevention-preparation.html>

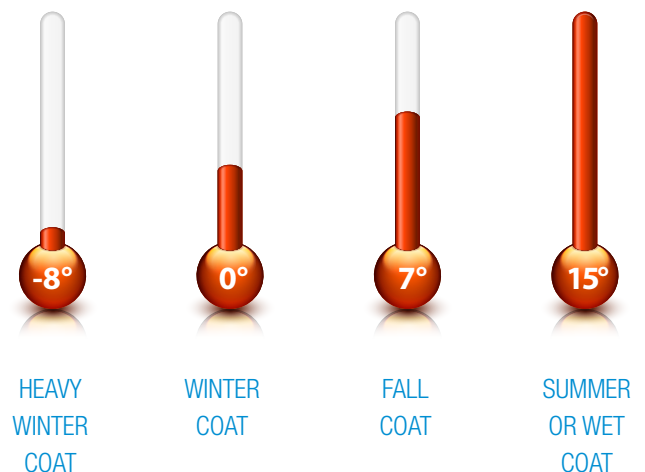
Environment Canada Weather Forecasts: https://weather.gc.ca/canada_e.html

Code of Practice for the Care and Handling of Beef Cattle: <http://www.nfacc.ca/codes-of-practice/beef-cattle>

Canadian Avalanche Center: <http://www.avalanche.ca/cac/>

Critical Temperatures for Beef Cattle

This illustration shows the impact different cattle hair coats can have on lower critical temperatures. Without winter coats, hypothermia can result. As hypothermia progresses, metabolic and physiological processes slow, and blood is diverted to protect vital organs. Extremities are prone to frostbite. At extreme low temperatures, respiration and heart rate drop, animals lose consciousness, and can die.



Severe Weather Preparedness

My preparedness steps for severe weather include the following:

General

- ☐ Arrange for feed supplies in case of road closures, if appropriate.
- ☐ Identify water supplies during freezing temperatures.
- ☐ Install alternative heat source, if required (see Power Outage).
- ☐ Identify alternate sources of fuel.
- ☐ Plan for personal needs (i.e., stored food) during prolonged road closures.

Outdoor Sheltering

- ☐ Determine which animals can remain outside.
- ☐ Determine locations where animals can be naturally sheltered.
- ☐ Build shelter or windbreak areas for animals, such as:
 - a. Shallow open front sheds
 - b. Constructed windbreaks
 - c. Wagons or bales strategically placed to block wind
- ☐ Protect water systems against freezing temperatures.

Indoor Sheltering

- ☐ Identify which animals should be sheltered indoors.
- ☐ Identify buildings that could be used for indoor shelters, including:
 - a. Winterized buildings
 - b. Roof structure sufficient for snow load
 - c. Shutters, doors, windows to keep out cold and wind.
 - d. Space heaters available and safely placed (i.e., fire risk)
- ☐ Consider these factors in selecting indoor shelter:
 - a. Sufficient floor space for livestock
 - b. Additional bedding
 - c. Adequate, unobstructed ventilation
 - d. Heaters

Action Items / Notes

Severe Weather Response

My response steps for severe weather include the following:

Indoor/Outdoor Sheltering

- ☐ Move selected animals indoors according to plan.
- ☐ Move livestock to pre-identified outdoor areas of shelter, if required.
- ☐ Move animals away from known avalanche run-out zones.

Emergency Feeding Considerations

- ☐ Ensure feed is available to all animals, including those at outdoor shelters.
- ☐ Check that mechanical feeding equipment is functioning properly, if appropriate.

Emergency Water Considerations

- ☐ Ensure adequate water is available and accessible.
- ☐ Remove ice around waterers.
- ☐ Haul water to animals, if needed.

Animal Welfare

- ☐ Monitor animals for signs of illness, dehydration, frostbite or hypothermia, and seek veterinary care if conditions warrant.
- ☐ Address the needs of young animals first; older livestock will often follow due to both maternal and herd instincts.
- ☐ Record any animal deaths, and dispose of animal carcasses (see *Animal Disease* section.)
- ☐ Record losses and apply for insurance reimbursement, if eligible.

Notes

Additional information to include with this section:

- ☐ Plans for water, sheltering, and feeding during severe temperatures.

Extreme Heat / Drought

Key Messages

1. Some ranchers have planned alternate arrangements for watering herds during droughts.
2. Extreme heat is generally more stressful to cattle than extreme cold.
3. Cattle should have access to natural or man-made areas that provide heat relief.

Drought is a slow-onset emergency that can devastate a herd. Excessive heat may or may not accompany a drought. Although occurring less frequently than some other emergencies in BC, extreme heat can result in reduced weight gain, heat-related illnesses, and death to beef cattle. Planning ahead will help protect the health and well-being of your herd.

Availability of Water and Feed

Cattle cool themselves through panting and water evaporation from the skin. Animals must replace the water that is needed for cooling. Water sources are often limited during the pre-cise time when water needs of cattle increase. Feed availability may also be limited.

Additional Information

BC Farm Animal Care Council: <http://www.bcfacc.ca/>

Code of Practice for the Care and Handling of Beef Cattle: <http://www.nfacc.ca/codes-of-practice/beef-cattle>

Environment Canada Weather Forecasts: https://weather.gc.ca/canada_e.html

Water Requirements for Cattle

Cattle require different amounts of water given the ambient temperature.





Extreme Heat / Drought

Extreme Heat / Drought Preparedness

My preparedness steps for extreme heat /drought include the following:

- ☐ Prepare to provide emergency water and feed resources, if needed.
- ☐ Reduce herd size to conserve resource demands in anticipation of extreme, prolonged drought.
- ☐ Identify areas of natural protection for exposed animals, including:
 - a. Shade trees
 - b. Breezy, ventilated locations

Action Items / Notes

Extreme Heat / Drought Response

My response steps for extreme heat/ drought include the following:

During Extreme Heat

- ☐ Move animals to areas of natural protection, if required, noting that animals get sunburned like people, especially on ears and nose.
- ☐ Feed animals later in day in cooler temperatures, if possible.
- ☐ Limit the handling of animals, especially midday.
- ☐ Monitor animals for signs of heat stress, such as:
 - a. Increased respiration rate or panting
 - b. Excessive salivation
 - c. Elevation of the head to make it easier to breathe
 - d. Open mouth breathing

During a Drought

- ☐ Move my animals to additional pastures or range.
- ☐ Ensure animals have a consistent supply of water.
- ☐ Monitor available natural water sources, such as ponds and streams.
- ☐ Check water delivery systems periodically for proper function, if applicable.

- ☐ Identify water sources where dry conditions may lead to undrinkable or toxic water, considering toxic blue-green algae and concentrated salts and minerals.
- ☐ Monitor animals for signs of dehydration, such as:
 - a. Rapid, shallow breathing
 - b. Reluctance to move
 - c. Drying of mucous membranes, i.e. eyes, nose, mouth
 - d. Decreased skin flexibility

Notes

Additional information to include with this section:

- ☐ Plans to provide emergency water and feed resources.

7

Hazardous Material



Key Messages

1. After a spill occurs on your ranch, the objective is to minimize the spread of the material.
2. Ranchers must notify Emergency Management BC if a spill reaches reportable volumes.

Ranchers may have to deal with hazardous materials accidentally spilled on their land, such as agri-chemicals, fertilizers, and petroleum products. Cattlemen have a responsibility to protect the environment and the public, as well as their operations after a spill. Knowledge of a few basics can go a long way toward meeting this responsibility.

Off-Ranch Spills

Beef producers may also be impacted by a spill of hazardous materials near their ranches. Most ranchers have railways, pipelines, and major highways going through or near their operations. After a spill, local emergency response organizations will be helpful in identifying the materials involved and advising producers on response actions.

Additional Information

Pesticide Awareness Training; Applicator Training: Farm and Ranch Safety and Health Association (FARSHA): <http://www.farsha.bc.ca>

WorkSafeBC: <http://www2.worksafebc.com/Portals/Agriculture/Home.asp>

Emergency Management BC: <http://www.embc.gov.bc.ca/index.htm>

Spill Reporting Requirements

Ranchers are required to report spills above these limits to

Emergency Management BC at 800-663-3456:

Fertilizer spills, granular or liquid,	greater than 50 kg or 50 litres
Pesticide spills	greater than 5 kg or 5 litres
Petroleum spills	greater than 100 litres
Manure spills	greater than 200 kg or 200 litres

7

Hazardous Material



Hazardous Material Preparedness

My preparedness steps for hazardous materials include the following:

- ☐ Read packaging labels for information on proper use, handling, and actions in case of spills.
- ☐ Obtain a copy of the Material Safety Data Sheets (MSDS) for all chemicals, and keep copies in the office.
- ☐ Use appropriate containers to store chemicals.
- ☐ After using application equipment, ensure valves are closed, hoses empty, and pumps are turned off.
- ☐ Clean equipment frequently, especially before switching to a new mix.
- ☐ Inspect equipment routinely for damage that could cause a leak. Keep a record of inspections and repairs.
- ☐ Assemble a Spill Kit and keep it in a location that is accessible by ranch workers at all times.
- ☐ Note the location of the Spill Kit on the ranch map.

A Spill Kit should include:

1. Personal Protective Equipment (chemical-resistant), including gloves, footwear, apron, disposable coveralls, eye protection, and respirator
2. Containment “snakes” or “tubes” to control liquid spills
3. Absorbent materials (i.e., absorbent clay, kitty litter, fine sand, activated charcoal, sawdust, vermiculite)
4. Plastic cover for dry spills
5. Spray bottle filled with water to mist dry spills
6. “Caution tape” to isolate the area
7. Shovel, broom, and dustpan
8. Heavy duty disposal bags with ties
9. Duct tape
10. Sturdy plastic container with lid to store contents of kit and to hold volume of recovered material
11. A permanent marker to label container contents

Action Items / Notes

Hazardous Material Response

My response steps for hazardous material spills include the following:

Contain and Control

- ☐ Approach a spill from a safe direction, upwind or upstream.
- ☐ Attempt to identify the type of product involved, if safe to do so.
- ☐ Avoid chemical spills that are reacting (i.e., hissing, bubbling, smoking, gassing, or burning). Evacuate the area immediately and call 9-1-1.
- ☐ Move the Spill Kit to a safe location near the spill.
- ☐ Put on Personal Protective Equipment: Gloves, footwear, apron, disposable coveralls, eye protection, and respirator.
- ☐ If possible, stop the spill from spreading. Take appropriate steps, such as:
 - a. Place the leaking container into a larger container.
 - b. Close valves, etc.
 - c. Use absorbent material, sandbags, or dig a trench to contain spills.
- ☐ If the spill is too big to control and clean up, call 9-1-1 or local emergency number.
- ☐ Set up barriers to keep people and animals out.
- ☐ Stay at the spill site until someone relieves you.
- ☐ Contact *Emergency Management BC* at 1-800-663-2345 if spill volume exceeds reportable level.

Clean-Up

- ☐ Spread absorbent material on the spill area.
- ☐ Avoid using sawdust. Strong oxidizing chemicals can combust and become a fire hazard.
- ☐ Sweep and scoop all material; work from the outside toward the inside to reduce spread.
- ☐ Scoop material into a drum or container lined with a heavy duty plastic bag.
- ☐ Repeat until the spill is soaked up.
- ☐ Seal the bag. Double bag, label clearly, and dispose of properly.
- ☐ For spills on soil, apply activated charcoal immediately for minor spills.
- ☐ For larger spills, dispose of top 2-3 inches of soil; cover area with 5 cm of lime and fresh top soil.
- ☐ Contact your municipality or regional district for information on safely disposing of contaminated material.

Spill Safety

1. If your eyes have been contaminated, wash with running water at least 15 minutes.
2. If others have been contaminated, help them wash first. Wash yourself after.
3. If anyone is incapacitated, call 9-1-1.

Notes

Additional information to include with this section:

- ☐ MSDS for high risk materials.
- ☐ Record of equipment inspections and repairs.

8

Structure Fire

Key Messages

1. Most structure fires are preventable by using common sense measures.
2. A ranch map can assist fire crews responding to a structure fire.

Barns, feed and equipment storage sheds, and ranch residences are all exposed to possible loss from fire. Ranch structures usually contain plentiful materials to serve as fuel, and are typically well-ventilated. A heat source to ignite a fire can take many forms, such as spontaneous combustion of hay, lightning, or an engine exhaust spark. Many simple protection and prevention techniques can reduce the risk of structure fire.

Loss of Livestock to Structure Fire

The risk of structure fire for most BC cattlemen is probably less than for confined livestock industries, such as dairy, swine, or poultry. Barn fires are especially a nightmare for horses. They may want to remain in their stalls during a fire, because the stall is a familiar place and horses think they are safe. Within a few minutes, precious animals can be lost, as well as thousands of dollars in forage, grain, and equipment.

Additional Information

Emergency Management BC: <http://embc.gov.bc.ca>

FireSmart Manual: <http://www.bcwildfire.ca/Prevention/firesmart.htm>

Smoke Inhalation

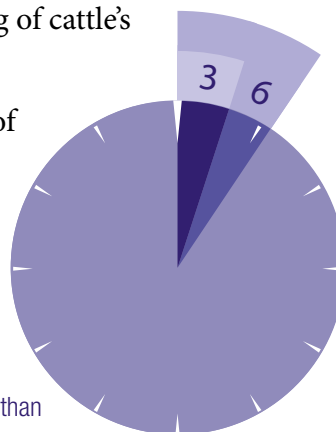
Smoke inhalation causes immediate irritation to the lining of cattle's respiratory system

Damage can occur in a few minutes with high quantities of smoke, or in hours in low smoke areas.

Smoke from a Structure Fire Can Kill Animals

It only takes 3 to 4 minutes of the fire starting for a structure to be filled with smoke.

A structure can be completely engulfed in less than 6 minutes





8

Structure Fire

Structure Fire Preparedness

My preparedness steps for structure fire include the following:

- ☐ Prohibit smoking in and around barns.
- ☐ Ensure hay is dry before storage. Store hay outside the barn in a dry, covered area, if possible.
- ☐ Inspect electrical systems regularly and correct problems.
- ☐ Remove accumulated dust from electrical fixtures, heaters, etc. on a regular basis.
- ☐ Keep appliances at a minimum in the barn. Use space heaters only when someone is in the barn.
- ☐ Obtain and install portable fire extinguishers near the exits to all buildings.
- ☐ Ensure all ranch workers and family members know how and when to use portable extinguishers, and where they are located.
- ☐ Identify water sources that could be used for fire suppression.

Action Items / Notes

Structure Fire Response

My response steps for structure fire include the following:

- ☐ Notify the fire authority immediately.
- ☐ Assess the fire. Attempt to contain or extinguish a small fire only if this can be done safely.
- ☐ If safe, begin evacuating the most accessible animals first.
- ☐ Move animals quickly to a fenced area away from fire and smoke.
- ☐ Do not turn the animals loose where they may return to a burning building.
- ☐ If necessary, evacuate to an agreed safe meeting place.

Notes

Additional information to include with this section:

- ☐ Map of structures showing location of portable extinguishers.
- ☐ Record of portable extinguisher inspections and refilling.