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Development Corporation of Central Interior  
First Nations

Name: \_\_\_\_\_

# AGRICULTURE EMERGENCY PREPAREDNESS WORKBOOK

DELIVERED BY

FUNDING PROVIDED BY



Investment  
Agriculture  
Foundation  
of British Columbia



BRITISH  
COLUMBIA

Canada

# Introduction

This project was funded in part by Agriculture and Agri-Food Canada and the Government of British Columbia through the Agri-Food Futures Fund. This program is delivered by the Investment Agriculture Foundation of B.C.

Through these funding initiatives CFDC of CIFN was able to create a usable emergency preparedness guide for those who work on the land, while navigating the unique needs of Indigenous peoples. The workbook was created by pulling the most relevant information from the BC Agriculture and Food Climate Action Initiative workbooks, the Tsilhqot'in Report on the 2017 wildfires, Prepared BC, FNESS, The Ontario Ministry of Agriculture, Food and Rural Affairs, The BC Ministry of Agriculture guides, other federal initiatives, and personal experiences. This is to be used as a guide to mitigate risks, however no parties assume responsibility for the information's accuracy or any decisions arising from that information.

Creating an emergency plan is valuable not only to pre-think through all your options, but also to inform others on how to assist (family, neighbours, first responders etc.) and to demonstrate "due diligence" in managing farm risks.

# Before an Emergency

## Know the Threats

Hazards vary by region, understanding the risks for your area will help ensure effective emergency planning.

Learn about your regional risks using the interactive map at



<https://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/preparedbc/know-your-hazards/regional-hazards-and-risks> (and while you are there check out other prepared BC resources).

Learn about local wildfire threats at



<https://www2.gov.bc.ca/gov/content/safety/wildfire-status/wildfire-situation/fire-danger> and consider going through the BC Wildfire Threat Assessment Guide and Worksheets to understand the threat on your own property.

Learn if there is a history of wildfires in the area and what conditions tend to be predictors? Also learn where to find the current fire danger rating in your area and check it regularly.





# Before an Emergency

## Agriculture Operation Information

Key Wildfire Plan information is current as of the last date revised: \_\_\_\_\_

### AGRICULTURE OPERATION INFORMATION AND EMERGENCY CONTACTS

*Agriculture Operation name*

*Parcel Identifier Number (PID):*

*Folio Number:*

*Premises ID number:*

*Agriculture Operation physical address:*

*Owner name(s):*

*Landline tel. number:*

*Mobile tel. number:*

*Email address:*

*Out-of-Region Contact:*

*Landline tel. number:*

*Mobile tel. number:*

*Email address:*

*Number of individuals normally on the farm:*

*Family:*

*Staff:*

*Tenants:*

### RANGE TENURE INFORMATION

*Range Agreement Number:*

*Range Tenure Location(s) (nearest cross roads, general location description):*

**Other Information:**

# Before an Emergency

## Important Contacts

Name / Organization	Telephone	Email / Website
<b>Local Resources</b>		
✪ Water Purveyor/Authority (if not well-based):		
✪ Emergency Contact:		
Electrician:		
Plumber:		
Fuel Dealer:		
Fencing Contractor:		
Feed Supplier:		
Veterinarian:		
<b>Relocation Resources [for Livestock and Pets]</b>		
Trucker / Livestock Hauler:		
Agriculture Association:		
Domestic / livestock Animal Rescue Organisations:		
Farm that may receive relocated livestock:		
Feedlot – holding:		
Friend / Neighbour:		

# Before an Emergency

## Important Contacts (Region specific contact info to be included on handout)

Name / Organization	Telephone	Email / Website
<b>Support Resources</b>		
Regional District Emergency Management Information		
Local Municipal Government OR Emergency Operation Center OR Band Office contact General Information 		
Ministry of Agriculture <sup>1</sup>  Regional <u>Agrologist</u> Name:	<u>AgriService BC:</u> 1-888-221-7141 T: M:	<a href="http://www.gov.bc.ca/agriservicebc">www.gov.bc.ca/agriservicebc</a>
Ministry of Forests, Lands, Natural Resource Operations and Rural Development (MFLNRORD) <sup>1</sup> Range Officer Name:	T: M:	
BC Wildfire Service (BCWS) <sup>1</sup>  Local Fire Zone Contact:		<a href="https://www2.gov.bc.ca/gov/content/safety/wildfire-status">https://www2.gov.bc.ca/gov/content/safety/wildfire-status</a>
<b>Industry and Community Support Resources</b>		
Agriculture Association:		
Tourism Industry Association of BC:	T: 604-685-5956	<a href="http://www.tiabc.ca/contact-us/">http://www.tiabc.ca/contact-us/</a>
Local Community Group contact:		
Friend / Neighbour:		

# Before an Emergency

## Agriculture Operation Map

(refer to power point on what to include)



# Before an Emergency

Expected livestock numbers by location during the early (May – June) and peak (July – September) fire seasons			
# of animals at the farm:		# of animals on range tenure	
Early	Peak	Early	Peak
Cattle:		Cattle:	
Horses:		Horses:	
Dairy:		Other:	
Sheep:			
Goats:			
Swine:			
Poultry:			
Other:			
<b>Pets:</b>			
Usual Turnout Date:		Usual Roundup Date:	



# Before an Emergency

VEHICLES AND RESPONSE EQUIPMENT/RESOURCES			
Vehicle / Equipment Type	Number on Property (location)	Number Available Nearby (location)	
Tractor, Front-end Loader or Backhoe			
Plow or other Implements			
Livestock Trailer			
Utility Trailer			
Passenger Car			
Pickup Truck			
Fire Hose (m or ft)			
Portable Water Pump			
Sprinkler kit or other sprinklers (and roof ladders)			
Irrigation Sprinkler Gun			
Generator			
Fire Equipment (e.g., extinguishers, hand tools)			
First Aid Kit			
WATER SOURCES			
Water Source	Capacity	Powered (P) or Gravity Feed (GF) System	On Property or Nearby (location)

# Before an Emergency

## Preparing for Floods

### On your property

- Make sure that your lot is properly graded. If possible, build up the ground around your property so that water can drain away from basement walls.
- Make sure downspouts extend at least 2 m (6') from your basement wall. Water should drain away from your property and neighbouring properties.
- Check that your roof and eaves are draining properly in heavy rains (and are cleaned annually).
- Check sidewalks, patios, decks and driveways to make sure they haven't settled over time and are causing water to drain toward your property. Clear snow away from the building's foundation. If the ground is sloped one inch per foot near the building, moving snow just three to five feet from the building will reduce problems.
- Use a rain barrel to catch water runoff.
- Consider planting a "rain garden" by using landscaping as way to catch and disperse water in the soil near your property. Use native plants and vegetation that will resist soil erosion.
- If possible, keep adequate feed, bedding, medications, etc on an area above the flood plain.

**If you have a livestock farm, remember that livestock have a natural instinct to flee flooding. Livestock will initially panic during flash floods, which complicates livestock handling. They will seek higher ground if possible. When designing your livestock operation, it is important that your livestock have access to higher ground in flood-prone areas. Without access, livestock are at greater risk of drowning or breaking out of pastures.**

# Before an Emergency

## Preparing for a Fire

### Structure fires

Barn fires can be caused by spontaneous combustion of bedding or hay, exposed wiring, unsecured heat appliance, engine exhaust spark, lightening, etc. It can be devastating as panicked animals often won't flee the barn on their own. When leading horses out of a barn fire, some tips are leading from the left-hand side, blindfolding them, and putting a towel under a halter to keep them from running back. Cattle are easier moved as a group as isolation causes stress, and both cattle and swine should be confined away from the fire to prevent them from running back.

Most animals are killed from smoke inhalation not the fire. In both structure fires and wild fires, damage can occur from irritation of the respiratory system within a few minutes in high concentrations, or a few hours in lower concentrations.

Remember proper storage and management of hay and chemicals/fuels can make a huge difference in an emergency. Make sure hay is dry before storing, and that it is stored away from roads, and fences, in a covered area that is away from other fuel sources. Make sure you have a fire extinguisher and keep track of its expiration date.

## Fire Safety for Farms and Rural Properties

Check with the local municipal office or Ministry of Natural Resources for regulations before any open burning.

Install and maintain lightning rods and grounding cables on barns and silos to give lightning a direct path to follow to ground, keeping barns and livestock safe.

Keep property numbers visible and prominently posted to help emergency responders locate your property.

Store hazardous products like herbicides and fertilizers in dry, well-ventilated areas according to manufacturer's recommendations and applicable regulations.

Refuel machinery and equipment outdoors away from potential ignition sources like open flames or sparks.

Enforce a 'NO SMOKING' policy in and around all farm buildings and post 'NO SMOKING' signs in prominent locations.

Ensure that electrical installations and repairs are done by licensed electricians.

Carry out regular inspections of electrical and mechanical systems for corrosion or malfunction that may cause a fire.

Install and maintain working smoke alarms on every storey and outside all sleeping areas of your home.

Develop a home fire escape plan and practise it with all members of the household.

**Infographic taken from:**



Office of the Fire Marshal ©2012  
[ontario.ca/firemarshal](http://ontario.ca/firemarshal)

**FOR MORE INFORMATION, CONTACT YOUR  
LOCAL FIRE DEPARTMENT.**



# Before an Emergency

## Preparing for a Fire

**Please refer to the FireSmart Homeowner's Manual provided in your kit, and/or check out the following resources to reduce the potential impacts of wildfire :**

Virtual Copy of FireSmart Manual: <http://fness.bc.ca/resources/library/forest-fuel-management/firesmart-homeowner-s-manual>

Open burning safety: <https://firesmartbc.ca/resource/open-burning-practices-for-farmers-and-ranchers/>

Revitalizing Cultural Burning: <http://fness.bc.ca/resources/library/forest-fuel-management/revitalizing-cultural-burning>

Barn Fire Prevention:  
<http://www.omafra.gov.on.ca/english/engineer/barnfire/fireprevention.htm>

Variety of information guides: <https://firesmartbc.ca/resources/>

ISC Fire prevention Guide: <http://fness.bc.ca/resources/library/fire-services/a-practical-guide-to-fire-prevention>

Other Agriculture-specific resources:  
<https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/business-market-development/emergency-preparedness>



# Before an Emergency

## Plan for Sprinkler Protection

If the agriculture operation contains flexible irrigation systems, sprinklers may provide additional structure protection. Fire brands and burning branches can travel more than 2 kms ahead of a wildfire. Just having green fields or a wet fuel break on the landscape around structures may not provide enough protection. Sprinklers help create a wet environment around individual buildings. Sprinkler systems are particularly important where animals will be sheltered, such as pastures or barns. If sprinklers or hoses are limited, determine the priority of agriculture operation structures to protect ahead of time. Producers could put sprinkler equipment in place at the beginning of each fire season, or leave the system permanently installed. Be informed of local water supply vulnerabilities and prepare accordingly. Contingency water supply for sprinklers may include on-site water storage (cisterns are highly recommended), private water sources, and surface water, as available.

Consider the following 4 actions to set up the sprinkler systems for protection of agriculture operation:

1. Determine if existing sprinkler equipment is sufficient to create a humid envelope around all structures, or at least critical buildings, during wildfire.
2. Identify the priorities of structures that should be protected by sprinklers.
3. For more information on setting up structural sprinklers, contact the BC Office of the Fire Commissioner, 250-952-4913, 1-888-988-9488, or email to [OFC@gov.bc.ca](mailto:OFC@gov.bc.ca).

The report Cariboo-Chilcotin Agriculture/Wildfire Preparedness Project – Opportunities and Barriers to Wildfire Risk Mitigation provides specifications for sprinkler kits, example schematic of components and layout, and 2016 sample cost estimates.

The Union of BC Municipalities provides inventory specifications for Structural Protection Units intended for community use and deployment:

<http://www.ubcm.ca/assets/Services/Documents/structural-protection-units-technicalspecifications.pdf>

4. Determine if the primary water supply is vulnerable (check with the local water purveyor if applicable) and have contingency water supply or storage (e.g., cisterns) in place for the sprinkler system. The volume of water required will depend on the size and number of buildings, surface area and duration of sprinkling. It is recommended to engage a fire protection professional if you have a large facility or complex protection needs.

# Before an Emergency

## Plan for Sprinkler Protection

**NOTE: Water damage frequently occurs for those who attempt this without guidance. It is highly recommended to contact the resources on the previous page or talk to a local Emergency Operations Center (EOC) about getting assistance.**

A sprinkler system can be used to protect the agriculture operation, and should be established by taking the following steps:

1. Priority structures on the property to protect with sprinklers are as follows:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

2. Sprinkler equipment that is available for prepositioning include:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

3. Gather the equipment and set the sprinkler system in place to test the coverage and identify problems.

4. Mount the sprinklers in appropriate locations and connect to a water source.

If the roof is made of combustible material, such as wood, direct the sprinkler spray onto the roof. If the roof is metal, mount the sprinklers on a high point (such as the ridge) to create a high humidity zone around the building. When sprinklers remain on the ground, position them so their reach just wets the sides of the structure.

5. Test the system for 2-3 hours, if possible. The sprinklers should create a humid environment around the structure without allowing water to enter buildings.

6. Secure the water source, protect it against radiant heat, and remove nearby combustible materials. Consider water supply vulnerability and install water storage (e.g. cisterns) if possible

7. Create simple instructions on how to set up and activate the sprinkler system in your emergency plan. Prepare a simple map showing how to lay out the sprinkler equipment and water delivery system in an emergency. Attach the map to the plan. The instructions and map will allow others to help with protection of the operation.



# Before an Emergency

## Planning for Livestock Protection

### Decision Guide for Livestock Protection

It is best to understand options for livestock protection before an emergency situation. Consider these four options in selecting the best way to protect the animals:

**Option 1: Shelter livestock in barn.** This option means keeping animals in a structure on the farm/operation, such as a barn, where they will be protected while personnel evacuate. This may be the best option if FireSmart measures, sprinklers, supplemental power and other protections are in place at the time of the emergency and firefighting personnel can have access to controlling the sprinklers. Consult with EOC and structural fire protection specialists from the firefighting agency to ensure this is the best option.

**Option 2: Move livestock to an on-site outdoor location.** Under this alternative, some or all animals would be moved to a pasture, open field, or other outdoor area that would provide protection from the threat. Ensure animals have access to food sources, clean water, and ample living area.

**Option 3: Relocate livestock off site.** Relocating livestock means moving them off the farm/operation and away from danger. In a situation where a wildfire threatens a large area, this may require moving animals out of the region. It is best to locate and pre-arrange a "buddy farm" and how to access the trucks/trailers required for relocation.

**Option 4: Free the animals.** In some situations, it may be best to open gates and cut fence to allow animals the freedom to protect themselves. This may be the only option if there is no time for other options, it is safe to do so, and the freed animals would not endanger others, such as motorists on a roadway. This option must be done in communication with firefighters and/or a local Emergency Operations Center.

There are risks with all the options, but the producer should select the approach with the greatest chance of success, all things considered. Producers may wish to adopt a different option for each type of animal. For example, cows may be allowed to shelter in barn, while horses are relocated. Please visit <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/business-market-development/emergency-preparedness/livestock-relocation> for more info on each option and support services to aid in relocation

# Before an Emergency

## Planning for Livestock Protection

### Livestock Relocation Kit

The kit should be kept in a central location, and checked regularly to ensure completeness and freshness of contents. The following are suggested core items; add items as necessary.

- ☐ Current list of all animal, (i.e. location; records of feeding, vaccinations, tests).
- ☐ Proof of ownership for all animals.
- ☐ Supplies for temporary ID of animals (i.e. plastic neckbands, permanent markers to label your animals with your name, address, and telephone number.
- ☐ Basic first aid kit.
- ☐ Handling equipment (i.e., halters, cages, appropriate tools).
- ☐ Water, feed, and buckets.
- ☐ Tools and supplies needed for sanitation.
- ☐ Emergency equipment (i.e. cell phone, flashlights, portable radios, batteries.)
- ☐ Other safety and emergency items for your vehicles and trailers.
- ☐ Food, water, and disaster supplies for your family.



# Before an Emergency

## Hazardous Materials

Following safety precautions is important when handling hazardous products. Ensure all hazardous products are clearly labelled to eliminate guesswork in an emergency.

**Spill Reporting Requirements** Spill amounts above the following volumes must be reported to Emergency Management BC at 1-800-663-3456:

Material Spilled	Reportable Amounts
Fertilizer spills, granular or liquid	Greater than 50 kg or 50 L
Pesticide spills	Greater than 5 kg or 5 L
Petroleum spills	Greater than 100 L
Manure spills	Greater than 200 kg or 200 L

**An on-farm Spill Kit should include the following items:**

1. Personal Protective Equipment (chemical-resistant), i.e., gloves, footwear, apron, coveralls, eye protection, respirator
2. Containment "snakes" or "tubes" for liquids
3. Absorbent materials (i.e., absorbent clay, kitty litter, fine sand, sawdust, vermiculite)
4. Plastic cover for dry spills
5. Spray bottle filled with water to mist 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 and lid to store kit
11. A permanent marker to label contents

# Before an Emergency

## Insurance

Insurance coverage is an important step in managing risk before a wildfire event. Producers should ensure that they have appropriate coverage for their assets, such as livestock, crops (both in-progress crops and completed stock), buildings, equipment, and fences. In general, federal and provincial disaster management programs will only cover perils for which private coverage cannot be obtained. In addition to private commercial insurance, a suite of government supported risk management programs including crop production insurance and "AgriInsure/AgriInvest" are available to agriculture producers.

- ☐ I meet with my insurance agent or broker or government program representative at least annually to review my coverage
- ☐ I understand my policy and am aware of what is included and what is excluded.
- ☐ My essential insurance information is recorded and available in event of wildfire emergency. Include private commercial insurance (e.g., farm, livestock, crop, business interruption) and government supported production insurance or other business risk management program you subscribe to.
- ☐ I have photographs of the property and assets in their current state and condition taken annually from the same location/position and they are filed in a secure location (i.e., with insurance documents).

# Before an Emergency

## Insurance

<i>Policy Number</i>	
<i>Date of Purchase / Last Renewal</i>	
<i>Insurance Provider</i>	
<i>Agent Name, Organization</i>	
<i>Telephone Number, 24/7 Claims</i>	
<i>Key Coverages and Exclusions</i>	<ul style="list-style-type: none"><li>• _____</li><li>• _____</li><li>• _____</li></ul>

<i>Policy Number</i>	
<i>Date of Purchase / Last Renewal</i>	
<i>Insurance Provider</i>	
<i>Agent Name, Organization</i>	
<i>Telephone Number, 24/7 Claims</i>	
<i>Key Coverages and Exclusions</i>	<ul style="list-style-type: none"><li>• _____</li><li>• _____</li><li>• _____</li></ul>



# Before an Emergency

## Planning for Business Continuity

### Business Continuity Plan Checklist

	Not Started	In Progress	Completed
1. Identify an emergency coordinator and/or team with defined roles and responsibilities for preparedness and response planning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Identify essential employees and other critical inputs (e.g. raw materials, suppliers, sub-contractor services/ products, and logistics) required to maintain business operations by location and function during an emergency .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Develop and plan for scenarios likely to result in an increase or decrease in demand for your products and/or services during an emergency (e.g. effect of restriction on mass gatherings, need for hygiene supplies, disruptions to telecommunications or transport infrastructure).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Determine potential impact of an emergency on company business financials using multiple possible scenarios that affect different product lines and/or production sites.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Find up-to-date, reliable information on emergencies from community public health, emergency management, and other sources and make sustainable links.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Establish an emergency communications plan and revise periodically. This plan includes identification of key contacts (with back-ups), chain of communications (including suppliers and customers), and processes for tracking and communicating business and employee status.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Implement an exercise/drill to test your plan, and revise periodically.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



# After a Disaster

## Disaster Recovery

After a disaster, it is important first to make sure of your own personal safety and welfare (including psychological welfare) and that of your family. When reentering your farm be cautious for sinkholes after a wildfire, mud bogs after a flood, unusual animal behavior, and other risks that may now be present.

Once you create a plan for animal recovery (if applicable) it may be beneficial to share your plan and any animal identifiers with the community, especially as emergency responders may have begun to recover livestock and pets. Make sure to continue to monitor animals closely for signs of injury or illness.

The animals are likely to also be emotionally affected by a disaster, some techniques to ease distress are handling animals in a calm manner, wearing familiar clothing/using familiar vehicles, try to clean the animals and keep them away from debris. If relocating to a buddy farm during a disaster or repairs, it can be beneficial to find a place with similar characteristics to your own property to create a more familiar environment for the animals. Animals can also be picky if their feed or water doesn't smell or taste familiar, being prepared with extra feed to accompany relocated animals can help ease the transition.

The following checklist can help provide a guide for things to remember during recovery

# After a Disaster

## Checklist for Damage Assessment

**Once the evacuation order has been lifted and if damage is observed on the agriculture operation, consider these steps to limit further damage.**

- ☐ Check livestock that sheltered-in-place at the earliest possible opportunity, and provide for their needs with water, feed, and safety.
- ☐ Inspect the agriculture operation for hazards and damage. Take care to avoid hazards, such as smoldering tree roots underground.
- ☐ Contact insurance agent or broker
- ☐ Document any loss of livestock, buildings, fences, or equipment in writing, using the inventory to verify losses. Document salvaged items.
- ☐ Take samples as required for laboratory assessment of damage (e.g., smoke taint of grapes).
- ☐ Take photographs and video of any damage following a disaster to document the loss (ideally before and after taking any recovery action). Take photographs from the same location/position as your pre-event baseline photographs.
- ☐ Secure the site.
- ☐ Review insurance policy with the insurance agent or broker and report the damage/loss.
- ☐ Review any government supported risk management program you have paid into or subscribed to with the government agent and report the damage/loss.
- ☐ Assemble all required supporting documentation and complete and submit claims for losses.

**The following steps should be taken to continue the disaster recovery process.**

- ☐ Work with neighbours to locate and identify loose animals in the area, and to return livestock that escaped or were freed.
- ☐ Seek assistance from agriculture associations active in your area and from the Regional Districts.
- ☐ Work with neighbours to get the agriculture operation and the community operational as soon as possible.
- ☐ Attend community recovery information sessions to find out about provincial measures that may assist the agriculture operation with disaster recovery.
- ☐ If eligible, apply for Provincial Disaster Financial Assistance through Emergency Management B.C.  
Website: <https://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/emergency-response-and-recovery/disaster-financial-assistance>
- ☐ If eligible, apply for BC Wildfire Service Fire Suppression Disturbance Rehabilitation for damages on private property as a direct result of fire suppression activities (contact local BCWS fire zone office).

# Notes

# Notes



# Resources

## Region Specific Resources

**See handouts for applicable resources for your area**