Farm Emergency Plan

Producers or farm owners should develop a farm emergency plan as the measure of preparedness before an emergency occurs in their farms. The plan will help you to ensure their safety, minimize property damage, protect other family members and employees as well as protect the environment. Producers may assess possible man-made or natural events, which may strike their operation and may have potential impacts. The assessment will help you to identify and prioritize the types of events you should be prepared to address.

The emergency farm plan should be filed/kept in multiple locations, such as

1. **Emergency Tube mounted on a pole at a prominent place in farm**
2. **Farm office or offices**
3. **Tractor cab(s)**
4. **Fire Department**

Facility Contacts

Owner/Operator			
Farm Location	Civic address: PID: GPS Coordinates:	**Phone**	
Who is normally on the farm?	Number of family members: Number of workers: Number of tenants:		
Alternate Operator			
Address		**Phone**	

Contents of this Document:

Important Emergency Contacts

IN CASE OF EMERGENCY, CALL 911	
Police/ Fire Department / Ambulance	911
Poison Control	911
Local Police (non-emergency)	
Local Fire Department (non-emergency)	
Canadian Coast Guard (24 hours Emergency Spills)	1-800-565-1633
NB Department of Agriculture and Aquaculture & Fisheries	(506)-453-3826
NB Department of Environment and Local Government(DELG)*	(506)-453-2690
Departmental regional offices (First point of contact) 1. Bathurst Region 2. Miramichi Region 3. Moncton Region 4. Saint John Region 5. Fredericton Region 6. Grand Falls Region	 (506) 547-2092 (506) 778-6032 (506) 856-2374 (506) 658-2558 (506) 444-5149 (506) 473-7744
Natural gas company (Liberty Utilities)	1-800-994-2762
Electrical company (NB Power)	1-800-663-6272
Municipality	
Regional Service Commission	
Vet lab	
Canadian Food Inspection Agency (CFIA)	506-851-7654
Neighboring farms	
NB Department of Natural Resources (or for forest fire- 911)	Local office
NB Emergency Measures Organization (EMO)	1-800-561-4034
Livestock transportation	
Hazardous materials disposal company 1. Green For Life (GFL) 2. Safety Clean (Clean Harbours)	 1-800-933-5959 (902) 662-3336
Contaminated Soil Remediation Facilities 1. Elmtree Environmental 2. McLaughlin Soil Management Facility	 (506) 546-6382 (506) 473-5409

If contact cannot be made with a DELG regional office, or if the environmental emergency occurs after-hours, contact the Canadian Coast Guard: 1-800-565-1633

Emergency Response Resources and Equipment

Resource/Equipment	**Location** **(On site or available quickly from neighbors or contractors)**
Fire extinguishers	
Additional firefighting equipment	
Emergency water sources (For firefighting and spill clean-up)	
Shovels	
First aid kits	
Portable water pumps	
Portable generators and flashlights	
Absorbent materials / spill kits	
Protective clothing	
Sandbags / diking materials	
Front-end loaders, back hoes	
Livestock transport	
Manure pumping equipment / contractor	
Empty tanks or containers (To hold manure, liquids, absorbent material or contaminated material)	
Other safety equipment	

Hazardous Goods Storage

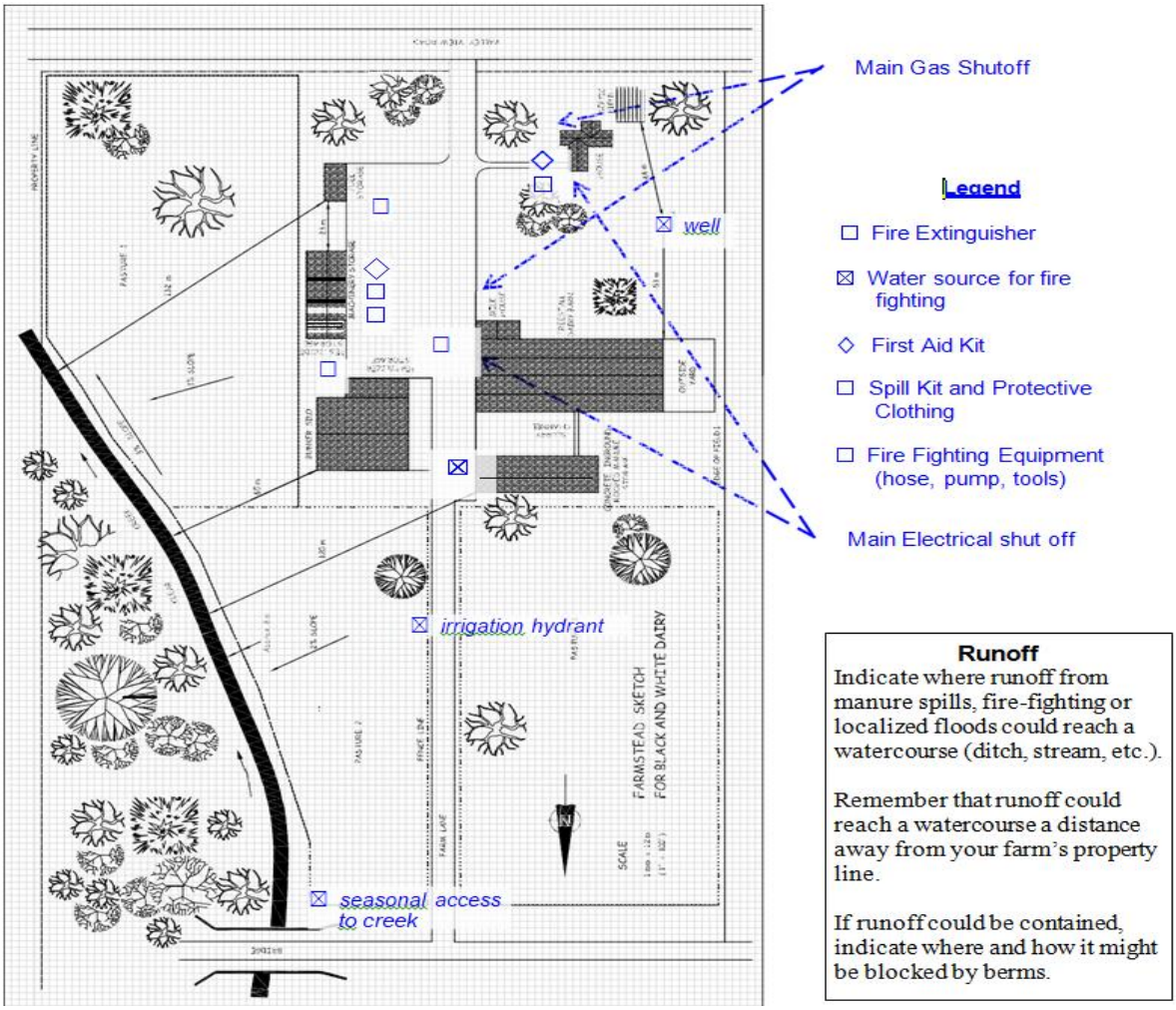
Product	**Location Stored**	**Comments** **(Inventory and/or type of storage)**
Fertilizers (Include MSDS)		
Fuels		
Oil / Lubricants		
Paints / solvents		
Pesticides		
Compressed Gases		
Animal Health/Vet supplies		
Other hazardous goods		

Farm Map

If available, use farm site map (aerial photograph) or draw a map/sketch of the site to show the location of the following:

- All buildings/structures
- Slope of land (drainage direction)
- Watercourses: ponds, streams, wetlands, etc.
- Fire extinguishers
- First aid kit
- Spill kit or sources of absorbent materials
- Water hydrants
- Emergency water source for firefighting (e.g., pond or dugout)
- Septic tanks, culverts, drainage ditches
- All existing wells, including those currently in use as well as abandoned or unused wells
- Municipal water supply
- Hydro, gas and water shut offs
- Petroleum storage
- Compressed gas storage
- Pesticide, fertilizer storage
- Manure storage
- Protective clothing storage

Example of a Farm Site Map:



Fire Contingency Planning

Fires require three elements to burn: fuel, oxygen, and heat. Barns and farm buildings provide a plentiful supply of fuel for fires to start and grow, as well as lots of oxygen as these buildings are typically well ventilated. The heat source can take many forms, including open flame, gas compression, chemical reaction, spontaneous combustion, lightning strikes, heat from equipment or vehicles, sparks from welding activities, and, where farms are close to the forest interface, wildfire.

Fire prevention and safe management practices are critical for the protection of your family members, employees and animals as well as your farm buildings, equipment and livelihood. These practices will also protect the environment from the escape of uncontrolled fire, smoke, particulate matter and contaminated runoff.

Protecting Your Farm from Fire

- Seek input from your local fire department on access routes and making your operation more fire safe.
- Obtain insurance coverage for all farm resources at risk from fire including crops and livestock – government disaster financial assistance is limited.
- Develop and carry out a routine fire safety inspection for all farm buildings and all potential sources of spark and combustion.
- Identify available water sources and means of access or use for firefighting. Place fire extinguishers in appropriate locations.
- Clear areas immediately surrounding all barns and farm buildings by removing brush, debris and machinery. Mow grass within 10 meters of buildings and do not store flammable materials within this zone. Use non-combustible landscaping within one or two meters of buildings.
- Provide adequate ventilation for hazardous materials storage areas, and for the prevention of spontaneous combustion in hay and dry poultry manure storage areas.
- Keep all types of heating devices and other equipment clean and in good condition.
- Handle gasoline carefully. Refuel tractors and machinery outdoors and well away from buildings so flammable vapours can dissipate. Arrange buildings so that flammables are safely away from ignition sources.
- Keep flammable liquids in labelled safety containers and store them in approved flammable-liquid safety cabinets in well-ventilated areas away from heat and sparks.
- Identify all hazardous materials storage areas with signs that state “Danger Chemical Storage Authorized Persons Only” on all entrances. The signs should be large enough to be read from a distance.

Protecting Your Farm Resources from Wildfire

Livestock Producers

- Concrete or metal buildings located away from forest vegetation provide a more fire safe livestock shelter option.
- Owners should have an evacuation plan for livestock if threatened by fire.
- If your animals cannot be moved onto a safe area on your property, make and confirm transportation and feeding arrangements in advance.

- The risk to farm animals can be reduced by preparing and maintaining fuel reduced areas onto which stock can be moved and held during a fire.
- Use a ploughed or heavily grazed field with a minimum of grass or stubble - if possible, this field should be shaded and located well away from any forested areas and to the leeward side of your property.
- As a last resort, if you are unable to move livestock into a safer area, cut fences, turning the animals loose to take their chances with the fire as long as there is no danger to people or vehicular traffic.

Feed Crops

- Haystacks, hay sheds and silos should be surrounded with a bare area - at least 5 metres wide - with another 20-metre-wide fuel-reduced strip around this.
- Do not attempt to burn off around these areas. Graze, mow or slash grass to desired height.
- Adequately dry hay before it is baled and stored to reduce the risk of spontaneous combustion.
- Store hay away from roads and fences. Hay and straw are fine fuels and vulnerable to ember ignitions.
- Grazing livestock can be used to reduce flammable grass around buildings, fence lines and haystacks.

In Case of Fire:

1. Don't place yourself, your family or employees at risk – stay out of burning buildings.

2. Eliminate the source of the fire, if possible.

3. Assess extent of fire.

4. Call 911 and describe location, type and extent of the fire.

5. Attempt to contain or eliminate the fire provided you can do this safely.

6. If necessary, evacuate to agreed safe meeting place or local Emergency Services Shelter.

7. Post fire assessment – Review actions taken to contain, minimize, or prevent the fire.
    - Can you determine the cause of the fire?
    - Were there signs present before the incident?
    - How could this be prevented?
    - How did the clean-up progress?
    - What has to be changed on your contingency plan?

8. Follow Spill Reporting Contingency Plans in the event that a spill occurred as a result of the fire.

9. Follow Mass Mortality Contingency Plan if large numbers of livestock or poultry died as a result of the fire.

10. Clean-up site.

A fire extinguisher is available in _____. Additional firefighting equipment (such as _____) is located at _____. An emergency water supply is available at_____.

Flood Contingency Planning

Having a plan for how to handle farm operations in the event of flooding may require farmers to take action independent of any outside help. Livestock, feed, hazardous materials or equipment may need to be moved.

Advance Preparation for a Flood:

All Producers

- Secure, eliminate or move potential sources of spills from hazardous materials (i.e., pesticides, fuel, lubricants, fertilizer) to a location above flood level. Pesticides, fertilizers and fuel may cause pollution and even poisoning, if left in flood-prone locations.
- Promptly and properly dispose of unwanted hazardous materials. Contact the local Regional Service Commission or an approved private hazardous materials disposal company for information.
- Identify sources of, and if necessary secure, sandbagging or dyking materials.
- Keep a supply of materials such as rope, sandbags, plywood, plastic sheeting and lumber handy for emergency waterproofing.
- Protect feed, manure storage, livestock, buildings and farm equipment by moving to high ground where possible or diverting water or constructing berms/dykes.
- Can flood water be diverted away from farm site?
- Will a diversion or dyke impact downstream landowners?
- Is work in or about a watercourse approved by the appropriate agencies?
- Use chains or cables to anchor fuel and propane tanks and other equipment that could float away.
- Secure copies of insurance policies and other essential farm documents.
- Check standby generators on the farm. Purchase extra fuel in case of prolonged power disruptions.
- Ensure that your wellhead is protected by a surface seal and a cap to prevent downward movement of water and contaminants. Be ready to turn off the electricity to your well pump just prior to the flood.
- Abandoned water wells should be plugged. A licenced Water Well Contractor and Well Driller must be hired to plug a well.
- Shut off electrical power to areas where flooding is imminent.

Livestock Producers on a Floodplain or in Flood Prone Locations

If a flood is forecast, seek alternate housing site for livestock.

- Is high ground available on your land?
- Have you obtained permission from a neighbour or alternate site to house your livestock?
- Is livestock transportation possible or available?
- Could you move some livestock in the days leading up to potential flooding?
- Have you made a confirmed list of people, including livestock haulers, who could help move livestock on short notice in the event of evacuation? Remember that other producers may also plan to use these people or haulers.
- Have you made provisions to move dangerous livestock, such as bulls, well before evacuation becomes necessary?

Pork and poultry producers:

- Have you contacted marketing organizations or processors regarding the sale of animals that are approaching market weight?

Poultry producers:

- Could you move birds to the top floor of two-storey barns, if space is available?
- Can you continue to provide feed, water and power to barns when flooding occurs?

Dairy producers:

- Have you made arrangements for temporary milking?
- In case animals from different herds have to share a relocation site, have you ensured that all cattle are positively identified (with ear tags or livestock marker) and that records of the identification are secure?
- Have you notified your dairy representative, milk hauler, processor, feed representative and veterinarian of your destination if evacuated?
- Have you anchored your milk tank and filled it with clean water to keep it from floating?

Livestock Producers in Upland Locations

Upland locations could be isolated or subject to restricted access due to flooded roads, detours, etc. If your farm is above a flood plain:

- Do you have enough feed on hand to last for at least a month as suppliers may not be able to access some roads?
- Have you ensured that you have adequate bedding material, dairy supplies, medications, etc. on hand for an extended period?
- Have you purchased extra fuel in case of prolonged power disruptions?
- Are you prepared where possible to assist other livestock producers who may have to evacuate from the flood plain?

If you must evacuate in the event of a flood:

- Always follow the instructions of local emergency officials.
- Take your personal emergency grab-and-go kit with you. This kit should have basic essential items such as prescription medications, eyeglasses, important papers, flashlight, battery powered radio, clothing, identification and some cash.
- Ensure each family member has waterproof clothing and footwear.
- Shut and lock doors and windows, including barn doors and gates. Shut off water supply, natural gas and power to all buildings, barns, etc. as identified on farm map.
- If you are evacuating your premises, shut off your gas valve at the meter.
- Rendezvous with family and workers at designated safe meeting place or at local Emergency Services Shelter.

In the event of a sudden or flash flood:

- Evacuate the farm operation turning off gas and utilities if time permits.
- Upon return, follow applicable Spill Reporting and Mass Mortality Contingency Plans.
- Clean-up site and evaluate hazards and potential changes to farm operation to prevent flood damage in future.

Petroleum Contingency Planning

Small spills of petroleum can cause extensive water damage and should be cleaned-up or contained. In a farm, petroleum spills may take place from fuel storage tank or hydraulic oil leakage (busted hoses) from equipment.

A petroleum spill clean-up kit is available in _____ (include in the kit appropriate protective clothing, containers for contaminated waste, absorbent material such as sawdust or kitty litter, and a shovel).

In Case of Spills:

1. Eliminate the source of the spill.

2. Containment – Construct berms or divert flow to prevent spread of fuel.

3. Report spills that could cause contamination of surface water or groundwater to the local NB DELG office directly or the Environmental Emergencies number.

4. Small spills can contaminate water – clean them up!

5. Apply absorbent material as required, which is located in _____.

6. Assess extent of spill

- Did the petroleum reach surface water?
- How much was released and for what duration?
- Did any damage occur to property, fish or wildlife or their habitat, or an employee?
- Did the spill leave the property?
- Can the spill potentially reach surface waters?
- Could a future rain event cause the spill to reach surface waters?
- Are potable water sources (wells or surface water) in danger?

7. Contact a contaminated soil remediation facility to arrange for disposal of any contaminated soil. They may ask you the DELG spill report case number. There will be a cost of approximately $40 per tonne of soil. Do not set fire to the spill as this is illegal and can leave behind by-products, specifically polyaromatic hydrocarbons (PAH).

8. Post spill assessment - Review actions taken to contain or minimize the spill.

- Can you determine the cause of the spill or discharge?
- Were there signs present before the incident?
- How could this be prevented?
- How did the clean-up progress?
- What has to be changed on your contingency plan?

In Case of Fire:

1. Notify attending fire department of location, type and quantity of petroleum product.

2. Construct containment berms to collect water and fuel runoff.

3. Notify provincial Emergency Measures Organization if fire has potential to spread beyond farm site or affect other properties or persons.

Fertilizer Contingency Planning

Fertilizer spills (granular or liquid formulations) that could cause contamination of surface water or groundwater must be reported to the NB DELG.

A fertilizer spill clean-up kit is available in _____ (include in the kit appropriate protective clothing, containers for contaminated waste, absorbent material such as sawdust or kitty litter, and a shovel).

In Case of Spills:

1. Eliminate the source of the spill.

2. Put on appropriate personal protective clothing which is located in _____.

3. Contain fertilizer using berms to prevent the spread of liquid fertilizer.

4. Report spills to the NB DELG directly or via the Environmental Emergencies number

5. Assess extent of spill

- Did the fertilizer reach surface water?
- How much was released and for what duration?
- Did any damage occur to property, fish or wildlife or their habitat, or an employee?
- Did the spill leave the property?
- Can the spill potentially reach surface waters?
- Could a future rain event cause the spill to reach surface waters?
- Are potable water sources (wells or surface water) in danger?

6. Clean up site by removing both fertilizer and soil from the site. This mixture of soil and fertilizer could be spread on crop land as a fertilizer.

7. Post spill assessment - Review actions taken to contain or minimize the spill.

- Can you determine the cause of the spill or discharge?
- Were there signs present before the incident?
- How could this be prevented?
- How did the clean-up progress?
- What has to be changed on your contingency plan?

In Case of Fire:

1. Notify attending fire department of location, type and quantity of fertilizer product.

2. Construct containment berms to collect water and fertilizer runoff.

3. Notify provincial Emergency Measures Organization if fire has potential to spread beyond farm site, affect other properties or persons or lead to a reportable spill.

Special Precautions:

For farm operations which store or use products such as ammonium nitrate, anhydrous ammonia or liquid fertilizers will need to identify specific precautions to handle spills and/or fires. It is strongly recommended that the plan should follow the recommendations on MSDS (Material Safety Data Sheets) for these products. MSDS sheets are available from fertilizer dealers (or from fertilizer manufacturers on the internet). Ensure that the MSDS sheets are attached to your contingency plan.

Manure Contingency Planning

Manure spills that could be hazardous to the environment must be reported to the NB DELG directly or via the Environmental Emergencies number.

Manure spills that are reasonably believed to contain infectious organisms must be reported to the provincial EMO if any amount is spilled.

In Case of Spills:

1. Eliminate the source.

(a) Spills from Manure Storage and Spreading Activities

- Stop application by spreader.
- Shut-off transfer pumps, close valves, separate pipes, creating air gap and stopping flow.
- Plug drain tile lines or block drainage ditches if manure has entered them.

(b) Run-off from Livestock Areas

- Remove cattle from seasonal feeding areas.
- Create a diversion around feed area (construct a berm).

2. Contain the spill, if possible.

- Minimize manure movement off the farm or downstream.
- Create a temporary diversion or berm to contain manure.

3. Report spills to the Provincial Emergency Program.

4. Assess extent of spill

- Did the manure reach surface water or wells and are potable water sources in danger?
- How much was released and for what duration?
- Did any damage occur to property, fish or wildlife or their habitat, or an employee?
- Did the spill leave the property?
- Could a future rain event cause the spill to reach surface waters?

5. Clean Up

- Move manure onto cropped field or to a storage area (depending on season and weather conditions).
- Remove soil containing excess nutrients from the direct spill area for eventual use as a fertilizer or soil amendment.

6. Post spill assessment - Review actions taken to contain or minimize the spill.

- Can you determine the cause of the spill or discharge?
- Were there signs present before the incident?
- How could this be prevented?
- How did the clean-up progress?
- What has to be changed on your contingency plan?

Spontaneous combustion of stored or composted poultry manure, wood waste, or other organic materials may occur under certain conditions resulting in smouldering that can often remain undetected until fire is well established.

In Case of Fire:

1. Notify attending fire department of location and type of manure storage involved in the fire.

2. Construct containment berms to collect water and contaminated runoff.

3. Notify the provincial Emergency Measures Organization if fire has potential to spread beyond farm site, affect other properties or persons or lead to a reportable spill.

Pesticide Contingency Planning

Report spills of pesticide products or mixtures (and wastes containing materials with a PCP#) which has a potential to contaminate surface water or groundwater to NB DELG or the Environmental Emergencies hotline.

An up-to-date inventory of stored pesticides, as well as all labels and MSDS sheets for pesticides used and stored on the farm, are kept in the farm office and the pesticide storage area. Pesticide storages are located at _____(see Farm Map).

A pesticide spill clean-up kit is available in_____ (include in the kit appropriate protective clothing, containers for contaminated waste, absorbent material such as kitty litter or sawdust, and a shovel).

In Case of Spills:

1. Prevent exposure of people and animals to the pesticide and its fumes.

2. Put on appropriate personal protective clothing which is located in _____

3. Prevent the spread of the pesticide. Dry pesticides can be swept up and reused if they have not become wet or contaminated. Use sawdust or absorbent material to prevent spread of liquid pesticides. Sawdust is available at _____ .

4. Report any potential toxic chemical escape to NB-EMO at 1-800-561-4034, NB Department of Public Safety at 506 453-2410 or the Environmental Emergencies hotline.

5. Assess extent of spill

- Did the pesticide reach surface water?
- How much was released and for what duration?
- Did any damage occur to property, fish or wildlife or their habitat, or an employee?
- Did the spill leave the property?
- Can the spill potentially reach surface waters?
- Could a future rain event cause the spill to reach surface waters?
- Are potable water sources (wells or surface water) in danger?

6. Dispose of absorbent material in a safe and suitable manner (in a clearly labelled garbage container).

7. Decontaminate the surface of the spill site (i.e., washes floor areas with bleach and detergent; excavate or remediate contaminated soil).

8. Where soil is contaminated, remove top 5-7 cm of soil, cover area with uncontaminated soil and add lime and/or activated carbon. Contact NB DELG for instructions on how to dispose of affected soil.

9. If the spill occurs beside a watercourse, remove the top layer of contaminated soil immediately and relocate it to a safe site.

10. Post spill assessment - Review actions taken to contain or minimize the spill.

- Can you determine the cause of the spill or discharge?
- Were there signs present before the incident?
- How could this be prevented?

- How did the clean-up progress?
- What has to be changed on your contingency plan?

In Case of Fire:

1. Notify attending fire department of location, type and quantity of pesticides.

2. Be prepared to construct containment berms to collect water and pesticide runoff.

3. Notify EMO if fire has potential to spread beyond farm site, affect other properties or persons.

Contingency Planning - High Wind Events

Preparation for high wind events starts well before the actual event. Preparedness includes several activities, and broadly they may be categorized as long term and immediate activities.

Long term activities:

- Ensure that roofs of buildings are well anchored to walls with truss tie downs (hurricane straps), not just toenailed into the top plate.
- Similarly, siding should be securely installed since flapping pieces can exacerbate the damage to the building. The biggest human danger in high wind is flying debris.
- Hazardous materials storage must be sufficiently secure to minimize risk of upset.

Immediate activities:

- Monitor weather forecasts to be aware of severe storm warnings and have time to prepare.
- Close all building doors since wind blowing into or out of a building can put extra pressure on roofs and walls.
- Ensure tarp barn straps are secure and tight.
- Animals should be safe either in a barn or in a field away from buildings.
- Ensure loose items are not left in the yard.
- Water troughs should be filled with water.
- Other items, including machinery, could be strapped and staked to the ground.
- Seek shelter before high winds strike.

Contingency Planning – Heavy Rain Events

Frequency of heavy rainfall events is predicted to increase in our region as the global climate warms. Heavy rains can create localized flooding and extreme runoff. Many adaptation and/or mitigation measures can be considered to ensure less adverse impact of heavy rainfall.

All Producers - Landscape/Waterway Development and Maintenance:

- Outlets from water impoundments should be designed to withstand a high a runoff event as feasible.
- Large angular rock (riprap) and/or well established vegetation at outlets and in runoff channels will diminish damage.
- Berms and diversion terraces should have sufficient height and vegetation should be strongly established on the top, sides and bottom where water flows.
- Laneways up a slope should have sufficient crowning and off-takes or else water bars maintained to prevent gullying of the roadbed.
- Culverts must be of a sufficient size to handle large runoff events.
- Ponding/floodable areas or water retention basins could be developed to decrease runoff.
- Naturalized areas could be developed to store water, area of hard surface reduced and water holding capacity of farmed soils increased.
- Minimize bare soil. Fields should be covered by growing vegetation or at least with mulch or plant residue year round.

Livestock Producers:

- Manure storage, if near their capacity, could overtop. Reduce this risk by field spreading sufficient liquid several days before heavy rain is forecast.
- Manure should be cleaned from yards prior to the event.
- Clean water should be diverted from manure storage areas.
- Storage of feed should be away from areas which could flood, or else consider constructing a berm or sand bagging.
- Sand bag building entrances as needed.

Contingency Planning – Water Shortage

Water could be lacking due to a severe dry period, contamination or failure of a well, pumping or delivery system. Water for humans, animals, cleaning and crops is essential.

For peoples' needs it is recommended to have several days reserve of potable water. A backup water supply is often available on a farm, but this supply should be frequently tested to ensure water quality and a functional delivery system. As a backup, ensure water hauling service is available in your area.

Pasture production during dry conditions:

- If you do not already practice rotational grazing, a low water situation is an excellent time to start.
- Consider using strip grazing during water shortage.
- Dividing your pasture(s) into smaller areas not only gives the non-grazed areas time to regrow, it also significantly reduces trampling, fouling and other forms of waste. The smaller the area the livestock are in, the less feed is wasted.
- Consider designating a "sacrifice pasture". Use this area to provide supplementary feed when the other pastures need resting. Do not provide supplementary feed in grazing areas as that will result in waste.
- If you decide to sacrifice a second cut hay field for grazing, be sure to divide it into small areas. Cattle will effectively graze tall pastures if space is limited, but will trample a lot of plants given the chance.

Emergency Irrigation during Water Shortage:

In the event of water shortage or drought

Part of the irrigation plan should include a contingency or emergency plan outlining what you will do in the event of water shortage or drought. Some hard decisions may have to be made. Each situation will be different.

- Which crops will suffer more if you cut back on irrigation?
- Which crops are at a critical stage?
- Can you reduce the irrigation rate further?

Efficient Irrigation System

- Inspect your system when it is operating and make sure there are not any leaks. If any are found, repair them. Check your system frequently.
- If possible, irrigate later in the day or evening, when temperatures are lower and there is less evaporation loss. This may not be an option for all crops as disease could be an issue.
- Avoid irrigating during windy conditions. Not only is water loss due to evaporation much higher, but it is difficult to obtain an even distribution of water, especially for large volume gun systems.
- Use rain gauges to measure how much water is being applied and if it is the intended amount. Consider using enough gauges to determine how evenly you have irrigated.
- Watch your system to ensure that the application rate does not exceed how fast the ground will accept it (infiltration). If it does, you will see runoff. Not only is this a waste of water, but you are also not getting the full benefit of the application.
- If you have a system where the pipes are moved between irrigations, try to allow the pipes to drain back into storage, if possible.

Monitoring irrigation plan

- Inventory how much water you have in storage, or have access to, from streams or water wells.
- Set out a desired irrigation scheduling program. Take into account projected needs of the crop, soil type, evaporation and transpiration, rooting depth, critical periods of growth, etc.
- Follow your irrigation plan and update it as needed.
- Either weekly or daily, reviews your volume of water in storage or water availability. Determine if your water supply matches your needs.

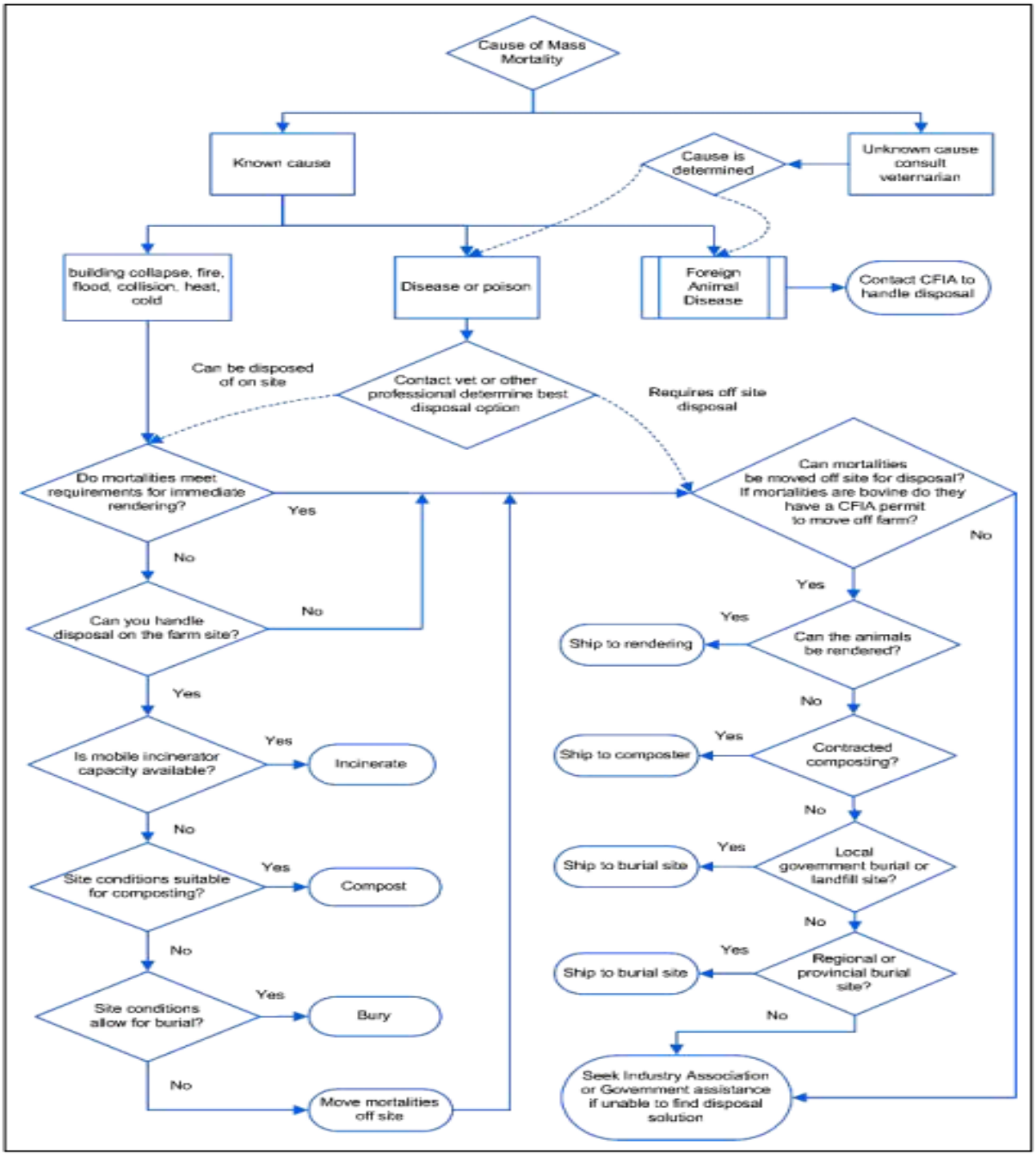
Irrigation directly from a water well

- Operate within your water withdrawal conditions, if applicable (potential for 50 m^3/day is trigger).
- Monitor the effect of the pumping on the static water level of any of your other wells or neighbour's wells, if possible.
- Shortly after pumping, monitor the static water level from the well you are using, to see:
- How much the water level has been drawn down,
- The recovery rate of the well. The pump may make this difficult, unless you have special equipment installed or an adjacent monitoring well.
- Consider hiring a hydro-geologist to assess what effect your water withdrawal may have on the ground water and neighbouring wells. Monitoring wells may be needed to document the impact of water withdrawals.

Mass Mortality Contingency Planning

Animal mortality is a regular occurrence on livestock operations; however, in the event of mass mortality, farmers and ranchers need to be prepared to manage large volumes of animal carcasses rapidly. The formulation of a mass mortality contingency plan is an essential step to timely and effective management of a potentially "messy" situation.

The flow chart below gives direction on the final resting place of mortalities. It is meant as guidance – livestock producers need to have considered the options that may be available prior to the mass mortality event. On farm disposal may be preferred for some; however, site conditions (i.e., high water tables, porous soils or heavy rainfall) may restrict the ability of a farm site to be used for disposal. The cause of the mass mortality will initially direct the disposal options.



- Animal deaths resulting from a Foreign Animal Disease must be reported to Canadian Food Inspection Agency (CFIA). They will direct the disposal options.
- It is the responsibility of the farmer to dispose of dead stock in a manner safe to human health and to the environment. The Departments of Health and Environment have stipulated that burial for the mass disposal of dead stock is not an option. Burial is only allowed for the day-to-day on-farm mortalities. The most economical and preferred solution for mass disposal of dead stock is to compost on-farm. For better information, please visit New Brunswick's Abattoir Waste and Carcass Disposal Guidelines / Lignes directrices régissant l'élimination des déchets d'abattoir et des carcasses (https://www2.gnb.ca/content/dam/gnb/Departments/10/pdf/Agriculture/AbattoirWasteCarcassDisposalGuidelines.pdf)
- Offsite disposal: This may be a more expensive option with less time and management requirements for the farm operation. The most economical and preferred solution for mass disposal of dead stock is to compost on-farm. Dead stock cattle containing SRMs can only be received by waste management facilities permitted by CFIA.
- Local government disposal sites should be considered when capacity to deal with mortalities on farm is overwhelmed. Local and regional offsite disposal is not available in all areas of the province.

Much of the content included in this template was sourced from BC Environmental Farm Plan's "Contingency Plan Template for On-Farm Planning" and Ontario EFP's "Emergency Plan".