STEPS TO TAKE WHEN CLOSING DOWN A HOG BARN FOR AN EXTENDED PERIOD OF TIME

1. Introduction

The Manitoba Pork Council has provided this checklist of items to assist hog producers who are considering closing down their operations for an extended period of time. As most producers know, it is not simply a question of turning out the lights and closing the doors. There are a number of things to consider first, then if the decision is made to completely empty and close down the barn, a series of steps should be taken to ensure the barn can be brought back into production in the future.

2. Things to Consider Before Deciding to Completely Shut Down

Here are some things to consider and look into BEFORE deciding to entirely empty a barn:

1. Prior to shutting down, contact the local municipal (or planning district) office to obtain a Zoning Memorandum or Certificate, so as to establish zoning status and size. Also get a written statement from them regarding the rules of re-establishment (see page 6 & 7 for more information).

2. Check with your insurance company to see what will happen to insurance rates before shutting down. Do not assume rates will simply go down. The opposite may occur! As well, some insurance companies require an inspection prior to extending the insurance on an empty barn.

3. **Rather than completely emptying your facilities, seriously consider keeping a small number of pigs (less than 10 AUs)* in the barn for personal use**. This may help to:

    - Keep your insurance from going up because the barn is never emptied, and is therefore occupied. This might also eliminate the need for an inspection;
    - Keep your municipal Conditional Use approval intact because the approved 'use' never technically ceases to operate (although the approval of a Conditional Use is essentially permanent, there are some municipalities that place time limits

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* An AU is an Animal Unit as defined under *The Planning Act*. By keeping less than 10 AUs, your operation is not considered a Livestock Operation. If you have accepted the Federal Hog Farm Transition program these pigs can not be sold on the market but must be kept for personal use only.

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2. Things to Consider before Making a Decision to Completely Shut Down

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Reasons to keep a small number of pigs (less than 10 AUs) in your barn, continued….

on them if they cease operating). In any event, it would still help to avoid potential issues with municipalities and/or neighbours if a producer never entirely ceased operating and wanted to later get back into full production;

- Keep the operation legal if a hog operation is a Non-Conforming Use* under the local zoning by-law;
- Avoid issues over new start-ups in *The Environment Act* (Bill 17) ban area, again, since the hog operation never ceased operating; and
- Keep the barn at least somewhat active and occupied. This may help to keep it from deteriorating to the same extent as if it was empty - if the producer ever wanted to re-activate it or sell it later on.

4. What to do - Should you Decide to Entirely Empty your Barn

(Thanks to *Manitoba Agriculture Food and Rural Initiatives*, *Manitoba Conservation*, *Manitoba Local Government*, the *Prairie Swine Centre, Ontario Pork*, and the *Ontario Ministry of Agriculture, Food and Rural Affairs* for providing much of this information)

If after considering whether it is best to keep a few animals, and you still decide to completely go out of production and mothball your barn with the intent of either selling it at some point, or going back into production yourself someday, following is a checklist of things you should do. This will help to ensure facilities stay in reasonably good condition as well as assisting in ensuring safety. If left completely unattended and not closed down properly, a barn can deteriorate very rapidly and could pose a human safety hazard.

As a general rule, the barn should be cleaned out as thoroughly as possible. Remove all organic matter – this can lead to condensation problems, flammable gas production, can cause mould and can attract animals and insects. Use a pressure washer wherever possible. Pay particular attention to feeding areas and equipment.

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* A Non-Conforming Use is a use which existed before a municipality adopted a zoning by-law which then restricted the size or location of the use (such as hog operations), thereby making any existing operation 'non-conforming'. Non-Conforming Uses can continue to operate, but cannot expand, and if they cease to operate for one year or more, they cannot re-establish.

4. What to do - Should you Decide to Entirely Empty your Barn

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Pay particular attention to two things - *The 2 Ms* – Manure and Moisture. If left in an enclosed space (such as a barn) for an extended period of time, either or both of these can cause serious damage to the structure and to machinery and equipment.

Leftover manure is one of the main culprits in corroding metal in pens, machinery and equipment. It is also a potential source of dangerous gases leading to possible explosions and human safety issues. Dried manure in gutters, pipes, tanks, etc., is often difficult to re-wet and clean out later, and will make it difficult to re-start gutter and manure removal systems.

Moisture build-up in barns causes corrosion and mould, and if it freezes, can cause frost damage through heaving, shifting, breakage, etc.

CHECKLIST OF THINGS TO DO AS A PART OF A BARN SHUTDOWN

5. General Cleanup and Manure Removal

- ☐ Remove all garbage, debris, feed, straw, manure and other organic matter.
- ☐ Wherever practical, use a pressure washer to clean all surfaces. Pay particular attention to feeding areas and equipment.
- ☐ Clean out as much manure as possible in pens, on metal rails, on floors and walls, in gutters, under slats, in pipes, tanks, etc.
- ☐ Pressure wash and flush this equipment with water until bare concrete/metal/plastic, etc., is visible. **As much manure as possible should be removed from the barn.**

6. Cleanup of Feed and Watering Facilities and Equipment

- ☐ Empty all feed bins – pressure wash.
- ☐ Leave access hatch in boot open to dry condensation. Or drill ventilation hole in boot (it can be closed with a bolt upon re-start).

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6. Cleanup of Feed and Watering Facilities and Equipment

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- Run dry whole grain or sawdust through mix mills, augers and pipes to clean out feed Leftover feed can hold moisture and may contain salts - both of which can cause corrosion.
- Wet dry feeders – disconnect nipple and remove feeder to clean. You may wish to consider flushing water lines with air or water.
- Shut off all water sources and drain all water tanks, pipes and hoses.
- Remove nipple drinkers from end runs and blow lines with air.
- Remove nipple drinkers from all drop pipes and allow to drain.

7. Greasing/Oiling Equipment and Dry-out Period

- Grease any fittings on motors and oil any chains, hinges, etc.
- Spray metal surfaces (pens, machinery and other metal equipment) with machine oil to prevent corrosion.
- Allow barn and equipment to dry out after washing. Fans and ventilation systems should be used to assist in this. This may take a couple of days or more.

8. Fans and Ventilation Equipment

After drying out the barn and machinery:

- Clean fans and louvers in ventilation system.
- Cover fan openings with covers provided by manufacturer or with heavy plastic sheeting (10 mil poly). This will prevent moist outside air from coming in. They can be covered from the inside to prevent interior barn gases from corroding the fans.*
- Close fresh air inlet openings on the roof to prevent moisture laden air from back drafting into the attic.*

* Even when shut down however, some continuous ventilation of the barn should be provided to reduce inside moisture levels and to help prevent condensation on interior surfaces.

9. Rodent Control

- Inspect barn for obvious entry points for rodents – close up any such entry ways.
- Ensure bait stations and rodent traps are placed in any locations where rodents may gather or get in - such as around water sources, in attics, etc. Rats, mice and other animals can cause significant damage to insulation, wiring and other parts of your facility.

10. Manure Storage Facility (outside of barn)

- Manure removal is optional for a liquid manure storage facility. In the case of cut and fill, clay-lined earthen manure storage facilities, a producer can fill the lagoon with water to ensure the clay liner does not dry out. **A Manure Storage Maintenance Plan must be filed with *Manitoba Conservation* (*Environmental Services, Livestock Section*) and approved by that department.**
- Manure may be required to be removed from semi-solid or solid manure storages.
- See attached sheets from *Manitoba Conservation* on pages 10 - 12 for more information on maintaining or de-commissioning manure storage facilities.

11. Heating the Barn

- Due to soil conditions and relatively high water tables in a number of areas in Manitoba, **consider maintaining enough heat in your emptied barn to avoid freezing.** Much of the damage to empty barns occurs because they are allowed to freeze. This leads to increased condensation/moisture issues that can largely be avoided by maintaining enough heat to keep the barns from freezing. As well, foundation problems and floor/wall damage can also become a serious issue when buildings are no longer heated. Remember that heating systems require sufficient ventilation to work properly.
- If the barn is on soil that is well drained and has a relatively low water table, you may decide to shut off the heat in the barn. If you are not sure about the soil conditions and want to turn off the heat, consider bringing in a qualified contractor or engineer to determine the nature of the barn's foundations and soil conditions.

12. Shutting off the Heat in the Barn

- ☐ If you should decide to shut off the heat:
  - o Ensure the gas/propane is shut off (if applicable);
  - o Drain any boilers and hot water heating systems. If they have anti-freeze in them, they can be left with water but the anti-freeze level should be checked;
  - o Blow out heaters with air to get rid of dust – dust often contains salts and can also hold moisture which can corrode heaters;
  - o Check the anti-freeze on any in-floor heating systems – or drain/blow the fluid out of the lines;
  - o If using coal and the coal storage facility is enclosed, ensure sufficient ventilation to prevent a build-up of potentially explosive gases. Clean out augers and chutes; and
  - o Shut off the main electrical panel in the barn if no heat is to be provided.

13. Exterior

- ☐ Securely lock all doors.
- ☐ Post **DANGER DO NOT ENTER Deadly Gases May Be Present** (or similar) signs at entrances.
- ☐ If the driveway to the barn is separate from yours or workers' residences, close off the driveway with a chain or gate.

14. Who to Contact if you are Shutting Down

- ☐ Contact your municipality and the Manitoba department of *Local Government's Assessment Branch* to inform them that the barn is empty – this can result in a lowering of property taxes.
- ☐ Ask the municipality or planning district office for a Zoning Memorandum or Zoning Certificate which states the zoning status. Find out what procedures are required for a re-start in the future. Get this in writing:
  - o If you are a Permitted or Conditional Use under local zoning **there are no**

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14. Who to Contact if you are Shutting Down

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- **time limits** as to when you can re-start UNLESS the municipality has a time limit written into its zoning by-law or permits/agreements. So, in most cases a re-start should require no new local approvals.
- If you are a Non-Conforming Use (see page 2) you may NOT be able to re-start after one year of being out of operation. Seriously take this into account before you shut down, since your closure may be permanent. Note however, that most operations are NOT Non-Conforming uses.
- If you are in the ban area (Bill 17) under *The Environment Act*, as long as you maintain your manure storage facility in accordance with your approved Maintenance Plan, you should be able to re-start after notifying and obtaining the go-ahead from *Manitoba Conservation* at least 60 days prior to re-start (see pages 10-12).

- ☐ Contact *Manitoba Conservation,* (*Environmental Services, Livestock Section*) to find out about filing a Manure Storage Maintenance Plan if you expect to not use your manure storage facility for more than one year (see attached sheets on manure storage maintenance and de-commissioning on pages 10-12).
- ☐ Contact all of suppliers (feed companies, fuel suppliers, etc).
- ☐ Contact the insurance company. As mentioned previously, do not assume rates will go down. They may go up.
- ☐ Contact the *Manitoba Pork Council* office to let us know your status, so that we can update premises identification, traceability and levy information.

15. Ongoing Maintenance during the Shut-Down Period

- ☐ Check and maintain bait stations and traps regularly - at least weekly in the fall and every 2-4 weeks at other times of the year.
- ☐ About every 2-4 weeks, check the manure storage facility to ensure water levels are at the appropriate height, check any monitoring wells to ensure the facility is sound and that no leakage is detected. **An annual Status of Facility report must be filed with *Manitoba Conservation,* (*Environmental Services, Livestock Section*),** to ensure the manure storage facility is being maintained in accordance with the approved plan.

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15. Ongoing Maintenance during the Shut-Down Period

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- About every 2-4 weeks, check all doors and locks. Do a general check of the barn to look for signs of any problems including checking windows and/or other points of entry for signs of damage.
- Keep grass cut and keep weeds away from the building.
- Consider turning on all fans at least once a year for 15 minutes or so. You may wish to consider turning them by hand first before you turn the power on - in case one or more of them have seized or have something in them (such as a nest).
- If you have been filing a Manure Management Plan with *Manitoba Conservation*, continue to do so during the shut-down period even if the plan simply says "*no manure is being applied in the upcoming year*."

16. Re-starting Your Operation

- At least **60 days before start-up, contact *Manitoba Conservation,* (*Environmental Services, Livestock Section*),** to ensure they are aware the manure storage facility is going to be operational again**.** They may come out and inspect the facility prior to approving the re-start.
- Enter the barn and check all equipment to ensure it is operational.
- Depending on the length of time the barn was shut down, have an electrician check the electrical system to ensure it is safe to re-start. It may also be advisable to have a qualified heating and ventilation contractor check heating and ventilation systems to ensure they are operable.
- Turn fans (by hand at first if practical).
- If heating system was turned off, re-connect and start up the system along with the ventilation system.
- If starting up in cold weather, re-heat building before turning on the water.
- Reconnect and check all water systems. Run water though all pipes, gutters, etc. to ensure nothing is plugged.

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16. Re-starting Your Operation

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- Power wash all pens and facilities (to clean off accumulated dust – depending on length of shutdown).
- The manure storage facility will have to be partly and carefully emptied of water in order to allow for liquid manure to enter. This must be done in accordance with a manure management plan. Water cannot be simply drained onto a field or ditch but must be applied to cropland as though it were liquid manure.
- Contact your insurance company.
- Contact the *Manitoba Pork Council* office to let us know your status, so that we can update premises identification, traceability and levy information.

Prepared by the ***Manitoba Pork Council*** with information from:

Manitoba Agriculture, Food and Rural Initiatives
Manitoba Conservation
Manitoba Local Government
The Prairie Swine Centre
Ontario Pork
The Ontario Ministry of Agriculture, Food and Rural Affairs

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December 2009

Maintenance and Decommissioning Plans for Manure Storage Facilities

Operators Intending to De-populate Livestock Operations Requiring Maintenance or Decommissioning Plans

If you are intending to temporarily de-populate or significantly reduce the livestock population of your operation it is important to take measures which ensure that the manure storage facility is adequately maintained.

Section 6.2 of the *Livestock Manure and Mortalities Management Regulation (LMMMR)* requires an operator with a manure storage facility that is not in active service for more than one year to submit, for director's approval, a written plan indicating their proposed process for either maintaining the structural integrity or decommissioning the manure storage facility.

What Needs to be Included in a Maintenance Plan?

Operators in possession/control of manure storage facilities inactive for more than one year must obtain director's approval of a maintenance plan should they wish to return the facility to active use. The approval process is initiated by the operator through submission of a maintenance plan to a Manitoba Conservation, Regional Environmental Operations office.

The maintenance plan must identify how the operator will maintain the structural integrity of the manure storage facility until it is returned to active service.

The plan shall include but not be limited to the following:

- Contact information (such as legal location, permit number or registration application number, Rural Municipality, phone number and mailing address).
- Information regarding the livestock operation (such as the size of the active operation (number of head, subspecies and type) and the proposed size of the operation after reduction of the herd).
- The anticipated beginning date for the maintenance plan and likely date when the facility will be re-commissioned into service, following resumption of livestock production activities.
- Manure removal is optional for liquid manure storage facilities, but may be a requirement for semi-liquid and solid manure storage facilities. Where the plan includes removal of manure, manure is to be applied to agricultural land in accordance with the LMMMR.

- Maintaining the structural integrity of the manure storage facility. The operator should consider the type of manure storage facility in their plan.
    - In the case of cut and fill and clay-lined earthen manure storage facilities the operator must ensure that the base and slopes are not allowed to dry because dehydration may lead to cracking. An operator may consider either keeping manure in the facility or filling it with water while it is not in active service. The plan must indicate that a frequent inspection schedule will be implemented to verify that a freeboard is maintained so as to avoid overtopping.
    - In the case of plastic lined earthen manure storage facility, the operator must ensure that the liners are adequately ballasted so as not to be impacted by strong winds. In the case of PVC lined facilities, the operator must ensure that no area of the liner is left exposed to UV radiation. An operator may consider keeping manure in the facility while it is not in active service. The plan must indicate that a frequent inspection schedule will be implemented to verify that a minimum freeboard of 0.5 m is maintained so as to avoid overtopping of the facility.
    - In the case of a concrete or steel tank, the manure storage facility must be protected from frost heaving during of the maintenance period. This can be achieved by keeping at least 1 m of liquid in tanks, or keeping some semi-solid manure in concrete molehills. However, all tanks and other concrete facilities have to maintain a freeboard no less than 0.3 m. Liquids must not be removed when ice has formed due to the risk of damaging the facility.
- The maintenance plan must indicate that the manure storage facility will not be used for any other purpose during the period that the maintenance plan is in effect. The plan must not exceed 5 years. If an operator intends to use the manure storage facility for another use, they must submit a decommissioning plan to the Director.
- The maintenance plan must indicate how frequently the operator will inspect to ensure that the liquid level is maintained. In addition, the operator is required to report to Environmental Operations, Manitoba Conservation annually by December 31st of each year.
- If monitoring wells or any leak detection systems are associated with the facility, yearly submission of groundwater or collected water quality analysis reports must be continued.
- If the active operation is required to submit manure management plans, annual submissions must be filed with Manitoba Conservation during the maintenance period.
- The maintenance plan must indicate that Manitoba Conservation Environmental Operations, will be notified at least 60 days in advance of returning the facility to active service to allow for inspection of the manure storage facility. The 60 days will also provide sufficient time for any engineering assessment and/or upgrades (if required) in advance of the proposed date of re-population.
- If you have any questions regarding submission of a maintenance plan, please contact your local Environmental Operations Manitoba Conservation office.

How Does the Province Respond to the Maintenance Plan?

- The request for approval of the maintenance plan must be submitted to Environmental Operations, Manitoba Conservation for review.
- The director may reject or approve the plan (with or without conditions).
- Where the maintenance plan is not likely to ensure that the facility's structural integrity will be adequately preserved, or where the facility's condition poses a risk for the environment, the director may require a further proposal or order the operator to maintain the facility in a manner set out within the order.
- Conditions of approval may include requirements for ensuring surface or ground water protection, or an inspection schedule and scope.
- Manitoba Conservation reserves the right to adjust the requested duration of the maintenance plan depending on geological and facility conditions.
- Where the facility is found to require major repairs before it can be re-commissioned, an engineering assessment or repairs may be required prior to returning the manure storage facility to active use.
- Other conditions of approval may be related directly to the manure storage facility and or manure application.
- Factors such as type and condition of the manure storage facility and site conditions will be considered.
- A copy of Manitoba Conservation's approval of the maintenance plan will be sent to your local rural municipality.

The approval does not limit the measures required to be taken in advance of returning the manure storage facility to active use which may include engineering assessment, major repairs, minor repairs, and/or other measures.

NOTE: Producers should contact other institutions such as the local municipal government in advance of implementing the plan. It is the responsibility of the operator to ensure the protection and safety of the public.

What Needs to be Included in a Decommissioning Plan

Operators wishing to decommission a manure facility may contact their local Regional Manitoba Conservation Environmental Operations Office to request a protocol for decommissioning a manure storage facility.

Manitoba Conservation Contact Information:

Eastern Region: Phone 346-6060 Steinbach
Western Region: Phone 726-6064 Brandon
622-2030 Dauphin
Central Region: Phone 945-7100 Winnipeg
642-6095 Gimli