

Summary of Main Manure Regulations in Manitoba



Subject	Current Requirements
<p>A. Winter and Fall Application of Manure¹</p> <p>'Winter' means between & including Nov 10 & Apr 10 of the same winter – about 150 days.</p> <p>'Fall' means between Sept 10 & Nov 10 of the same year.</p>	<ol style="list-style-type: none"> As of Nov 9, 2013, winter application of manure was no longer allowed for any livestock operation including pig farms in Manitoba. In regularly inundated areas including the Red River Valley Special Management Area (RRVSMA), manure applied in the fall must be injected or incorporated within 48 hours, except where a field is cropped with perennial forage or is under minimum tillage management. On lands outside of regularly inundated areas (including the RRVSMA), standard manure application rules apply to fall application.
<p>B. Manure Phosphorus (P) Thresholds</p>	<ol style="list-style-type: none"> The following phosphorus (P) thresholds apply to all pig farms: <ul style="list-style-type: none"> Where the soil test P levels (using the <i>Olsen Procedure</i>) in the top 15cm (6") of soil anywhere in the application area are: <ol style="list-style-type: none"> less than 60 parts per million (ppm) P – there are no restrictions on P₂O₅ application; between 60 ppm & 120 ppm P – may apply up to 2x the crop removal rate of P₂O₅ ; between 120 ppm & 180 ppm P – may apply up to 1x the crop removal rate of P₂O₅ ; and over 180 ppm P – cannot apply any P₂O₅ without advance approval from Manitoba Conservation and Water Stewardship (MCWS).
<p>C. Multi-year (Rotational) Fertilization</p>	<ol style="list-style-type: none"> If soil test levels are between 60 ppm & 180 ppm P – you may apply all of the P₂O₅ that will be removed by the crops in a multi-year rotation in the first year of the rotation, provided that: <ol style="list-style-type: none"> no more than 5 years' worth of P₂O₅ is applied in the first year; and no additional manure is applied during the rotation or until soil test P levels return to their pre-application levels. <p>For example, if in the 1st year of a 4-year rotation, 4 years' worth of P₂O₅ is applied, no additional manure P₂O₅ can be applied in the next 3 years or until soil tests show that P levels have returned to their pre-manure application levels.</p>
<p>D. Soil Nitrate (N) Limits</p>	<ol style="list-style-type: none"> Manure cannot be applied to any portion of land that will result in residual* nitrate nitrogen (NO₃-N) within the top 60cm (2') being more than: <ol style="list-style-type: none"> 157.1 kg/ha (140 lbs/a) on Agriculture Capability Class 1, 2 or 3 soils, except 3M & 3MW soils; 102 kg/ha (90 lbs/a) on Class 3M, 3MW or 4 soils; or 33.6 kg/ha (30 lbs/a) on Class 5 soils (unless the farm was established before Apr 2004, has not expanded since then and has been allowed in writing by MCWS); N within the top 60cm (2') cannot be more than 2x the above limits at any time. <p>* 'Residual' means after the harvest of one crop but before fertilization for the next crop.</p>

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<p>E. Manure Applicator's Licensing</p>	<ol style="list-style-type: none"> 1. Anyone applying manure commercially (for a fee) must successfully complete the Manure Applicators' Course (through Assiniboine Community College) and must obtain a Custom Manure Applicator's License from MAFRD. 2. Livestock farmers that have 300 AUs or more and that apply manure to land they do not own or lease, must successfully complete the Manure Applicators' Course and must obtain an Off-Farm Manure Applicator's License from MAFRD.
<p>F. Manure Management Plans (MMPs) & Nutrient Management Plans</p> <p>MC inspectors annually field check about 10% of farms to see if the manure has been applied in accordance with their MMPs – usually by soil testing and discussion with farmers.</p>	<ol style="list-style-type: none"> 1. All livestock farms of 300 AUs or more, <u>or, any</u> livestock farms that were established or expanded after Oct 31, 2009 must file an annual Manure Management Plan with MCWS. 2. Farmers with less than 300 AUs that intend to apply manure to Zone N4 lands must submit a <u>Nutrient</u> Management Plan to MCWS if they are not filing an MMP. 3. MMPs must be filed annually before: <ol style="list-style-type: none"> a) February 10, if manure is to be applied as fertilizer for spring crops; or b) July 10, if manure is to be applied in the fall. 4. MMPs received after the Feb 10 and July 10 deadlines, must be accompanied by a \$100 (plus tax) fee and may be filed no less than 14 days before application of manure. 5. Soil test results must be submitted to MCWS prior to application of manure. 6. MMPs may be prepared and filed by the owner/operator or a Manure Management Planner.
<p>G. General Prohibitions for Manure Application</p>	<ol style="list-style-type: none"> 1. Manure cannot be applied or discharged into any surface water, surface watercourse or groundwater, nor can manure be applied or discharged in a manner that would cause pollution of surface water or groundwater. 2. Manure cannot escape a farm's boundaries. 3. Manure must be applied as fertilizer to any land on which a crop is growing or will be planted during the next season. 4. Manure cannot be burned without prior approval from MCWS. 5. Without prior approval from MCWS, manure cannot be applied: <ol style="list-style-type: none"> a) onto Zone N4 lands (unless the farm was established before Apr 2004 and has not expanded since); b) onto unseeded land before Aug 15 if the land is not to be seeded before the next spring; or c) if it will cause pollution of surface or ground water.

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<p>H. Manure Application Setback Limits from Surface Water</p> <ul style="list-style-type: none"> • See also the General Prohibitions for Manure Application in Part G. • A wetland, bog, marsh or swamp is considered 'Major' if: <ul style="list-style-type: none"> - it has an area greater than 2 ha (5a), - is connected to 1 or more downstream water bodies or groundwater features, - contains standing water or saturated soils for periods of time sufficient to support the development of hydrophytic vegetation, or - it is a constructed storm water retention pond. 	<p>1. Where manure is to be applied adjacent to Surface Water or a Surface Watercourse, it must be applied with the following setbacks, as measured from the ordinary high water mark (OHWM) or from the nearest and highest bank (whichever is further from the surface water or watercourse):</p> <table border="1"> <thead> <tr> <th>Type of Surface Water or Watercourse</th> <th>Manure Application Method</th> <th>Manure Application Setback Width – With Permanently Vegetated Buffer</th> <th>Manure Application Setback Width - Without Permanently Vegetated Buffer</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Lakes</td> <td>In area designated as 'vulnerable' in the NMR - any method</td> <td>30m (100') setback consisting of 30m (100') permanently vegetated buffer</td> <td>35m (115') setback</td> </tr> <tr> <td>Injection, or low-level application followed by immediate incorporation</td> <td>15m (50') setback - when there is a 15m (50') wide permanently vegetated buffer</td> <td>20m (66') setback</td> </tr> <tr> <td>High-level broadcast or low-level application without incorporation</td> <td>30m (100') setback - when there is a 15m (50') wide permanently vegetated buffer</td> <td>35m (115') setback</td> </tr> <tr> <td rowspan="3">Rivers, Creeks & 3rd Order or Greater Drains</td> <td>Designated as 'vulnerable' in the NMR – any method</td> <td>15m (50') setback consisting of 15m (50') permanently vegetated buffer</td> <td>20m (66') setback</td> </tr> <tr> <td>Injection, or low-level application followed by immediate incorporation</td> <td>3m (10') setback - when there is a 3m (10') wide permanently vegetated buffer</td> <td>8m (27') setback</td> </tr> <tr> <td>High-level broadcast or low-level application without incorporation</td> <td>10m (33') setback - when there is a 3m (10') wide permanently vegetated buffer</td> <td>15m (50') setback</td> </tr> <tr> <td>Groundwater Feature (sinkhole, spring or well, except a monitoring well)</td> <td>Any method</td> <td>15m (50') setback consisting of 15m (50') permanently vegetated buffer</td> <td>20m (66') setback</td> </tr> <tr> <td rowspan="2">Wetland, bog, marsh or swamp</td> <td>Major</td> <td>3m (10') setback consisting of 3m (10') permanently vegetated buffer</td> <td>8m (27') setback</td> </tr> <tr> <td>Not Major</td> <td>Any method</td> <td>No application on land between the water's edge & the ordinary high water mark</td> </tr> <tr> <td>Roadside Ditch or Order 1 or 2 Drain</td> <td>Any method</td> <td colspan="2">No direct application to ditches or Order 1 or 2 Drains</td> </tr> </tbody> </table>	Type of Surface Water or Watercourse	Manure Application Method	Manure Application Setback Width – With Permanently Vegetated Buffer	Manure Application Setback Width - Without Permanently Vegetated Buffer	Lakes	In area designated as 'vulnerable' in the NMR - any method	30m (100') setback consisting of 30m (100') permanently vegetated buffer	35m (115') setback	Injection, or low-level application followed by immediate incorporation	15m (50') setback - when there is a 15m (50') wide permanently vegetated buffer	20m (66') setback	High-level broadcast or low-level application without incorporation	30m (100') setback - when there is a 15m (50') wide permanently vegetated buffer	35m (115') setback	Rivers, Creeks & 3 rd Order or Greater Drains	Designated as 'vulnerable' in the NMR – any method	15m (50') setback consisting of 15m (50') permanently vegetated buffer	20m (66') setback	Injection, or low-level application followed by immediate incorporation	3m (10') setback - when there is a 3m (10') wide permanently vegetated buffer	8m (27') setback	High-level broadcast or low-level application without incorporation	10m (33') setback - when there is a 3m (10') wide permanently vegetated buffer	15m (50') setback	Groundwater Feature (sinkhole, spring or well, except a monitoring well)	Any method	15m (50') setback consisting of 15m (50') permanently vegetated buffer	20m (66') setback	Wetland, bog, marsh or swamp	Major	3m (10') setback consisting of 3m (10') permanently vegetated buffer	8m (27') setback	Not Major	Any method	No application on land between the water's edge & the ordinary high water mark	Roadside Ditch or Order 1 or 2 Drain	Any method	No direct application to ditches or Order 1 or 2 Drains	
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<p>I. Manure Storage Facilities (MSFs)</p>	<p>1. A permit is required by MCWS prior to construction, modification or expansion of a MSF. An approved permit will contain conditions that must be met before or during construction - depending on the condition. A Professional Engineer must certify that the placement or construction of a MSF is in accordance with the rules in the LMMMR (including Schedule 'A') and guided by MCWS's relevant Technical Reference Documents.</p> <p>2. New or significantly altered earthen MSFs must have between 400 & 500 days of storage capacity. Other types of MSFs must have between 250 & 500 days of capacity (except under-floor pits with less than 30 days of storage). Existing MSFs that do not meet these storage capacity requirements can remain at their current size - unless the MSF does not have capacity to avoid winter manure application by Nov 10, 2013, in which case their capacity must be increased.</p> <p>3. Since Mar 30 1998, no liquid MSF can be built in a 100 year flood area, unless flood protected to at least 60cm (2') above the 100 year flood level or as approved by MCWS – except for under-floor concrete pits with less than 30 days storage that were in operation before 2009.</p> <p>4. Any earthen MSF which is not used for more than 1 year requires a De-Commissioning Plan or Maintenance Plan approved in advance by MCWS.</p> <p>5. All MSFs must be registered with MC&WS. MSFs built before registration or a permit was necessary, are still required to be registered with MCWS.</p>																																							

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<p>J. Other Related Issues, incl:</p> <ul style="list-style-type: none"> • Manure Treatment • Expansion, • New Pig Farms, • Outdoor Confined Areas, • Water Testing 	<ol style="list-style-type: none"> 1. No MSFs shall be constructed for new pig farms or expanded for existing pig farms anywhere in Manitoba unless the manure is to be treated with a MCWS-approved anaerobic digester or other environmentally-sound treatment system that is similar to or better than anaerobic digestion in the opinion of MCWS¹. Exceptions will be considered for existing pig farms which are building a new MSF or expanding their existing MSF to avoid winter application (and are not expanding their number of AUs). 2. New or expanding pig farms of 300 AUs or more must first obtain local (municipal) approval with a Technical Review Committee (TRC) review, including a Site Assessment and posting on a provincial Public Registry prior to obtaining a permit from MCWS. 3. A permit is required from MCWS for any manure treatment system or for any outdoor confined area (such as hoop structures) housing 10 AUs or more. 4. Pig farms with 300 or more AUs must submit to MCWS an annual water analysis report of the farm's livestock drinking water source by Dec 31 of each year. 				
<p>K. Minimum Separation Distances for Siting of Pig Farms and MSFs</p> <ul style="list-style-type: none"> • In this table, the 'Separation Distance... from a Single Residence' does not include a residence associated with the farm. • Where 2 or more pig barns are located within 800m (2625') of each other and are under the same ownership, they are considered a single farm with their AUs added together. • Individual municipalities may have different setback requirements from waterways, residences, designated areas, etc – check with your municipality or planning district for local planning & zoning restrictions. 	<p>Size of Pig Farm in AUs</p>	<p>Separation Distance in Metres (feet) from a Single Residence</p>		<p>Separation Distance in Metres (feet) from Designated Areas</p>	
		<p>To Earthen MSF</p>	<p>To Barn & Non-Earthen MSF</p>	<p>To Earthen MSF</p>	<p>To Barn & Non-Earthen MSF</p>
	<p>10-100 AUs</p>	<p>200m (656')</p>	<p>100m (328')</p>	<p>800m (2625')</p>	<p>530m (1739')</p>
	<p>101-200 AUs</p>	<p>300m (984')</p>	<p>150m (492')</p>	<p>1200m (3937')</p>	<p>800m (2625')</p>
	<p>201-300 AUs</p>	<p>400m (1312')</p>	<p>200m (656')</p>	<p>1600m (5249')</p>	<p>1070m (3511')</p>
	<p>301-400 AUs</p>	<p>450m (1476')</p>	<p>225m (738')</p>	<p>1800m (5906')</p>	<p>1200m (3937')</p>
	<p>401-800 AUs</p>	<p>500m (1640')</p>	<p>250m (820')</p>	<p>2000m (6561')</p>	<p>1330m (4364')</p>
	<p>801-1600 AUs</p>	<p>600m (1968')</p>	<p>300m (984')</p>	<p>2400m (7874')</p>	<p>1600m (5249')</p>
	<p>1601-3200 AUs</p>	<p>700m (2297')</p>	<p>350m (1148')</p>	<p>2800m (9186')</p>	<p>1870m (6135')</p>
	<p>3201-6400 AUs</p>	<p>800m (2625')</p>	<p>400m (1312')</p>	<p>3200m (10,499')</p>	<p>2130m (6988')</p>
	<p>6401-12,800 AUs</p>	<p>900m (2953')</p>	<p>450m (1476')</p>	<p>3600m (11,811')</p>	<p>2400m (7874')</p>
	<p>Over 12,800 AUs</p>	<p>1000m (3281')</p>	<p>500m (1640')</p>	<p>4000m (13,123')</p>	<p>2670m (8760')</p>
	<p>All Pig Farms</p>	<p>MSFs must be located at least 100m (330') from a: surface watercourse, sinkhole, well or property line. No well or drainage ditch shall be constructed within 100m (330') of a MSF.</p>			
<p>L. Animal Unit (AU) Calculations for Pigs</p>	<p>Type of Pig</p>		<p>AUs Produced by 1 Pig</p>	<p>Number of Pigs to Produce 1 AU</p>	
	<p>Sows, Farrow to Finish</p>		<p>1.25</p>	<p>0.8</p>	
	<p>Sows, Farrow to Weanling</p>		<p>0.25</p>	<p>4</p>	
	<p>Sows, Farrow to Nursery</p>		<p>0.313</p>	<p>3.2</p>	
	<p>Weanlings (up to 50lbs / 23kgs)</p>		<p>0.033</p>	<p>30</p>	
	<p>Growers / Finishers</p>		<p>0.143</p>	<p>7</p>	
	<p>Boars (Artificial Insemination Operations)</p>		<p>0.2</p>	<p>5</p>	

Footnote

¹ The provincial government department of Manitoba Agriculture, Food and Rural Development (MAFRD), currently has a funding program in place, the *Growing Assurance - Environment Program (GA-E)* to assist producers in:

- Increasing MSF capacity to eliminate winter spreading for farms under 300 AUs;
- Existing MSF repair; and
- Solid Liquid manure separation to assist in complying with P thresholds.

Contact your local **MAFRD GO Office** for more details.

Abbreviations & Definitions

For the full and legal definitions and numerous other relevant definitions, refer to the *Livestock Manure and Mortalities Management Regulation, The Environment Act, the Nutrient Management Regulation, The Water Protection Act, the Provincial Planning Regulation, the Technical Review Committee Regulation, The Planning Act, the Manure Regulation and The Pesticides and Fertilizers Control Act.*

- **a** – acre(s). 1 acre = 0.4047 hectares.
- **AU(s)** – Animal Unit(s) – means the number of livestock that will excrete 73 kg of total N per year.
- **cm(s)** – centimetre(s). 1 cm = 0.4 inches.
- **Crop removal rate of P₂O₅** – means the net amount of phosphorous (expressed as P₂O₅) removed from a field through plant (crop) uptake from the soil and removal of the plant material from the field through harvesting or grazing.
- **Designated Area** – means an area designated in a municipal or planning district Development Plan as an: urban or settlement centre; rural or seasonal (cottage) residential area; or parks or recreational areas.
- **Fall** - for the purposes of application of manure, means: manure applied to soil between September 10 and November 10 of the same year.
- **Farm** – for the purposes of this document only, means: an ‘agricultural operation’ as defined in the *LMMMMR*.
- **Ha(s)** – hectare(s). 1 ha = 2.47 acres.
- **Incorporation** – means the mixing of manure into soil, usually by tillage, to minimize exposure of the manure at the surface and to increase contact with the soil. This includes *Aerway*-type application.
- **Injection** – means the placement of liquid manure beneath the soil surface using specialized application equipment, including discs, chisels, openers and sweep-type tools.
- **kg(s)** – kilogram(s). 1 kg = 2.2 pounds.
- **lb(s)** – pound(s). 1 lb = 0.455 kilograms (or 455 grams)
- **LMMMMR** – *The Livestock Manure and Mortalities Management Regulation*, adopted under *The Environment Act*, implemented and enforced by MCWS. This is the main regulation dealing with manure in Manitoba.
- **m** – metre(s). 1 m = 3.28 feet
- **MAFRD** - The provincial government department of Manitoba Agriculture, Food and Rural Development – responsible for assisting farmers with advice, training & financial programs.
- **MCWS** – The provincial government department of Manitoba Conservation and Water Stewardship - responsible for the enforcement & implementation of *The LMMMMR, The Environment Act, The Nutrient Management Regulation and The Water Protection Act.*
- **MMP** – Manure Management Plan - prepared on a form approved by MCWS and provides for the storage and handling of the manure produced from a pig farm, including: the land application, treatment or other acceptable use or disposal of the manure. A MMP may address other sources of nutrients in addition to manure that will be applied to the land on the farm including synthetic fertilizers, municipal wastewater sludge and bio-solids.
- **MSF** – Manure storage facility. This includes earthen manure storage structures (sometimes called ‘lagoons’), as well as concrete, steel or other manure storage structures.
- **Manure Management Planner** – A person who has completed training that is acceptable to MCWS and is a member in good standing in the Manitoba Institute of Agrologists or is a Certified Crop Advisor.
- **N** – Nitrate Nitrogen.
- **NMR** – means *The Nutrient Management Regulation* adopted under *The Water Protection Act.*
- **P** – Phosphorous, expressed as P₂O₅.
- **Pig farm or pig operation** – for the purposes of this document only, means a ‘livestock operation’ raising or keeping pigs, as defined in the *LMMMMR*.
- **ppm** – parts per million.

... Abbreviations / Definitions continued on next page ...

Abbreviations / Definitions, cont'd....

- **RRVSMA** – The Red River Valley Special Management Area established in the *LMMMMR*. It includes all of the RMs of: Rockwood, St Andrews, St Clements, Rosser, West and East St Paul, Springfield, Tache, Ritchot, Macdonald, St Francois Xavier, Morris and Montcalm, as well as parts of the RMs of: Woodlands, Brokenhead, Portage la Prairie, Grey, Dufferin, Roland, Ste Anne, Hanover, De Salaberry, Franklin and Rhineland.
- **Regularly inundated** - means an area of land which floods at a frequency of once every 5 years or more often, and includes the Red River Valley Special Management Area (RRVSMA).
- **Surface water** – means any body of flowing or standing water (including ice), whether naturally or artificially created, including but not limited to: a lake, river, creek, spring, drainage ditch, roadside ditch, reservoir, swamp, wetland and marsh - but not including a dugout or reservoir on a farm property.
- **Surface watercourse** – means the bed or channel in which surface water is contained – but does not include any that are completely surrounded by private land controlled by the farm owner and have no outlet beyond the private land.
- **Winter** – for the purposes of application of manure, means: manure spread between November 10 and April 10 of the same winter – about 150 days.
- **x** - times.
- **Zone N4 lands** – areas of land defined in *The Nutrient Management Regulation*, and include: CLI Class 6 or 7 soils and/or unimproved organic soils.
- ' - foot or feet. 1 foot = 0.305 m.
- " - inch(es). 1 inch = 2.5 cm.

Key Manitoba Conservation and Water Stewardship, Environmental Livestock Program, Phone Numbers	
<ul style="list-style-type: none"> • Enquiries about Manure Management Plans, engineering and source water analysis questions should be directed to Environmental Services. • Enquiries on all other LMMMMR matters should be directed to Environmental Operations. • For reporting a spill, emergency spreading or any emergencies, call Environmental Operations – after hours use the Emergency Response number. 	
Emergency Response, phone # 944-4888	
Manitoba Conservation and Water Stewardship, Environmental Livestock Program, Environmental Services 1007 Century St., Winnipeg, R3H 0W4	Manure Management Plans, Ph: 945-3078 in Winnipeg Source Water Analysis, Ph: 945-5168 in Winnipeg Engineering, Ph: 945-7084 in Winnipeg
Manitoba Conservation and Water Stewardship, Environmental Livestock Program, Environmental Operations	Eastern: Ph: 346-6060 in Steinbach Western: Ph: 726-6064 in Brandon, or 622-2030 in Dauphin Central: Ph: 945-0675 in Winnipeg, 123 Main Street, Winnipeg, R3C 1A5 Ph: 642-6095 in Gimli, or Ph: 239-3204 in Portage la Prairie
See the Environmental Livestock Program's Website for more information, including technical documents and application forms at: www.gov.mb.ca/conservation/envprograms/livestock	

Disclaimer

This information has been summarized from numerous pages of legislation and regulations. While we have attempted to ensure accuracy, final authority rests with the actual legislation and regulations as implemented by the appropriate government departments. This is only a summary, intended as a quick reference, therefore a number of details have necessarily been omitted and/or shortened. Before making any related decisions that will affect you, your farm operation or business, check first with **Manitoba Conservation & Water Stewardship** officials and/or your local **MAFRI Go Office**.



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