# SITE ASSESSMENT

FOR LARGE LIVESTOCK OPERATION PROPOSALS (300 ANIMAL UNITS OR MORE)



## 1.0 Purpose

The establishment or expansion of a livestock operation that has 300 Animal Units or more is subject to Part 7 of <u>The Planning Act</u>. When such proposals are considered a conditional use by a municipal council or planning district board, approval of a conditional use permit is required. This includes a review by the Technical Review Committee (TRC) appointed by the Minister of Indigenous and Municipal Relations. The <u>Technical Review Committee Regulation</u> requires a site assessment be undertaken by the proponent to help the committee complete its review and allow the public affected by the livestock operation to comment on the proposal.

## 2.0 Assistance

For assistance in completing the Site Assessment Form, the following resources are available:

- Glossary of Terms for definitions
- Manitoba Agriculture for animal unit and suitable spread field acreage calculations
- Manitoba Sustainable Development for information on regulatory requirements
- Government agencies to obtain any required reports. For example, a
   Conservation Data Centre report is required as per Section 12.0 of the Site Assessment
- Contact the Technical Review Coordination Unit for additional help.

# **Description of Livestock Operation** 3.0 Operation legal name, if other than the owner's name: Operation location (project site)<sup>1</sup>: Rural Municipality (RM): Legal description: quarter, section, township, range, meridian or river lot(s): Manitoba Premises Identification Number: Municipal Tax Roll Number(s): Illustrate the location of the operation (project site) on a map. (See Location Map for example). ☐ Location Map Attached Nature of Project<sup>2</sup> 4.0 Please indicate if the proposal is for a new or expanding livestock operation. If the operation is expanding, please identify when the operation was established. ☐ New Operation ☐ Expansion of Existing Operation Date Established: Describe what is being proposed:

5.0	<b>Current and Propose</b>	d Type and Size	e of Operation	on <sup>3</sup>	
animals and	Manitoba Agriculture Anind danimal units for each are peration (if applicable).	nimal category ass	ociated with th	ne <u>current</u> and	
	Table 5-1: Curre	nt and Proposed (	Operation Anin		ory Operation
Ar	Animal Categories (Column B from nimal Units Calculator)	Current Number of Animals (Column D)	Current Number of Animal Units (Column E)	Proposed Number of Animals (Column F)	Proposed Number of Animal Units (Column G)
		Total Current		Total Proposed	
	nitoba Agriculture Animal Ui nimal Confinement <sup>4</sup>	nits Calculator attac	hed		
	the nature of the proposeck more than one category	ed project indicate ory if applicable)	e the type of a	nimal confinem	nent. (Note:

☐ Confined Livestock Area <sup>5</sup> – means an outdoor, non-grazing area where livestock are confined by fences or other structures, and includes a feedlot, paddock, corral, exercise yard, holding area and hoop structures.  ☐ Other (Describe what is being proposed)		
Does the operation currently use a confined livestock area:   No		
If yes, what is the current capacity (livestock places and animal units)?		
To ensure the proposed livestock operation can be built in a way the environment is protected, a permit is required for construction and expansion of confined livestock area(s) for operations with 300 Animal Units or more. Permits are required by the Livestock Manurand Mortalities Management Regulation (M.R. 42/98), under The Environment Act.		
A permit under the <u>Livestock Manure and Mortalities Management Regulation</u> (M.R. 42/98) not required for an indoor housing area or barn unless there is a manure storage facility within the building (an under barn storage capable of storing manure for 30 days or more).	) is	
Note that agricultural buildings such as barns over 600 meters (6,458 sq ft) require a building permit from the Fire Commissioner's Office under <i>The Building and Mobile Home Act</i> and the Manitoba Building Code.  Show all existing, proposed buildings and additions to existing buildings on the project site plan. See <a href="Project Site Plan example">Project Site Plan Guide</a> for help creating your site plan <sup>6</sup> .		
☐ Project Site Plan attached		
7.0 Water		
7.1 Project Sites Unsuitable for Development		
To protect water quality, the <u>Nutrient Management Regulation</u> (M.R. 62/2008), under <i>The Water Protection Act</i> , prohibits the construction or expansion of nutrient generating facilities in Nutrient Management Zone 4 (Agriculture Capability Class 6, 7 and unimproved organic soils) and Nutrient Buffer Zones. Nutrient generating facilities include barns, confined livestock areas and manure storage facilities.		
A <u>Nutrient Buffer Zone</u> , as defined in section 3(3) of the regulation, includes areas of land along water bodies such as rivers, lakes, streams and drains.		
The proposed indoor housing area, barn, confined livestock area and/or manure storage facility:		
will will will not be located within Nutrient Management Zone 4 (Class 6, 7 and unimproved organic soils) any Nutrient Buffer Zone.	) or	

Determine the agriculture capability class(es), including their limitations, of the soils for the project site.

Individuals with GIS mapping software can access information through <u>Manitoba Land Initiative</u> (MLI) website. In addition, information from MLI can also be viewed on Google Earth. Both the download for Google Earth and the registration for MLI are free.

Click <u>here</u> for instructions under the MLI website.

## 7.2 Water Source<sup>7</sup>

To be sustainable, a livestock operation must have access to a sufficient quantity and quality of water for livestock.

Water source for operation:	
☐ Pipeline (public) ☐ Proposed well ☐ River ☐ Dugout - dimensions:xx	☐ Water cooperative ☐ Existing well ☐ Lake
If using an existing well, provide a copy of the water property. Logs can be obtained from Manitoba Susta 945-6959 in Winnipeg; 1-800-214-6497 toll free.	
7.3 Source Water Analysis Reports	
Annual <u>livestock source water quality monitoring re</u> Sustainable Development for any operations of 300	
Has the operation submitted an annual source water  ☐ Yes ☐ No	monitoring report?  N/A (new operation or existing operation <300 AU currently)
If yes, please indicate year of last submission:	
Will livestock have direct access to surface water (no $\square$ Yes	ot including dugouts)?
If yes, identify the name of the surface water featur	e:
List any steps that will be taken to prevent direct ac	cess of livestock to the water body:

## 7.4 Water Requirements

Protecting the interests of domestic users and the environment, in addition to existing licensees, is the intended purpose of the water rights licensing scheme.

In order to protect the sustainability of water sources, all operations using more than 25,000 litres (5,499 imperial gallons) per day must possess a Water Rights License required by the <u>Water Rights Regulation</u> (MR 126/87) under The Water Rights Act.

For more information on the Water Rights Licensing process, contact the Water Use Licensing Section at (204) 945-3983 in Winnipeg; 1-800-214-6497 toll free.

## Water Use9

To calculate the total water use for non-dairy operations, go to the <u>Water Requirement</u> Calculator.

For dairy operations, go to the <u>Dairy Barn Water Requirement Estimator</u>.

Maximum daily use for the operation:  imperial gallons	☐ litres
Maximum annual use for the operation:  imperial gallons	ubic decameters
☐ Water Requirement Calculator attach	ed
☐ Dairy Barn Water Requirement Estima	ator attached

## 7.5 Groundwater (Contamination Risk Protection)

Improper storage and handling of manure or mortalities increases the risk of contaminating groundwater. Beneficial management practices (BMP), mitigation measures and requirements for the permit process reduce this risk. Soil testing, manure management planning and proper engineering, along with construction and management of manure storage structures, reduce the risk of contaminating groundwater.

All unused or abandoned well(s) on site and spread fields should be properly sealed and a seal well report filed with the Groundwater Management Section of Manitoba Sustainable Development. Information on well sealing is available from Manitoba Sustainable Development at (204) 945-6959 or refer to the <u>technical information document</u>. It is recommended that all but the most basic wells should be sealed by a well drilling professional.

Check off the mitigation measures used for the existing components of the operation that may pose a risk of contamination. Also check off any measures that may be used with the proposed components for this expansion, if applicable:

	Existing	Proposed	Not Applicable
Manure is stored in a storage facility built by permit or is registered by Manitoba Sustainable Development			
Storage includes leak detection system			
Earthen storage has between 400 and 500 days storage			
Steel/concrete tank has between 250 and 500 days storage			
Manure storage facility meets required setbacks			
Field storage (solid manure) locations are changed annually			
Field storage meets required setbacks			
All fields to receive manure are soil tested annually for nitrate-N and Olsen phosphorus			
All manure is applied according to a registered manure management plan			
Licensed commercial manure applicator is used to apply manure			
Operator applies manure			
Abandoned wells have been properly sealed			
Other:			

## 7.6 Building in Flood Areas:

The <u>Livestock Manure and Mortalities Management Regulation</u> prohibits an operator from constructing a manure storage facility within the boundaries of the 100-year flood plain elevation. <u>Manure storage facilities</u> that are constructed with protection for a flood-water level at least 0.6 meters higher than the 100-year flood water level are exempt.

The <u>Designated Flood Area Regulation</u> under *The Water Resources Administration Act* requires a Designated Flood Area Permit before a proposed structure (such as a barn) can be built within a Designated Flood Area

The flood protection level for structures located within a Designated Flood Area is the site specific design flood level plus freeboard, as provided by the Hydraulic Forecasting Branch of Manitoba Infrastructure. Contact the Hydrologic Forecasting Branch at (204) 945-2121 in Winnipeg; 1-800-214-6497 toll free, for more information.

The pr	roposed site:		
	□ is	$oldsymbol{\square}$ is not	
locate	d in a Designated Flood Area: <u>Upper Red River Valley [</u>	Designated Flood Area or	
Lower	Red River Designated Flood Area.		
Note:	At the time of permit issuance, verification is needed t structure(s) are located within the 100-year flood plain set by Manitoba Infrastructure.		
7.7	Watershed Management Planning		
stakeh	ated watershed management planning is a co-operative nolders and governments to create a long term plan to lies for watersheds.		
What are the names of the watershed and sub-watershed where the livestock operation and the fields identified for manure application are located?			
Name of watershed(s):			
Name of sub-watershed(s):			
Name of Integrated Watershed Management Plan for the proposed project site, if applicable:			
	ore on Integrated Watershed Management Planning, ca ams at (204) 945-7408 in Winnipeg; 1-800-214-6497 tol	_	

## 8.0 Manure

The <u>Livestock Manure and Mortalities Management Regulation</u> (M.R. 42/98) sets requirements for the use, management and storage of livestock manure in agricultural operations, to ensure it is handled in an environmentally sound manner. For more information on this, call Manitoba Sustainable Development at (204) 945-4384 in Winnipeg.

Improper storage, handling and/or land application of manure can contaminate water and soil, as well as potentially cause unacceptable odours for neighbours. The following is used to assess the manure management system.

8.1	Manure Type		
	ype of manure generated and application options av		influences storage, handling
	t type(s) of manure will be Solid	e generated?	☐ Liquid
8.2	Manure Volume or W	/eight	
of th accord and of earth conc facility What livest	e manure storage is the recordance with the Livestock construction of a manure sten manure storage facility each of the storage tank must have a sufficient capacity each operation?	esponsibility of the operato Manure and Mortalities Manure and Mortalities Manure storage facility is dependent ies must have between 400 we between 250 and 500 deciminating the need for wire or weight of manure generations.	and 500 days capacity, a steel or ays capacity. This ensures the other application of manure.  ated annually by the
8.3	Manure Storage Type ar	nd Capacity	
	e of storage system used vor field storage area.	will affect the capacity requ	irements for the manure storage
-	peration planning to cons manure storage facility?	truct, modify or expand a r	manure storage facility or use an
	☐ Construct☐ Expand☐ Modify		☐ Use existing ☐ Not applicable

Concrete tank(s) manure storage facility	What type of <u>manure stor</u>	<u>rage</u> will be used by the	operation?
Earthen manure storage facility Engineered solid manure storage facility Field storage  If the proposed operation or expansion will utilize an existing manure storage facility for the new manure, indicate the construction permit number or facility registration number:  Provide the dimensions of the existing and/or proposed manure storage facilities that will be used to store manure from the proposed operation or expansion. (See Existing and Proposed Manure Storage Facility Dimensions Table.)    Existing and Proposed Manure Storage Facility Dimensions Table attached if an existing manure storage facility that will be used to store any of the manure from the proposed expansion has a leak detection system (monitoring wells or sump pit), annual sampling and reporting to Manitoba Sustainable Development is required. Has the system been sampled and results submitted to Manitoba Sustainable Development?		nanure storage	_
Engineered solid manure storage facility    Field storage		torage facility	<b>–</b>
In the proposed operation or expansion will utilize an existing manure storage facility for the new manure, indicate the construction permit number or facility registration number:    Provide the dimensions of the existing and/or proposed manure storage facilities that will be used to store manure from the proposed operation or expansion. (See   Existing and Proposed Manure Storage Facility Dimensions Table.)    Existing and Proposed Manure Storage Facility Dimensions Table attached   If an existing manure storage facility that will be used to store any of the manure from the proposed expansion has a leak detection system (monitoring wells or sump pit), annual sampling and reporting to Manitoba Sustainable Development is required. Has the system been sampled and results submitted to Manitoba Sustainable Development?   Yes   No   Not applicable   If yes, please indicate year of last submission:   If a manure storage facility is proposed in a geologically sensitive area, a leak detection system may be required.  For more information on obtaining a manure storage facility permit, please contact Manitoba Sustainable Development, Environmental Approvals Branch at (204) 945-5081.  8.4 Odour Control Measures (project site)  Barns and manure storage facilities can be significant sources of livestock odours. The use of manure storage covers and shelterbelts can reduce this, particularly for neighbours in the vicinity of the operation.  What odour control measures are you planning to use?  Manure storage cover:   No   Not Applicable   Not Applicable   If yes, type of cover:   No   Not Applicable   If yes, type of cover:   Shelterbelt planting:   Not Applicable   If yes, type of cover:   No	_		
Field storage   storage facility    If the proposed operation or expansion will utilize an existing manure storage facility for the new manure, indicate the construction permit number or facility registration number:  Provide the dimensions of the existing and/or proposed manure storage facilities that will be used to store manure from the proposed operation or expansion. (See   Existing and Proposed Manure Storage Facility Dimensions Table attached   If an existing manure storage facility that will be used to store any of the manure from the proposed expansion has a leak detection system (monitoring wells or sump pit), annual sampling and reporting to Manitoba Sustainable Development is required. Has the system been sampled and results submitted to Manitoba Sustainable Development?   Yes   No   Not applicable   If yes, please indicate year of last submission:   If a manure storage facility is proposed in a geologically sensitive area, a leak detection system may be required.  For more information on obtaining a manure storage facility permit, please contact Manitoba Sustainable Development, Environmental Approvals Branch at (204) 945-5081.  8.4 Odour Control Measures (project site)  Barns and manure storage facilities can be significant sources of livestock odours. The use of manure storage covers and shelterbelts can reduce this, particularly for neighbours in the vicinity of the operation.  What odour control measures are you planning to use?  Manure storage cover:   No   Not Applicable   Not Applicable   If yes, type of cover:   Shelterbelt planting:   Not Applicable   If yes, type of cover:   Shelterbelt planting:   Not Applicable   If yes, type of cover:   Shelterbelt planting:   Not Applicable   If yes, type of cover:   Shelterbelt planting:   Not Applicable   If yes, type of cover:   Shelterbelt planting:   Not Applicable   If yes, type of cover:   Shelterbelt planting:   Not Applicable   If yes, type of cover:   Shelterbelt planting:   Not Applicable   If yes, type of cover:   Shelterbelt planting:		Harlare Storage	
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used to store manure from the proposed operation or expansion. (See Existing and Proposed Manure Storage Facility Dimensions Table.)    Existing and Proposed Manure Storage Facility Dimensions Table attached			
If an existing manure storage facility that will be used to store any of the manure from the proposed expansion has a leak detection system (monitoring wells or sump pit), annual sampling and reporting to Manitoba Sustainable Development is required. Has the system been sampled and results submitted to Manitoba Sustainable Development? Yes No Not applicable  If yes, please indicate year of last submission:  If a manure storage facility is proposed in a geologically sensitive area, a leak detection system may be required.  For more information on obtaining a manure storage facility permit, please contact Manitoba Sustainable Development, Environmental Approvals Branch at (204) 945-5081.  8.4 Odour Control Measures (project site)  Barns and manure storage facilities can be significant sources of livestock odours. The use of manure storage covers and shelterbelts can reduce this, particularly for neighbours in the vicinity of the operation.  What odour control measures are you planning to use?  Manure storage cover:  Yes No Not Applicable  If yes, type of cover:  Shelterbelt planting:	used to store manure from	m the proposed operati	
If a manure storage facility is proposed in a geologically sensitive area, a leak detection system may be required.  For more information on obtaining a manure storage facility permit, please contact Manitoba Sustainable Development, Environmental Approvals Branch at (204) 945-5081.  8.4 Odour Control Measures (project site)  Barns and manure storage facilities can be significant sources of livestock odours. The use of manure storage covers and shelterbelts can reduce this, particularly for neighbours in the vicinity of the operation.  What odour control measures are you planning to use?  Manure storage cover:  Yes  No  Not Applicable  If yes, type of cover:	If an existing manure stor proposed expansion has a sampling and reporting to been sampled and results  No Not applicable	rage facility that will be a leak detection system of Manitoba Sustainable is submitted to Manitoba	used to store any of the manure from the (monitoring wells or sump pit), annual Development is required. Has the system
Manitoba Sustainable Development, Environmental Approvals Branch at (204) 945-5081.  8.4 Odour Control Measures (project site)  Barns and manure storage facilities can be significant sources of livestock odours. The use of manure storage covers and shelterbelts can reduce this, particularly for neighbours in the vicinity of the operation.  What odour control measures are you planning to use?  Manure storage cover:  Yes  No  Not Applicable  If yes, type of cover:  Shelterbelt planting:	•	ry is proposed in a geolo	ogically sensitive area, a leak detection
Barns and manure storage facilities can be significant sources of livestock odours. The use of manure storage covers and shelterbelts can reduce this, particularly for neighbours in the vicinity of the operation.  What odour control measures are you planning to use?  Manure storage cover:  No Not Applicable  If yes, type of cover:  Shelterbelt planting:			
manure storage covers and shelterbelts can reduce this, particularly for neighbours in the vicinity of the operation.  What odour control measures are you planning to use?  Manure storage cover:  No Not Applicable  If yes, type of cover:  Shelterbelt planting:	8.4 Odour Control N	leasures (project site)	
Manure storage cover:  Yes  No  Not Applicable  If yes, type of cover:  Shelterbelt planting:	manure storage covers ar		
☐ Yes ☐ No ☐ Not Applicable  If yes, type of cover:  Shelterbelt planting:		ures are you planning to	o use?
Shelterbelt planting:		□ No	☐ Not Applicable
	If yes, type of cover:		
	Shelterbelt planting:  Yes	□ No	☐ Existing shelterbelt

Other measure (specify):	
8.5 Manure Treatment	
Pig operations:	
expansion, or construction of a manufacture number of animal units for <b>pigs</b> , unless another environmentally sound treatmedigestion, according to Manitoba Sutreatment has been defined in the Hog	ctor must not issue a permit for the modification e storage facility accommodating an increase in the the manure is treated using anaerobic digestion of the manure is similar to, or better than, anaerobic ustainable Development. Environmentally sound Production Pilot project. For more information or the requirements of the Hog Production Pilot project il.
<ul> <li>and expanding pig operations must:</li> <li>Subject the manure to treatment separation including multi-celled</li> <li>Have access to sufficient suitar generated by the operation;</li> <li>Maintain soils below 60 ppm Olse</li> </ul>	te pig manure on tilled land. Perennial forages, in
New and expanding pig operations should	d also consider odour control practices.
If this Site Assessment is for a <b>pig</b> operat in the Hog Production Pilot Protocol?	ion, does your proposal meet all the criteria outline
☐ Yes	No - This is no longer required.
If this Site Assessment is for a <b>pig</b> operat Pork Council under the Hog Production P Yes	ion, have you included a letter from the Manitoba illot Protocol?
☐ Letter from Manitoba Pork Council	l attached (if applicable) N/A
Manure treatment:	
Is manure treatment proposed for the o	peration?
☐ Yes	LI INU

If yes, please describe treatment process, including	intended end use of treated manure:
Some manure treatment systems will trigger the redepending on the type of treatment or intended use for a license is determined by Manitoba Sustainabl permit application for the construction, modificating facility.	e of the treated products. The requirement e Development during their review of the
If treated manure is directed to a retailer, additional establishing the treatment process. Producers should treated manure products is allowed.	
Manitoba Sustainable Development may require add to be completed by the operator with respect to the (204) 945-4384 to determine what information will be	treatment facility. Please contact
8.6 Manure Application Method	
The <u>Livestock Manure and Mortalities Management</u> annual manure management plans for new or expandence.	
Does the operation currently file an annual Manure Sustainable Development?	Management Plan (MMP) with Manitoba
☐ Yes ☐ No	☐ N/A (new operation or existing operation <300 AU currently)
If yes, please indicate most recent MMP Registration	on #:
Manure application methods and the season in which nutrient availability, crop response, land base require contamination.	• •
Proposed application method:  Broadcast Broadcast and incorporate within 48 hours	☐ Injection

# 8.7 **Land Available for Manure Application** Using the Manure Application Field Characteristics Table provide the information requested. Total land available for manure application: \_\_\_\_\_\_acres Suitable Land: Sufficient <u>suitable</u> land must be available for all of the manure generated by the operation that is to be land applied. Suitable land can be owned, leased or under agreement. Under the Livestock Manure and Mortalities Management Regulation and the Nutrient Management Regulation, application of nutrients is not permitted on Agriculture Capability Class 6, 7 and unimproved organic soils (Nutrient Management Zone 4) and within Nutrient Buffer Zones. In addition, only fields with less than 60 parts per million (ppm) Olsen phosphorus (P) in the top six inches (15 centimeters) of soil will be considered suitable. The Nutrient Buffer Zones and manure application setback requirements are outlined in the Nutrient Management Regulation (62/2008) and the Livestock Manure and Mortalities Management Regulation (42/98). They have been consolidated in the Setback Requirements from Water Features Table. Have the setback areas for all water features been observed and excluded from land base calculations for this operation? □ No ☐ Yes Total suitable area available for manure application: acres For all suitable lands, copies of soil test reports that are no more than 12 months old and that demonstrate that soil phosphorus levels are below 60 ppm Olsen P in the top six inches (15 centimeters) of soil must be included with this submission. ☐ Manure Application Field Characteristics Table attached

## 8.8 Land Required for Manure Application

Long term land base requirements for manure application are calculated based on estimates of the quantity of nutrients (nitrogen and phosphorus) excreted by livestock and the utilization or removal of nutrients by the proposed crops.

☐ Soil test reports for the required land base for manure application attached

The quantity of nitrogen and phosphorus excreted by the livestock depends on the type, number and size of livestock, the quantity and availability of nitrogen and phosphorus fed to the livestock, the amount retained by the livestock and the amount contained in milk and eggs.

The utilization of nitrogen and removal of phosphorus by crops depends on the crops grown and the historical crop yield averages. (See <a href="Crop Rotation Table">Crop Rotation Table</a>).

## "Certain Areas":

The <u>Livestock Manure and Mortalities Management Regulation</u> requires the proponent demonstrate sufficient land is available, to the satisfaction of the director, in order to implement an appropriate manure management plan before Manitoba Sustainable Development will issue a permit for a manure storage facility or confined livestock area. Sufficient suitable land must be available for the manure nitrogen and phosphorus that will land applied.

"Certain Areas" are defined by the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) as areas where the amount of phosphorus in the manure produced annually by livestock in an area of not less than 93.24 km<sup>2</sup> is greater than two times the annual crop removal rate of  $P_2O_5$  in that area.

In "certain areas" it is Manitoba Sustainable Development's policy to consider a manure storage facility permit if the operation can demonstrate it has access to sufficient suitable land, within a reasonable distance<sup>10</sup>, to apply manure at a rate equivalent to one times the crop removal rate of phosphorus. In areas which are not considered to be "certain areas", Manitoba Sustainable Development may consider a manure storage facility or confined area permit, subject to all applicable legislation, if the operation demonstrates it has access to sufficient suitable land to apply manure at a rate equivalent to two times the crop removal rate of phosphorus.

Currently the rural municipalities of Hanover and La Broquerie are considered to be "certain areas". A livestock operation is considered to be located within a "certain area" if any part of the operation is located within the defined area. This may include, but not limited to, barn(s), confined livestock area(s), field storage location(s), manure storage facility(ies), and/or spread field(s).

Is the livestock operation located in	"certain areas" (i.e. Hanover or La Broquerie)?
☐ Yes	□ No

## **Land Base Requirement Calculation:**

It is recommended that proponents use Manitoba Agriculture's Land Base Calculator to calculate the minimum area required for manure application and contact Manitoba Agriculture at (204) 945-3869 in Winnipeg for assistance with the land base calculator prior to submitting their site assessments.

Table 8-1: Land Base Requirements

Total acres required for crop utilization of the manure N <sup>a</sup>	acres
Total acres required for two times crop P <sub>2</sub> O <sub>5</sub> removal <sup>a</sup>	acres
Total acres required for one times crop P <sub>2</sub> O <sub>5</sub> removal <sup>b,c</sup>	acres

<sup>&</sup>lt;sup>a</sup>All operations must demonstrate sufficient suitable land for crop N utilization and two times crop  $P_2O_5$ .

<sup>&</sup>lt;sup>b</sup>Due to high livestock density and reduced land availability for manure application, all livestock operations proposed in "certain areas" (i.e. Hanover and La Broquerie) must demonstrate

<sup>c</sup> Unde	er the Hog Production Pilot Project, pig operations must also demonstrate enough land to ce phosphorus over the long-term (one times crop $P_2O_5$ ).
_	Crop Rotation Table attached
	Manitoba Agriculture's Land Base Calculator attached
8.9	Land Base Requirement Summary
	aring the total suitable land available for manure application with the land required for application, state whether sufficient suitable land for manure application:
	has not been identified
	has been identified to meet nitrogen utilization
	has been identified for two times the crop removal rate of phosphorus
	has been identified for one times the crop removal rate of phosphorus (for pig
ope	rations and operations in "certain areas" [i.e. Hanover and La Broquerie])

sufficient suitable land to balance phosphorus over the long term (one times group D.O.)

## 8.10 Long-Term Environmental Sustainability

The Government of Manitoba has included phosphorus as a nutrient by which applications of manure, synthetic fertilizer and municipal waste sludge to agricultural lands may be limited.

Over the short-term for fields with low phosphorus, regulations allow manure to be applied to meet the nitrogen requirements of the crop. This often results in over- application of phosphorus and a build-up of phosphorus in soils. When soil test phosphorus levels reach 60 ppm Olsen P, manure application rates must consider how much phosphorus will be removed in the harvested portion of the crop. At 60 ppm, but less than 120 ppm Olsen P, the amount of phosphorus that can be applied cannot exceed twice (two times) what the crop can remove in order to slow the build-up of soil phosphorus. Once soil test phosphorus levels reach 120 ppm Olsen P, applications of phosphorus are restricted to no more than what the crop can remove (one times) in order to stop further soil test phosphorus build-up. At 180 ppm Olsen P, no additional phosphorus may be applied.

It should be noted that soil-test phosphorus levels of 60 ppm Olsen P or greater are agronomically very high and at these levels most crops will not benefit from additional phosphorus beyond starter phosphorus. As phosphorus levels build up in soils, the concentration of phosphorus in runoff to waterways increases.

Therefore, to remain environmentally sustainable over a long-term planning horizon of 25 years or more, phosphorus applications from applied manure and other nutrient sources such as commercial fertilizers must be balanced with crop removal to avoid further build-up in soils. Consequently, sufficient land must be available in relatively close proximity to the operation so that manure can be applied at no more than one times the crop removal rate.

		acres (one times crop P <sub>2</sub> O <sub>5</sub> removal from for the long term environmental sustainability of the
9.0	Mortalities (Dead Anim	nal) Disposal
use, lives betw	management and storage of live tock mortalities are handled in a	es Management Regulation establishes requirements for the estock mortalities in agricultural operations. This helps ensure an environmentally sound manner. Winter application, and April 10 of the following, of composted mortalities is
[	e of Disposal:  Rendering  Composting  Burial	☐ Incineration (in approved incinerator only)
_	s the proposal include a perman Yes	ent site for composting mortalities?
utiliz	es a substantial amount of man	re treatment facility is required if the composting process ure (>15% by weight) as a primary substrate. Please opment at (204) 945-5081 for more information.
9.	1 Mass Mortalities	
[	$\square$ A plan for mass mortalities is	in place
W	/hat steps will be taken in the ca	ase of mass moralities?

## 10.0 Project Site Description: Land Use Planning Considerations

For assistance contact your **Community and Regional Planning Regional Office**.

## 10.1 Development Plan and Zoning Bylaw

The Planning District or Municipal Development Plan and Zoning By-law adopted under <u>The Planning Act</u>, set policy and regulations for the use and development of land. A proposed livestock operation must comply with the requirements of both documents. In the absence of such documents, the <u>Provincial Planning Regulation</u> under <u>The Planning Act</u> applies.

## 10.2 Development Plan

Every Development Plan must contain a livestock operation policy (LOP) that identifies areas where new or expanded livestock operations may be allowed. It must also set general standards for the location and setback of livestock operations. Identifying the Development Plan's land use designation and policies (for the planning district or municipality that affect the site) will help confirm the project site's compliance. The Development Plan designations for the spread fields (if something other than agricultural) will indicate the potential loss of the fields in the future due to possible development.

Table 10-1: Development Plan

Name of Planning District	
Development Plan by-law number	
Land use designation of project site	
Livestock operation policies – quote supportive policy numbers	
Other Development Plan policies – quote supportive policy numbers	
Non-supportive Development Plan policies	
proposed operation.	on policies support the size and location of the port the long term use of the proposed spread

## 10.3 Zoning By-law

Identifying the zoning for the project site, the proposed spread fields and the related zoning provisions, helps determine the project's compliance and the minimum separation distances needed between the operation and property boundaries and other natural features and land uses. The Zoning By-law contains specific regulations that govern location and setback of livestock operations.

Identify the minimum project site requirements stated in the Zoning By-law.

Table 10-2: Zoning By-law

	Project Site Dimensions	Minimum Zoning By-Law Site Requirements
Minimum Site Area		
Minimum Site Width		
Minimum Front Yard		
Minimum Side and Rear Yard		

If any project (front, side or rear) yard site dimensions are less than the Zoning Bylaw minimum, a Variation Order from the Municipality will be required.

# 10.4 Separation Distances (Zoning By-law or Provincial Planning Regulation)<sup>11</sup>

Using the proposed size of the operation (see <u>Animal Units Calculator</u>) and the type of animal housing and manure storage facility, complete the following table.

### Indicate the distance from:

A. earthen manure storage facility OR B. feedlot and

**C**. animal confinement facility *OR* **D**. non-earthen manure storage facility...

Table 10-3: Separation Distances

to the following land use features (if	distance requi By-law or Pro Regulation	imum separation red in the Zoning ovincial Planning (If applicable) opriate box(es)	If land use feature is less than the minimum separation distance required in the Zoning By-law or Provincial Planning Regulation		
applicable)	□ A □ B	□ c □ b	Provide actual distance	Provide location or name of feature (e.g. Red River)	
Residence/ dwelling					
Designated area  12(non- agricultural)					
Livestock operation					
Other significant features/land uses					

In cases where minimum separation distances are not stated in the Zoning By-law or Development Plan, the minimum separation distances in the Provincial Planning Regulation apply. If any separation distance is less than the Zoning By-law minimum, a Variation Order will be required from the Municipality.

Indicate on a Land Use and Spread Field Map (See <u>Land Use and Spread Field Map Example</u><sup>13</sup>):

- a) location of the project site, location and ownership of spread fields
- b) land uses and significant features including dwellings
  - i) within a 1 mile radius of the project site
  - ii) within and adjacent to each spread field.

## 10.5 Buffer Area from Crown Lands

Indicate in the table below if the proposed <u>livestock operation</u> (project site and spread fields) is located **within 1 mile** of any designated parcel of Crown land which would include: Provincial Park, Wildlife Management Area, Ecological Reserve, Provincial Forest, and Wildlife Refuge/Sanctuary. If applicable, also indicate the name of the Designated Crown Land.

Please complete the following table.

Table 10-4: Buffer Areas

Type of Designated Crown Land	Distance from perimeter of Designated Crown Land	Name of Designated Crown Land (e.g. Spruce Woods Provincial Park)
Provincial Park	☐ 1 mile or less	
1 TOVITICIAI I ATK	Greater than 1 mile	
Wildlife Management	☐ 1 mile or less	
Area	☐ Greater than 1 mile	
Feelegieel Becomie	☐ 1 mile or less	
Ecological Reserve	☐ Greater than 1 mile	
Dunyingial Favort	☐ 1 mile or less	
Provincial Forest	☐ Greater than 1 mile	
Wildlife	☐ 1 mile or less	
Refuge/Sanctuary	Greater than 1 mile	

If any Crown land parcel is to be utilized as part of the proposed planned works where the proposed works will involve the installation of infrastructure (e.g., pipe/hose) that will be placed on the surface of the land, the appropriate Crown land disposition may be required (e.g., General Permit/Work Permit<sup>14</sup>). The proponent is encouraged to contact the Regional Lands Manager with Manitoba Sustainable Development for further discussion. Contact the Crown Lands and Property Agency at http:\clp.gov.mb.ca or toll free at 1-866-210-9589 or 1-204-239-3510.

## 10.6 Setback Distances

Use the following table to indicate setback distances, as required under the <u>Livestock Manure</u> and <u>Mortalities Management Regulation</u> (M.R. 42/98).

Table 10-5: Setback Distances

Feature	Structures	Minimum setback distance required (m)	Actual Setback distance (m)	Provide location or name of feature (e.g. Red River)
	Manure storage facility	100 m		
Surface watercourses,	Field storage	100 m		
sinkholes, spring or well	Composting site	100 m		
	Confined livestock area	100 m		
	Manure storage facility	100 m		
Property Line	Composting site	100 m		
	Confined livestock area	100 m		

If any setback distances have not been met, please provide explanation below:		

# 11.0 Truck Haul Routes and Access Points<sup>15</sup>

One consideration with new or expanding livestock operations is the potential impact on existing public roads (municipal and provincial), access and the need for improvements or mitigation. Complete the following table.

Table 11-1: Truck Haul Routes and Access Points

Vehicle	Estimated Average Number of Times per Day Accessing		Access from PTH/PR onto site will mainly require a Left or Right Hand Turn Please check one			Access onto PTH/PR from site will mainly require a Left or Right Hand Turn Please check one				
Type	Provincial Trunk Highway (PTH)	Provincial Road (PR)	Provincial Trunk Highway (PTH)	Trunk Proving Highway Road					Provincial Road (PR)	
	(,		LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
Truck										
Tractor Trailer										
Other, specify										

Identify what roads and access points will be used for the proposed operation? (See <u>Truck Hau</u> <u>Routes and Access Points Map</u> for an example).
☐ Truck Haul Routes and Access Point Map attached
12.0 Conservation Data Centre Report
A Conservation Data Centre Report must be requested and the response attached to this site assessment. The request may be submitted electronically at: <a href="www.gov.mb.ca/conservation/cdc.">www.gov.mb.ca/conservation/cdc.</a>
Were rare species identified in the Conservation Data Centre Report? ☐ Yes ☐ No

# **13.0** Supporting Documents

Check the supporting documents included in this submission:
☐ Contact Information and Privacy and Publication Notice
☐ Location Map (shows proposed project within rural municipality)
lacksquare Project Site Plan (proposed operation showing current and proposed structures)
☐ Animal Units Calculator
☐ Water Requirement Calculator
☐ Dairy Barn Water Requirement Estimator
☐ Manure Production Calculator
lacksquare Existing and Proposed Manure Storage Facility Dimension Tables (if applicable)
☐ Manure Treatment Supporting Documentation (if applicable)
☐ Manure Application Field Characteristics Table
☐ Crop Rotation Table
☐ Recent manure application field soil sample results (Olsen Phosphorus – ppm at 0-6 inch depth)
☐ Manitoba Agriculture Land Base Calculator
$\square$ Letter from the Manitoba Pork Council under the Hog Production Pilot Protocol (pigs only)
☐ Land Use and Spread Field Map (location and ownership of operation, location and distance to non-agricultural uses, development plan designation, zoning for project site and spread fields)
lacksquare Truck Haul Routes and Access Points Map (with routes and access points on
municipal/provincial roads and/or provincial trunk highways)
Response from the Conservation Data Centre
☐ Other, please specify:

# 14.0 Additional Information:

Please include any additional information you deem necessarily in order for the Technical Review Committee to review your proposal.

# 15.0 Declaration

•	verify that the information contained in the Site Assessment, and all pporting Documents, are accurate and complete to my knowledge.
Date: _	(YYYY/MMM/DD)
Name: _	(Please Print Clearly)
Signature: _	(c. cases :e cica,)

## 15.0 Declaration

The second secon	verify that the information contained in the Site Assessment, and all pporting Documents, are accurate and complete to my knowledge.	
Date:	(YYYY/MMM/DD)	
Name:	LLOYD WIGHT.	
Signature:	(Phase Print Clearly)	

#### Notes

<sup>1</sup> Identifying the location of the project is needed to determine the compliance with zoning and other by-laws. The inclusion of a location map helps to identify the project site within the municipality.

If a plan is required, the proponent may attach the acceptance letter from the director of Manitoba Sustainable Development in an appendix to the Site Assessment as supporting documentation, demonstrating compliance with section 12.2(1) of the Livestock Manure and Mortalities Management Regulation (M.R. 42/98). For more information, contact Manitoba Sustainable Development at (204) 945-4384.

<sup>11</sup>" Agricultural operations are a source of traffic, noise, dust and odours. One of the key elements to successful siting of a livestock operation is to observe appropriate separation distances between potentially conflicting land uses. This is particularly important for the effective dispersion and dilution of odours from pig production facilities. When deciding where to build a new livestock operation, it is best to choose a site with as few neighbours as possible."

Section 6.2 Setbacks and Other Steps to Avoid Conflicts - Farm Practice Guidelines for Pig Producers in MB (April 2007)

Identifying the distance to the nearest land use features such as a neighbouring agricultural operation or non-agricultural designated uses ( such as residential or recreational designated areas in the Development Plan), sensitive areas such as wildlife management areas or critical habitat, individual dwellings and various water bodies and drains

<sup>&</sup>lt;sup>2</sup> Indicating if the operation is new or expanding helps determine what regulation requirements are needed to be met for the proposal.

<sup>&</sup>lt;sup>3</sup> The regulatory requirements such as municipal by-laws and provincial regulations will vary with type and size of a livestock operation.

<sup>&</sup>lt;sup>4</sup> The regulatory requirements such as provincial regulations will vary with the type of housing.

<sup>&</sup>lt;sup>5</sup> Confined livestock areas most commonly refer to outdoor, open livestock facilities such as beef feedlots or cowcalf operation facilities ("open confined livestock areas"). The LMMMR includes covered structures, open to the elements, used for the rearing of livestock that feature a floor design that constitutes an effective water barrier, such as concrete ("Covered Confined Livestock Areas"). For example biotech shelters for feeder pig production and hoop structures.

<sup>&</sup>lt;sup>6</sup> The site plan is needed to ensure that required yard and other requirements can be met. Noting other features such as dwellings, shelterbelts, water source locations, drainage patterns, access points and the property dimensions enable the applicant to ensure proper site planning and sufficient separation distances between features to meet provincial regulations.

<sup>&</sup>lt;sup>7</sup> The province regulates the use of surface and ground water. Identifying the source of water will be required for resource management and licensing purposes.

<sup>&</sup>lt;sup>8</sup> A water well log is a report completed by the well driller after the construction of the well. Copies of the report are left with the well owner, the well drilling contractor and the Water Science and Management Branch of Manitoba Sustainable Development. Water well logs provide useful information on the geology of the well site and can be used to assess the potential vulnerability of the site to groundwater contamination.

<sup>&</sup>lt;sup>9</sup> The Province regulates the use of surface and ground water. Identifying the amount of water needed will be required for resource management and licensing purposes.

<sup>&</sup>lt;sup>10</sup>New or expanding livestock operations **in certain areas** must have access to additional lands suitable for the application of livestock manure located within a reasonable distance, in the opinion of the director of Manitoba Sustainable Development. Reasonable distance is considered to be within a 10 mile radius of the operation for liquid manure. If land is identified beyond the 10 mile radius, a producer must submit a plan to the director of Manitoba Sustainable Development for approval describing the action taken and proposed to be taken to achieve and maintain soil phosphorus levels below 60 ppm.

enable the applicant to ensure that minimum separation distances are maintained between those various uses and the proposed animal confinement facility and manure storage facilities.

Any clearing activity, related construction activity, or works associated with the manure spreading application will also require the appropriate permitting under applicable legislation (e.g., The Crown Lands Act, The Forestry Act etc. Please contact the Regional Lands Manager or Conservation Officer for additional information.

<sup>&</sup>lt;sup>12</sup>Is an area identified on a Development Plan Map based on its current or future use?

The mapping of the project site, neighbouring designated residential areas, individual residences and surface water features enables the applicant to describe the geographic setting and general suitability of the area for the project. This may also assist the applicant in determining appropriate setbacks for field storage of manure, composting manure, and composting mortalities. By identifying a 3-kilometer area around the project site, the applicant is made aware of all land owners that will be notified regarding the public Conditional Hearing that will take place as part of the review process.

<sup>&</sup>lt;sup>14</sup> If undesignated Crown lands will be used for manure spreading purposes; including the laying of pipe, including draglines, or clearing activity, it will require the proponent to obtain a Crown Lands General Permit disposition that will authorize the use and access of the subject Crown Land(s).

<sup>&</sup>lt;sup>15</sup>Identifying truck haul routes and access points on municipal and Provincial Roads and/or Provincial Trunk Highways assists the province and municipality in planning and identifies any potential required access permits. The information also allows other stakeholders to determine potential impacts on existing roads and adjacent land uses.