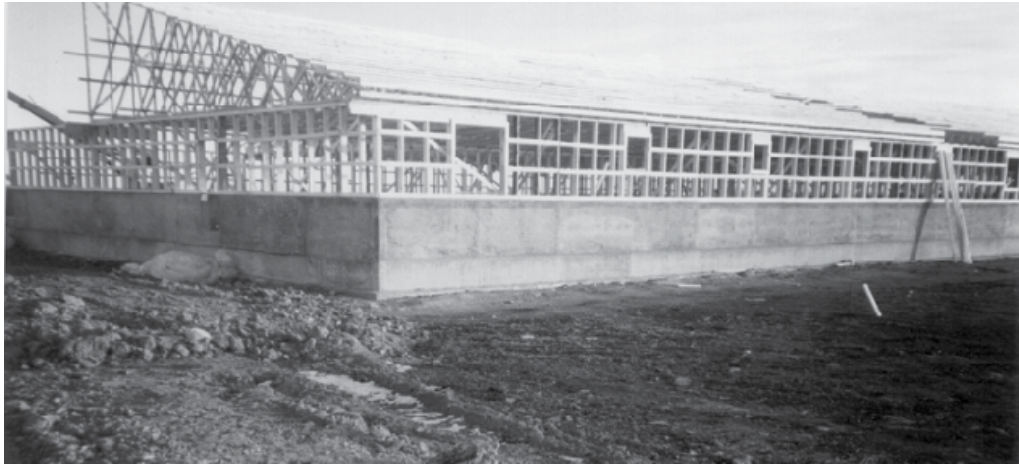


## SECTION 8

# Preparing a Livestock Operation **PROPOSAL**



### 8.1 Public Relations

Rural residents often have questions and concerns about proposed developments in their communities. They want to know the potential impacts and benefits of livestock operations. The establishment of a new livestock operation is increasingly dependent on the proponent's ability to build public understanding and support. A participatory planning process can provide those who may be affected by the proposal some input in the process. This can build local understanding and support for a project. Open discussion between the project proponent and future neighbours is the first positive step in the communication process. Giving the neighbours a chance to participate can build acceptance, understanding and trust, and may result in changes that improve the project.

#### 8.1.1 Public consultation process

There are a number of tools available to build public understanding and support for a proposal. Depending on the specifics of the planned operation, such as size and location, some or all of the following activities may be appropriate:

- **Community Profile:** Assess the benefits your project will have on the local community. Who are the people who are likely to have a direct interest in your project? Will local businesses service your project? Will there be employment opportunities? Will tax rolls benefit? Will roads be serviced?
- **Neighbours:** Assess and address the concerns of neighbours. Do your neighbours feel they will be affected? Will special interest groups or nearby home owners oppose the project? Make a list of the various public groups and their perspectives and concerns. Design an approach for addressing the concerns of each group.

- **Personal Contact:** Ask for neighbours' opinions on your proposed plan. Acknowledge their concerns and discuss possible solutions. Provide more information to address the concerns, where appropriate and practical, alter plans to accommodate concerns. Provide informative pictures, videos or field trips to similar operations to help your neighbours understand the project.
- **Feedback:** A large number of people can be contacted through a mail-out or newspaper announcement. Including a response form in the mail-out provides residents the opportunity to provide feedback. Be sure to ask the respondents to identify themselves so you can address their concerns directly.
- **Open House:** An open house is a positive way to educate the public about the project and provide them with the opportunity to express their concerns. Proponents should prepare posters that describe their project including a timetable which outlines projected completion dates for various aspects of the proposal. Information that demonstrates that the project meets all government regulations should be provided. This includes municipal by-laws and provincial requirements under various acts and regulations (refer to Section 2). Staff from the various government agencies should also be available to answer questions. The open house also provides an opportunity to show that the project meets the minimum suggested criteria in the Farm Practices Guidelines. An open house can be held in a local hall. Hours should be convenient and allow people to come and go at their leisure. Ample time for the public consultation process must be ensured and adequate staff should be available to answer the public's questions. Finally, questionnaires should be available to facilitate feedback. Visitors should be encouraged to fill out the questionnaires, leaving phone numbers so follow-up calls can be made.
- **Planning Workshop:** Bringing together representatives of concerned groups (such as citizen groups and special interest groups), staff from relevant government departments and the project proponents may be a way to address concerns and find alternatives. This approach requires a skilled workshop leader or facilitator and may be more successful when a broad base of people will benefit from the proposal. Check with the local municipality office to see if they would provide a facilitator.
- **Reference Centre:** Make a place available, such as the municipal office or library, where technical documents related to the project are available to the public. This demonstrates openness and may help to prevent misinformation. The documents to provide may include: blueprints, artist sketches, technical data such as well logs, aquifer locations or other technical reports.
- **Communication:** Keep interested parties up-to-date on project developments so they are not surprised by any changes.

## 8.2 Site Assessment

The objective of the site assessment is to determine the suitability of a proposed site for the intended purpose and to determine the engineering requirements that ensure the project is environmentally and structurally sound. Soil suitability for manure application and for manure storage and building construction should be determined. Other factors, including topography and drainage, wind direction, water availability, distance to neighbouring residences, and access to suitable road and power should be considered. A proposed site will need to meet the local and provincial planning and permitting requirements as well as any bio-security setbacks from other livestock facilities. For intensive livestock operations, the engineering requirements for the manure storage depend on the results of site-specific exploration.

There are six main steps to a site assessment process:

1. Identify potential sites.
2. Conduct a preliminary evaluation, including a review of existing available information such as topography, drill logs, soil maps, unique design requirements, etc.
3. Develop a site investigation plan, including field investigation, subsurface exploration, sampling and testing, probable number of bore holes, and site cost investigation.
4. Conduct a site investigation, based on proposed site investigation plan.
5. Prepare the final evaluation, including potential risks, level of project design, and consultation with permitting agencies.
6. Complete investigation and prepare report.

This six step process is iterative. One or more of the steps may need to be repeated. During each step of the assessment process, the client and consultant should evaluate if the assessment should continue, based on design objectives and cost, or if a new site should be selected. The process within each step may vary with the engineering consultation, specific site conditions, and the project objectives.

## 8.3 Provincial Review Processes for Livestock Operations

Under *The Planning Act*, any municipal council or planning district board considering an application for a livestock operation that is 300 animal units (A.U.) or greater, must obtain a Technical Review Report from the provincial government. The Technical Review Committees (TRC) may review proposals for operations under 300 animal units in size at the request of the council or board.

The purpose of the Technical Review process is to:

- Provide the municipality or planning district with an overview of land use and development in the vicinity, a review of the livestock proposal in the context of local soil conditions, local water resources, local and provincial regulatory requirements, and provide recommendations on siting, manure storage and application.
- Assist with the exchange of information between the proponent, local governments, the provincial governments and general public.

The review and approval of a new or expanding livestock operation by the board or council is a critical first step. Additional provincial reviews and approval processes commence after the proponent receives local approval. The province

requires operators to obtain a permit for the construction, expansion or modification of any manure storage structure. A permit is also required for the construction or expansion of a confined livestock area such as a hoop shelter capable of housing 300 or more animal units. These permitting processes require detailed, on-site investigation of soil and groundwater conditions. A Water Rights Licence is required if daily withdrawals of water exceed 25,000 litres. Operations that are 300 animal units or greater must also submit annual manure management plans for registration with Manitoba Conservation and must provide source water analytical results annually.

### **8.3.1 Structure of the technical review committees**

The Technical Review Committee is not an approving body. It provides technical support and information to the municipal council or planning district board for their consideration.

Technical Review Committees have representation from the following provincial departments:

- Agriculture, Food and Rural Initiatives
- Intergovernmental Affairs and Trade
- Water Stewardship
- Conservation

Manitoba Agriculture, Food and Rural Initiatives chairs the Technical Review Committees. Other departments may be consulted during the process and additional information included in the Technical Review Committee report.

Livestock operations larger than 300 animal units that propose to locate within eight kilometers (five miles) of the Canada-United States border are subject to a process through which the neighbouring states – Minnesota or North Dakota – are notified of the application to build. The protocol is administered by Water Stewardship and is initiated through the Technical Review process.

### **8.3.2 Technical review process**

To assist with selecting an appropriate site, proponents should familiarize themselves with local livestock development criteria as set out in the development plan and zoning by-law. The first step in the Technical Review process occurs when the proponent applies for a permit with the municipality or planning district. Where Technical Reviews are mandatory under *The Planning Act* (all operations 300 or more animal units in size), the council or board must send a written request for a technical review directly to the Chair of the Technical Review Committee, with a copy to the Minister of Intergovernmental Affairs and Trade, through the appropriate community planning office. The letter must be accompanied by a completed Livestock Production Operation Information Sheet, detailed site plans and current soil fertility test information. The review will not start until the required information is received in a form that is acceptable to the chair. The committee may contact the proponent for additional information if required.

The municipality or planning district must set a hearing not less than 30 days from receipt of the Technical Review Committee report. Notice of the public hearing must indicate that the report is available for inspection and copying at the municipal office. A copy of

the report will be filed at the same time with the Public Registry of Manitoba Conservation to facilitate public access to the report.

### 8.3.3 Basis of assessing the proposal

The Technical Review Committee assess proposals based on information provided by the proponent including:

- a completed Livestock Production Operation Information Sheet including detailed site plans (see Appendix H)
- soil fertility test results for the application fields
- published information including soil survey reports, drainage and watershed maps, the province's drilled well database, and other sources of information on soils, geology and hydrogeology
- *The Planning Act* and Provincial Land Use Policies
- municipal or planning district development plans and zoning by-laws
- the Farm Practices Guidelines for various livestock commodities in Manitoba
- Livestock Manure and Mortalities Management Regulation
- *The Water Protection Act*
- other applicable provincial Acts and regulations

### 8.3.4 Recommendations

The Technical Review Committee report will include:

- an assessment of site suitability based on soil, hydrogeological and surface water data
- an assessment of whether or not the proposal meets the intent of the local development plan, siting and setback criteria in the zoning by-law, regulations regarding storage and application of manure, and provincial guidelines with respect to siting
- an indication of site suitability from a nutrient management perspective, specifically based on soil characteristics, subsurface conditions, surface water resources, soil fertility information and landbase available for manure application
- comments on the methods the proponent will use to reduce the potential for production of nuisance odours (e.g. manure storage cover, manure application methods, tree planting, separation distances, new technologies, etc.)
- recommendations regarding siting, establishment and on-going management that the applicants may consider to avoid or minimize potential social and environmental risks.

Where operations are 300 or more animal units in size, the municipality or planning district may impose conditions of approval that may include measures to implement recommendations made by the Technical Review Committee.

### 8.4 Landbase Requirements for Manure Application

When preparing a livestock operation proposal, the proponent will need to estimate the total land required for the application of manure. Tables 15a and 15b provide a method for estimating landbase requirements for liquid and solid manure, respectively.

This method requires estimates of:

- the annual volume of manure generated by the operation (Tables 3a and 3b)
- average nutrient content of the manure (Tables 4a, 4b, and 5)
- the amount of nutrient removed by crops (Table 6)

Landbase requirements can be based on nitrogen (N) or phosphorus (P). Generally, more land is required if the manure is applied based on the P removal of the crops than if it is applied based on the crop N requirement.

Landbase calculations are estimates for planning purposes only and should not be used to estimate manure application rates. Manure application rates should be determined by the manure management plan (see Section 4).

### 8.5 Provincial Permits and Licences

Proponents are reminded that they may need to obtain permits and/or licences from the provincial government. Operations that will use 25,000 L (5,500 imp. gal) of water or more in any one day are required to apply for a Water Rights Licence from Manitoba Water Stewardship (Appendix K). Livestock operations that propose to construct, modify or expand a manure storage facility must obtain a permit from Manitoba Conservation prior to beginning construction, modification or expansion. Applications for a permit may be obtained from regional offices of Manitoba Conservation (Appendix K). A professional engineer, registered to practice in Manitoba, is required to design the manure storage facility and any proposed alterations to it.

**Table 15a: Total Landbase<sup>1</sup> Required For The Livestock Operation In Hectares – Liquid Manure**

<b>STEP 1:</b>	Determine the total number of animals produced by the livestock operation (i.e. pig places or barn capacity).	
<b>STEP 2:</b>	Determine the total annual volume of manure generated by the operation.	
<b>STEP 3:</b>	Determine the total landbase required for the operation based on nitrogen (N).	
<b>OR STEP 4:</b>	Determine the total landbase required for the operation based on 2X phosphorus (P <sub>2</sub> O <sub>5</sub> ) removal by the crop.	
<b>OR STEP 5:</b>	Determine the total landbase required for the operation based on 1X phosphorus (P <sub>2</sub> O <sub>5</sub> ) removal by the crop.	
<b>STEP 1:</b>	Number of livestock places	_____ (A)
<b>STEP 2:</b>	Volume of manure in litres/day or m <sup>3</sup> /day (Table 3a)	_____ (B)
	Number of days per year animals are at the operation	_____ (C)
	Volume of manure per year for the operation (A x B x C)	_____ (D)
<b>STEP3:</b>	Total nitrogen (N) content of the manure in kg/1000 litres or kg/m <sup>3</sup> (Table 4a or 4b)	_____ (E)
	Amount of N per year from the operation (D x E) (÷ 1000 if using kg/1000 litres) in kg	_____ (F)
	Nitrogen requirement (based on soil test) or removal in kg/ha	_____ (G)
	<b>Hectares Required for Nitrogen (F ÷ G)</b>	_____ (ha)
<b>STEP4:</b>	Total phosphorus (P <sub>2</sub> O <sub>5</sub> ) content of the manure in kg/1000 litres or kg/m <sup>3</sup> of (Table 4a or 4b)	_____ (H)
	Amount of P <sub>2</sub> O <sub>5</sub> per year from the operation (D x H) (÷ 1000 if using kg/1000 litres)in kg	_____ (I)
	1X crop P <sub>2</sub> O <sub>5</sub> removal (calculate using Table 6) in kg/ha	_____ (J)
	2X crop P <sub>2</sub> O <sub>5</sub> removal (J x 2) in kg/ha	_____ (K)
	<b>Hectares Required for 2X crop P<sub>2</sub>O<sub>5</sub> removal [I ÷ K]</b>	_____ (ha)
<b>STEP 5:</b>	<b>Hectares Required for 1X crop P<sub>2</sub>O<sub>5</sub> removal [I ÷ J]</b>	_____ (ha)

<sup>1</sup> The landbase calculation is an estimate of the total landbase required for the disposition of all of the manure generated by the operation in a year. It is for planning purposes only. Actual manure application rates are determined through manure management planning.

**Table 15b: Total Landbase<sup>1</sup> Required For The Livestock Operation In Hectares – Solid Manure**

<b>STEP 1:</b>	Determine the total number of animals produced by the livestock operation (i.e. pig places or barn capacity).	
<b>STEP 2:</b>	Determine the total annual weight of manure generated by the operation.	
<b>STEP 3:</b>	Determine the total landbase required for the operation based on nitrogen (N).	
<b>OR STEP 4:</b>	Determine the total landbase required for the operation based on 2X phosphorus (P <sub>2</sub> O <sub>5</sub> ) removal by the crop.	
<b>OR STEP 5:</b>	Determine the total landbase required for the operation based on 1X phosphorus (P <sub>2</sub> O <sub>5</sub> ) removal by the crop.	
<b>STEP 1:</b>	Number of livestock places	_____ (A)
<b>STEP 2:</b>	Weight of manure in kg/day (Table 3b)	_____ (B)
	Number of days per year animals are at the operation	_____ (C)
	Weight of manure per year for the operation (A x B x C)	_____ (D)
<b>STEP3:</b>	Total nitrogen (N) content of the manure in kg/tonne (Table 5)	_____ (E)
	Amount of N per year from the operation (D x E ÷ 1000) in kg	_____ (F)
	Nitrogen requirement (based on soil test) or removal in kg/ha	_____ (G)
	<b>Hectares Required for Nitrogen (F ÷ G)</b>	_____ (ha)
<b>STEP4:</b>	Total phosphorus (P <sub>2</sub> O <sub>5</sub> ) content of the manure in kg/tonne (Table 5)	_____ (H)
	Amount of P <sub>2</sub> O <sub>5</sub> per year from the operation (D x H ÷ 1000) in kg	_____ (I)
	1X crop P <sub>2</sub> O <sub>5</sub> removal (calculate using Table 6) in kg/ha	_____ (J)
	2X crop P <sub>2</sub> O <sub>5</sub> removal (J x 2) in kg/ha	_____ (K)
	<b>Hectares Required for 2X crop P<sub>2</sub>O<sub>5</sub> removal [I ÷ K]</b>	_____ (ha)
<b>STEP 5:</b>	<b>Hectares Required for 1X crop P<sub>2</sub>O<sub>5</sub> removal [I ÷ J]</b>	_____ (ha)

<sup>1</sup> The landbase calculation is an estimate of the total landbase required for the disposition of all of the manure generated by the operation in a year. It is for planning purposes only. Actual manure application rates are determined through manure management planning.