



**TECHNICAL REVIEW COMMITTEE**

**A TECHNICAL REVIEW REPORT**

**PREPARED FOR**

**THE RURAL MUNICIPALITY  
OF MACDONALD**

**CROCUS SWINE INC.**

**SE 1/4 27-07-01 WPM**

**TRC 12-065**

**April 6, 2020**

**(Re-issued April 7, 2020)**

## **A. INTRODUCTION – THE TEAM**

The Technical Review Committee (TRC) is supported by the following department personnel:

### Agriculture and Resource Development (ARD)

- Livestock Environment Specialist
- Nutrient Management Specialist
- Business Development Specialist
- Agricultural Engineer
- Veterinarians
- Habitat Mitigation and Wildlife Land Specialist
- Fish Habitat Specialist
- Crown Lands Manager
- Groundwater Specialist
- Land-Water Specialist

### Conservation and Climate (CC)

- Environment Officer
- Environmental Engineer
- Water Rights Licensing Technologist

### Infrastructure (MI)

- Development Review Technologists
- Engineering and Operations Division
- Development Review Officers
- Water Management and Structures Division

### Municipal Relations (MR)

- Community Planners

And any other specialist or department that may have an interest, which may be consulted during the process.

## **THE TECHNICAL REVIEW COMMITTEE (TRC) REPORT**

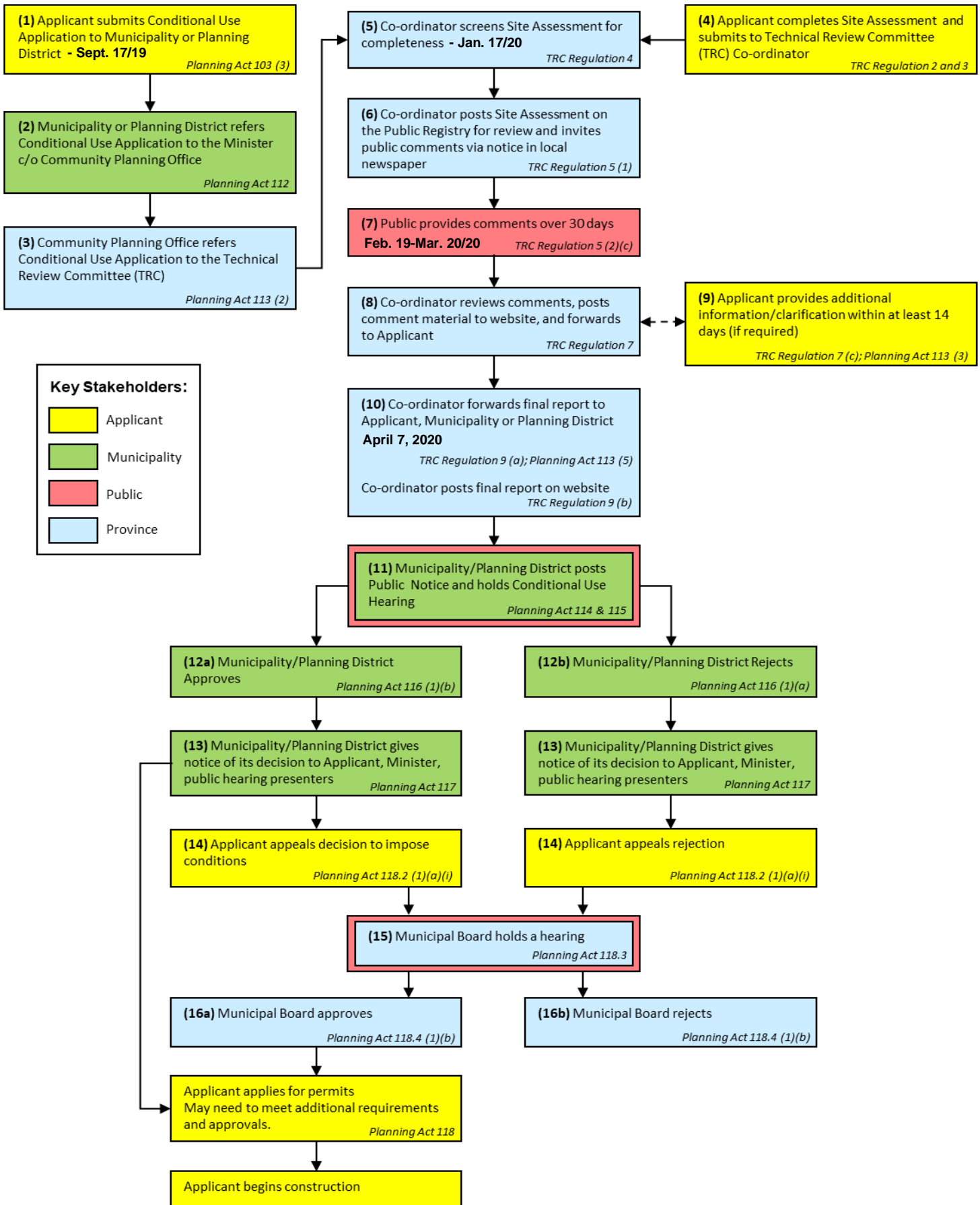
### Purpose of TRC Reports

To provide objective, credible, technically-based assessments that:

- a) Enable municipal councils to make informed Conditional Use Permit decisions;
- b) Create a common stakeholder understanding of a livestock proposal, potential impacts and related regulatory requirements and safeguards;
- c) Provide a vehicle/forum that enables the sharing of public concerns and proponent responses;
- d) Offer recommendations to both municipal councils and proponents; and
- e) Represents the fulfillment of the TRC's role as per 116(1)(b)(i) of *The Planning Act* – to determine, based on available information, that the proposed operation will not create a risk to health, safety or the environment, or that any risk can be minimized through the use of appropriate practices, measure and safeguards.

Should the municipal council provide conditional approval of the proposal, the project proponent may be required to obtain various permits and licenses from the Province to address in greater detail environmental aspects of the proposal. As of November 1, 2019, a proponent may appeal a municipal council's rejection of their application or appeal a condition imposed related to municipal council's approval. Appeals are made to the Municipal Board.

# Livestock Technical Review Process (November 1, 2019)



## B. DESCRIPTION OF PROPOSED LIVESTOCK OPERATION

Further information can be found at [https://www.gov.mb.ca/mr/livestock/public\\_registries.html](https://www.gov.mb.ca/mr/livestock/public_registries.html)

**Applicant:** Crocus Swine Inc.

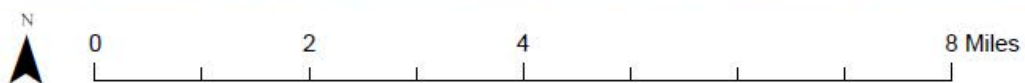
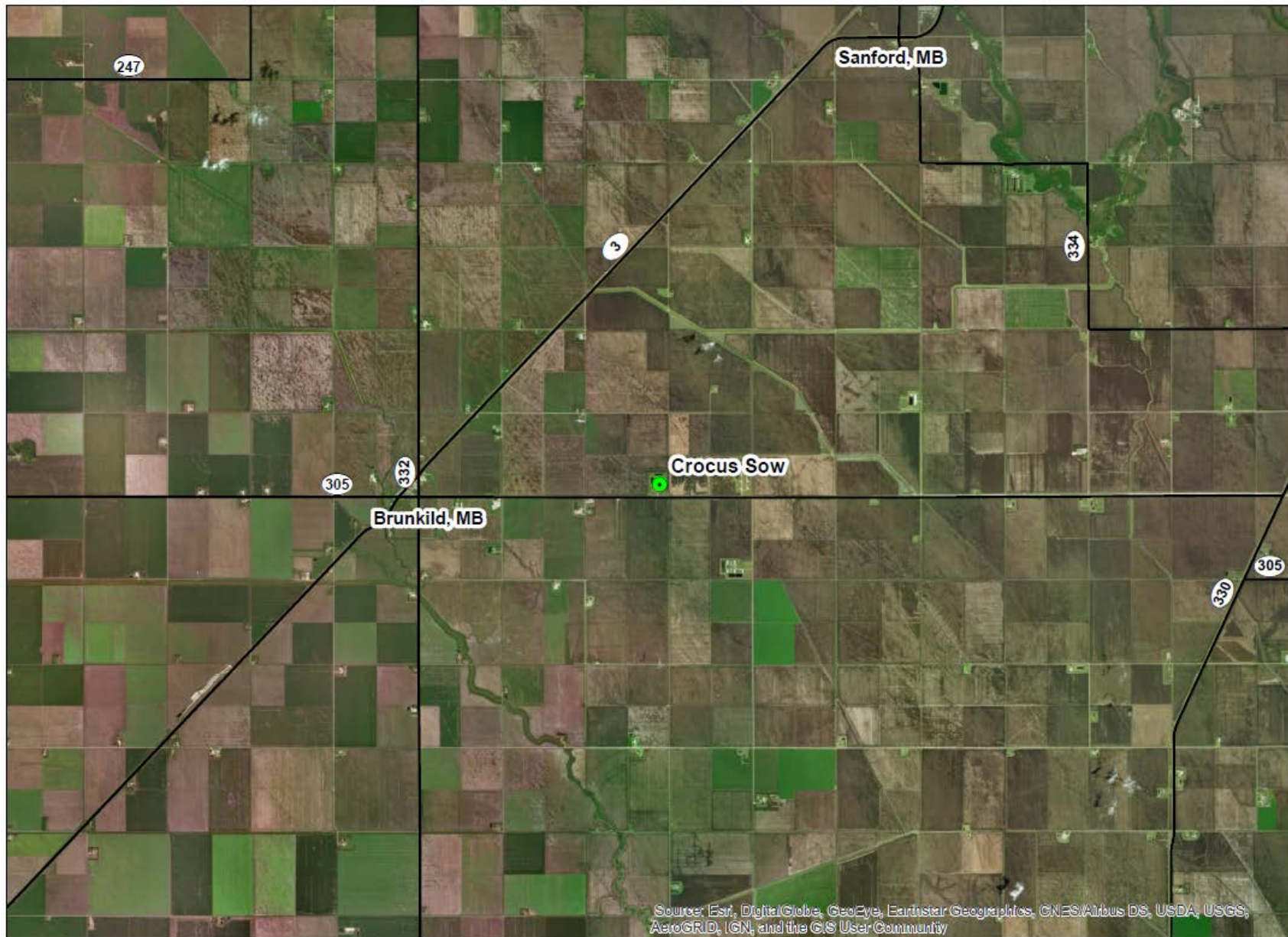
**Site Location:** SE ¼ 27-07-01 WPM. Refer to map below.

**Proposal:** To expand the current pig operation from 3,200 to 6,000 sows: farrow to finish (800 to 1,500 animal units) within an animal confinement facility.

This will involve the following:

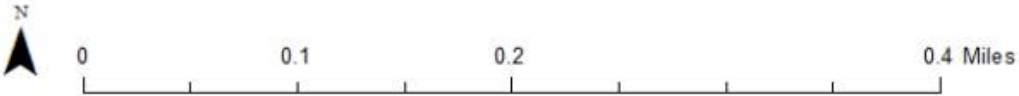
- Construction of animal confinement facilities
- Earthen manure storage facility
- Consumption of up to 36,300 imperial gallons of water from the Parker Drain Tributary, 1km NE of the barn, pumped into an onsite dugout
- Rendering mortalities
- Truck haul routes as shown in map below

# RM of Macdonald - Proposed Expansion Site



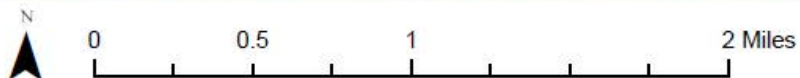
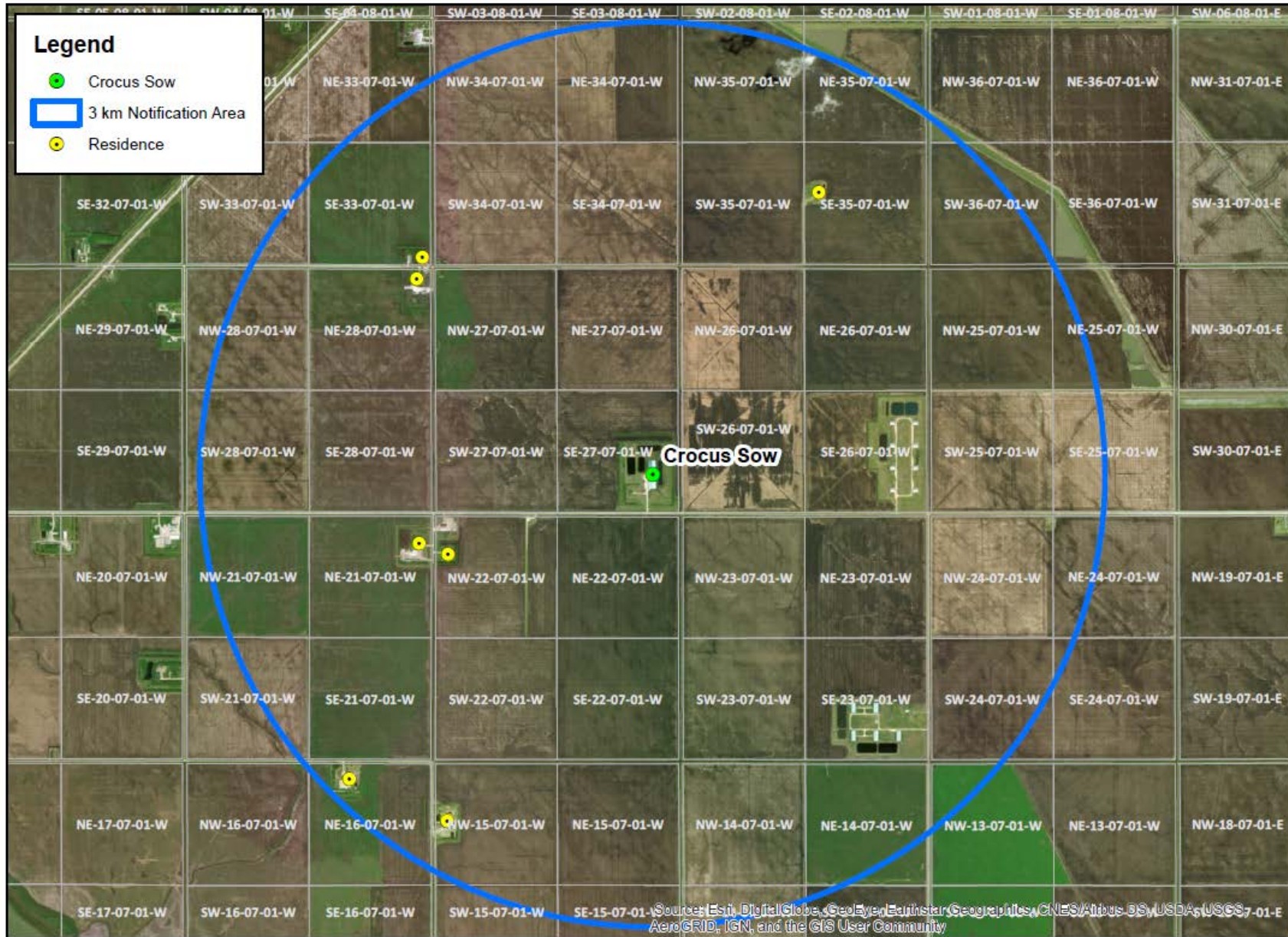
Prepared by:  
Kieran Hamm  
HyLife Ltd.

# Proposed Site Layout - Crocus Sow - SE-27-7-1W



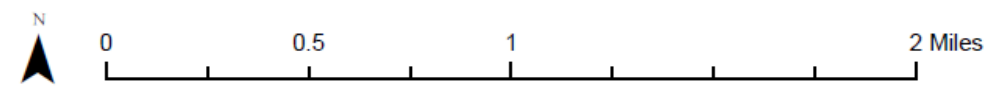
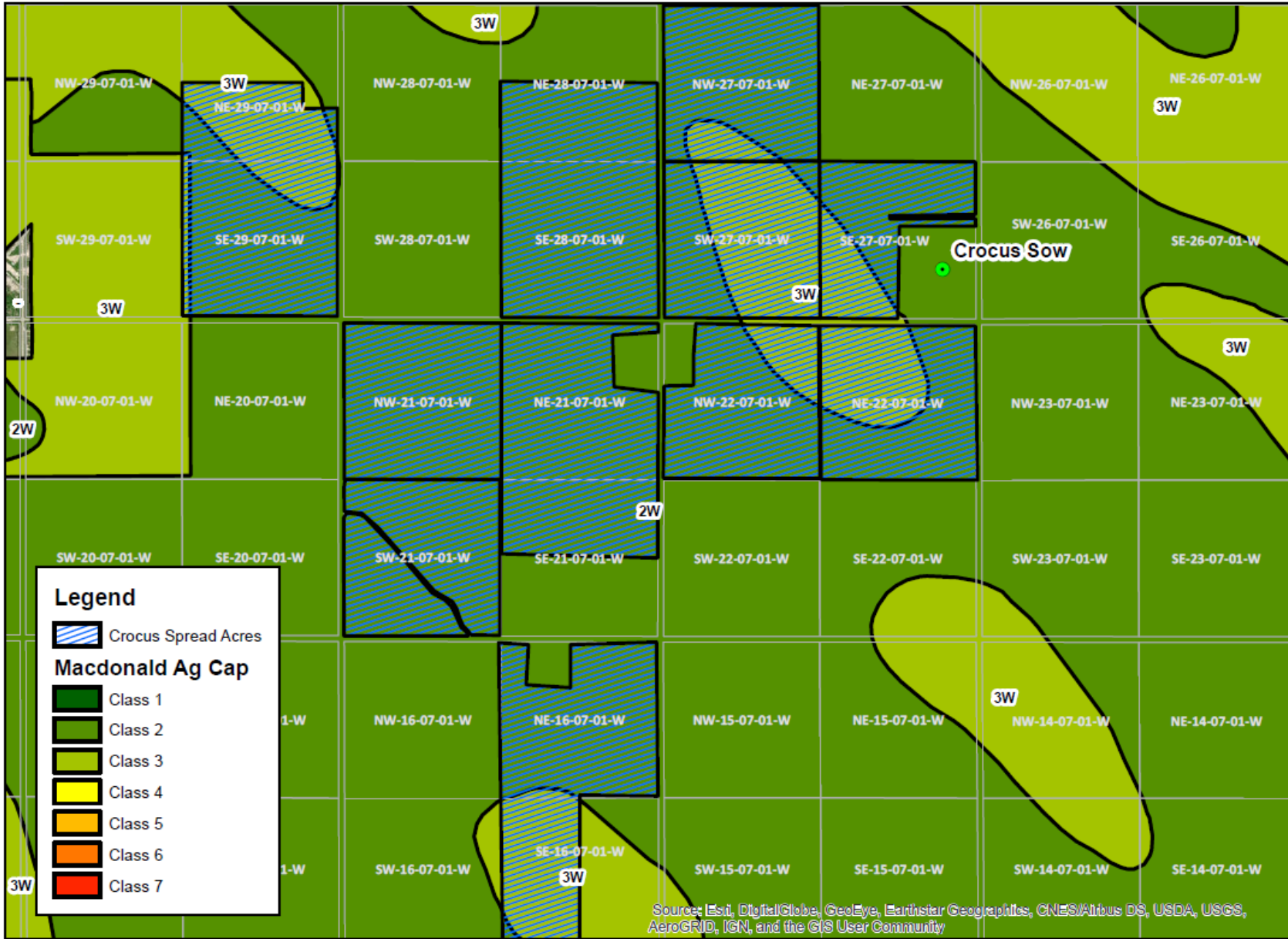
Prepared by:  
 Matt Reimer  
 Director of Environmental Affairs  
 HyLife Ltd.

# Crocus Sow - Land Use Map



Prepared by:  
Kieran Hamm  
HyLife Ltd.

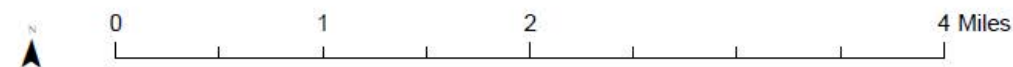
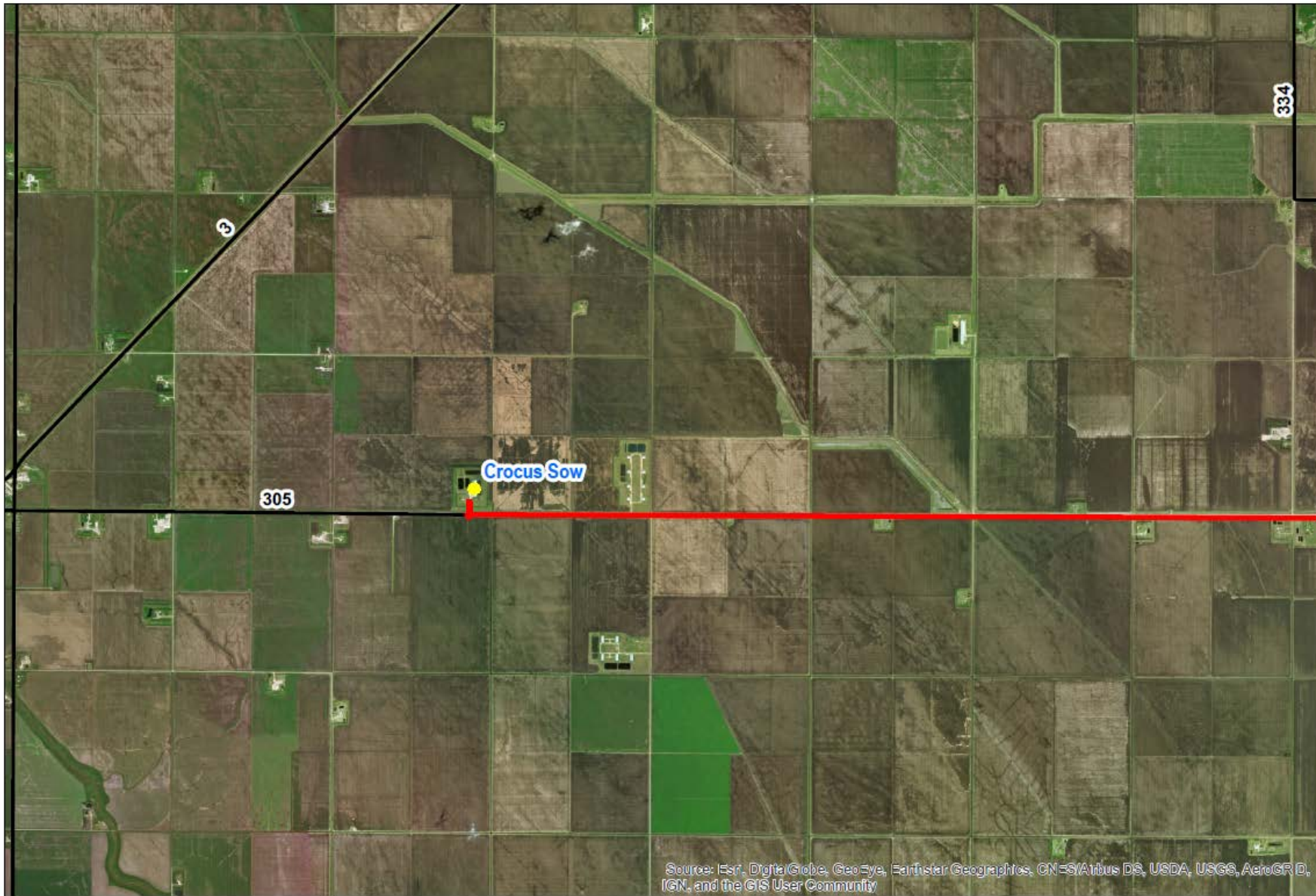
## Crocus Sow - Spread Acres & Capability



Prepared by:  
Kieran Hamm  
HyLife Ltd.



### Crocus Sow Truck Haul Route



Prepared by:  
Kieran Hamm  
Nutrient Management Coordinator  
Hylife Ltd.

## C. SITE ASSESSMENT OVERVIEW

Provincial Technical Overview of TRC 12-065 – Crocus Swine				
Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	Dept.
1	Submitted complete site assessment	X	Technical Review Committee Regulation 119/2011 requires an applicant to submit a completed site assessment.	MR
2	Clearly identified the current and proposed type and number of animals and animal units	X	The proponent is requesting approval to expand Crocus Swine from 3,200 sows, farrow to wean (800 AU) to 6,000 sows, farrow to wean (1,500 AU).	ARD
3	Project clearly defined as (animal confinement facility)	X	The proponent has identified the construction of new animal confinement facilities for their proposal.	CC
			Each of the barns being proposed are in excess of 6,458 sq. ft. (600 sq.m) and will therefore require a building permit from the Office of the Fire Commissioner under <i>The Building and Mobile Home Act</i> and the Manitoba Building Code.	MR
4	Identified all existing and proposed buildings and structures and related separation distances	X	All existing and proposed buildings and structures are in compliance with the minimum separation distances of Provincial Planning Regulation 81/2011.	MR
5	Demonstrated project site is not located within Nutrient Management Zone N4 or any Nutrient Buffer Zone	X	According to reconnaissance soil survey, Crocus Swine Inc is located on Class 2 and 3 prime agricultural land.  No person shall construct, install, site, locate, expand or modify a confined livestock area or manure storage facility in Nutrient Management Zone N4 or in a Nutrient Buffer Zone according to the Nutrient Management Regulation ( <i>M.R. 62/2008</i> ) under The Water Protection Act. The project site is not located within Nutrient Management Zone N4 or any Nutrient Buffer Zone.	ARD

## Provincial Technical Overview of TRC 12-065 – Crocus Swine

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	Dept.
6	Identified suitable water source: Parker Drain Tributary, pumped into onsite dugout  and a water consumption rate of <b>36,300</b> imperial gallons per day	X	All operations using more than 25,000 litres (5,499 imp gal) per day must maintain a Water Rights Licence under The Water Rights Act, Water Rights Regulation (M.R. 126/87). This project proposal has noted an estimated water usage that will exceed 25,000 litres per day, therefore a Water Rights Licence is required. The proponent currently holds a Water Rights Licence for the existing project, and an application for amendment has been received. They are currently in good standing with the Water Use Licensing Section.	CC
7	Proposed project site meets development plan, zoning by-law	X	Section 42(2) of <i>The Planning Act</i> requires that development plans must include a livestock operation policy that guides zoning by-laws dealing with livestock operations.	MR
8	Identified any unsealed abandoned wells on the project site or spread fields	X	The provincial water well database does not contain information for wells located on the proposed property or spread fields.  Per <i>The Groundwater and Water Well Act</i> , abandoned water wells on the site or spread fields must be properly sealed. A sealed well report must be filed with the Groundwater Management Section of Agriculture and Resource Development for each well sealed. Information on well sealing and well sealing reports are available from Agriculture and Resource Development (204-945-6959) or: <a href="https://www.gov.mb.ca/sd/water/groundwater/wells_groundwater/index.html">https://www.gov.mb.ca/sd/water/groundwater/wells_groundwater/index.html</a> . All but the most basic wells should be sealed by a well drilling professional. A list of currently licensed well drilling professionals can also be accessed from the above web page.	ARD
9	Identified suitable manure storage methods	X	A permit to expand/construct the manure storage facility must be obtained, prior to initiating any of the expansion/construction work, in accordance with the Livestock Manure and Mortalities Management Regulation. An application for a permit to expand/construct the manure storage must be submitted to Environmental Approval Branch of Conservation and Climate (EABDirector@gov.mb.ca). Design guidelines and application forms are available at: <a href="https://www.gov.mb.ca/sd/waste_management/livestock_program/index.html">https://www.gov.mb.ca/sd/waste_management/livestock_program/index.html</a> .  The proposed earthen manure storage facility expansion appears to meet siting requirements of MR 42/98, Schedule A (Sec. 1).	CC

## Provincial Technical Overview of TRC 12-065 – Crocus Swine

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	Dept.
10	Identified acceptable manure application methods	X	The proponent must submit and adhere to a manure management plan approved for the facility per the Livestock Manure and Mortalities Management Regulation (MR 42/98).	CC
11	Mortalities disposal methods identified (rendering)	X	The proponent has indicated that mortalities will be dealt with by rendering. This is an acceptable disposal method under the LMMMR (MR 42/98). More specific information is included in the Livestock Manure and Mortalities Management Regulation and at: <a href="https://www.gov.mb.ca/sd/waste_management/livestock_program/index.html">https://www.gov.mb.ca/sd/waste_management/livestock_program/index.html</a> .	CC
12	Proposed suitable setback distances from water and property lines for manure, livestock and mortalities	X	The proponent indicates that setback distances meet minimum requirements set out in the Livestock Manure and Mortalities Management Regulation (MR 42/98).	CC
13	Indicated if proposed project site is within designated flood area or is otherwise at risk of flooding	X	<p>The proposed project site is not within a Designated Flood Area per The Water Resources Administration Act; Designated Flood Area Regulation 59/2002.</p> <p>This site and much of the surrounding area was inundated during the 1997 Red River flood. (See Appendix A for flood imagery).</p>	CC MI
14	Proposed acceptable odour control measures	X	<p>Should odour become a problem for neighbouring residents, there is a complaints process under The Farm Practices Protection Act. A person who is disturbed by any odour, noise, dust, smoke or other disturbance resulting from an agricultural operation may make a complaint, in writing, to the Manitoba Farm Industry Board. The Act is intended to provide for a quicker, less expensive and more effective way than lawsuits to resolve nuisance complaints about farm practices. It may create an understanding of the nature and circumstances of an agricultural operation, as well as bring about changes to the mutual benefit of all concerned, without the confrontation and the expense of the courts.</p> <p>Section 116(1) of <i>The Planning Act</i> allows municipal councils to require a manure storage cover and the planting of a shelter belt as a condition of approval.</p>	ARD MR

## Provincial Technical Overview of TRC 12-065 – Crocus Swine

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	Dept.
15	Proposed sufficient and suitable land for manure spreading with minimum setbacks from water sources	X	<p>Manitoba Agriculture and Resource Development calculated that Crocus Swine Inc should have access to at least 1,941 acres of suitable land for manure application. They have met this land requirement by demonstrating that they have access to 1,986 suitable acres for manure application. A detailed description can be found in Appendix B.</p> <p>During manure spreading, setback distances to all groundwater features as prescribed under the Livestock Manure and Mortalities Management Regulation should be considered as a minimum distance.</p>	ARD
16	Indicated if spread fields are located in the Red River Valley Special Management Area or any other regularly inundated area	X	Proposed Spread fields are located within the Red River Valley Special Management Area and are subject to restrictions as per Section 14 of the Livestock Manure and Mortalities Management Regulation (42/98).	CC
17	Proposed spread fields, that meet development plan and zoning by-law requirements	X	The proposed spread fields comply with the Macdonald-Ritchot Development Plan and R.M. of Macdonald Zoning By-law.	MR
18	Proposed acceptable manure transportation methods		The transport of livestock manure is subject to Section 9 of the Livestock Manure and Mortalities Management Regulation. The proponent has indicated dragline as means of transportation. This is considered acceptable under the Livestock Manure and Mortalities Management Regulation.	CC
			Please be advised that any structures placed within the controlled area of PR 305, PR 330 and PR 332 (125 feet from the edge of the right-of-way) requires a permit from our office. The contact is Sheena del Rosario at (204) 945-3457. The placements of temporary drag lines or any other temporary machinery/equipment for manure application within the right-of-way of PR 305, PR 330 and PR 332 requires permission from our regional office in Steinbach. Please contact the Acting Regional Planning Technologist (Robert Fender) at (204) 371-6858 or <a href="mailto:Robert.Fender@gov.mb.ca">Robert.Fender@gov.mb.ca</a> . In addition, please notify the Acting Regional Planning Technologist for the placement of temporary draglines or other temporary equipment for manure application within the controlled area of PR 305, PR 330 and PR 332 (125 feet from the edge of the right-of-way).	MI

## Provincial Technical Overview of TRC 12-065 – Crocus Swine

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	Dept.
<b>19</b>	Identified suitable trucking routes and access points	<b>X</b>	The subject land has frontage along PR 305 with an existing access. We don't anticipate a substantial increase in use for the existing access.	<b>MI</b>
<b>20</b>	Identified proposed trucking routes – local roads	X	As per Section 116(2) of <i>The Planning Act</i> , municipalities as a condition of approval may require proponent to enter into a development agreement regarding the condition and upkeep of local roads used as truck haul routes.	<b>MR</b>
<b>21</b>	Confirmed that no rare species are impacted on new sites/lands	X	The Conservation Data Centre Report indicates that no species listed under the provincial Endangered Species and Ecosystems Act, the federal Species at Risk Act, or classed as at-risk according to internationally recognized standards, have been documented in the project area.	<b>ARD</b>

**Provincial Departments:** Agriculture and Resource Development (ARD), Conservation and Climate (CC), Infrastructure (MI), Municipal Relations (MR)

## **D. PUBLIC COMMENTS AND DISPOSITIONS**

*none*

## E. CONCLUSIONS AND RECOMMENDATIONS

### Conclusion

The information contained in the Site Assessment submitted by the proponent generally meets Provincial requirements. In addition, based on available information it has been determined that the proposed operation will not create a risk to health, safety or the environment, or that any risk can be minimized through the use of appropriate practices, measures and safeguards.

### Recommended Actions to Council

1. As per Section 114(1) of *The Planning Act*, at least 14 days before the date of the hearing, Council must:
  - a) send notice of the hearing to
    - i. the applicant,
    - ii. the Minister (c/o the Portage Community Planning Office),
    - iii. all adjacent planning districts and municipalities, and
    - iv. every owner of property located within three kilometres of the site of the proposed livestock operation, even if the property is located outside the boundaries of the planning district or municipality;and
  - b) post a copy of the notice of hearing on the affected property in accordance with Section 170 of *The Planning Act*.
2. Council should specify the type(s) of operation, legal land location, number of animals in each livestock category and total animal units in its Conditional Use Order.
3. As per Section 117 of *The Planning Act*, Council must send a copy of its Conditional Use Order to
  - a) the applicant,
  - b) the Minister (c/o the Portage Community Planning Office), and
  - c) every person who made representation at the hearing.
4. Councils are requested to include in their resolution and/or Conditional Use Order, notification that the applicant may appeal council's decision to reject the application or appeal a condition imposed by council related to its approval as per Section 118.2 of *The Planning Act*.
5. As per Section 118.2(2)(b), an applicant may appeal the following decisions of a board or council to the Municipal Board:

for an application for approval of a conditional use made in respect of a large-scale livestock operation,

  - (i) a decision to reject the application,
  - (ii) a decision to impose conditions.
6. As per Section 118, no development or expansion of a livestock operation that is the subject of an application under this Division may take place until
  - (a) the application is approved and the applicant complies, or agrees to comply, with any condition imposed on the approval under this Division; and



- (b) the applicant obtains every approval, including any permit or licence, required under an Act, regulation or by-law in respect of the proposed operation or expansion, and complies with, or agrees to comply with, any condition attached to the approval.

*Council is welcome to contact Manitoba Conservation and Climate, Environmental Approvals Branch or Regional Environmental Compliance and Enforcement staff with respect to the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) including compliance and enforcement issues.*

### **Recommended Actions to Proponent**

That any additional measures identified through subsequent provincial licencing or permitting in order to minimize any identified risks to health, safety and the environment be undertaken.

That as per Section 118.2(2)(b), an applicant may appeal the following decisions of a board or council to the Municipal Board:

- (i) a decision to reject the application,
- (ii) a decision to impose any condition on the approval.

## F. TECHNICAL REVIEW COMMITTEE MEMBERS

Name	Department	Title <i>Branch</i>	Contact
Don Malinowski	Municipal Relations	Senior Planner <i>Community Planning Branch</i>	204-945-8353
Petra Loro	Agriculture and Resource Development	Livestock Environment Specialist <i>Agri-Resource Branch</i>	204-918-0325
Shannon Beattie	Conservation and Climate	Policy Analyst <i>Legislation, Policy and Coordination Branch</i>	204-792-6269
Jeff DiNella	Infrastructure	Senior Development Review Technologist <i>Highway Planning and Design Branch</i>	204-945-2664

# Appendix A

## 1997 Flood Imagery (1:100 year or 1% Flood Event)



## **Appendix B**

### **Manitoba Agriculture and Resource Development**

#### **Water Science and Water Management Branch:**

Proper nutrient management applications that avoid excess loss of nutrients to surface waters are needed on lands receiving manure in southern Manitoba because long-term trend analysis of total phosphorus and total nitrogen has shown significant increases in these nutrients in the Assiniboine and Red rivers (Jones and Armstrong 2002).

The proponent plans to inject all manure. Injection of manure at appropriate rates poses lower environmental risk than other manure application methods.

A portion of the manure will be injected in spring. Applications of manure in spring after soils have thawed are less susceptible to runoff losses and have reduced environmental risk when compared to fall applications.

The proponent plans to implement a three-cell lagoon for manure storage which when properly managed will allow for better utilization of manure nutrients and can reduce the risk of nitrogen and phosphorus loss to surface and groundwater.

For most crops, manure contains an excess of phosphorus (P) compared to nitrogen (N) and as a result, application at N-based rates causes a buildup of soil P. Practices which reduce N losses from the manure improve the N:P ratio in the manure and help slow P buildup when manure is applied at N-based rates. The proponent plans to apply the liquid manure with injection which will also reduce N losses compared to broadcast application methods.

The proponent has acknowledged the setback areas for all water features have been observed and excluded from land base calculations. Setbacks should be clearly communicated to and observed by those involved in manure application to minimize the risk of nutrients entering surface and groundwater.

Manitoba has included phosphorus as a nutrient by which fertilizer application through manure, synthetic fertilizer, and municipal waste sludge to agricultural lands may be limited. To remain environmentally sustainable over a long-term planning horizon of 25 years or more, the proponent must be able to balance phosphorus inputs from applied manure and other nutrient sources such as commercial fertilizers with crop removal rates to avoid further build-up in soils. Consequently, sufficient land base must be available such that manure can be applied at no more than 1 times crop P removal rates (P balance). For long-term planning purposes, the proponent needs to have sufficient land available to ensure that manure can be applied at 1 times crop P removal. The proponent acknowledges that 3,668 acres may be required for the long-term environmental sustainability of the operation. The proponent has identified 1,986 acres for manure application. Application to meet crop N requirements is estimated to use 1,420 acres. Application at 2 times the crop removal of P is estimated to use 1,834 acres (3,668 acres is estimated to achieve P balance with current crop choices and yield potential).

As phosphorus levels build up in soils, the concentration of phosphorus in runoff to surface waters increases. It is important to rotate manure application across all spread fields and whenever possible focus manure applications on fields with low Olsen-P soil test levels so as to prevent excessive P buildup when applying manure at rates above P balance (P removal by harvested crops).

## **Agri-Resource Branch:**

Crocus Swine Inc has met the land requirements for 6,000 sow, farrow to wean, as follows:

In areas of lower livestock intensity such as the RM of MacDonald, it is currently the Province of Manitoba's policy to require sufficient suitable land for all of the nitrogen and half of the phosphorus generated by the livestock. This policy assumes that more land is available and could be brought into the Crocus Swine Inc manure management plan to balance phosphorus with crop removal, should it be necessary in the future.

In order to determine the land requirements for Crocus Swine Inc, nitrogen and phosphorus excretion by 6,000 sows, farrow to wean, is compared to nitrogen utilization and phosphorus removal by the proposed crops to be grown. The calculation takes into consideration typical, modern feeding practices for pig production and realistic, long-term 10-year crop yields from the Manitoba Agricultural Services Corporation (MASC). On-farm MASC yields were used for all crops except corn. Due to a limited number of records, Manitoba Agriculture and Resource Development used the RM yield records for D soils for corn. This resulted in a very slightly higher land requirement than in the site assessment.

Land suitability is determined using soil testing for phosphorus and soil survey to establish the agriculture capability. All of the lands with soil tests were below 60 ppm Olsen P, as required to be considered suitable. Reconnaissance soil survey is available to determine the agriculture capability of the land. The agriculture capability of the land included in the proposal is predominantly Class 2 and 3 (prime agricultural land). The primary limitation is wetness (W).

**Manitoba Agriculture and Resource Development calculated that Crocus Swine Inc should have access to at least 1941 acres of suitable land for manure application. They have met this land requirement by demonstrating that they have access to 1986 suitable acres for manure application.**