

## **TECHNICAL REVIEW COMMITTEE**

## A TECHNICAL REVIEW REPORT PREPARED FOR

# THE RURAL MUNICIPALITY OF DE SALABERRY

**CAREY COLONY** 

22-6-6 WPM

TRC 12-066

**April 8, 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

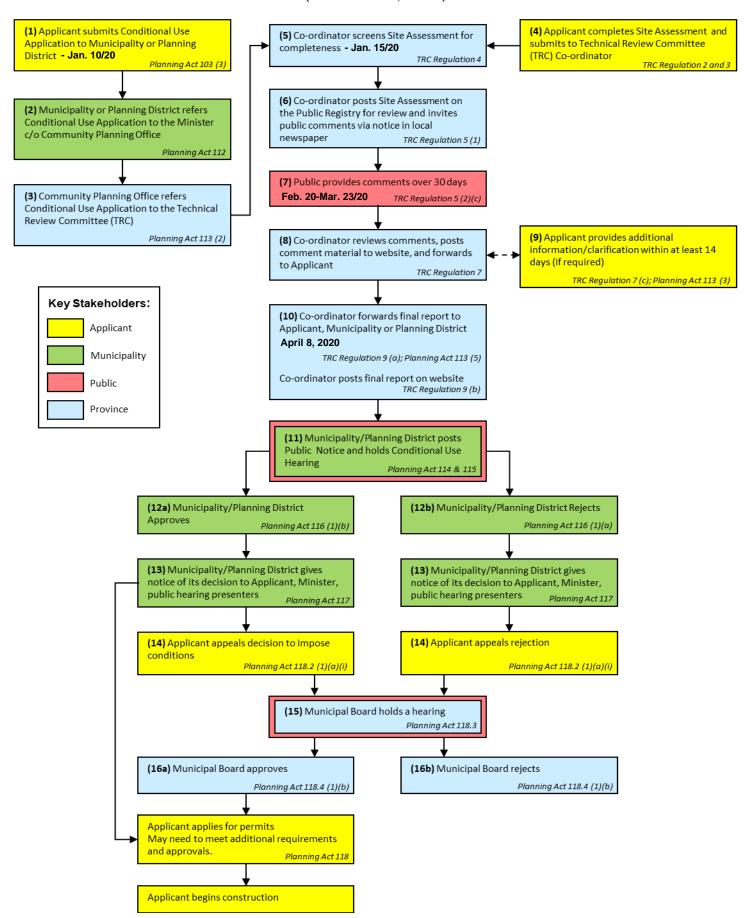
To provide objective, credible, technically-based assessments that:

- 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 <a href="https://www.gov.mb.ca/mr/livestock/public registries.html">https://www.gov.mb.ca/mr/livestock/public registries.html</a>

**Applicant:** Carey Colony

Site Location: NW 1/4 26-5-3 EPM and N 1/2 26-5-3 EPM. Refer to map below.

**Proposal:** To expand the current mixed livestock operation by adding 900 sows: farrow to finish; 24,800 layers; 12,400 pullets to an existing 9,000 heavy hen operation, while eliminating 2,000 growers finishers. Existing hog and turkey barns will continue to be used, additional barns for pullets and layers will be constructed, and hog facility will be completed.

#### This will involve the following:

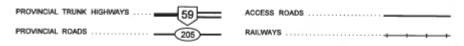
- Use of existing barns and construction of four new barns
- Earthen manure storage, field storage, permanent solid manure storage facility
- Consumption of up to 38,583 imperial gallons of water per day from a well
- Composting mortalities
- · Truck haul routes as shown in map below

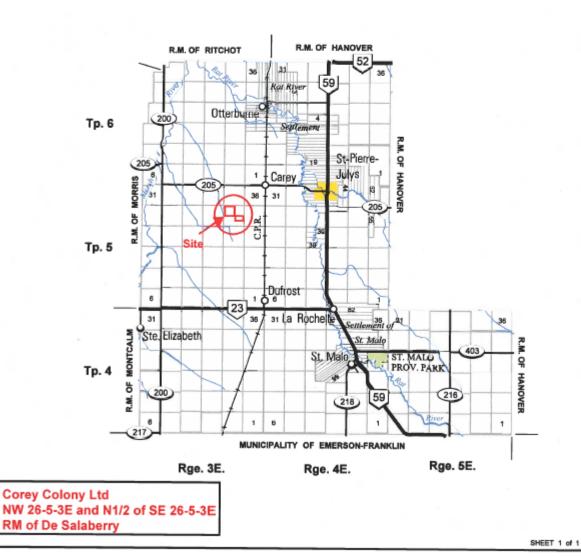


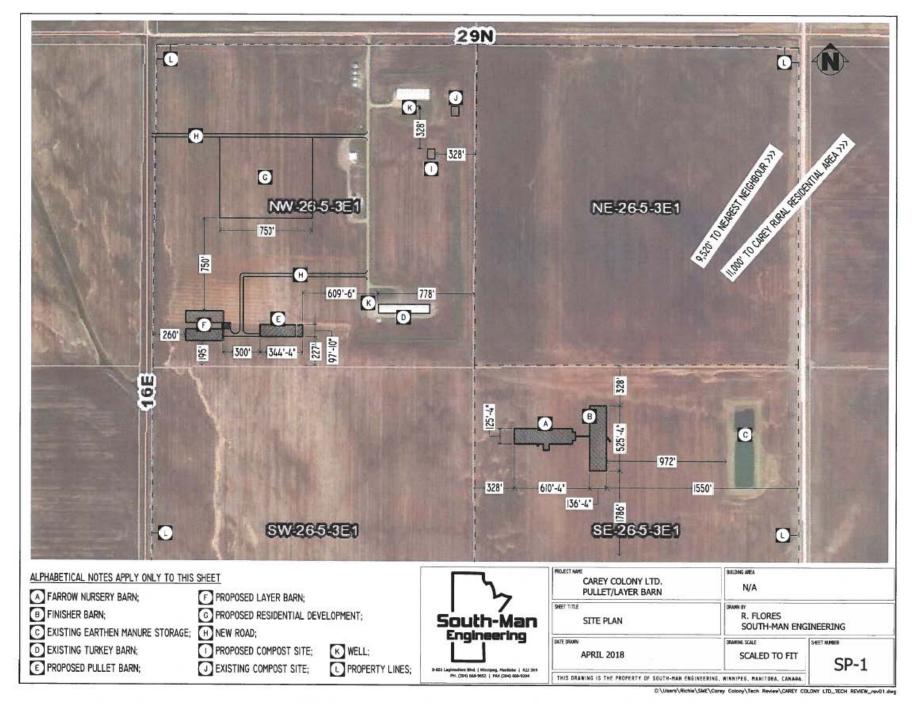
## R.M. OF DE SALABERRY

PROVINCE OF MANITOBA
INFRASTRUCTURE
HIGHWAY PLANNING AND DESIGN BRANCH
GEOGRAPHIC & RECORDS MANAGEMENT SECTION
WINNIPEG
JANUARY 1, 2015

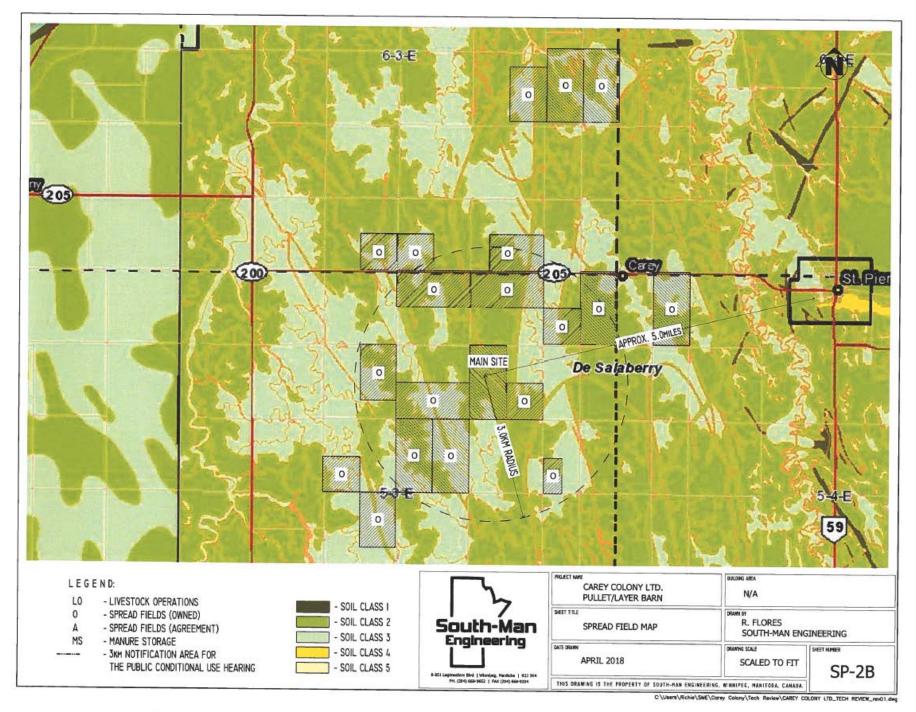
## LEGEND

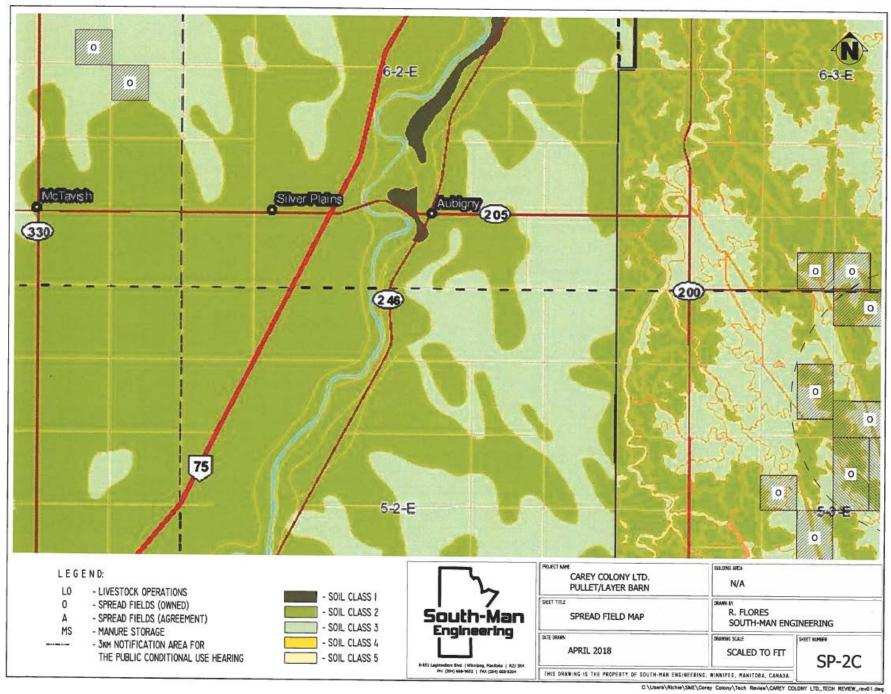


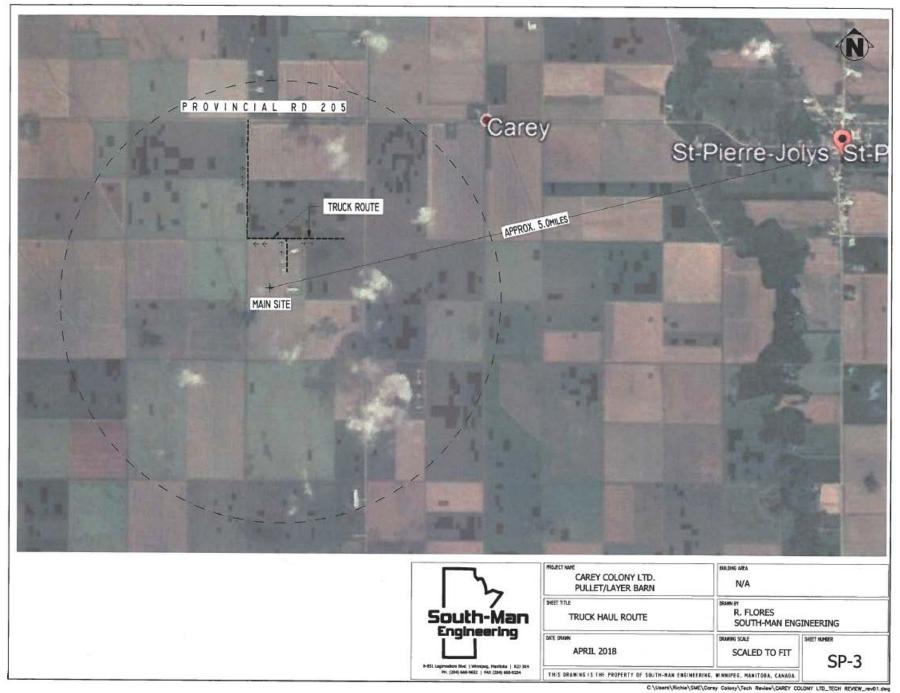












## C. SITE ASSESSMENT OVERVIEW

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards		
1	Submitted complete site assessment	Х	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	Carey Colony is proposing to construct a 900 sow, farrow to finish operation by adding 150 sows to their already approved 750 sow, farrow to finish, operation. They are also proposing to add 24,800 layers and 12,400 layer pullets to their existing 9,000 heavy hen turkey operation. The total animal units for these operations is 1,462 AU.	ARD <sup>1</sup>	
	Project clearly defined as (animal confinement facility)	х	The project is clearly defined as an animal confinement facility.	СС	
3			The site assessment indicates that the proposed operation will establish 4 new barns. Any barn in excess of 6,458 sq. ft. each will require a building permit from the Office of the Fire Commissioner.	MR	
4	Identified all existing and proposed buildings and structures and related separation distances	Х	Any proposed development that does not meet the required setbacks or livestock separation distances as established in the zoning by-law, requires Council's approval and a public hearing to vary those requirements. Given the proposed size of the operation and proximity to the closest rural residential dwelling (NE 36-5-3E) and a designated area, Carey, it appears that the operation meets the separation distance requirements of the zoning by-law. Variance orders will not be required.	MR	
5	Demonstrated project site is not located within Nutrient Management Zone N4 or any Nutrient Buffer Zone	X	According to detailed (1:20,000) soil survey, Carey Colony is located on prime agricultural land that is mapped as agriculture capability Class 2W and 3W.  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 (M.R. 62/2008) under The Water Protection Act. The project site is not located within Nutrient Management Zone N4 or any Nutrient Buffer Zone.	ARD <sup>2</sup>	

Agri-Resource Branch
 Agri-Resource Branch, Water Science and Watershed Management Branch

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	Dept.
6	Identified suitable water source: Existing wells and a water consumption rate of 38,583 imperial gallons per day	Х	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 will be required. The proponent currently holds a Water Rights Licence for the initial proposal, but an Application to Construct a Well and Divert Groundwater will be required for the project expansion.	СС
7	Proposed project site meets development plan, zoning by- law	X	The proposed livestock operation is located on land designated as "General Agriculture" pursuant to the RM of De Salaberry Development Plan By-Law No. 2362-18. Policy 3.1.18.2 of the development plan states that new or expanding operations of 300 animal units or greater shall be a Conditional Use. The proposed livestock operation site is located on land zoned "AG" Agriculture General. The proposed operation meets the minimum zoning site requirements.  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.  Section 147 of <i>The Planning Act</i> requires municipalities to issue development permits for any development on a site. All development must comply with the Development Plan and the Zoning By-law.	MR
8	Identified any unsealed abandoned wells on the project site or spread fields	X	The site assessment identifies that the water use for the proposal is from the existing wells on the property at NW of section 26-5-3E. The provincial water well database contains information for two wells associated with the proposed livestock operation. The database also indicates that there are wells present within the spread field locations. Per The Groundwater and Water Well Act, 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: https://www.gov.mb.ca/sd/water/groundwater/wells_groundwater/index.html. 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 <sup>3</sup>

<sup>-</sup>

<sup>&</sup>lt;sup>3</sup> Water Science and Watershed Management Branch

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	
9	Identified suitable manure storage methods	Х	A permit to expand the existing manure storage facility must be obtained, prior to initiating any of the expansion work, in accordance with the Livestock Manure and Mortalities Management Regulation. An application for a permit to expand 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: https://www.gov.mb.ca/sd/waste_management/livestock_program/index.html	СС
10	Identified acceptable manure X application methods		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).	СС
11	Mortalities disposal methods identified		The proponent has indicated that mortalities will be dealt with by composting. Composting mortalities must be completed in accordance with Section 15.1 of the Livestock Manure and Mortalities Management Regulation (MR 42/98).	СС
12	Proposed suitable setback distances from water and property lines for manure, livestock and mortalities	X	Based on the information in the site assessment, the existing wells are within 100 metres of the confined livestock facilities. The wells were installed in the late 1990s prior to current The Groundwater and Water Well Act. If the operation requires a new well in the future, it will be required to be constructed more than 100 metres from the confined livestock facility.	ARD⁴
			The earthen manure storage facility is 82m from the north property line (permit #LM2-137, year of construction: 1998). This facility is pre-existing and no changes or modifications to the EMS are proposed. (Section 16(3)(a) of the Livestock Manure and Mortalities Management Regulation).	СС
13	Indicated if proposed project site is within designated flood area or is otherwise at risk of flooding	X	This site is not within a Designated Flood Area.  This area will experience standing water and overland flooding in a 1:100 year flood event such as the 1997 Red River spring flood.	МІ

\_

<sup>&</sup>lt;sup>4</sup> Water Science and Watershed Management Branch

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	
14	Proposed acceptable odour control measures	X	The proponent has indicated that a manure storage facility cover and shelterbelts will be used. 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.	ARD⁵
			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	MR
15	Proposed sufficient and suitable land for manure spreading with minimum setbacks from water sources	cient and ble land for ure ading with num acks from	Manitoba Agriculture and Resource Development released a revised land calculator on February 24, 2020. Using the revised calculator, Carey Colony requires at least 2,629 acres of suitable land for manure application. They have demonstrated that they have 5,111 suitable acres. This is sufficient suitable land to balance all of the phosphorus in the manure with what will be removed by the proposed crops to be grown. Details are included in Appendix A.	ARD <sup>6</sup>
			During manure spreading, the setback distances to all water features as prescribed under the Livestock Manure and Mortalities Management Regulation should be considered as a minimum distance.	СС
16	Indicated if spread fields are located in the Red River Valley Special Management Area or any other regularly inundated area	n er ial it 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).	СС
			Spread fields will be underwater due to standing water and overland flooding during a 1:100 year flood event. MI has no information about this area during smaller events. The Carey Drain Provincial Waterway is directly east of the site and any manure hoses crossing this drain will require authorization from Manitoba Infrastructure prior to placement. Please contact MI at <a href="MITWaterReview@Gov.mb.ca">MITWaterReview@Gov.mb.ca</a> to start a Provincial Waterway Authorization Application.	МІ

<sup>&</sup>lt;sup>5</sup> Agri-Resource Branch <sup>6</sup> Agri-Resource Branch

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	Dept.
17	Proposed spread fields, that meet development plan and zoning by-law requirements	Х	Spread fields that are located in the RM of De Salaberry are designated "General Agriculture" area and zone "Agriculture General". The proposed fields are cultivated agricultural lands. Therefore, the proposed spread fields meet the intent of the RM of De Salaberry Development Plan and the Zoning By-law. Two spread fields located in the RM of Morris (SE 23-6-1E and NW 13-6-1E), are designated "General Agricultural Area" and zoned "General Agricultural". The lands are in agricultural use and appear to be suitable for manure spread fields. The spread fields are in compliance with the RM of Morris Development Plan and the Zoning By-law.	MR
	Proposed acceptable manure transportation methods	on X	Proponent has indicated dragline and a solid spreader as means of manure transportation. This is considered acceptable under the Livestock Manure and Mortalities Management Regulation (42/98).	СС
18			Please be advised that any structures placed within the controlled area of PR 205 (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 205 requires permission from our regional office in Steinbach. Please contact the Acting Regional Planning Technologist (Robert Fender) at (204) 371-6858 or <a href="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 205 (125 feet from the edge of the right-of-way).	МІ
19	Identified suitable trucking routes and access points	The proposed truck route utilizes an existing Government Road Allowance that connects onto PR 205. We don't anticipate a substantial increase in us X for the existing access.		МІ
20	Identified proposed trucking routes – local roads	Х	Under <i>The Planning Act</i> , municipalities as a condition of approval may require Carey Colony to enter into a Development Agreement regarding the condition and upkeep of local roads used as truck haul routes.	MR
21	Confirmed that no rare species are impacted on new sites/lands	Х	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.	ARD <sup>7</sup>

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

<sup>&</sup>lt;sup>7</sup> Wildlife and Fisheries Branch

## D. PUBLIC COMMENTS AND DISPOSITIONS

Public Comment Summary			
Ruth Brown PR 205 W	OPPOSED  The commenter has some barns around her property which already cause a smell that requires her to stay indoors some days.  The Carey Colony is actually Crystal Springs Colony outside of Otterburne. The writer is concerned that the proposed development will affect their and other neighbouring residences (6 in total) property values.		
Rod Brown 36-5-3E PR 205 W	OPPOSED  The commenter lives at Carey. It is a small community of families and they will be directly in the line of odours produced by the operation. There are already barns to the northwest, northeast, and southwest, and the writer is concerned that this expansion will make these properties unbearable by reducing air quality, and is concerned that the proposed expansion will affect property values.		

A full copy of the public comments as well as the proponent's response may be viewed on the public registry at: <a href="https://www.gov.mb.ca/mr/livestock/public\_registries.html">https://www.gov.mb.ca/mr/livestock/public\_registries.html</a>

See Appendix B for the proponent's response to the public comments.

## 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 Steinbach 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 Steinbach 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) of *The Planning Act*, 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 of *The Planning Act*, 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) of *The Planning Act*, 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 Branch	Contact
Don Malinowski	Municipal Relations	Senior Planner Community Planning Branch	204-945-8353
Petra Loro	Agriculture and Resource Development	Livestock Environment Specialist  Agri-Resource Branch	204-918-0325
Shannon Beattie	Conservation and Climate	Policy Analyst Legislation, Policy and Coordination Branch	204-792-6269
Jeff DiNella	Infrastructure	Senior Development Review Technologist Highway Planning and Design Branch	204-945-2664

## Appendix A Manitoba Agriculture and Resource Development

#### **Agri-Resource Branch:**

Carey Colony has met the land requirements for 900 sows (farrow to finish), 9,000 turkeys, 28,400 layers, 12,400 pullets, as follows:

In areas of lower livestock intensity such as the RM of De Salaberry, 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 in the region to balance phosphorus with crop removal, should it be necessary in the future.

In order to determine the land requirements for Carey Colony, nitrogen and phosphorus excretion by all of the livestock are 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) for the RM of De Salaberry.

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. Detailed 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 limitations are predominantly wetness (W) with some areas of salinity (N).

Manitoba Agriculture and Resource Development released a revised land calculator on February 24, 2020. Using the revised calculator, Carey Colony requires at least 2,629 acres of suitable land for manure application. They have demonstrated that they have 5,111 suitable acres. This is sufficient suitable land to balance all of the phosphorus in the manure with what will be removed by the proposed crops to be grown.

#### **Water Science and Watershed 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 liquid manure and incorporate solid manure within 48 hours of spreading. Injection of manure at appropriate rates poses lower environmental risk than other manure application methods. Incorporation of solid manure as soon as possible after application also reduces environmental risk and conserves nitrogen increasing the fertilizer value of the manure.

A portion of the manure will be applied 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.

Spread fields are within the Red River Valley Special Management Area and as such fall manure applications (September 10 – November 10) to tilled land must be injected or incorporated within 48 hours.

The proponent plans to utilize a 2-cell lagoon for liquid 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 reduce N losses compared to broadcast application methods. The fully enclosed storage of solid manure from the pullet/layer facility will also reduce N losses during storage of this manure.

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 5,006 acres may be required for the long-term environmental sustainability of the operation. The proponent has identified 5,111 acres for manure application. Application to meet crop N requirements is estimated to use 2,031 acres. Application at 2 times the crop removal of P is estimated to use 2,503 acres (5,006 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).

## Appendix B - Proponent Response to Public Comments



8-851 Lagimodiere Blvd. Winnipeg, MB R2J 3K4

Phone: 204.668.9652 Fax: 204.668.9204

E-mail: sme@southmaneng.com

April 3, 2020

Community Planning Manitoba Municipal Relations 600-800 Portage Av Winnipeg, MB R3G 0N4

Re: Carey Colony Site Assessment

Response to Public Comments and Concerns

The comments provided by both Ruth Brown and Rod Brown are primarly associated with concerns over odour production and the impact of these odours on themselves and their property values. It would appear from the information available that these residents are situtated near Carey on the fringe of the 3.0 km radius from the proposed operation. Southwest winds would be anticipated to carry odours toward these residences and on occasion have an impact upon them. Other livestock operations in the region within similar setback distances exist and are anticipated to have similar impacts on these properties. Based on the wind direction distribution map as attached (Figure 1), the frequency of impact from the Carey Colony site is anticipated to be much less than other livestock operations that already exist in the area.

As there are a number of fields identified for manure application in close proximity to the community of Carey, first preference will be given to fields further distant from the community and where prevailing wind at the time of application will carry odours away from residences versus toward them. Management practices will be employed by Carey Colony to have the least impact on residents in the area as possible.

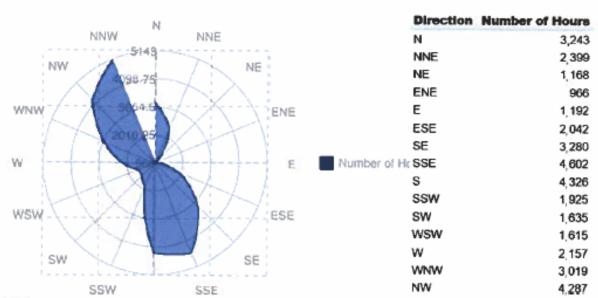


Figure: 1 Wind direction distribution at Morris station

The principle cause for odour production are typically manure storages. Manure within these facilities is typically stored for a full year and then field applied in either the spring or fall. During the storage period this manure will become anaerobic producing H<sub>2</sub>S and ammonia which will release naturally with wind and wave action and considerably more when the manure is agitated prior to field application. In the case of the proposed operation an earthen manure storage (EMS) already exists and although an expansion of the EMS would be required, the impact on odour production would not be anticipated to change dramatically. As manure application typically will occur during September and October, the increase in odour intensity during agitation is not anticipated to have an impact on the community of Carey as prevailing winds from the north to west will carry odours away from that direction.

Manure from the proposed poultry operations will be handled as a solid manure and consequently be field stored. Location of the fields upon which this manure is stored can be adjusted with consideration of prevailing winds and the impacts on adjacent land owners. Composting of this field stored material will further reduce the odour production anticipated from this manure source. Field application of this composted material would be preferable on the agricultural fields in close proximity to the community of Carey as odour production from fully composted material is virtually non-existant.

To clarify, Carey Colony is the sister colony of Suncrest Colony which originated from Crystal Spring Colony in 1969. Although there currently are no residences on site the intention is to have permanent residents on site shortly following the first phases of the development as per the proposal. The development of this site was started with the expectation that Suncrest Colony was going to need to divide much sooner, however slower growth than anticipated has only now brought this fruition.

I trust that the concerns of the neighbouring residents have been addressed, however members of the colony have also expressed that they are available for conversation and dialogue with respect to management of the operation to have the least impact on neighbours as possible.

Respectfully Submitted,

South-Man Engineering

Per, /LA:

Peter Grieger, P. Eng.