TECHNICAL REVIEW COMMITTEE

A TECHNICAL REVIEW REPORT
PREPARED FOR

THE RURAL MUNICIPALITY OF MORRIS

Maple Leaf Agri-Farms: Ashwood

SW ¼ 30-6-1 WPM and Part of NW ¼ 30-6-1 WPM

TRC 12-067

April 20, 2020

A. INTRODUCTION – THE TEAM

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

Agriculture and Resource Development (ARD)

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

Conservation and Climate (CC)

- Environmental Engineer
- Environment Officer
- Water Rights Licensing Technologist

Infrastructure (MI)

- Engineering and Operations Division
- Development Review Officers
- Development Review Technologists
- 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

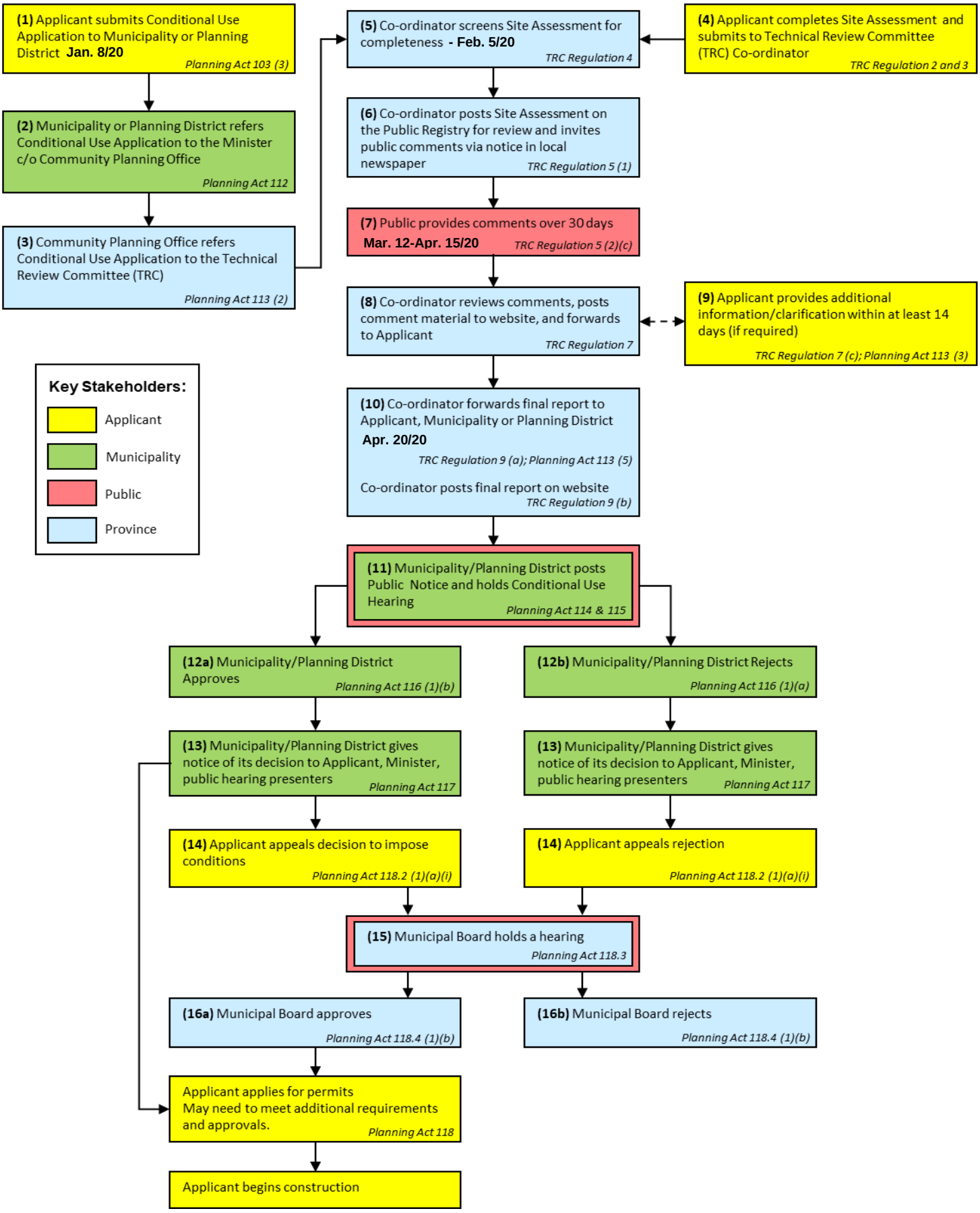
Purpose of TRC Reports

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

a) Enable municipal councils or planning districts 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, planning districts 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

Applicant: Maple Leaf Agri-Farms: Ashwood

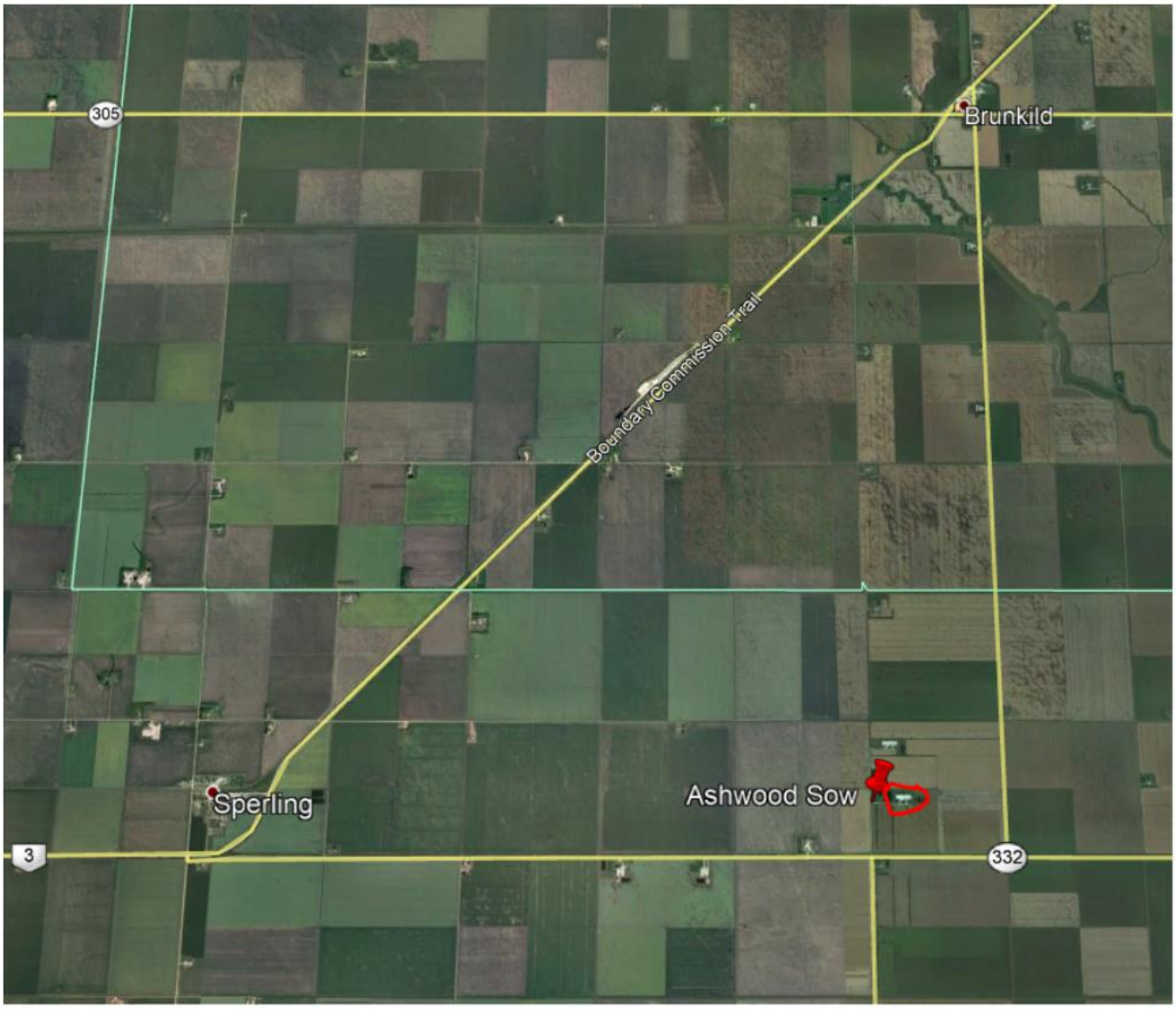
Site Location: SW ¼ 30-6-1 WPM and part of NW ¼ 30-6-1 WPM. Refer to map below.

Proposal: To expand existing operation from 1,200 to 1,600 sows: farrow to nursery (376 to 501 animal units).

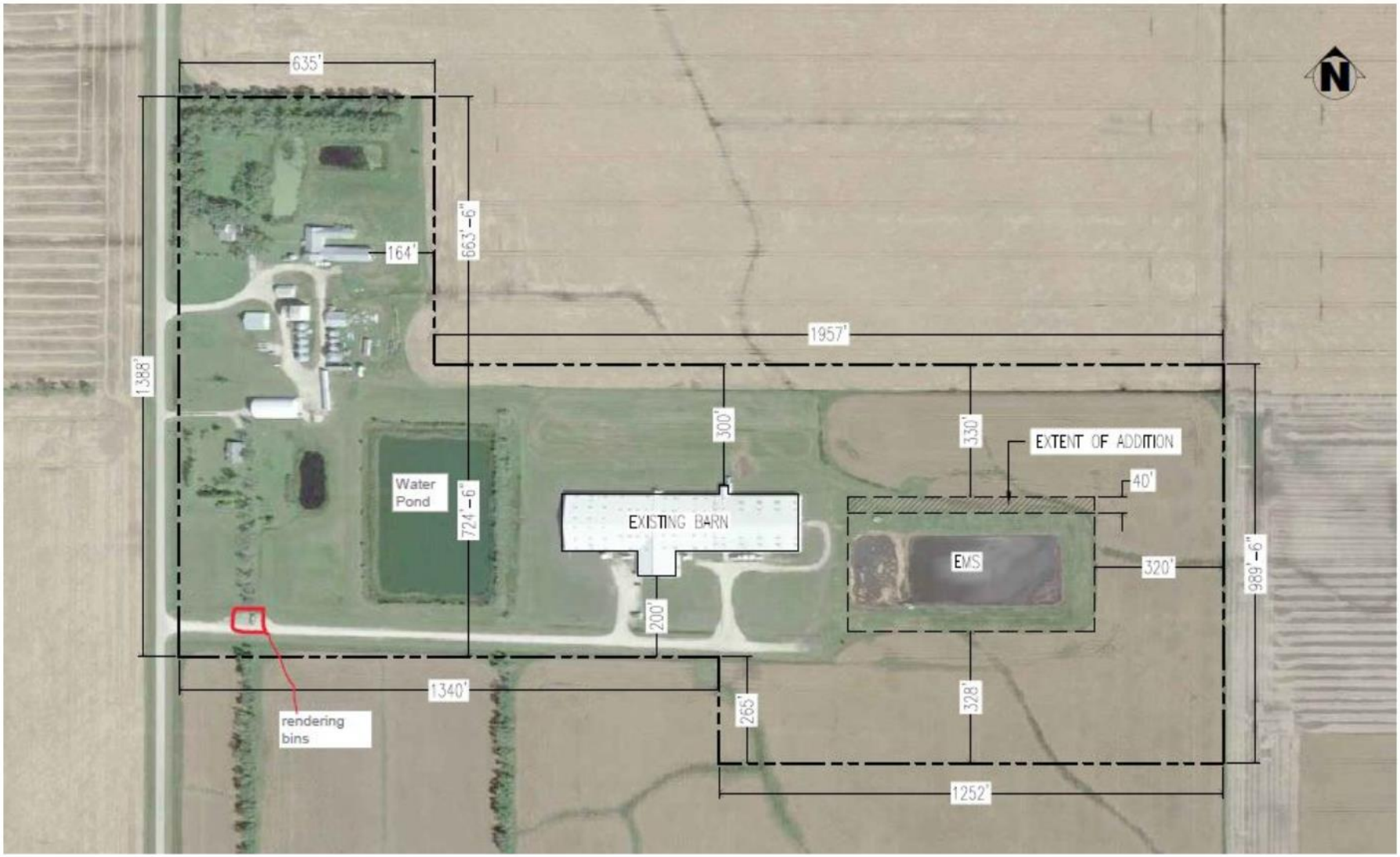
This will involve the following:

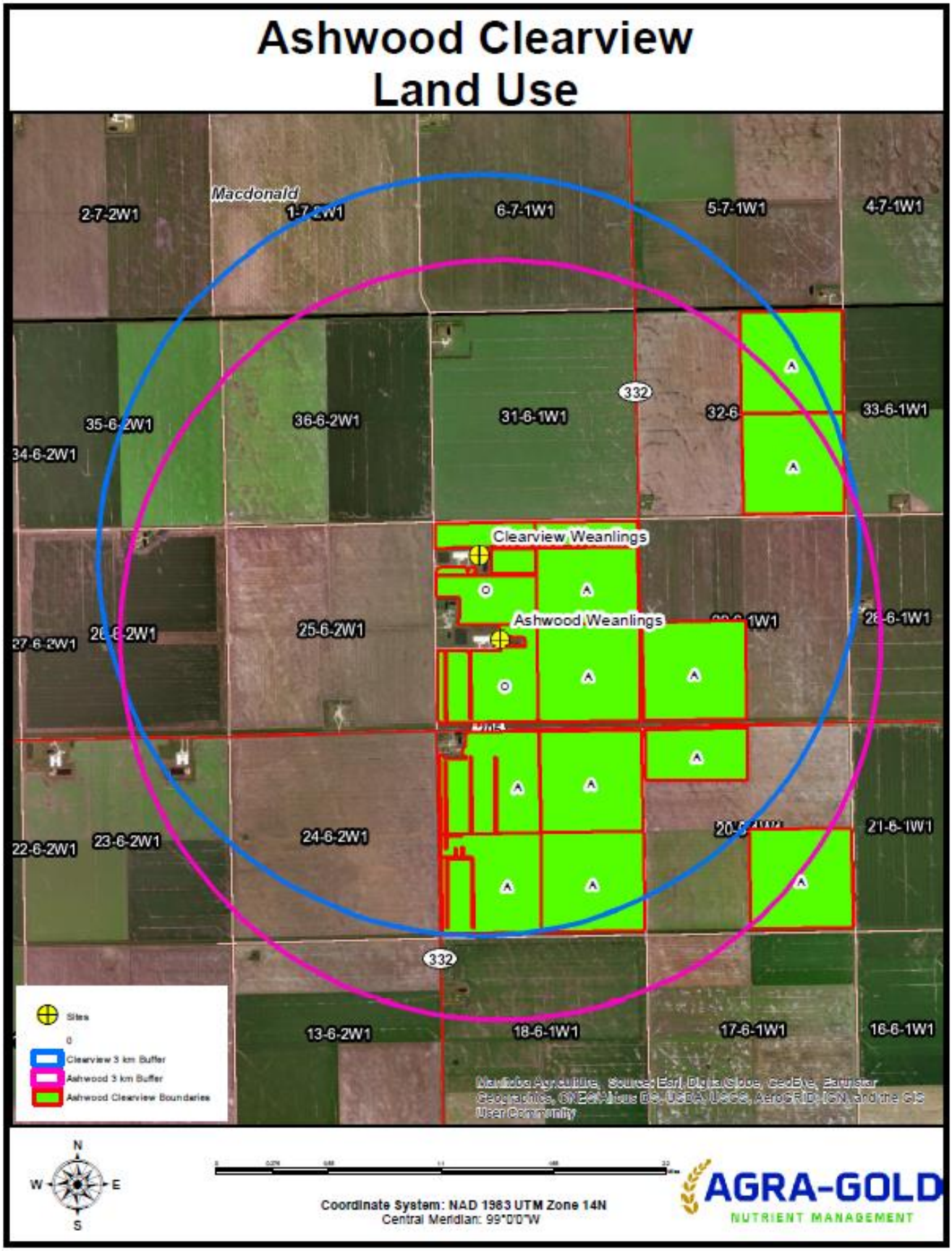
- No change to existing buildings
- Earthen manure storage
- Consuming a maximum of 12,595 imperial gallons of water per day from an existing well.
- Rendering mortalities
- Truck haul routes as shown in map below

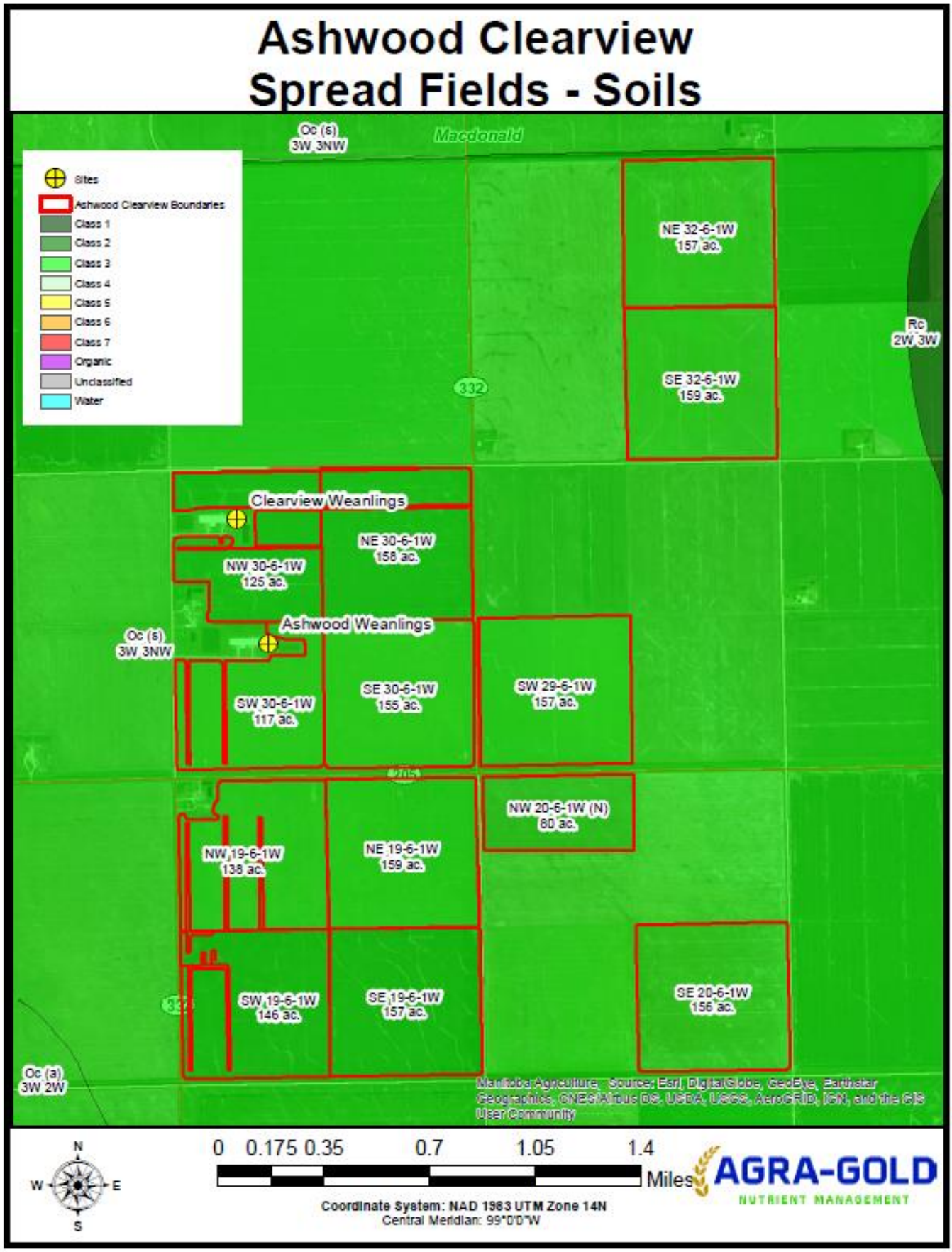
Location Map



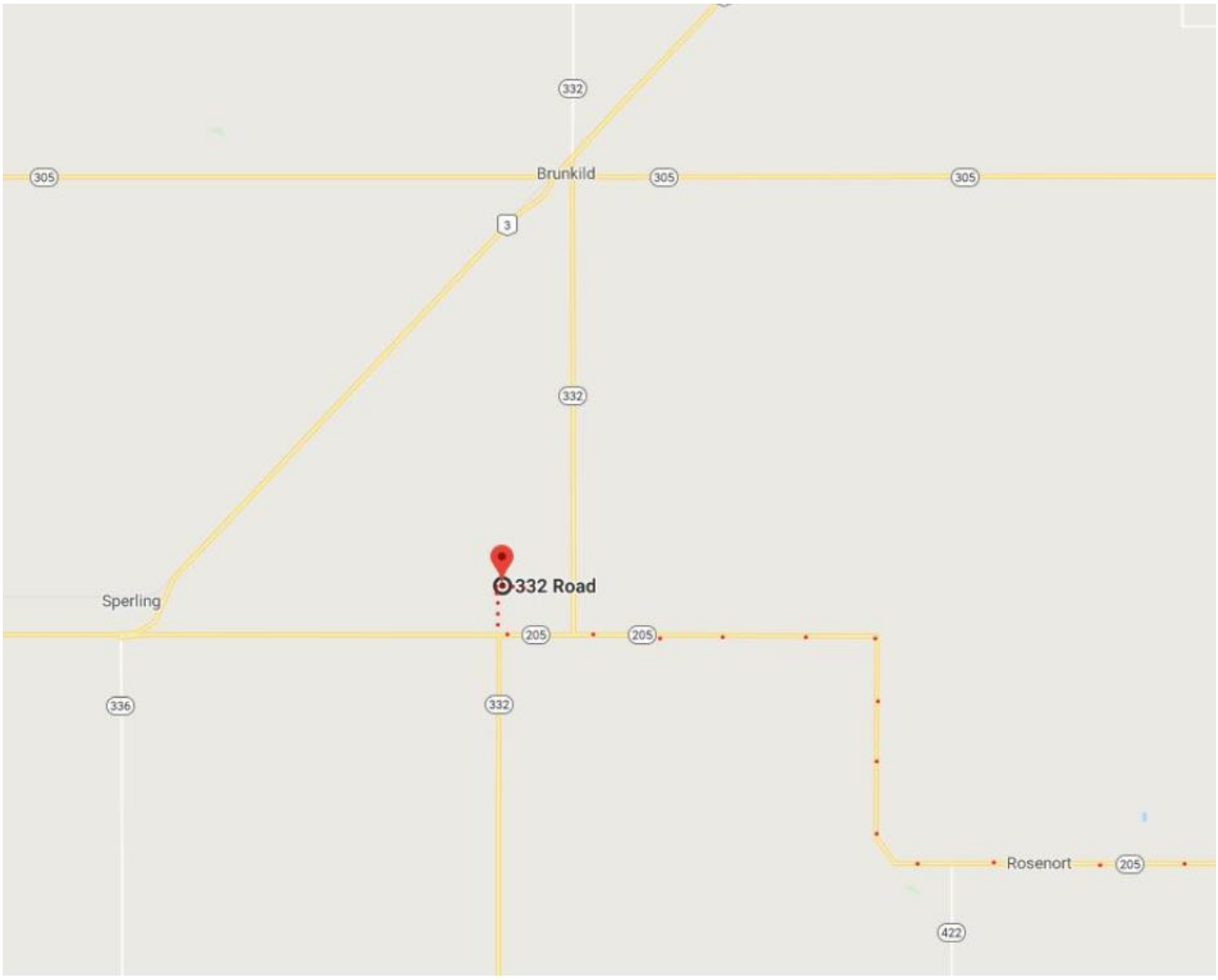
Site Map


635'
663'-6"
164'
1957'
1388'
300'
330'
EXTENT OF ADDITION
40'
Water Pond
724'-6"
EXISTING BARN
EMS
320'
989'-6"
200'
1340'
265'
328'
1252'
rendering bins
N


Ashwood Clearview
Land Use
Macdonald
2-7-2W1
1-7-2W1
6-7-1W1
5-7-1W1
4-7-1W1
35-6-2W1
36-6-2W1
31-6-1W1
32-6
33-6-1W1
34-6-2W1
332
Clearview Weanlings
Ashwood Weanlings
25-6-2W1
27-6-2W1
24-6-2W1
22-6-2W1
23-6-2W1
21-6-1W1
13-6-2W1
18-6-1W1
17-6-1W1
16-6-1W1
Sites
Clearview 3 km Buffer
Ashwood 3 km Buffer
Ashwood Clearview Boundaries
N
W
E
S
Coordinate System: NAD 1983 UTM Zone 14N
Central Meridian: 99°0'0"W
AGRA-GOLD
NUTRIENT MANAGEMENT


Ashwood Clearview
Spread Fields - Soils
Oc (s)
3W 3NW
Macdonald
Sites
Ashwood Clearview Boundaries
Class 1
Class 2
Class 3
Class 4
Class 5
Class 6
Class 7
Organic
Unclassified
Water
NE 32-6-1W
157 ac.
SE 32-6-1W
159 ac.
Rc
2W 3W
332
Clearview Weanlings
NE 30-6-1W
158 ac.
NW 30-6-1W
125 ac.
Ashwood Weanlings
Oc (s)
3W 3NW
SW 30-6-1W
117 ac.
SE 30-6-1W
155 ac.
SW 29-6-1W
157 ac.
NW 20-6-1W (N)
80 ac.
NW 19-6-1W
138 ac.
NE 19-6-1W
159 ac.
SW 19-6-1W
146 ac.
SE 19-6-1W
157 ac.
SE 20-6-1W
156 ac.
Oc (a)
3W 2W
Manitoba Agriculture. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
N
W
E
S
0 0.175 0.35 0.7 1.05 1.4
Miles
AGRA-GOLD
NUTRIENT MANAGEMENT
Coordinate System: NAD 1983 UTM Zone 14N
Central Meridian: 99°0'0"W

Truck Haul Route



C. SITE ASSESSMENT OVERVIEW

Provincial Technical Overview of TRC 12-067 – Maple Leaf Agri-Farms: Ashwood				
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	Maple Leaf Agri-Farms Ashwood is seeking Conditional Use approval to operate a 1,600 sow, farrow to nursery operation plus a 350 gilt quarantine barn, which is equivalent to 551 animal units (AU).	**ARD[1]**
3	Project clearly defined as an animal confinement facility	X	The project is clearly defined as an animal confinement facility.	**CC**
		X	No new barns proposed.	**MR**
4	Identified all existing and proposed buildings and structures and related separation distances	X	The identified existing and proposed buildings and structures meet the required setbacks in the "AG" Zone based on the site assessment plan.	**MR**
5	Demonstrated project site is not located within Nutrient Management Zone N4 or any Nutrient Buffer Zone	X	No person shall construct, install, site, locate, expand or modify a 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[2]**
6	Identified suitable water source: on-site surface water dugout and a water consumption rate of 12,595 imperial gallons per day	X	Under *The Water Rights Act*, all operations using more than 25 000 litres (5,499 Imperial gallons) of water per day must hold a Water Rights Licence (M.R. 126/87). The proponent currently holds a Water Rights Licence for the existing dugout. If the water usage is increasing beyond the licensed allocation, the proponent will be required to submit an Application to Divert and Use Surface Water.	**CC**

[1] Agri-Resource Branch
[2] Agri-Resource Branch, Water Science and Watershed Management Branch

Provincial Technical Overview of TRC 12-067 – Maple Leaf Agri-Farms: Ashwood

Item No.	Provincial Requirements	Confirmed	Related Provincial Safeguards	Dept.
7	Proposed project site meets development plan, zoning by-law	X	The RM of Morris Development Plan By-law No. 1712/15 designates the proposed livestock operation in the NW ¼ 30-6-1W and SW ¼ 30-6-1W as General Agricultural Area. The proposal complies with Development Plan Policies 3.3.4 -3.3.14 (Livestock Policies). The RM of Morris Zoning By-law No. 1713/151 zones the proposed operation as "AG" General Agricultural Zone and has a minimum site area of 40 acres with a minimum site width of 600 feet. The project meet the minimum site area and width requirements in the "AG" zone.	**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 proposed livestock operation is from a pipeline (public) and a dugout. The provincial water well database does not contain information for wells located on the proposed property or spread fields. If there are unused water wells on the site or spread fields these shall 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[3]**
9	Identified suitable manure storage methods	X	A permit to expand the manure storage facility must be obtained, prior to initiating any of the expansion work, in accordance with the Livestock Manure and Mortalities Management Regulation (MR 42/98). 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.	**CC**
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 Livestock Manure and Mortalities Management Regulation (MR 42/98). More specific information is included in the Livestock Manure and Mortalities Management Regulation and at: https://www.gov.mb.ca/sd/waste_management/livestock_program/index.html.	**CC**

[3] Water Science and Watershed Management Branch

Provincial Technical Overview of TRC 12-067 – Maple Leaf Agri-Farms: Ashwood				
Item No.	**Provincial Requirements**	**Confirmed**	**Related Provincial Safeguards**	**Dept.**
12	Proposed suitable setback distances from water and property lines for manure, livestock and mortalities	X	The proponent indicates that the manure storage facility will be setback 240m from a watercourses, sinkholes, spring or well, and 100 m from property boundaries. These setbacks for the existing manure storage facility are in compliance with the Livestock Manure and Mortalities Management Regulation. The proponent has stated that an expansion of the manure storage facility to 400 days storage is planned for 2021 and that property boundaries have been adjusted to meet the 100m setback distance requirement.	**CC**[4]
13	Indicated if proposed project site is within designated flood area or is otherwise at risk of flooding	X	The proposed project site is on the outside of the very western edge of the Red River Designated Flood Area. This site is not subject to Section 17 of the Water Resources Administration Act and the Designated Flood Area Regulation. However, this land was inundated during the 1997 Spring Flood event which is consider a 1:100 year flood event. We would recommend that all permanent structures be raised to a 1:200 year Flood Protection Level of 239.88 metres (787 feet) CGVD28 using clean impervious fill.	**MI**
14	Proposed acceptable odour control measures	X	As this is an existing operation, there should be no increase in odours following approval. 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.	**ARD**[5]
		X	*The Planning Act* allows municipal councils to require a manure storage cover and the planting of a shelter belt as conditions of approval.	**MR**

[4] Water Science and Watershed Management Branch
[5] Agri-Resource Branch

Provincial Technical Overview of TRC 12-067 – Maple Leaf Agri-Farms: Ashwood				
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	Maple Leaf Agri-Farms Ashwood and Clearview operations share the land available for manure application. Therefore, the total land base for the combined livestock inventory was assessed. As well, Manitoba Agriculture and Resource Development released a revised land calculator on February 19, 2020. The combined, required land base for both Maple Leaf Agri-Farms Ashwood (1,600 sows, farrow to nursery and 350 gilt places) and Clearview (1,600 sows, farrow to nursery) operations, is 1,753 acres of suitable land for manure application using the revised calculator. They have demonstrated that they have access to 1,864 suitable acres. (See Appendix A). 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.	**ARD[6]**
16	Indicated if spread fields are located in the Red River Valley Special Management Area or any other regularly inundated area	X	Spread fields are within the Red River Valley Special Management Area. Per Section 14 of the Livestock Manure and Mortalities Management Regulation (42/98) fall manure applications (September 10 – November 10) to tilled land must be injected or incorporated within 48 hours.	**CC**
17	Proposed spread fields, that meet development plan and zoning by-law requirements	X	The operation is designated General Agricultural (Development Plan By-law No. 1712/15) and complies with Livestock Policies 3.3.4 -3.3.14. The proposed site is zoned “AG” Agricultural General Zone. The spread fields meet the minimum zoning by-law requirements in the “AG” zone for the earthen manure storage facility and animal confinement facility set back requirement to a residence/dwelling and designated area.	**MR**
18	Proposed acceptable manure transportation methods	X	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**

[6] Agri-Resource Branch

Provincial Technical Overview of TRC 12-067 – Maple Leaf Agri-Farms: Ashwood				
Item No.	**Provincial Requirements**	**Confirmed**	**Related Provincial Safeguards**	**Dept.**
		X	Please be advised that any structures placed within the controlled area of PR 205, PR 332 and PTH 3 (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 or Sheena.Delrosario@gov.mb.ca. The placements of temporary drag lines or any other temporary machinery/equipment for manure application within the right-of-way of PR 205, PR 332 and PTH 3 requires permission from our regional office in Steinbach. Please contact the Regional Planning Technologist, Denise Stairs at (204) 871-2239 or Denise.Stairs@gov.mb.ca. In addition, please notify the Regional Planning Technologist for the placement of temporary draglines or other temporary equipment for manure application within the controlled area of PR 205, PR 332 and PTH 3 (125 feet from the edge of the right-of-way). Forrester Drain to the South and Boyne Channel to the North have been designated Provincial Waterways. Provincial Waterways are subject to section 14(4) of *The Water Resources Administration Act* which states: *"No person shall place any material on, remove any material from, or construct, carry out, reconstruct, establish, or place, any works or structures on, over, or across, a provincial waterway, except as may be authorized in writing by the minister and subject to such terms and conditions as the minister may prescribe."* Provincial Waterway Authorization must be obtained by Water Management and Structures prior to the commencement of any construction or activity along a Provincial Waterway, including the use of draglines. Please contact MITWaterReview@gov.mb.ca to apply for Provincial Waterway Authorization.	**MI**
19	Identified suitable trucking routes and access points	X	The subject land has frontage along a municipal road. The proposed truck haul will utilize an existing municipal road connecting to PR 205. We don't anticipate a substantial increase in use for the existing access.	**MI**
20	Identified proposed trucking routes – local roads	X	As per Section 116(2) of *The Planning Act*, 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.	**MR**
21	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.	**ARD**[7]

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

[7] Wildlife and Fisheries Branch

D. PUBLIC COMMENTS AND DISPOSITIONS

No 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 Morden 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 Morden Community Planning Office), and
    c) every person who made representation at the hearing.

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 *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

Land Assessment
Manitoba Agriculture and Resource Development

Agri-Resource Branch

Maple Leaf Agri-Farms Ashwood and Clearview operations share the land available for manure application. Therefore, the total land base for the combined livestock inventory was assessed.

Maple Leaf Agri-Farms Ashwood and Clearview operations have met the land requirements for 3200 sows (farrow to nursery) and 350 purchased gilts, as follows:

In areas of lower livestock intensity such as the RM of Morris, 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 Maple Leaf Agri-Farms Ashwood and Clearview operations, 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 Risk Area 12.

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 19, 2020. The combined, required land base for both Maple Leaf Agri-Farms Ashwood (1600 sows, farrow to nursery and 350 gilt places) and Clearview (1600 sows, farrow to nursery) operations, is 1753 acres of suitable land for manure application using the revised calculator. They have demonstrated that they have access to 1864 suitable acres.

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. Injection of manure at appropriate rates poses lower environmental risk than other manure application methods and conserves nitrogen increasing the fertilizer value of the manure.

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. Straw cover on the expanded earthen manure storage 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 shares a land base with Maple Leaf Agri-Farms: Clearview and has calculated the land base for the combined manure production of the two operations. The proponent acknowledges that 3,330 acres may be required for the long-term environmental sustainability of the operations. The proponent has identified 1,864 acres for manure application. Application to meet crop N requirements is estimated to use 1,276 acres. Application at 2 times the crop removal of P is estimated to use 1,753 acres (3,330 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).