

TECHNICAL REVIEW COMMITTEE

A TECHNICAL REVIEW REPORT PREPARED FOR

THE RURAL MUNICIPALITY OF RITCHOT

Red River Pullet Farms Ltd SW 18-08-04E

TRC 12-004

October 3, 2013

A. INTRODUCTION

The Technical Review Committee (TRC) consists of representatives from the following provincial departments:

- Agriculture, Food and Rural Initiatives (MAFRI);
- Conservation & Water Stewardship (CWS);
- Infrastructure and Transportation (MIT)
- Local Government (LG); and
- Any other department that may have an interest, which may be consulted during the process.

The Technical Review Coordinator, Manitoba Local Government, chairs the committee.

The Technical Review Committee Report includes the following:

- An assessment of completeness and nature of the information contained in the Site Assessment provided by the project proponent that enables the TRC to conduct its review.
- A summary of public comments along with proponent and departmental responses, if any.
- Recommendations to the Municipal Council based upon a review of all of the information provided by the proponent.

Should the Municipal Council provide conditional approval of the proposal, the project proponent will be required to obtain various permits and licenses from the Province to address in greater detail environmental aspects of the proposal.

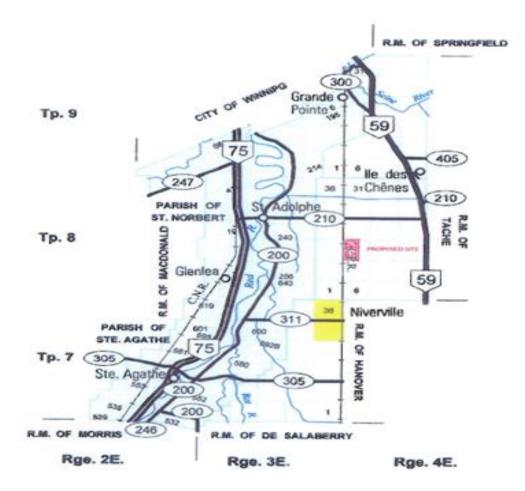
B. DESCRIPTION OF PROPOSED LIVESTOCK OPERATION

To view a detailed description go to

www.gov.mb.ca/ia/programs/livestock/public_registries.html

Applicant: Red River Pullet Farms Ltd

Site Location: Approximately 2 miles north of the Town of Niverville, in the R.M. of Ritchot (SW 18-08-04EPM) Refer to Map below.



Proposal: To establish a 130,000 pullet (429 A.U.) operation. This will involve the following;

- Constructing two 60' X 342' barns and a 60' X 138' enclosed wood frame manure storage building
- Water consumption of 5,200 imperial gallons per day/ 7.0 acre-feet per year
- Spreading manure over an area of 1278 acres
- Composting dead animals on site
- Using the truck haul routes as shown below.



C.SITE ASSESSMENT AUDIT

Site Assessment Sections	Meets Requirements for TRC Review (type "X")	Comment	Reviewing Department	
2.0 Description of Operation	X	The applicant has provided a detailed description of the current operation.	LG	
3.0 Nature of Project	x	The applicant has clearly defined the nature of the project.		
4.0 Proposed Type and Size of Operation	x	The applicant has indicated that this is a 130,000 pullet operation with 2 cycles per year.	MAFRI	
5.0 Animal Confinement Facilities	x	Climate Change & Environmental Protection – Environmental Programs and Strategies: Manitoba Conservation and Water Stewardship regulates the construction of manure storage facilities (MSF) by requiring the proponent to submit an "Application for Permit to Construct, Modify or Expand a Manure Storage Facility". The definition of MSF does not include gutter or pit (including under barn storage) used to contain liquid or semi-solid manure for less than 30 days for the purpose of moving the manure to a storage facility.	CWS	
6.0 Environmental Farm Planning	X	This is a new operation so they do not have an Environmental Farm Plan	MAFRI	
7.0 Water		Climate Change & Environmental Protection - Environmental Programs and Strategies: The proposed operation is a new facility and not yet constructed, therefore the producer has not submitted Source Water Monitoring analysis. No deficiency was identified. Water Stewardship – Water Science and Management: The proponent has acknowledged that land base calculations have taken into account the required setbacks for water features. It is important that nutrients not be applied within the Nutrient Buffer Zone as outlined in the Nutrient Management Regulation (appended Table 1); Agri-Maps indicate a Class 4 drain (St. Adolphe Coulee) through River lots 234, 235, 239 and 240 Parish of St. Norbert. The setback area for this order of drain and application method is 8 meters. 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).	cws	
		Water Stewardship – Water Use Licensing:		

Site Assessment Sections	Meets Requirements for TRC Review (type "X")	Comment	Reviewing Department
		With wash water, this project could potentially exceed the threshold for licensing a livestock project; therefore, the proponent is encouraged to submit an application for a water rights licence.	
8.0 Manure Related	x	Climate Change & Environmental Protection - Environmental Programs and Strategies: The proposed operation is a new facility and not yet constructed, therefore the producer has not submitted a Manure Management Plan for the 2014 crop year. No deficiency was identified.	cws
8.1 Land Available/Required for Manure Application	X	A detailed description of the land assessment is provided in the Appendix. In summary, in order to satisfy the Province's land base requirement, Red River Pullets Ltd must demonstrate access to sufficient suitable land to apply manure at a rate equivalent to 2 times the crop removal rate of phosphorus. Red River Pullets Ltd has submitted 1138 acres of suitable land which greatly exceeds the current Provincial land base requirement. Red River Pullets has an additional 140 acres of land that has not been soil tested, bringing the total available land to 1278 acres. As such, Red River Pullets has demonstrated that sufficient land will be available to ensure the long-term sustainability of the operation when beneficial management practices are used. Manitoba Local Government – Land Use Designations and Zoning All identified spread fields are appropriately designated as "Green/Agricultural" Policy Areas in the Macdonald-Ritchot Planning District Development Plan (By-Law 2-2010) and are appropriately zoned as "Agricultural General" in the RM of Ritchot Zoning By-Law 18-2002.	MAFRI LG (CRP Regional Office)
8.1 Land Available/Required for Manure Application(Permit Related)	X	Climate Change & Environmental Protection - Environmental Programs and Strategies: Manitoba Conservation and Water Stewardship has obtained information on average phosphorus output from livestock and expected crop removal rates of phosphorus as well as Census data in order to estimate the phosphorus budget in each Rural Municipality within agro-Manitoba. "Certain Areas", are defined by the Livestock Manure and Mortalities Management Regulation as areas where the amount of phosphorus in the manure produced annually by livestock in an area of not less than 93.24 km ² is greater than two times the annual crop removal rate of P ₂ O ₅ in that area. The Rural Municipality of Ritchot is not considered to be a "certain area".	cws

Site Assessment Sections	Meets Requirements for TRC Review (type "X")	Comment	Reviewing Department
		base calculation necessary for application of manure. In addition, operators must identify manure spread fields and demonstrate that the application meets the minimum regulated requirement. In areas of Manitoba which are not considered to be "certain areas" as defined above, Manitoba Conservation and Water Stewardship's current policy for the construction permit is to require an operation to demonstrate access to sufficient land to apply manure at a rate equivalent to 2 X the crop removal rate of phosphorus. The proponent has indicated that 1138 acres is available and suitable for manure application; therefore Manitoba Conservation and Water Stewardship is sufficiently satisfied with the proposal for a pullet operation in this respect.	
		Water Stewardship – Water Science and Management: 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 excessive build-up in soils. Consequently, sufficient land base or economically achievable treatment technologies must be available so that manure can be applied at no more than 1 times crop removal rates. Over the short-term, regulations allow manure to be applied at no more than 2 times crop removal rates when soil-test phosphorus is between 60 ppm and 120 ppm. Once phosphorus levels reach 120 ppm, applications of manure would be restricted to no more than 1 times crop removal rates. It should be noted that soil-test phosphorus levels of 60 ppm are well above phosphorus needs for most crops (over 20 ppm is usually considered very high), and that as excess phosphorus levels build up in soils, greater losses occur to surface and ground water. For long-term planning purposes, the proponent needs to have sufficient land available to ensure that manure can be applied at 1 times crop removal;	
		Red River Pullets has demonstrated that sufficient suitable land is available for long-term planning purposes and management of phosphorus.	
9.0 Mortalities Disposal	x	Climate Change & Environmental Protection – Environmental Programs and Strategies: In accordance with the Livestock Manure and Mortalities Management Regulation 42/98, mortalities must be kept in a secure storage room, covered container or secure location; and continuously frozen or refrigerated, if not disposed of within 48 hours after death.	cws
		Composting mortalities is acceptable provided the composting site is located at least 100-meters from any surface	

Site Assessment Sections	Meets Requirements for TRC Review (type "X")	Comment	Reviewing Department
		watercourse, sinkhole, spring or well, and the operation's boundaries. Mortalities must be composted in a manner that does not cause pollution of surface water, groundwater or soil, and the composting facility and process must be acceptable to the Director of Manitoba Conservation and Water Stewardship.	
		Application of composted mortalities to land is prohibited between November 10 of one year and April 10 of the following year.	
		Although a plan has not been approved at this time by Manitoba Conservation and Water Stewardship, it is not a requirement provided that the producer abides by the regulatory requirements in the case of a mass mortality. In the event of a mass mortality, operators should contact the local Manitoba Conservation and Water Stewardship office. The proponent should prepare a contingency plan in case of a catastrophic event resulting in mass mortalities.	
10.0 Project Site Description	X	 Development Plan The subject land is designated 'Green/Agricultural Policy Area' in the Macdonald-Ritchot Planning District Development Plan (By-law 2-2010). In addition, Map 15 of the Development Plan identifies the subject land as 'MSD – Livestock Mutual Separation Distance Management Area'. The policies relevant to the subject proposal can be summarized as follows: A Conditional Use order will be required (in the Zoning By- law) to allow for a livestock operation with greater than 300 AU. (Policy 4.4.1.3). The proposed operation must be compatible with the nature of the surrounding area (Policy 4.4.1.3(a)). The proposed operation will not be detrimental to the health or welfare of people in the area (Policy 4.4.1.3(a)) The proposed operation should not be on Class 6 or 7 soils (Policy 4.4.1.3(b)). The location must not be within the mutual separation distance requirements established in the Zoning By-law (Same distances as Provincial Land Use Regulation). 	LG (CRP Regional Office)
		Zoning The subject land is zoned 'AG' Agricultural General Zone, in RM of Ritchot Zoning By-law 18-2002. As indicated in the application, the proposed site meets the minimum bulk requirements of the zone.	
		The nearest dwelling is approximately 4,500' from the proposed operation and the nearest Designated Area (St. Adolphe) is approximately 14520' from the proposed operation. Both are well beyond the required minimum separations distances.	
		<u>Conclusion</u> The proposed operation is in compliance with the policies of	

Site Assessment Sections	Meets Requirements for TRC Review (type "X")	Comment	Reviewing Department
		the Development Plan. The proposed operation will require a Conditional Use order from the RM of Ritchot Council to allow for a 429 AU operation in the AG Zone.	
10.0 Project Site Description (Native Prairie, Wildlife Mgt Areas, Crown Land)	x	Conservation Programs – Wildlife & Ecosystem Protection: No concerns Conservation & Water Stewardship – Lands Branch: No concerns	CWS
11.0 Truck Haul Routes and Access Points	X	MIT has reviewed this application. The proposed site does not front onto a provincial highway nor does it have direct access onto a provincial highway. Based on the available information we have no concerns with this proposed development. It should be noted that PR 210 in this vicinity can handle Class B1 loading. PR 311 between PTH 59 and Niverville is capable of RTAC loading.	MIT

- CWS Conservation and Water Stewardship
- LG- Local Government
- MAFRI- Manitoba Agriculture, Food and Rural Initiatives
- MIT Manitoba Infrastructure and Transportation

D. PUBLIC COMMENTS & DISPOSITIONS

None Received

E.CONCLUSIONS & RECOMMENDATIONS

Overall Conclusion

Based on the Site Assessment submitted by the producer and available information, the Technical Review Committee recommends the following appropriate practices, measures and safeguards be taken in addition to any additional measures identified through subsequent Provincial and Federal licensing or permitting in order to minimize any identified risks to health, safety and the environment.

Recommended Actions to Council

- As per Section 114(1) of The Planning Act, Council must set a date for a Conditional Use hearing which must be at least 30 days after it receives this report
- As per Section 114(2) 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 la Prairie Community & Regional 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;
 - B. publish the notice of hearing in one issue of a newspaper with a general circulation in the planning district or municipality; and
 - C. post a copy of the notice of hearing on the affected property in accordance with Section 170 of The Planning Act.
- Council may wish to ask for a contingency plan, provided by the proponent, detailing dead animal disposal method(s) in the event of a catastrophe resulting in mass mortalities.
- Council should specify in its Conditional Use Order, the number of head of each subspecies and the legal location of the animal confinement area(s).
- 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 la Prairie Community & Regional Planning Office); and
 - C. every person who made representation at the hearing.

Recommended Actions to Proponent

- The proponent is required to submit an ``Application for Permit to Construct, Modify, or Expand a Manure Storage Facility" to Manitoba Conservation and Water Stewardship for each Manure Storage Facility (MSF) to be constructed;
- Construction of a MSF shall not commence until a permit is granted by the Director, and adequate notification is given to Manitoba Conservation and Water Stewardship;
- The proponent shall ensure the MSF, alone or in combination with other MSFs located on the property of the agricultural operation, is/are of sufficient capacity to store all livestock manure produced and used by the agricultural operation;
- Livestock manure shall be stored until such a time that it can be applied as fertilizer.
- The proponent must submit a Manure Management Plan (MMP) annually to Manitoba Conservation and Water Stewardship in accordance with the *Livestock Manure and Mortalities Management Regulation* (MR 42/98).
- The proponent is encouraged to submit an application for a water rights licence to Manitoba Conservation and Water Stewardship.
- In accordance with the *Livestock Manure and Mortalities Management Regulation*, the proponent must annually submit to Manitoba Conservation and Water Stewardship analytical results from samples of drinking water provided to their livestock.
- In order to satisfy the Province's land base requirement, Red River Pullets Ltd must demonstrate access to sufficient suitable land to apply manure at a rate equivalent to 2 times the crop removal rate of phosphorus. Red River Pullets Ltd has submitted 1138 acres of suitable land which greatly exceeds the current Provincial land base requirement.
- Red River Pullets has an additional 140 acres of land that has not been soil tested, bringing the total available land to 1278 acres. As such, Red River Pullets has demonstrated that sufficient land will be available to ensure the long-term sustainability of the operation when beneficial management practices are used.

* and any additional measures identified through subsequent Provincial licensing or permitting in order to minimize any identified risks to health, safety and the environment.

The overall conclusion represents the consensus of the TRC Members.

F. TECHNICAL REVIEW COMMITTEE MEMBERS

Name	Department	Title	Address	Telephone
Don Malinowski Chair	Local Government	Senior Planner,TRC Community & Regional Planning Branch	604-800 Portage Avenue Winnipeg	945-8353
Petra Loro	Agriculture, Food and Rural Initiatives	Livestock Environment Specialist	545 University Crescent Winnipeg	945-3869
Andrea Bergman	Conservation and Water Stewardship	Technical Review Officer Environmental Programs & Strategies Branch	1007 Century St Winnipeg	945-4384
Heinz Lausmann	Heinz Lausmann Infrastructure and Transportation		1420 - 215 Garry Street Winnipeg	945-2664

Appendix A

Table 1.Setback requirements for livestock manure application on land adjacent to surface waters or a
groundwater feature.Setback requirements extracted from the Livestock Manure and Mortalities
Management Regulation (MR 42/98) and the Nutrient Management Regulation (MR 62/2008).

Surface water or Groundwater Feature		Manure Application Method	Manure Application Setback Width (metres) with Permanently Vegetated Buffer Width (metres)	Manure Application Setback Width (metres) with no Permanently Vegetated Buffer	Regulation Source for Setback Width	
	Designated as vulnerable in Nutrient Management Regulation schedule ¹	Any method	30 m setback, consisting of 30 m permanently vegetated buffer	35 m setback	Nutrient Management Regulation (MR 62/2008)	
Lakes		Injection or low-level application followed by immediate incorporation	15 m setback, consisting of 15 m permanently vegetated buffer	20 m setback	Livestock Manure and Mortalities	
	-	High-level broadcast or low-level application without incorporation	30 m setback, including 15 m permanently vegetated buffer	35 m setback	Management Regulation (MR 42/98)	
Rivers, creeks, streams drains, designated as an	Designated as vulnerable in Nutrient Management Regulation schedule ¹	Any method	15 m setback, consisting of 15 m permanently vegetated buffer	20 m setback	Nutrient Management Regulation (MR 62/2008)	
		Injection or low-level application followed by immediate incorporation	3 m setback, consisting of 3 m permanently vegetated buffer	8 m setback	Livestock Manure and Mortalities	
	-	High-level broadcast or low-level application without incorporation	10 m setback, including 3 m permanently vegetated buffer	15 m setback	Management Regulation (MR 42/98)	
Groundwater feature ²	-	Any method	15 m setback, consisting of 15 m permanently vegetated buffer	20 m setback		
Major wetland, bog, marsh or swamp ³ and constructed storm water retention ponds	rsh or swamp ³ and onstructed storm		3 m setback, consisting of 3 m permanently vegetated buffer	8 m setback	Nutrient Management Regulation	
Wetland, bog, marsh or swamp not defined as major	-	Any method	Distance between the water's edge and the high water mark		(MR 62/2008)	
Roadside ditch or an Order 1 or 2 drain	-	Any method	No direct application to dit drain			

¹ Designated as vulnerable if listed in the schedule in the Nutrient Management Regulation under the Water Protection Act.

² Groundwater feature means a sinkhole, a spring or a well other than a monitoring well.

- As defined in 1(2) in the Nutrient Management Regulation under the Water Protection Act. For the purposes of this regulation, a wetland, bog, marsh or swamp is major if it:
 - has an area greater than two hectares (4.94 acres)
 - is connected to one or more downstream water bodies or groundwater features
 - contains standing water or saturated soils for periods of time sufficient to support the development of hydrophytic vegetation.

Land Base Assessment for Red River Pullets Ltd TRC Report Sept 9, 2013 Petra Loro, Livestock Environment Specialist

Manitoba Agriculture, Food and Rural Initiatives (MAFRI) assessed the land base for manure application as provided by the proponent in order to provide Council with the assurance that adequate suitable land is available for this operation. The Province will require sufficient suitable land when the proponent applies for the manure storage facility permit.

In the Rural Municipality of Ritchot, it is currently the Government of Manitoba's policy to require enough suitable land to allow manure application at a rate that does not exceed 2 times the phosphorus that will be removed from the field in the harvested portion of the crop. Phosphorus typically determines the land base requirement. Only lands with Agriculture Capability Class 1 to 5 and recent soil tests demonstrating phosphorus (P) levels below 60 ppm Olsen P are considered suitable. Buffer strips and setbacks must be excluded.

Red River Pullets Ltd has submitted 1138 acres of land below 60 ppm Olsen P for manure application. All of this land is Agriculture Capability Class 2 and 3 (prime agricultural land) based on detailed and reconnaissance soil survey. The soil survey information indicates the land has slight to moderate limitations due to wetness (W), density (D) and inundation (I).

MAFRI has calculated the land base requirement considering the total number of animals proposed, typical nutrient excretion rates, the cropping system provided, a 20% N loss during storage and the nitrogen and phosphorus (expressed as P_2O_5) crop removal rates. 130,000 pullets are estimated to excrete about 42328 lb N per year and 38896 P_2O_5 per year (assuming 2 cycles per year). The crop yields used are long-term, 10-year (2003-1012) MASC yield averages for C, D and E soil zones in the RM of Ritchot. Based on the crop rotation indicated for the 'acreage suitable for manure spreading' and the 10-year MASC yield averages, the average crop N removal rate is estimated to be 70 lb N per acre per year and the average crop P_2O_5 removal rate is estimated to be 30 lb P_2O_5 per acre per year. In order to satisfy the **Province's land base requirement, Red River Pullets Ltd requires a minimum of 613 acres of suitable land.** To ensure the long-term environmental sustainability of the operation, however, Red River Pullets Ltd may require up to a total of 1227 acres to balance manure P with crop P removal over the life of the operation.

Red River Pullets Ltd has identified 1138 suitable acres for manure application that have recent soil tests. They have also indicated that there is an additional 140 acres that are available but require retesting, bringing the total land available for manure to 1278 acres. As such, Red River Pullets Ltd has exceeded the current Provincial land base requirement and demonstrated that sufficient land will be available to ensure the long-term sustainability of the operation when beneficial management practices are used.

All of the river lots are adjacent to St. Adolphe. The recommended separation distance from a designated residential area (i.e. urban centre) is 400 m when manure is incorporated within 48 hours.

MAFRI also reviewed the soil test reports provided by the operation. In Manitoba, manure application to land is regulated on the basis of residual soil nitrate-N limits and phosphorus thresholds. The fields identified for manure application include Class 2 and 3 soils (excluding 3M and 3MW) for which the residual soil nitrate-N limit is 140 lbs/acre. The fields identified for manure application also include Class 3 M soils for which the residual soil nitrate-N limit is 90 lbs/acre. None of the soil test reports exceed these limits.

All of the fields identified for manure application are currently below 60 ppm Olsen P. Manure can be applied to meet the nitrogen requirements of the crop on these fields. However, this often results in more phosphorus being applied than is removed from the field and a build-up of soil test phosphorus. No more than 2 times crop removal rates for phosphorus can be applied when soil-test phosphorus is between 60 ppm and 120 ppm. If soil test levels reach 120 ppm Olsen P, manure application rates will be restricted to no more phosphorus than what is removed in the harvested portion of the crop over the course of a rotation.

Actual manure application rates will be determined in the manure management plan submitted to Manitoba Conservation and Water Stewardship. Although the regulations allow for greater build-up of soil test P, since Red River Pullets Ltd has enough land to balance manure application rates with crop P_2O_5 removal, it is recommended that Red River Pullets Ltd manage the fertility of the fields that receive manure to keep all soil tests below 60 ppm P for the long-term environmental sustainability of the operation.

MAFRI provides extension support and computer software to help producers complete manure management plans. If the operation uses professional services to prepare the plan, manure management planners must successfully complete the Manure Management Planners Course offered by the Assiniboine Community College and be a member in good standing in the Manitoba Institute of Agrologists or a Certified Crop Advisor. If the services of a Commercial Manure Applicator are obtained to apply the manure, the applicator must be trained by the Assiniboine Community College and Icenced by MAFRI.