

SITE ASSESSMENT

For Large Livestock Operation Proposals (300 Animal Units or more)

Purpose

The set up, or expansion, of a livestock operation that has 300 Animal Units or more is subject to Part 7 of The Planning Act. This includes consideration as a conditional use by the municipal council or planning district board. It also includes a review by the Technical Review Committee (TRC) appointed by the Minister of Local Government. The Technical Review Committee Regulation requires a site assessment to help the committee do its review and allow people who will be affected by the livestock operation to comment on the proposal.

Description of Operation

Operation name: Red River Pullet Farms Ltd.

Operation location (project site):

Rural Municipality (RM) of Ritchot

Legal description: section, township, range or river lot(s)

Sw 18-8-4E

Municipal tax roll number(s) 27400.000

Show the location of the operation (project site) on a location map. (See Location Map for example).

For help with mapping, contact your Community and Regional Planning Regional Office.

Location Map attached

For links to resources, click on the highlighted underlined items.

For definitions, click on the Glossary of Terms.

For additional help, contact the Technical Review Coordination Unit.

R.M. OF RITCHOT



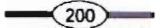

MAP REVISED:- JANUARY, 2008

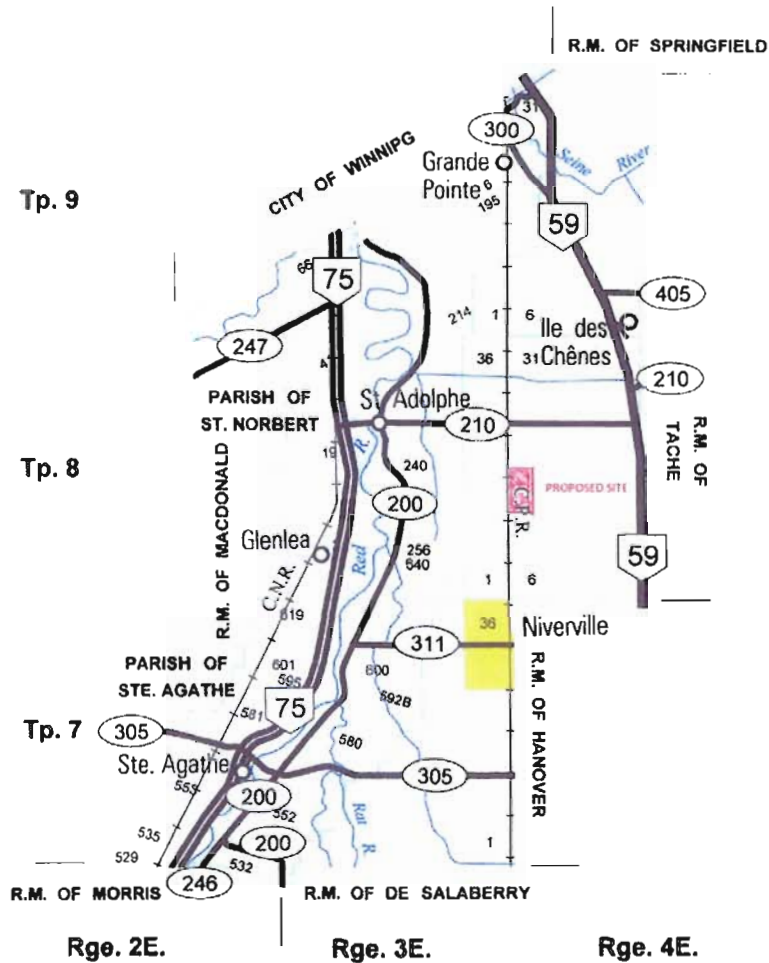


0 5
SCALE IN KILOMETRES

MANITOBA
TRANSPORTATION AND GOVERNMENT SERVICES
HIGHWAY PLANNING AND DESIGN BRANCH
DRAFTING SECTION
WINNIPEG
JANUARY, 2003

LEGEND

- PROVINCIAL TRUNK HIGHWAYS ...  ACCESS ROADS ... 
- PROVINCIAL ROADS ...  RAILWAYS ... 



Nature of Project **New operation** **Expansion of existing operation**

State if any existing buildings will be replaced or demolished. If existing buildings will be reused, state how they will be reused.

Proposed Type and Size of Operation

State the proposed type and size of the operation. (See Animal Units Calculation Table.)

Type of operation (Column B from Animal Unit Calculation Table)	Existing number of animals (Column C from Animal Unit Calculation Table)	Total Animal Units (Column F from Animal Unit Calculation Table)
Pullet operation	130000 birds proposed	429 A.U.

 Animal Units Calculation Table attached**Animal Confinement Facilities**

To ensure a confined livestock area can be built in a way that ensures the environment is protected, a permit is required for operations with 300 Animal Units or more. Permits are required by the Livestock Manure and Mortalities Management Regulation, under *The Environment Act* (MR 42/98).

Type of housing: barn outdoor seasonal feeding area feedlot

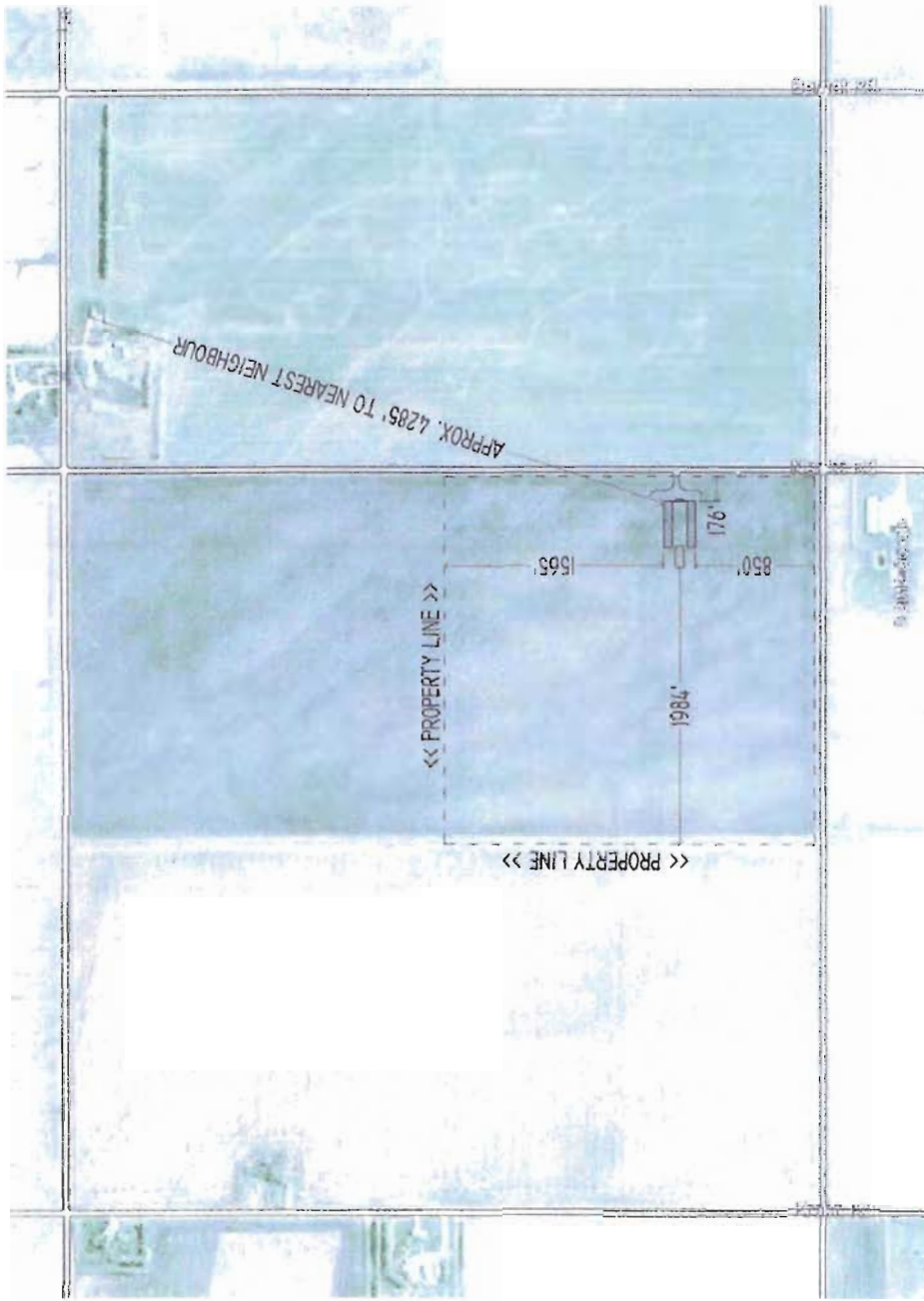
Show all existing and proposed buildings on the project site plan. See Project Site Plan example and the Project Site Plan Guide for help creating your site plan.

 Project Site Plan attached

Animal Units Calculation Table

Animal Type	Type of Operation	Existing Number	Proposed Additional Number	Animal Units per Head	Total Animal Units	Annual Confinement Period (Days)
Dairy	Cows - milking cows			2	-	
Beef	Beef cows including associated livestock			1.25	-	
	Backgrounder			0.5	-	
	Summer pasture / replacement heifers			0.625	-	
	Feeder cattle			0.769	-	
Pigs	Sows - farrow to finish (234-254 lbs)			1.25	-	
	Sows - farrow to weaning (up to 11 lbs)			0.25	-	
	Sows - farrow to nursery (51 lbs)			0.313	-	
	Boars (artificial insemination units)			0.2	-	
	Weanlings, Nursery (11-51 lbs)			0.033	-	
	Growers / Finishers (51-249 lbs)			0.143	-	
Chickens	Broilers			0.005	-	
	Roasters			0.01	-	
	Layers			0.0083	-	
	Pullets	-	130,000	0.0033	429.00	365
	Broiler breeder pullets			0.0033	-	
	Broiler breeder hens			0.01	-	
Turkeys	Broilers			0.01	-	
	Heavy Toms			0.02	-	
	Heavy Hens			0.01	-	
Horses	Mares			1.333	-	
Sheep	Ewes			0.2	-	
	Feeder lambs			0.063	-	
Other Livestock	Type:				-	
	Type:				-	
				Total AUs	429.00	365.00

For all other livestock or operation types please inquire with your Manitoba Agriculture, Food and Rural Initiatives GO office to determine the animal units per head.
www.gov.mb.ca/agriculture/contact/agoffices.html



CLIENT
RED RIVER VALLEY FARMS LTD.
SW 18 B-E

PROJECT
SITE PLAN

DATE
SEPTEMBER 2012

DATE
JUNE 2013

TOTAL AREA = 42,254 SQFT

PREPARED BY
R. FLORIES
SOUTH-MAN ENGINEERING

DATE NOTED
AS NOTED

PROJECT NO.
SP-2

Environmental Farm Planning

Environmental farm planning is a voluntary, confidential self-assessment process designed to help farm managers identify the environmental strengths and weaknesses of their operations.

Do you have an Environmental Farm Plan yes no **NEW OPERATION**

Water

Project Sites Unsuitable for Development

To protect water quality, the Nutrient Management Regulation (MR 62/2008), under *The Water Protection Act*, prohibits the set up or expansion of nutrient generating facilities in Nutrient Management Zone 4 (Agriculture Capability Class 6, 7 and unimproved organic soils) and Nutrient Buffer Zones. This includes barns, confined livestock areas and manure storage facilities

The Nutrient Buffer Zone is an area of land along water bodies (ex: rivers, lakes, streams, drains) that varies, depending on the waterway.

The proposed barn and/or manure storage facility:

is
is not

located within Nutrient Management Zone 4 (Class 6, 7 and unimproved organic soils) or any Nutrient Buffer Zone.

Determine the agriculture capability class (es) of the project site, and its limitations. (See Agri-Maps.)

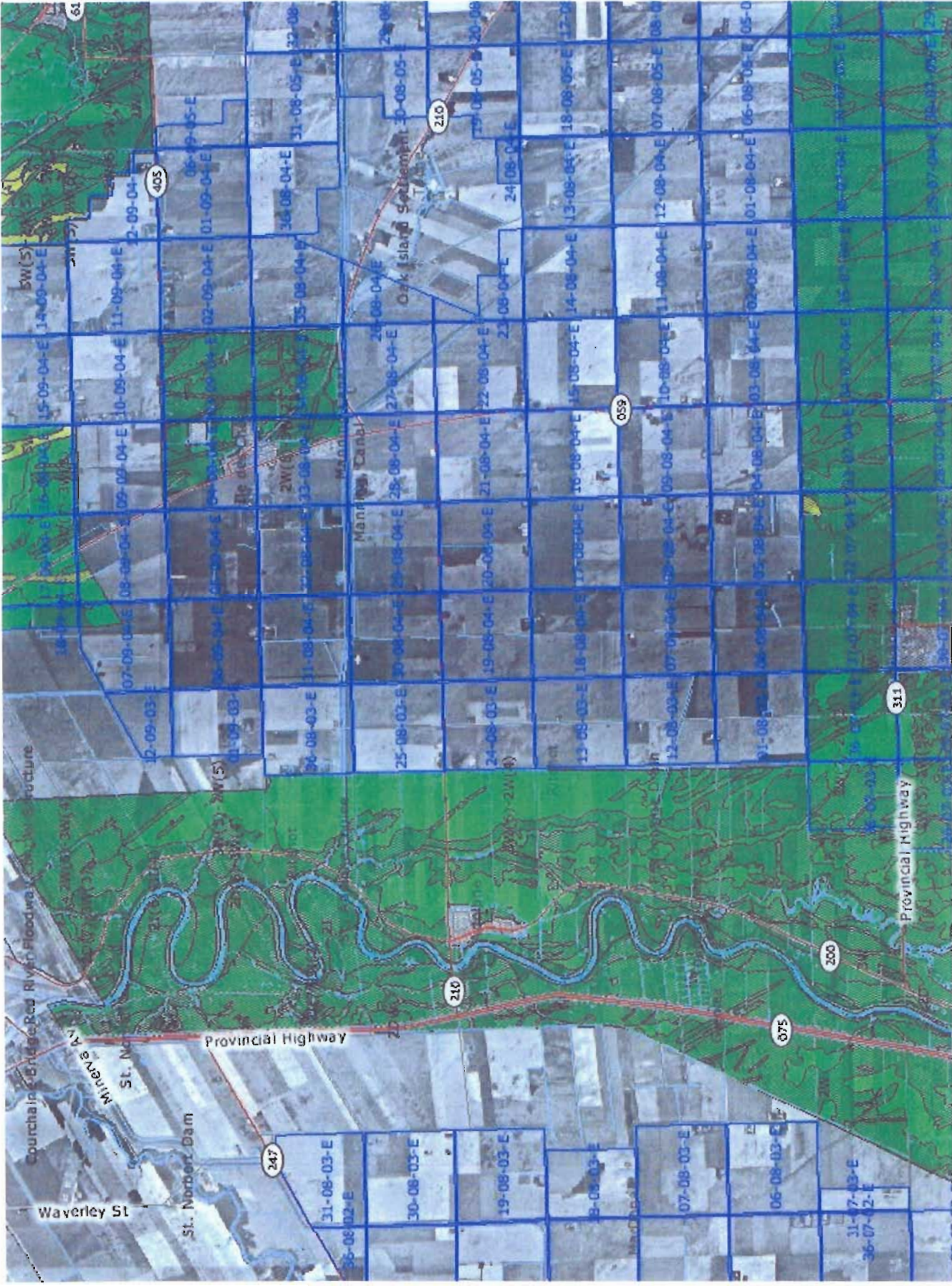
Water Source

To be sustainable, a livestock operation must have access to a sufficient quantity and quality of water for livestock.

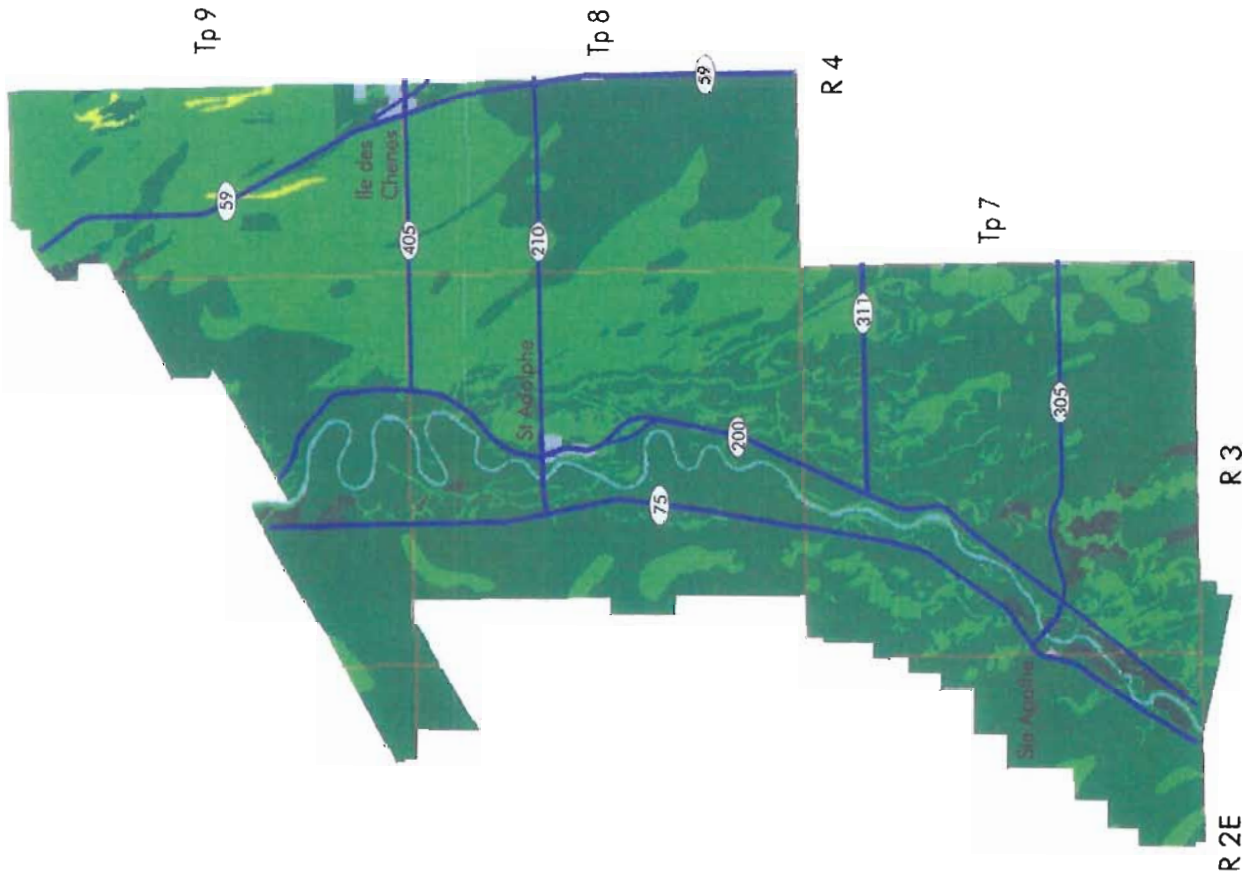
Water source for operation:

- pipeline (public) river
 lake
 dugout (dimensions : _____ x _____ x _____)
 proposed well existing well

If using an existing well, provide a copy of the water well log and logs for other wells on the property. Logs can be obtained from Manitoba Water Stewardship by calling 204-945-7418 in Winnipeg; 1-800-214-6497 toll free.



Agriculture Capability Map



Canada Land Inventory Classes

- Class 1
- Class 2
- Class 3
- Class 4
- Class 5
- Class 6
- Class 7
- Organic
- Unclassified
- Water

Scale



(Km.)

Universal Transverse Mercator
(NAD27) Projection

Land Resource Unit
Winnipeg Manitoba
June 2003

Source Water Analysis Reports

Annual, livestock, source water monitoring analysis reports must be submitted to Manitoba Conservation, for existing operations with operations of 300 Animal Units or more.

Have you submitted an annual, source water monitoring report for the current calendar year? yes no **N/A PROPOSED OPERATION**

Will livestock have direct access to surface water? yes no

If yes, identify:

Name of the water body _____

Steps that will be taken to prevent direct access of livestock to the water body.

Water Requirements

To protect the sustainability of water sources, all operations using more than 25,000 litres (5,499 imperial gallons) per day must have the Water Rights Licence required by the Water Rights Regulation (MR 126/87) under *The Water Rights Act*.

For more information, contact the Water Use Licensing Section at 204-945-3983 in Winnipeg; 1-800-214-6497 toll free.

Water Use

To calculate the total water use, go to the Water Requirement Calculation Table.

Maximum daily use: 5200 imperial gallons or litres

Maximum annual use: 7.0 acre-feet or cubic decameters

Water Requirement Calculation Table attached

Ground Water (Contamination Risk Protection)

Improper storage and handling of manure or mortalities increases the risk of contaminating groundwater. Beneficial management practices (BMP), mitigation measures and requirements for the permit process reduce this risk. Soil testing, manure management planning and proper engineering, along with construction and management of manure storage structures reduce the risk of contaminating groundwater.

Check the mitigation measures used for the existing components of the operation that may pose a risk of contamination. Also check any measures that may be used with the proposed components for this expansion, if applicable:

Water Requirement Calculation Table

Livestock	Number	IG/day per animal in summer	IG/day per animal in summer	IG/day
Heeder/helper/steer (600 lb.)		5	9	-
Heeder (900 lb.)		7	12	-
Heeder (1250 lb.)		10	15	-
Dow/calf pair		12	15	-
Dry cow		10	12	-
Milking cow		25	30	-
Bison		8	10	-
Horses		8	11	-
Dow (Farrow/wean)		6.5		-
Dry Sow/Boar		4		-
Heeder		3		-
Nursery (33 lb.)		2		-
Broilers		0.035		-
Roasters/Pullets	130,000	0.04		5,200
Layers		0.055		-
Breeders		0.07		-
Turkey Growers		0.13		-
Turkey Heavies		0.16		-
Sheep/Goats		2		-
Ewes/Does		3		-
Lambs/Kids (90 lb.)		1.6		-
TOTAL				5,200
TOTAL				1,898,000

Enter this number on page 4 of the Site Assessment.

Enter this number on page 4 of the Site Assessment.

Notes:

Imperial gallons per day – IG/day)

For beef, dairy, bison and horse enterprises:
Use summer numbers if appropriate for the operation.
Otherwise base projections on winter values. Always use the greater of the two values.

Water Rights Licences are issued to a specific legal land description. Obtaining a Water Rights License or information as to the licensing requirements can be obtained through Manitoba Water Stewardship at (204) 945-3983 or 1-800-282-8069 Ext 3983.

Other consumption values:
Normal household consumption, 40-55 Imperial Gallons per day per person
(180-250 l/day/person)
Hydrant flow, 10 imperial GPM (45 l/min)

Conversion Factor: 1271,470 Imperial Gallons = 1 acre-foot

	Exist	Proposed
Manure is stored in a storage facility built by permit or registered by Manitoba Conservation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Storage includes leachate collection.	<input type="checkbox"/>	<input type="checkbox"/>
Earthen storage has between 400 and 500 days' storage.	<input type="checkbox"/>	<input type="checkbox"/> N/A
Steel/concrete tank has between 250 and 500 days' storage.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Manure storage facility meets required setbacks.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Field storage (solid manure) locations are changed annually.	<input type="checkbox"/>	<input type="checkbox"/> N/A
Field storage meets required setbacks.	<input type="checkbox"/>	<input type="checkbox"/> N/A
All application fields are soil tested annually for nitrate-N and Olsen phosphorus.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
All manure is applied according to a manure management plan.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Licensed commercial manure applicator is used to apply manure.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Abandoned wells have been properly sealed.	<input type="checkbox"/>	<input type="checkbox"/> N/A

Other:

Flooding

The Livestock Manure and Mortalities Management Regulation prohibits an operator from putting a manure storage facility within the boundaries of the 100-year flood plain elevation. Manure storage facilities that have protection for a flood-water level at least 0.6 meters higher than the 100-year flood water level are exempt.

The Designated Flood Area Regulation under *The Water Resources Administration Act* requires a Designated Flood Area Permit before a proposed structure (such as a barn) can be built within a Designated Flood Area.

The flood protection level for structures located within a Designated Flood Area is the 100-year flood elevation or an elevation set by Manitoba Water Stewardship. Contact the Forecasting and Flood Co-ordination Branch at 204-945-2121 in Winnipeg; 1-800-214-6497 toll free.

The proposed site:

is is not

located in a Designated Flood Area: Red River Valley Designated Flood Area or Lower Red River Designated Flood Area

Note: At the time a permit is issued, verification is needed to ensure any proposed barns are located within the 100-year flood plain elevation; or an elevation set by Manitoba Water Stewardship.

Watershed Management Planning

Integrated watershed management planning is a co-operative effort by local residents, stakeholders and governments to create a long term plan to manage water and land-based activities for watersheds.

What are the names of the watershed and sub-watershed where the livestock operation and the fields identified for manure application are located.

Name of watershed(s): Seine River Watershed

Name of sub-watershed(s): _____

Name of Integrated Watershed Management Plan for the proposed project site, if applicable: Seine River Integrated Watershed Management Plan

For more on Integrated Watershed Management Planning, call Watershed Planning and Programs at 204-945-7408 in Winnipeg; 1-800-214-6497 toll free.

Manure Related

The Livestock Manure and Mortalities Management Regulation sets requirements for the use, management and storage of livestock manure in agricultural operations, to ensure it is handled in an environmentally sound manner. For more on this, call Manitoba Conservation at 204-945-5168 in Winnipeg.

Improper storage, handling and/or land application of manure can contaminate water and/or cause unacceptable odours for neighbours. The following is used to assess the manure management system.

Manure Type

The type of manure generated and used by the operation influences storage, handling and land application options available.

What type(s) of manure will be generated?

solid semi-solid liquid

Manure Volume or Weight

The quantity of manure will determine the capacity requirements for the manure storage facility or field storage area.

What is the total volume or weight of manure generated annually by the livestock operation? (See Manure Storage Calculation Table.)

liquid volume: _____ solid weight: 64058 ft³/yr

Manure Storage Calculation Table attached

Manure Storage Type and Capacity

The type of storage system used will affect the capacity requirements for the manure storage facility or field storage area.

What type of manure storage system will be used by the operation?

- under-barn concrete earthen concrete/steel tanks
 field storage confined livestock area

Provide the dimensions of the existing and/or proposed manure storage facilities, if applicable. (See Existing and Proposed Manure Storage Facility Dimensions Table.)

Existing and Proposed Manure Storage Facility Dimension Table attached

Odour Control Measures (project site)

Barns and manure storage facilities can be significant sources of livestock odours. The use of manure storage covers and shelterbelts can reduce this, particularly for the neighbourhoods close to the operation.

What odour control measures you are planning to use?

Manure storage cover: yes no

Type of cover: wood frame building enclosing storage

Shelterbelt planting: yes no existing shelterbelt

Other measures (specify): _____

Manure Treatment

The Livestock Manure and Mortalities Management Regulation states that nobody can expand a confined livestock area or a manure storage facility for pigs, unless it includes anaerobic digestion or other environmentally sound manure treatment that is the same or better than anaerobic digestion. The alternative treatment must be approved by the Manitoba government.

Does your proposal include anaerobic digestion or another environmentally sound treatment for manure? yes no not applicable
 anaerobic decomposition will occur.

Manure Application Method

The Livestock Manure and Mortalities Management Regulation requires the registration of annual manure management plans for new or expanding operations with 300 Animal Units or more.

Concrete Storage Capacity

Operation: Red River Pullet Farms Ltd.
Owner: Jake Doerksen
Legal: SW18-8-4E
RM: Richot

Livestock	Quantity	Daily Production (ft ³ /animal/day)	Annual Manure Production (ft ³)
Chickens (Pullets)	130,000	0.00135	64,058

Storage Length (ft)	Storage Width (ft)	Wall Thickness (in)	Door Clearance (ft)	Wall Height (ft)	Effective Storage Length (ft)	Effective Storage Width (ft)	Pile Height (ft)*	Storage Capacity (ft ³)	Days Storage Capacity
150	60	20	10	6.0	138.33	58.33	8.0	64,556	368

*Assumed average pile height over width of building.

Does the operation currently file an annual manure management plan with Manitoba Conservation? (For operations with 300 Animal Units or more, only)

yes no N/A New operation

Manure application methods and the season they're applied in affect odour, nutrient availability, crop response, land base requirements and the risk of water contamination.

Application method: broadcast broadcast and incorporation within 48 hours
 injection

The Livestock Manure and Mortalities Management Regulation prohibits new operations and existing livestock operations 300 Animal Units or more from application of manure, from November 10 of one year to April 10 of the following year (winter application).

Time of year for application: spring summer fall

The Livestock Manure and Mortalities Management Regulation puts restrictions on fall application of manure in the Red River Valley Special Management Area.

The proposed spread fields:

are
are not

in the Red River Valley Special Management Area.

Land Available for Manure Application

The land available for manure application includes all suitable land (owned, leased or under agreement) that is available to the operation for manure application. Manure from any other livestock operation is not permitted to be used on this land.

Under the Livestock Manure and Mortalities Management Regulation and the Nutrient Management Regulation, application of nutrients is not permitted on Agriculture Capability Class 6, 7 and unimproved organic soils (Nutrient Management Zone 4) and within Nutrient Buffer Zones. The Nutrient Buffer Zone is an area of land along water bodies (ex: rivers, lakes, streams, drains) that varies depending on the waterway.

Areas of a field that are Class 6, 7, unimproved organic soils (Nutrient Management Zone 4) or are within the nutrient buffer zones are considered unsuitable for manure application. In addition, fields with 60 parts per million Olsen phosphorus (P) in the top six inches (15 centimetres) of soil will not be included in the land base calculation.

Use the [Manure Application Field Characteristics Table](#) to determine the following:

Total suitable area available for manure application

1138 acres

Manure Application Field Characteristics Table attached

additional 140 acres available upon soil testing

Copies of **soil test reports** that are no more than 12 months old must also be included with this submission.

Soil test reports for the required area for manure application attached.

Land Required for Manure Application

Long term, land base requirements for manure application are calculated based on estimates of the quantity of nutrients (nitrogen and phosphorus) excreted by livestock and the removal of nutrients by the proposed crops.

Phosphorus

The quantity of phosphorus excreted by the livestock depends on the type, number and age of livestock (see [Animal Units Calculation Table](#)), the quantity and availability of phosphorus fed to the livestock and the amount retained by the livestock.

The removal of phosphorus by crops depends on the crops grown and the historical crop yield averages. (See [Manure Application Field Characteristics Table](#).)

The [Livestock Manure and Mortalities Management Regulation](#) requires that the proposal must satisfy Manitoba Conservation that "sufficient land is available to the operator to implement an appropriate manure management plan" for a manure storage facility, before Manitoba Conservation issues a permit.

In areas of high livestock intensity (ex: RMs of Hanover and La Broquerie), it is Manitoba Conservation policy to approve a manure storage facility permit if the operation shows it has access to sufficient suitable land to apply manure at a rate equivalent to one times the crop removal rate of phosphorus.

Are any of the lands for manure application in the RMs of Hanover or La Broquerie? yes no

Manure Application Field Characteristics Table

Field	Legal Description ¹	Municipality	Of/LA ²	Acreage Available ³	Features ⁴	Expected Crop to be Grown (Historical Yield Average)	Soil Nitrate ^{5,6}	Soil Phosphorus ^{5,7}	Acreage Suitable for Manure Spreading ⁸	Development Plan Designation ⁹	Zoning ¹⁰
1	W1/2 18-8-4E	Ritchot	O	310	None	Spring wheat, 35.9 bu/ac	36 lb/ac	36 ppm	310	By-Law 18-2002	AG
2	NE 19-8-4E	Ritchot	O	73	Dwelling	Grain Corn, 86.2 bu/ac	84 lb/ac	43 ppm	73	By-Law 18-2002	AG
3	RL 234,235 Parish of St Norbert	Ritchot	L	100	Natural Drainage	Soybeans, 30 bu/ac	25 lb/ac	6 ppm	100	By-Law 18-2002	AR
4	RL 239,240 parish of St Norbert	Ritchot	L	50	Natural Drainage	Canola, 29.2 bu/ac	18 lb/ac	19 ppm	50	By-Law 18-2002	AR
5	SE 13-8-3E	Ritchot	A	155	None	Winter Wheat 73.4 bu/ac	46 lb/ac	33 ppm	155	By-Law 18-2002	AG
6	NE 13-8-3E	Ritchot	A	150	Dwelling	Winter Wheat 73.4 bu/ac	21 lb/ac	30 ppm	150	By-Law 18-2002	AG
7	NW 29-8-4E **	Ritchot	O	140	None	Canola, 29.2 bu/ac	37 lb/ac	12.7 ppm	0	By-Law 18-2002	AG
8	SW 29-8-4E **	Ritchot	O	145	Subdivided Yard site	Canola, 29.2 bu/ac	129 lb/ac	23.2 ppm	145	By-Law 18-2002	AG
9	SE 30-8-4E **	Ritchot	O	155	None	Canola, 29.2 bu/ac	184 lb/ac	57.4 ppm	155	By-Law 18-2002	AG
10											
11											
16											
17											
18											
19											
20											
TOTAL PROPOSED				1278							
								TOTAL	1138		

1. _____ Indicates Roll Number, Sec, T, W, S, R, E or River Lot.
 2. _____ Indicates how the land has been secured for spreading
 3. _____ Acreage available should take into account setbacks from water courses, including ditches, property lines (refer to setback tables in the SA Guide)
 4. _____ Features indicate any dwellings, other uses, wells (existing or abandoned), water bodies or other natural features within or adjacent to a spread field (note if any native habitat is proposed for manure application)
 5. _____ Soil fertility analysis must be completed by an accredited soil-testing laboratory.
 6. _____ Nitrate concentration N (lb/ac at 0-24 inch depth)
 7. _____ Phosphorus concentration (ppm P at 0-5 inch depth) based on extraction method specified
 8. _____ Suitable acreage is to be based on soil, crop and setback calculations
 9. _____ Please reference the Development Plan for the designations
 10. _____ Please reference the Zoning Bylaw of your municipality(ies)

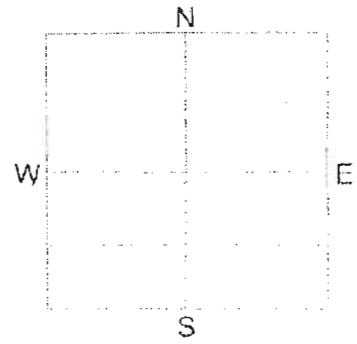
**** Acreage currently under agreement with other operation, agreement terminating in August 2013. NW 29-8-4E will be tested and included in acreage for future.**



Soil Analysis by Agvise Laboratories
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **WEBER**
 SAMPLE ID **W 1/2 18-B-AE**
 FIELD NAME
 COUNTY
 TWP
 SECTION QTR ACRES **320**
 PREV. CROP **Soybeans**



SUBMITTED FOR:
PRAIRIE HARVEST FARMS

SUBMITTED BY: **TE3082**
TERRAFLEX AG-NIVERV.
25 1ST AVE S
BOX 356
NIVERVILLE, MB **ROA 1EO**

REF # **14166497** BOX # **0**
 LAB # **NW154606**

Date Sampled **10/17/2012**

Date Received **10/18/2012**

Date Reported **10/23/2012**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
0-6" 6-24"	21 lb/ac 15 lb/ac		Wheat-Spring	YIELD GOAL	Corn-Grain	YIELD GOAL	Oats	YIELD GOAL		
Nitrate	0-24" 36 lb/ac		60 BU		120 BU		120 BU			
Phosphorus	0-24" 36 ppm		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
Potassium	508 ppm		Band/Maint.		Band/Maint.		Band/Maint.			
Chloride	0-24" 128 lb/ac		LB/ACRE APPLICATION		LB/ACRE APPLICATION		LB/ACRE APPLICATION			
Sulfur	0-6" 26 lb/ac 6-24" 234 lb/ac		N 111	N 78	N 69					
Boron	1.4 ppm		P ₂ O ₅ 38 Band *	P ₂ O ₅ 48 Band *	P ₂ O ₅ 30 Band *					
Zinc	4.72 ppm		K ₂ O 10 Band (Starter)*	K ₂ O 10 Band (2x2) *	K ₂ O 10 Band (Starter)*					
Iron	20.0 ppm		Cl 0	Cl Not Available	Cl 0					
Manganese	1.7 ppm		S 0	S 0	S 0					
Copper	2.25 ppm		B 0	B 0	B 0					
Magnesium	1934 ppm		Zn 0	Zn 0	Zn 0					
Calcium	5302 ppm		Fe 0	Fe 0	Fe 0					
Sodium	70 ppm		Mn 0	Mn 0	Mn 0					
Org. Matter	6.5 %		Cu 0	Cu 0	Cu 0					
Carbonate (ECE)	3.0 %		Mg 0	Mg 0	Mg 0					
Sol. Salts	0-6" 0.66 mmho/cm 6-24" 0.81 mmho/cm		Lime	Lime	Lime					
			Sulph	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			0-6" 8.0		44.2 meq	% Ca (65-75) 59.9	% Mg (15-20) 36.4	% K (1-7) 2.9	% Na (0-5) 0.7	% H (0-5)

General Comments: Texture is not estimated on high pH soils.

Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 38 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Crop 2: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 30 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 48 K2O = 32 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

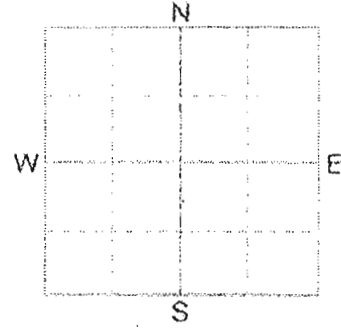
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 15 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 30 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.



Soil Analysis by **Agvise Laboratories**
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **PET 001**
 SAMPLE ID **NE-19-8-4E**
 FIELD NAME
 COUNTY
 TWP
 SECTION QTR ACRES **80**
 PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
PRAIRIE HARVEST

SUBMITTED BY: **TE3082**
TERRAFLEX AG-NIVERV.
25 1ST AVE S
BOX 356
NIVERVILLE, MB **ROA 1E0**

REF # **13497885** BOX # **0**
 LAB # **NW52472**

Date Sampled **08/21/2012**

Date Received **08/23/2012**

Date Reported **10/11/2012**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
0-6" 6-24"	45 lb/ac 39 lb/ac		Canola-bu	Soybeans	Corn-Grain	YIELD GOAL	YIELD GOAL	YIELD GOAL		
Nitrate	0-24" 84 lb/ac		50 BU	40 BU	120 BU					
Phosphorus	Olsen 43 ppm		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
Potassium	565 ppm		Broadcast/Maint	Broadcast/Maint	Broadcast/Maint					
Chloride	0-24" 544 lb/ac		LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Sulfur	0-6" 34 lb/ac 6-24" 306 lb/ac		N 91		N ***		N 60			
Boron	1.5 ppm		P ₂ O ₅ 0		P ₂ O ₅ 0		P ₂ O ₅ 15	Band (2x2) *		
Zinc	2.52 ppm		K ₂ O 0		K ₂ O 0		K ₂ O 10	Band (2x2) *		
Iron	27.1 ppm		Cl	Not Available	Cl	0	Cl	Not Available		
Manganese	2.2 ppm		S 10	Broadcast	S 0		S 0			
Copper	3.47 ppm		B 0		B 0		B 0			
Magnesium	2318 ppm		Zn 0		Zn 0		Zn 0			
Calcium	5509 ppm		Fe 0		Fe 0		Fe 0			
Sodium	115 ppm		Mn 0		Mn 0		Mn 0			
Org. Matter	4.8 %		Cu 0		Cu 0		Cu 0			
Carbonate (COE)	5.7 %		Mg 0		Mg 0		Mg 0			
Soil Salts	0-6" 0.77 mmho/cm 6-24" 0.86 mmho/cm		Limb		Limb		Limb			
			Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			0-6" 8.0		48.8 meq	% Ca (65-75)	% Mg (15-20)	% K (1-7)	% Na (0-5)	% H (0-5)
						56.4	39.6	3.0	1.0	

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 45 K2O = 23 A GVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

Crop 2: Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is very high based on the salt and carbonate levels. Crop Removal: P205 = 35 K2O = 60 A GVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.

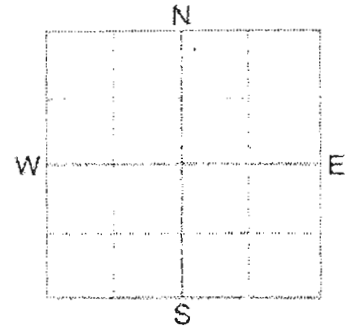
Crop 3: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 48 K2O = 32 A GVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.



Soil Analysis by Agvise Laboratories
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **BIN PIECE**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **RL 234,235**
 SECTION QTR ACRES **120**
 PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
PRAIRIE HARVEST

SUBMITTED BY: **TE3082**
TERRAFLEX AG-NIVERV.
25 1ST AVE S
BOX 356
NIVERVILLE, MB ROA 1EO

REF # **13497887** BOX # **0**
 LAB # **NW52476**

Date Sampled **08/21/2012**

Date Received **08/23/2012**

Date Reported **10/11/2012**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
Depth	Concentration		Crop	Yield Goal	Crop	Yield Goal	Crop	Yield Goal			
0-6" 6-24"	13 lb/ac 12 lb/ac		Canola-bu	50 BU	Soybeans	40 BU	Corn-Grain	120 BU			
0-24"	25 lb/ac										
Nitrate			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
Phosphorus Olsen	6 ppm		Band		Band		Broadcast/Maint.				
Phosphorus	381 ppm		LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Potassium	64 lb/ac		N 150		N ***		N 119				
Chloride	22 lb/ac 96 lb/ac		P ₂ O ₅ 48	Band *	P ₂ O ₅ 35	Band *	P ₂ O ₅ 88	Broadcast			
Sulfur	1.4 ppm		K ₂ O 0		K ₂ O 0		K ₂ O 10	Band (2x2) *			
Boron	0.47 ppm		Cl	Not Available	Cl	0	Cl	Not Available			
Zinc	25.9 ppm		S 15	Band	S 5	Band (Trial)	S 0				
Iron	1.8 ppm		B 0		B 0		B 0				
Manganese	2.2 ppm		Zn 2	Band (Trial)	Zn 2	Band (Trial)	Zn 6	Broadcast			
Copper	2209 ppm		Fe 0		Fe 0		Fe 0				
Magnesium	5598 ppm		Mn 0		Mn 0		Mn 0				
Calcium	86 ppm		Cu 0		Cu 0		Cu 0				
Sodium	4.7 %		Mg 0		Mg 0		Mg 0				
Organic Matter	3.0 %		Lime		Lime		Lime				
Carbonate CCE	0.66 mmho/cm 0.56 mmho/cm		Soil pH	7.8	Cation Exchange Capacity	47.7 meq	% Base Saturation (Typical Range)				
Sol. Salts							% Ca	% Mg	% K	% Na	% H
							58.6	38.6	2.0	0.8	(0-5)

General Comments: Texture is not estimated on high pH soils.

Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is high based on the salt and carbonate levels. Crop Removal: P2O5 = 35 K2O = 60 AGVISE Band guidelines will build P & K test levels to the medium range over many years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.

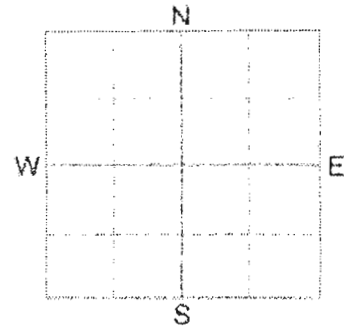
Crop 3: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 48 K2O = 32 AGVISE Broadcast/Maintenance guidelines will build P & K test levels to the high range over several years and then maintain them.



Soil Analysis by Agvise Laboratories
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **ST ADOLPHE**
 SAMPLE ID
 FIELD NAME
 COUNTY
 TWP **RL 239, 240**
 SECTION QTR ACRES **200**
 PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
PRAIRIE HARVEST

SUBMITTED BY: **TE3082**
TERRAFLEX AG-NIVERV.
25 1ST AVE S
BOX 356
NIVERVILLE, MB ROA 1EO

REF # **13497888** BOX # **0**
 LAB # **NW52477**

Date Sampled **08/21/2012**

Date Received **08/23/2012**

Date Reported **10/11/2012**

Nutrient In The Soil		Interpretation	1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
Depth	Concentration		Crop	Yield Goal	Crop	Yield Goal	Crop	Yield Goal		
0-6"	9 lb/ac	*****	Canola-60	50 BU	Soybeans	40 BU	Corn-Grain	120 BU		
6-24"	9 lb/ac		N	157	N	***	N	126		
0-24"	18 lb/ac	*****	P ₂ O ₅ 15 Band *	P ₂ O ₅ 14 Band *	P ₂ O ₅ 15 Band (2x2) *	K ₂ O 0	K ₂ O 10 Band (2x2) *			
Nitrate			Cl	Not Available	Cl	0	Cl	Not Available		
0-6"	19 ppm	*****	S 15 Band	S 5 Band (Trial)	S 0	B 0	B 0			
6-24"	19 ppm		B 0	B 0	Zn 0	Zn 0	Zn 0			
0-24"	116 lb/ac	*****	Zn 0	Zn 0	Fe 0	Fe 0	Fe 0			
0-6"	28 lb/ac		Mn 0	Mn 0	Mg 0	Mg 0	Cl 0			
6-24"	120 lb/ac	*****	Cu 0	Cu 0	Mg 0	Mg 0	Lime			
Sulfur			Lime		Lime		Lime			
0-6"	1.2 ppm	*****	Soil pH	Buffer pH	% Base Saturation (Typical Range)					
6-24"	1.2 ppm		Lime		Lime		Lime		Lime	
Boron		*****	Soil pH	7.2	40.6 meq					
Zinc			Lime		Lime		Lime		Lime	
Iron		*****	% Ca	54.0	% Mg	42.8	% K	2.3	% Na	0.9
Manganese			Lime		Lime		Lime		Lime	
Copper		*****	% H	(0-5)						
Magnesium			Lime		Lime		Lime		Lime	
Calcium		*****	General Comments: Clays/Clay Loams (CEC range = 30+) (Fine)							
Sodium			Lime		Lime		Lime		Lime	
Org. Matter		*****	Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.							
Carbonate (L.C.F.)			Lime		Lime		Lime		Lime	
0-6"	0.58 mmho/cm	*****	Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is moderate based on the salt and carbonate levels. Crop Removal: P205 = 35 K2O = 60 AGVISE Band guidelines will build P & K test levels to the medium range over many years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.							
5-24"	0.68 mmho/cm		Lime		Lime		Lime		Lime	
Soil Salts		*****	Crop 3: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 48 K2O = 32 AGVISE Band guidelines will build P & K test levels to the medium range over many years.							

General Comments: Clays/Clay Loams (CEC range = 30+) (Fine)

Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 45 K2O = 23 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. The risk of the development of iron chlorosis on soybeans on this field is moderate based on the salt and carbonate levels. Crop Removal: P205 = 35 K2O = 60 AGVISE Band guidelines will build P & K test levels to the medium range over many years. Soybeans may respond to nitrogen on fields testing less than 60 lb/ac with a limited soybean history.

Crop 3: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 48 K2O = 32 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

LIVESTOCK MANURE SPREADING AGREEMENT

Between: Red River Pullet's Jed Dymek Hereafter referred to as "Livestock Operator"
Please print Signature
 And: Kraha Acres Inc [Signature] Hereafter referred to as:
Please print Signature "Landowner" or
 "Land Renter"

Date: Nov 21/12

The duration of this agreement is of 10 years, beginning at the above date.

Additional terms of this contractual agreement for agricultural inputs and Acts and regulations implicit to this agreement are presented on page 2.

Responsibilities of the Landowner or the Land Renter

Land Parcels selected as potential fields to receive manure

Field	Legal location	(Check one)		Nominal size (acres)	Area available for spreading (acres; exclusive of setbacks see p. 2)	Cropping Intentions	Preferred Application Time
		Owned	Rented				
3	SE 13-8-3E	✓		160	160	Cereals + OS	Fall
4	NE 13-8-3E	✓		155	155	if road side's	Fall

The Landowner or Land Renter: (Check where applicable/proposed)

- will keep this document and any other related records in his files;
- will notify the Livestock Operator of the dates those fields will be available for spreading;
- agrees to purchase manure nutrient at a rate of \$ 0 per 1000 gal or tonne, conditional to manure being applied with the method and time as specified below by the Livestock Operator;
- will incorporate manure within 48 hours of broadcast applications if agreed to as part of the manure application method (below).

Responsibilities of the Livestock Operator

Field Application Details

- Time of Application Spring Summer Fall
- Application method Broadcast Broadcast and incorporate within 48 hours
 Injection Irrigation/sprinkler

Applicator

- Livestock Operator
- Custom applicator Name of applicator: _____

Anticipated Manure Application Starting Date: _____

The Livestock Operator: (Check where applicable/proposed)

- will keep track of these records, but will not disclose them without the consent of the Landowner and the Land Renter;
- will pay all costs for soil testing and these results will be made available to both the Landowner and the Land Renter;
- will carry a manure analysis test and the results will be made available to both the Landowner and the Land Renter;
- will calculate the manure application rate for each field on the basis of (check only one):
 - the soil test recommendations for plant nitrogen requirements or
 - the soil test recommendations for plant phosphorus requirements
 - general soil fertility recommendations as per the *Soil Fertility Guide* (Manitoba Agriculture and Food) or the *Farm Practices Guidelines for Beef/Dairy/Hog/Poultry Producers in Manitoba* series
- will provide a proof of calibration for the manure spreading equipment;
- will notify the Landowner and the Land Renter of changes in anticipated dates and rates of application in volume and crop nutrient (N, P, K);
- will have a manure management plan prepared by a professional agrologist, along with field map(s) highlighting setbacks to observe;
- will provide a copy overall manure management plan to the Landowner and the Land Renter, if applicable.



C12236-090

A & L Canada Laboratories Inc.

2136 Jetstream Road, London, Ontario, N5V 3P5
Telephone: (519) 457-2575 Fax: (519) 457-2664

Report Number: C12236-090
Account Number: 95094

To: AGRI-TREND AGROLOGY
BOX 60
12 ASHLAND DRIVE
SANFORD, MB R0G 2J0
Attn: BRAD SCHNELL
204-736-3368

For: KRAJIN ACRES INC.
(204) 736-2245
(204) 736-3368

Grower Code: 26968

Field: 03 FRED S

Reported Date: 2012-08-27
Printed Date: 2012-08-27

SOIL TEST REPORT

Sample Number	Legal Land Descpt:	Depth	Lab Number	Organic Matter	Phosphorus - P ppm	Bray-P1	Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	pH	pH Buffer	CEC meq/100g	Percent Base Saturations			
													% K	% Mg	% Ca	
1-A	26968 *	6	07844	4.5	52	306	1975	4250	4250	8.0	8.0	39.3	2.0	41.9	54.1	2.0
1-B	26968	24	07845	2.2	4	218	2435	4960	4960	8.3	8.3	47.2	1.2	43.0	52.5	3.3

Sample Number	Sulfur ppm	Nitrate Nitrogen ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Mo ppm	CaCO3 ppm	EC mmhos/cm	%P	Al ppm	%Al	K/Mg Ratio	GFI	NH4N ppm	Chloride Cl ppm	Na ppm
1-B	134	13	5.2						142				0.0	0.03	24.65			359

SOIL FERTILITY GUIDELINES (lbs/ac)

Sample Number	Crop	Yield Goal	Lime Tons/Acre	N	P205	K20	Mg	Ca	S	Zn	Mn	Fe	Cu	B

* Recs are based on building nutrients to a level to maintain soil health. Banding and/or precision placement techniques can be utilized to increase fertilizer efficiency.

* If this report contains soil in excess of 7500 ppm Ca it may or may not effect the calculated Cation Exchange Capacity. Excessive seed placed fertilizer can cause injury.

The results of this report relate to the sample submitted and analyzed.

* Crop yield is influenced by a number of factors in addition to soil fertility.

No guarantee or warranty concerning crop performance is made by A & L.

Results Authorized By: Ian McLachlin, Vice President

Client: **Krahn Acres Inc.**
 Year: **2013**
 Field: **#26968 - 03-Fred S**

The Field Programmer™

Agri-Coach: **Brad Schnell,**
 Phone: **(204) 736-2245**



Field Details # 26968						
Field Name	03-Fred S	ADS field id	26968			
Legal	SE 13-8-3-E1	# Acres	160	Irrigated	No	
Intended Crop	Wheat - Hard Red Winter	2012 Crop	Canola - LL 28(A) / 27.1(T)	2011 Crop	Soybeans - RR 29.31(A) / 25.5 (T)	
Variety	CDC Falcon	Manure Applied			X-Ref Coach	
Target Yield	90 bu/ac	Amount Applied				
Cultural Practice	Minimum Tillage	Soil Texture	Clay	10% Sand	20% Silt	70% Clay
Problems / Objectives						

Seed Recommendations							
Crop Type	Variety	Germ.	Mortality	TKW	Plants/Ft ²	Rate	Comments

Soil Test Report																
Depth	OM	P	P1	P2	PM3	K	Mg	Ca	pH	pH B	CEC	% K	% Mg	% Ca	% H	% Na
0-6" - 1-A	4.5	33	52	0		306	1975	4250	8	0	39.3	2	41.9	54.1	0	2
6-24" - 1-B	2.2	4	4	0		218	2435	4960	8.3	0	47.2	1.2	43	52.5	0	3.3
Depth	S	NO3	NH4	Zn	Mn	Fe	Cu	B	Mo	SS	Sat P%	Al	K/Mg	Cl	Na	Base Sat. Carbonate
0-6" - 1-A	42	33		5.8	24	41	2.5	1	0.1	0.7		6	159	0.05	62	180
6-24" - 1-B	134	13		0	0	0	0	0	0	0		0	142	0.03	0	359

Soil Placement Recommendations																	
Comment	Placement	Type	Acres	N	P	K	S	Mg	Ca	Cl	B	Cu	Fe	Mn	Zn	Mo	
	Seed Placed	Dry	160	12.7	40	0	5	0	0	0	0	0	0	0	0	0	
Application Total				12.7	40	0	5	0	0	0	0	0	0	0	0	0	0

Other/Foliar Recommendations		
Comment	Product	Rate Stage

Notes

Agri-Trend Agrology (Canada) Ltd.

102, 8026 Edgar Industrial Cr. Red Deer, AB T4P 3R3, Toll Free Ph# 1-877-276-7526,
 Website: www.AGRI-TREND.com

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A & L Canada Laboratories Inc.

2136 Jelsieam Road, London, Ontario, N5V 3P5
Telephone (519) 457-2575 Fax: (519) 457-2664



C12236-081

Report Number: C12236-091
Account Number: 95094

To: AGRI-TREND AGRICULTURE
BOX 6C
12 ASHLAND DRIVE
SANFORD, MB R0G 2J0
Attn: BRAD SCHNELL
204-736-3368

For: KRAHN ACRES INC.
(204) 736-2245
(204) 736-3368

Field: 04 FRED N

Grower Code: 26969

Reported Date: 2012-08-27
Printed Date: 2012-08-27

SOIL TEST REPORT

Page: 1

Sample Number	Legal Land Descr:	Depth	Lab Number	Organic Matter	Phosphorus - P ppm	Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	pH	CEC	Percent Base Saturations
					Bray-P1				Buffer	meq/100g	% K % Mg % Ca % H % Na
1-A	26969	6	07846	5.0	47	392	1760	3990	7.9	36.0	2.8 40.7 55.3
1-B	26969	24	07847	2.6	3	167	2235	5070	8.5	45.5	0.9 41.0 55.8

Sample Number	Sulfur ppm	Nitrate Nitrogen ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Mo ppm	CaCO3	EC mmhos/cm	%P	Al ppm	%Al	K/Mg Ratio	GFI	NH4N ppm	Chloride Cl ppm	Na ppm
1-A	29	18	2.9	29	45	2.5	1.0	0.10	16	0.5	16	382	0.0	0.07	44.87	47	97	245
1-B	43	3	18						101			101	0.0	0.02	23.47			

W

54

SOIL FERTILITY GUIDELINES (lbs/ac)

Sample Number	Crop	Lime Tons/Acre	N	P2O5	K2O	Mg	Ca	S	Zn	Mn	Fe	Cu	B

- Recs are based on building nutrients to a level to maintain soil health. Banding and/or precision placement techniques can be utilized to increase fertilizer efficiency.
- If this report contains soil in excess of 7500 ppm Ca it may not effect the calculated Cation Exchange Capacity. Excessive seed placed fertilizer can cause injury.
- The results of this report relate to the sample submitted and analyzed.
- Crop yield is influenced by a number of factors in addition to soil fertility.

Results Authorized By: Ian McLachlin, Vice President

No guarantee or warranty concerning crop performance is made by A & L.

A&L Canada Laboratories Inc. is accredited by the Standards Council of Canada for specific tests as listed on www.scc.ca and by the Canadian Association for Laboratory Accreditation as listed on www.cala.ca

Client: **Krahn Acres Inc.**
 Year: **2013**
 Field: **#26969 - 04-Fred N**

The Field Programmer™

Agri-Coach: **Brad Schnell,**
 Phone: **(204) 736-2245**



Field Details # 26969						
Field Name	04-Fred N	ADS field id	26969			
Legal	NE 13-8-3-E1	# Acres	155	Irrigated	No	
Intended Crop	Wheat - Hard Red Winter	2012 Crop	Canola - LL (A) / 27.1(T)	2011 Crop	Soybeans - RR 29.31(A) / 25.5 (T)	
Variety	CDC Falcon	Manure Applied			X-Ref Coach	
Target Yield	90 bu/ac	Amount Applied				
Cultural Practice	Minimum Tillage	Soil Texture	Clay	10% Sand	20% Silt	70% Clay
Problems / Objectives	Zn, Mn levels should be okay but Cu may be slightly low. Winter of 07 applied N 1/2 with chicken manure. Hog manure applied spring 2010 - 6121gpa. Manure applied fall 2011@ 15300g/a X 4lbsN/a Nova= 61lbsN/a.					

Seed Recommendations						
Crop Type	Variety	Germ.	Mortality	TKW	Plants/Ft ²	Rate Comments

Soil Test Report																
Depth	OM	P	P1	P2	PM3	K	Mg	Ca	pH	pH B	CEC	% K	% Mg	% Ca	% H	% Na
0-6" - 1-A	5	30	47	0		392	1760	3990	7.9	0	36	2.8	40.7	55.3	0	1.2
6-24" - 1-B	2.6	3	3	0		167	2235	5070	8.5	0	45.5	0.9	41	55.8	0	2.3
Depth	S	NO3	NH4	Zn	Mn	Fe	Cu	B	Mo	SS	Sat P%	Al	K/Mg	Cl	Na	Base Sat. Carbonate
0-6" - 1-A	29	18		2.9	29	45	2.5	1	0.1	0.5		16	382	0.07	47	97
6-24" - 1-B	43	3		0	0	0	0	0	0	0		0	101	0.02	0	245

Manure Applications																
Year	Rate	N	P	K	S	Mg	Ca	Cl	B	Cu	Fe	Mn	Zn			
2012	15300 gal/acre	18.4	15.7	12.6	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0			
Total		18.4	15.7	12.6	0	0	0	0	0	0	0	0	0			

Soil Placement Recommendations																
Comment	Placement	Type	Acres	N	P	K	S	Mg	Ca	Cl	B	Cu	Fe	Mn	Zn	Mo
	Seed Placed	Dry	155	12.7	40	0	5	0	0	0	0	0	0	0	0	0
	Application Total			12.7	40	0	5	0	0	0	0	0	0	0	0	0

Other/Foliar Recommendations		
Comment	Product	Rate Stage

Notes



Farmers Edge Laboratories
 1357 Dugald Road
 Winnipeg, Manitoba Canada
 R2J 0H3
 Phone: 1 204 233 4099

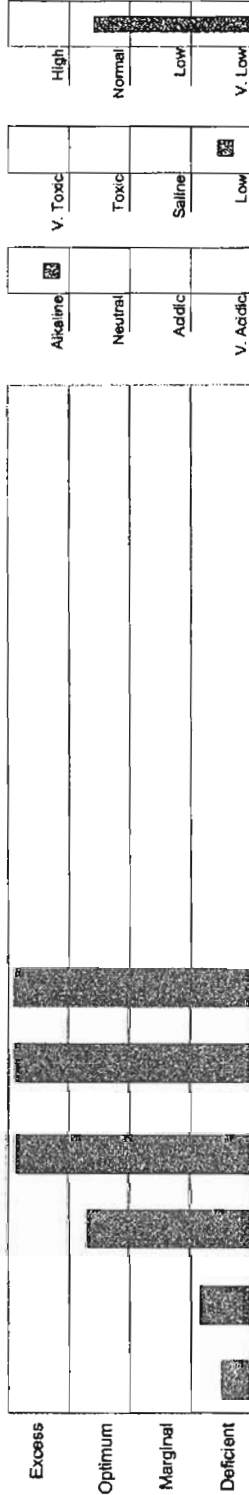
Report To: Farmers Edge - Interlake
 1357 Dugald Rd.
 Winnipeg, MB R2J 0H3

Grower: PPV (PURATONE)
Grower Field Name: NO MANURE
Reference Field Name: NW 29-8-4 E
Legal Location: 145
Total Acres: JW
Sampler: JW

Lot Number: 110826_002
Date Sampled: 2011/08/26
Received Date: 2011/08/26
Date Reported: 2011/08/29

Attention:
Client ID: 09-0021

Sample ID	Depth	N	P*	K	S	Ca	Mg	Na	B	Cu	Fe	Mn	Zn	CI	pH	EC	OM
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		dS/m	%
110826_002-01	0-6	7	12.7	390	6	4972	2492	116							8.2	0.88	5.5
110826_002-02	6-24	4			29										8.1	1.15	



CEC (meq/100g): 46.8
 Ca Base Saturation (%): 53.0
 Mg Base Saturation (%): 43.8
 Base Saturation (%): 100.0
 K Base Saturation (%): 2.1
 Na Base Saturation (%): 1.1

Sand (%): Silt (%): Clay (%):
 Texture:

Recommendation:

Comments: *Canela*

* Bicarbonate-Extractable (Olsen) Phosphate



Farmers Edge Laboratories
 1357 Dugald Road
 Winnipeg, Manitoba Canada
 R2J 0H3
 Phone: 1 204 233 4099

Report To: Farmers Edge - Manure Management
 1357 Dugald Rd.
 Winnipeg, MB R2J 0H3

Grower: PPV
Lot Number: 120814_006

Grower Field Name:
Date Sampled: 2012/08/13

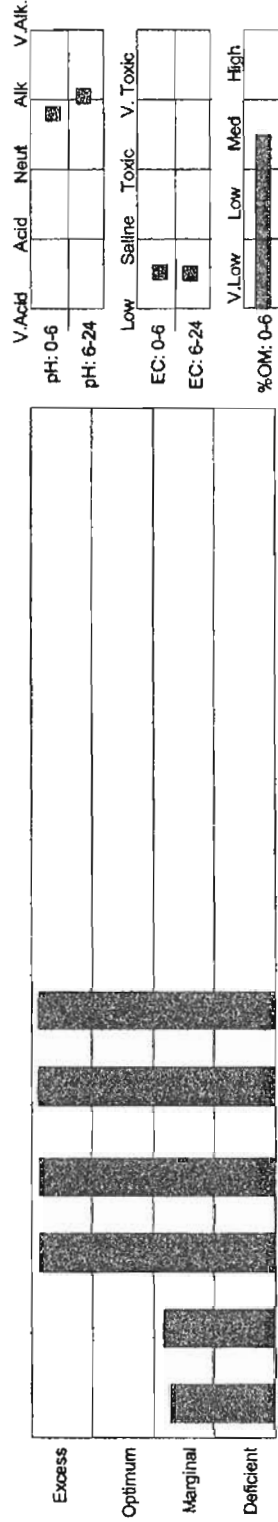
Reference Field Name:
Received Date: 2012/08/14

Legal Location: SW 29-8-4 E1
Date Reported: 2012/08/16

Total Acres: 150
Sampler: JW

Attention: George Bilinsky
Client ID: 09-0021

Sample ID	Depth	N	P*	K	S	Ca	Mg	Na	B	Cu	Fe	Mn	Zn	Cl	pH	EC	OM
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		dS/m	%
120814_006-01	0-6	24	23.2	747	17	6424	2652	174							7.8	0.98	6.0
120814_006-02	6-24	13			31										8.1	0.96	



CEC (meq/100g): 56.5
Ca Base Saturation (%): 56.7
Mg Base Saturation (%): 38.6
Base Saturation (%): 100.0
K Base Saturation (%): 3.4
Na Base Saturation (%): 1.3

Sand (%): Silt (%): Clay (%): Texture:

Total lb/Ac:	129	46	1494	219
Estimated lb/Ac:	129	46	1494	219

Recommendation:

Comments: PREVIOUS CROP: CANOLA

* Bicarbonate-Extractable (Olsen) Phosphate



Interpretive Guidelines and Class Limits are based on accepted guidelines. The client is advised to consult with an agronomic professional for detailed interpretation. Farmer's Edge Laboratories limits liability to the cost of the analysis.



Farmers Edge Laboratories
 1357 Dugald Road
 Winnipeg, Manitoba Canada
 R2J 0H3
 Phone: 1 204 233 4099

Report To: Farmers Edge - Manure Management
 1357 Dugald Rd.
 Winnipeg, MB R2J 0H3

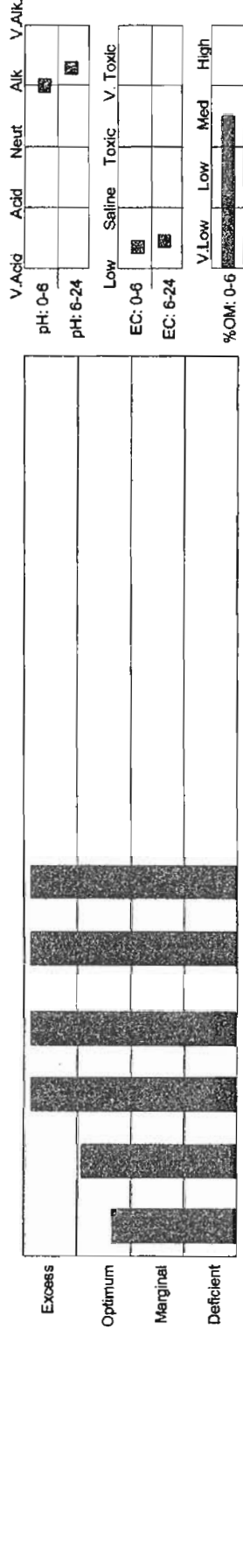
Grower: PPV
Grower Field Name:
Reference Field Name: SE 30-8-4 E1
Legal Location: SE 30-8-4 E1

Lot Number: 120821_005
Date Sampled: 2012/08/21
Received Date: 2012/08/21
Date Reported: 2012/08/23

Attention: George Bilinsky
Client ID: 09-0021

Total Acres: 160
Sampler: JW

Sample ID	Depth	N	P*	K	S	Ca	Mg	Na	B	Cu	Fe	Mn	Zn	Cl	pH	EC	OM
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		dS/m	%
120821_005-01	0-6	27	57.4	632	20	6061	2491	121							8.0	0.64	6.0
120821_005-02	6-24	21		12											8.6	0.83	



CEC (meq/100g): 52.9
Ca Base Saturation (%): 57.2
Mg Base Saturation (%): 38.8
Base Saturation (%): 100.0
K Base Saturation (%): 3.1
Na Base Saturation (%): 1.0

Sand (%): **Silt (%):** **Clay (%):**

Texture:

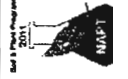
	N	P	K	S
Total lb/Ac:	184	115	1263	111
Estimated lb/Ac:	184	115	1263	111

Recommendation:

Comments: PREVIOUS CROP: CANOLA

* Bicarbonate-Extractable (Olsen) Phosphate

Interpretive Guidelines and Class Limits are based on accepted guidelines. The client is advised to consult with an agronomic professional for detailed interpretation.
 Farmer's Edge Laboratories limits liability to the cost of the analysis.



In areas with lower livestock intensity, Manitoba Conservation may issue a manure storage facility permit, if:

- the operation shows it has access to sufficient suitable land to apply manure at a rate equivalent to two times the crop removal rate of phosphorus (and)
- if long-term phosphorus inputs from manure application will be balanced with one times the crop removal rate of phosphorus to prevent build up in soils

Use the [Land Base Calculator](#) to calculate the minimum area required for manure application.

Total minimum area required for manure application at two times crop removal, for operations outside of Hanover and La Broquerie	653 acres
Total minimum area required for manure application at one times crop removal, for operations within Hanover and La Broquerie AND For the long-term sustainability of operations outside of Hanover and La Broquerie	1306 acres

For more, call Manitoba Agriculture, Food and Rural Initiatives (MAFRI) at 204-945-3869 in Winnipeg or contact your local [MAFRI GO Office](#).

Land Base Calculator attached

Land Base Requirement Summary

By comparing the land available for manure application with the land required for manure application, state whether sufficient suitable land for manure application:

- has not been identified
- has been identified for two times the crop removal rate of phosphorus (for operations outside of the RMs of Hanover or La Broquerie)
- has been identified for one times the crop removal rate of phosphorus (for operations within the RMs of Hanover and La Broquerie)

I acknowledge that over the long term, up to 1300 acres/hectares (which is one times crop removal from table above) may be required for the long term environmental sustainability of the operation.

Operation: **Red River Pullet Farms Ltd.**

Crop	Example Manitoba Target Yields	Unit	Historical Yield	Nutrient Removal (lb/ac)						Uptake (lb/ac)			Total Removal				
				P ₂ O ₅	2(P ₂ O ₅)	Nitrogen (N)	Acres	P ₂ O ₅	2(P ₂ O ₅)	Nitrogen (N)	P ₂ O ₅	2(P ₂ O ₅)	Nitrogen (N)				
Alfalfa	5	tons/ac		40	80			30									
Barley Grain	80	bu/ac															
Barley Silage	4.5	tons/ac															
Canola	35	bu/ac	29.2	30	61	56		93	350	9.34	18.68	17.33				28.65	
Corn Grain	100	bu/ac	86.2	38	76	84		132	73	2.43	4.87	5.36				8.46	
Corn Silage	5	tons/ac		60	120			200									
Dry edible beans	18	cwt/ac		25	50												
Fababbeans	34	cwt/ac															
Flax	24	bu/ac															
Grass hay	3	tons/ac		30	60			100									
Lentils	18	cwt/ac															
Oats	100	bu/ac															
Peas	50	bu/ac															
Potatoes	400	cwt/ac															
Rye	55	bu/ac															
Soybeans	35	bu/ac	30	25	50	116		156	100	2.20	4.39	10.20				13.71	
Sunflower	22	cwt/ac															
Wheat - Spring	40	bu/ac	35.9	21	42	54		76	310	5.77	11.54	14.67				20.63	
Wheat - Winter	75	bu/ac	73.4	37	75	76		99	305	10.03	20.07	20.46				26.56	
									1138	29.77	59.54	68.03				98.01	

Red River Pullet Farms Ltd.

Operation Name:

STEP 1: Livestock Information

Species	Type	Manure Type	Livestock Places	Animal Units	Production Cycle (Days)	Rotation	Output per head		Production-N		Production P ₂ O ₅	
							kg N	kg P	kg	lb	kg	lb
1 Chickens	Pullets	Solid	130000	429	133	2	0.074	0.068	19240	42328	17680	38896
2												
3												
4												
5												
			Total AU	429								

STEP 2: Crop Rotation Information

Removal (lb/ac)	Nitrogen (N)	P ₂ O ₅	2XP ₂ O ₅
68	30	60	

STEP 3: Nitrogen Volatilization

1. Manure	Type	Value (%)
Solid	Manure Pack	30

2. Method of Application	Conditions	Value (%)
Injected	Average	0

STEP 4: Phytase Added

1. Was phytase used as an additive in feed?	No
---	----

Base Total N:	19240	42328	17680	38896
Post Manure Application N:	13468	29630	---	---
LAND BASE REQUIRED	Acres			
Nitrogen (N) based	2 X P ₂ O ₅ Removal			
Phosphorus (P ₂ O ₅) based	1 X P ₂ O ₅ Removal			
	436	436	436	436
	653	653	1306	1306

- Nutrient values excreted by livestock is adapted from Quebec (Le Centre de reference en agriculture et agroalimentaire du Quebec - CREAQ)
- Nutrient excretion for sows is based upon unpublished data for Manitoba
- Nutrient values for turkeys based upon data from "Farm Practices Guidelines for Poultry Producers in Manitoba, 2000"

NOTE: Occupancy of facility based on 2 flocks per year only. Occupancy period of each flock 19 weeks (133 days).



Web address: http://www.mmpp.com/mmpp.nsf/mmpp_browser_variety.html

MMPP Variety Yield Data Browser

[\(Variety Query Help\)](#)

[Save Raw Data](#)

[New Search](#)

Search Summary

Your selected search:

Region(s) Selected: RITCHOT

Crop(s) Selected: ARGENTINE CANOLA

Variety(s) Selected: All

Period Selected: 1995 to 2011

This search returned 314 records from the MASC database, summarized below:

Number of Farms:	1,144 farms
Total Acres:	230,275 acres
Yield per Acre:	29.2 Bushels / acre (0.661 tonnes / acre)

[View Raw Data](#)

[Save Raw Data](#)

[New Search](#)



Benchmarks for Better Farm Management

Web address: http://www.mmpp.com/mmpp.nsf/mmpp_browser_variety.html

MMPP Variety Yield Data Browser

[\(Variety Query Help\)](#)

[Save Raw Data](#)

[New Search](#)

Search Summary

Your selected search:

Region(s) Selected: RITCHOT

Crop(s) Selected: GRAIN CORN

Variety(s) Selected: All

Period Selected: 1995 to 2011

This search returned 62 records from the MASC database, summarized below:

Number of Farms:	125 farms
Total Acres:	13,881 acres
Yield per Acre:	86.2 Bushels / acre (2.190 tonnes / acre)

[View Raw Data](#)

[Save Raw Data](#)

[New Search](#)





Web address: http://www.mmpp.com/mmpp.nsf/mmpp_browser_variety.html

MMPP Variety Yield Data Browser

[\(Variety Query Help\)](#)

[Save Raw Data](#)

[New Search](#)

Search Summary

Your selected search:

Region(s) Selected: RITCHOT

Crop(s) Selected: RED SPRING WHEAT

Variety(s) Selected: All

Period Selected: 1995 to 2011

This search returned 81 records from the MASC database, summarized below:

Number of Farms:	855 farms
Total Acres:	193,260 acres
Yield per Acre:	35.9 Bushels / acre (0.977 tonnes / acre)

[View Raw Data](#)

[Save Raw Data](#)

[New Search](#)

mmpp.com



Benchmarks for Better Farm Management

Web address: http://www.mmpp.com/mmpp.nsf/mmpp_browser_variety.html

MMPP Variety Yield Data Browser

(Variety Query Help)

Save Raw Data

New Search

Search Summary

Your selected search:

Region(s) Selected: RITCHOT

Crop(s) Selected: SOYBEANS

Variety(s) Selected: All

Period Selected: 1995 to 2011

This search returned 151 records from the MASC database, summarized below:

Number of Farms:	490 farms
Total Acres:	114,619 acres
Yield per Acre:	30.0 Bushels / acre (0.816 tonnes / acre)

[View Raw Data](#)

Save Raw Data

New Search

Canada

MASC

Manitoba 



Web address: http://www.mmpp.com/mmpp.nsf/mmpp_browser_variety.html

MMPP Variety Yield Data Browser

[\(Variety Query Help\)](#)

[Save Raw Data](#)

[New Search](#)

Search Summary

Your selected search:

Region(s) Selected: RITCHOT

Crop(s) Selected: ALFALFA

Variety(s) Selected: All

Period Selected: 1995 to 2011

This search returned 69 records from the MASC database, summarized below:

Number of Farms:	88 farms
Total Acres:	9,138 acres
Yield per Acre:	2.329 Tons / acre (2.113 tonnes / acre)

[View Raw Data](#)

[Save Raw Data](#)

[New Search](#)

Mortalities (Dead Animal) Disposal

The Livestock Manure and Mortalities Management Regulation sets requirements for the use, management and storage of livestock mortalities in agricultural operations. It ensures livestock mortalities are handled in an environmentally sound manner. Permanent composting facilities require a permit from Manitoba Conservation. Winter application of composted mortalities is prohibited.

Type of disposal: rendering
 composting
 incineration (in approved incinerator only)

Mass Mortalities

The Livestock Manure and Mortalities Management Regulation sets requirements for mass mortalities.

A plan for mass mortalities (endorsed by Manitoba Conservation) is in place.

What steps will be taken in the case of mass mortalities?

1) Removal to approved land fill.
 2) On-site burial. Site soil and groundwater conditions would be suitable for burial under the direction of MB Conservation + Water Stewardship.

Project Site Description: land use planning considerations

For assistance contact your Community and Regional Planning Regional Office.

Development Plan and Zoning Bylaw

The Development Plan and Zoning Bylaw adopted under The Planning Act, set policy and regulations for the use and development of land. A proposed livestock operation must comply with the requirements of this bylaw. In the absence of a bylaw, the Provincial Planning Regulation under The Planning Act applies.

Development Plan

Every development plan must contain a livestock operation policy (LOP) that identifies areas where new or expanded livestock operations may be allowed. It must also set general standards for the location and setback of livestock operations. Identifying the plan's land use designation and policies (for the planning district or municipality that affect the site and proposed spread fields) will help confirm the project's compliance.

Name of development plan	RM of Ritchot Zoning By-Law
By-law number	18-2002
Land use designation of project site	"AG" Agricultural General
Livestock operation policies – quote supportive policy numbers	Part 5, Clause 1 (1) Clause 2 (3)
Other development plan policies – quote supportive policy numbers	
Non-supportive development plan policies	

The development plan livestock operation policies support the size and location of the proposed operation. *Subject to Conditional Use*

Zoning Bylaw

Identifying the zoning for the project site, the proposed spread fields and the related zoning provisions, helps determine the project's compliance and the minimum separation distances needed between the operation and property boundaries and other natural features and land uses. The zoning bylaw contains specific regulations that govern location and setback of livestock operations.

What are the minimum project site requirements stated in the zoning bylaw?

	Project site dimensions	Minimum zoning bylaw site requirements
Minimum site area	160 ac.	80 ac
Minimum site width	2640 ft	660 ft
Minimum front yard	245 ft	125 ft
Minimum side and rear yard	601 ft	50 ft

Separation Distances

Using the proposed size of the operation (see Animal Units Calculation Table) and the type of animal housing and manure storage facility, complete the following table.

Indicate the distance from:

earthen manure storage facility or feedlot OR

animal confinement facility or non-earthen manure storage facility

To	Minimum separation distance required (by the zoning bylaw)	If land use feature is within the minimum distance	
		Provide actual distance	Provide location or name of feature (ex: Red River)
Residence/dwelling	3960 ft	4285 ft	Residence NE18-8-4E
Designated area (non-agricultural)	4364 ft (PROVINCIAL)	14520 ft	St. Adolphe, MB
Surface water	328 ft (PROVINCIAL)	MIN. 328 ft	Municipal ditch to manure storage
Surface watercourse	328 ft (PROVINCIAL)	MIN. 328 ft	Municipal ditch to manure storage
Crown land		None in immediate area	
Wildlife Management Area		None in immediate area.	
Livestock operation		≈1200 ft	Tri-Venture Farms Inc NW7-8-4E
Other significant features/land uses			

In cases where minimum separation distances are not stated in the zoning bylaw or development plan, the minimum separation distances in the Provincial Planning Regulation apply.

Show: a) location of the project site, location and ownership of spread fields and c) land uses and significant features (i) within a 3 kilometre radius of the project site and (ii) within and adjacent to each spread field on a Land Use & Spread Field Map. (See Land Use & Spread Field Map Example).

Land Use & Spread Field Map attached



LAND USE AND SPREAD FIELD MAP

RED RIVER PULLET FARMS LTD.
SW 18-8-4E
RM OF RITCHOT

LEGEND:

LO - LIVESTOCK OPERATIONS

O - SPREAD FIELDS (OWNED)

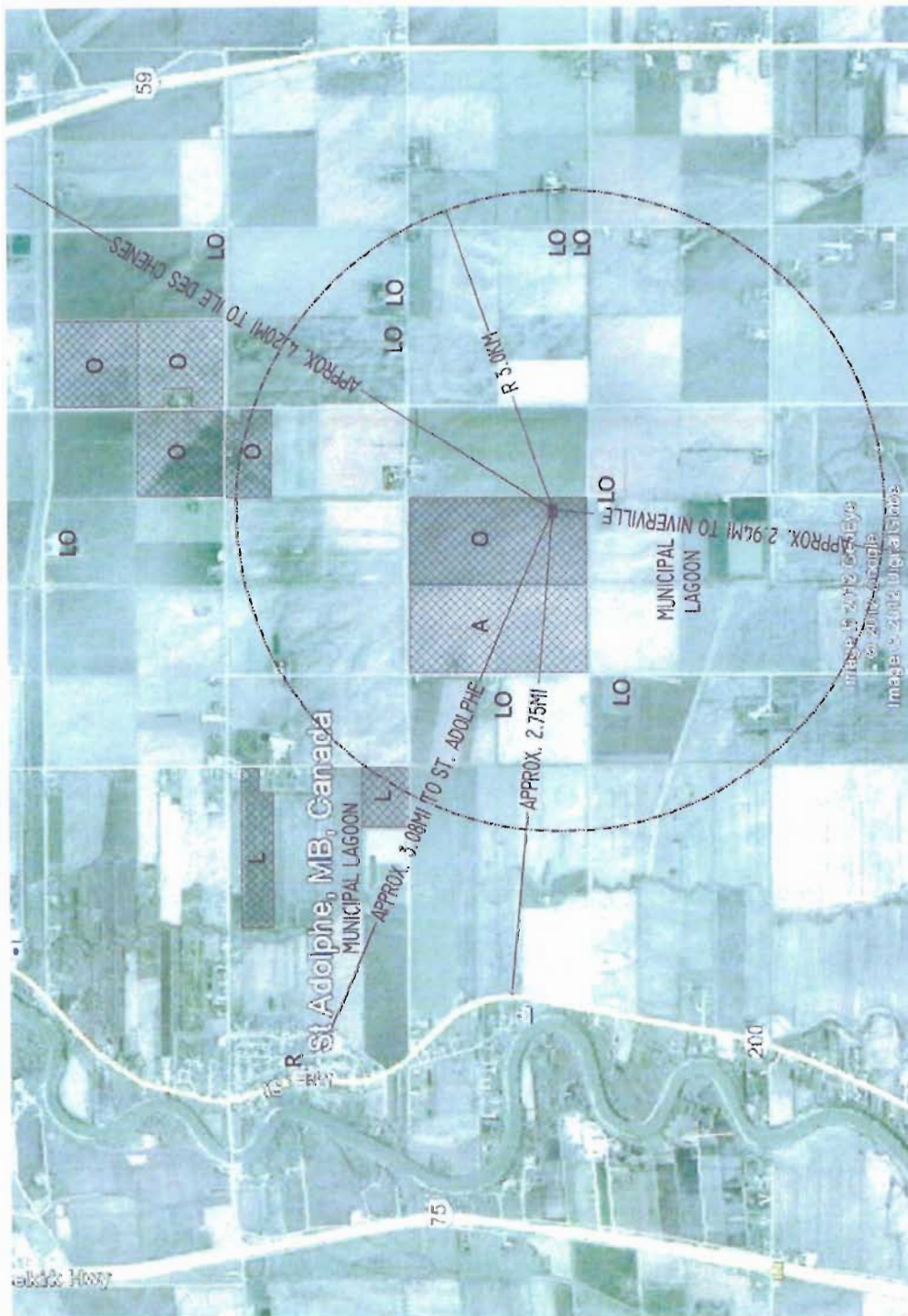
L - SPREAD FIELDS (LEASED)

A - SPREAD FIELDS (AGREEMENT)

R - RURAL SETTLEMENT CENTRE

LO - LIVESTOCK OPERATION

— -3KM NOTIFICATION AREA FOR THE
PUBLICNOTIONAL USE HEARING



PROJECT NAME	RED RIVER PULLET FARMS LTD. SW 18-8-4E	TOTAL AREA = 42,294 SQFT
DISTRICT	LAND USE & SPREAD FIELD MAP	R. FLORES SOUTH-MAN ENGINEERING
DATE	SEPTEMBER 2012	AS NOTED
DATE	NOVEMBER 2012	

Truck Haul Routes and Access Points

One consideration with new or expanding livestock operations is the potential impact on existing public roads (municipal and provincial), access and the need for improvements or mitigation.

What roads and access points will be used for the proposed operation? (See **Truck Haul Routes and Access Points Map** for an example).

For help with mapping, contact your **Community and Regional Planning Regional Office**.

Truck Haul Routes and Access Points Map attached

Supporting Documents

Check off the supporting documents included in this submission:

- Contact Information and Privacy and Publication Notice**
- Location Map** (shows proposed project within rural municipality)
- Animal Unit Calculation Table**
- Water Requirement Calculation Table**
- Manure Storage Calculation Table**
- Existing and Proposed Manure Storage Facility Dimension Tables**
(if applicable)
- Manure Application Field Characteristics Table**
- Recent manure application field soil sample results** (Nitrate- N lb/ac at 0-6 and 6-24 inch depths, Phosphorus – ppm at 0-6 inch depth)
- Land Base Calculator**
- Project Site Plan** (proposed operation showing current and proposed structures)
- Land Use and Spread Field Map** (location and ownership of operation, spread fields, location and distance to non-agricultural uses, development plan designation, zoning for project site and spread fields)
- Truck Haul Routes and Access Points Map** (with routes and access points on municipal/provincial roads and/or provincial trunk highways)



TRUCK HAUL ROUTE & ACCESS MAP
RED RIVER PULLET FARMS LTD.
SW 18-8-4E
RM OF RITCHOT



 SOUTH-MAN ENGINEERING 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000	
CLIENT: RED RIVER PULLET FARMS LTD. SW 18-8-4E	TOTAL AREA = 42,294 SQ/FT
PROJECT: TRUCK HAUL ROUTES & ACCESS MAP	R. FLORES SOUTH-MAN ENGINEERING
DATE: SEPTEMBER 2012	DATE: AS NOTED
SCALE: 1" = 100'	SCALE: AS NOTED
DRAWN BY: [Name]	
CHECKED BY: [Name]	
DATE: NOVEMBER 2012	
PROJECT NO: SP-4	