

SITE ASSESSMENT

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

1.0 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.

2.0 Assistance

For assistance in completing the Site Assessment Form please refer to the following.

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

For additional information on a particular item, please click on the (?) “Learn More” icon.

For definitions, click on the [Glossary of Terms](#).

For help with mapping, contact your [Community and Regional Planning Regional Office](#).

For additional help, contact the [Technical Review Coordination Unit](#).

3.0 Description of Livestock Operation

Operation legal name, if other than the owner's name:

Nevin Bender

Operation location (project site): NE 14-2-4E

Rural Municipality (RM) of Franklin

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

NE 14-2-4E

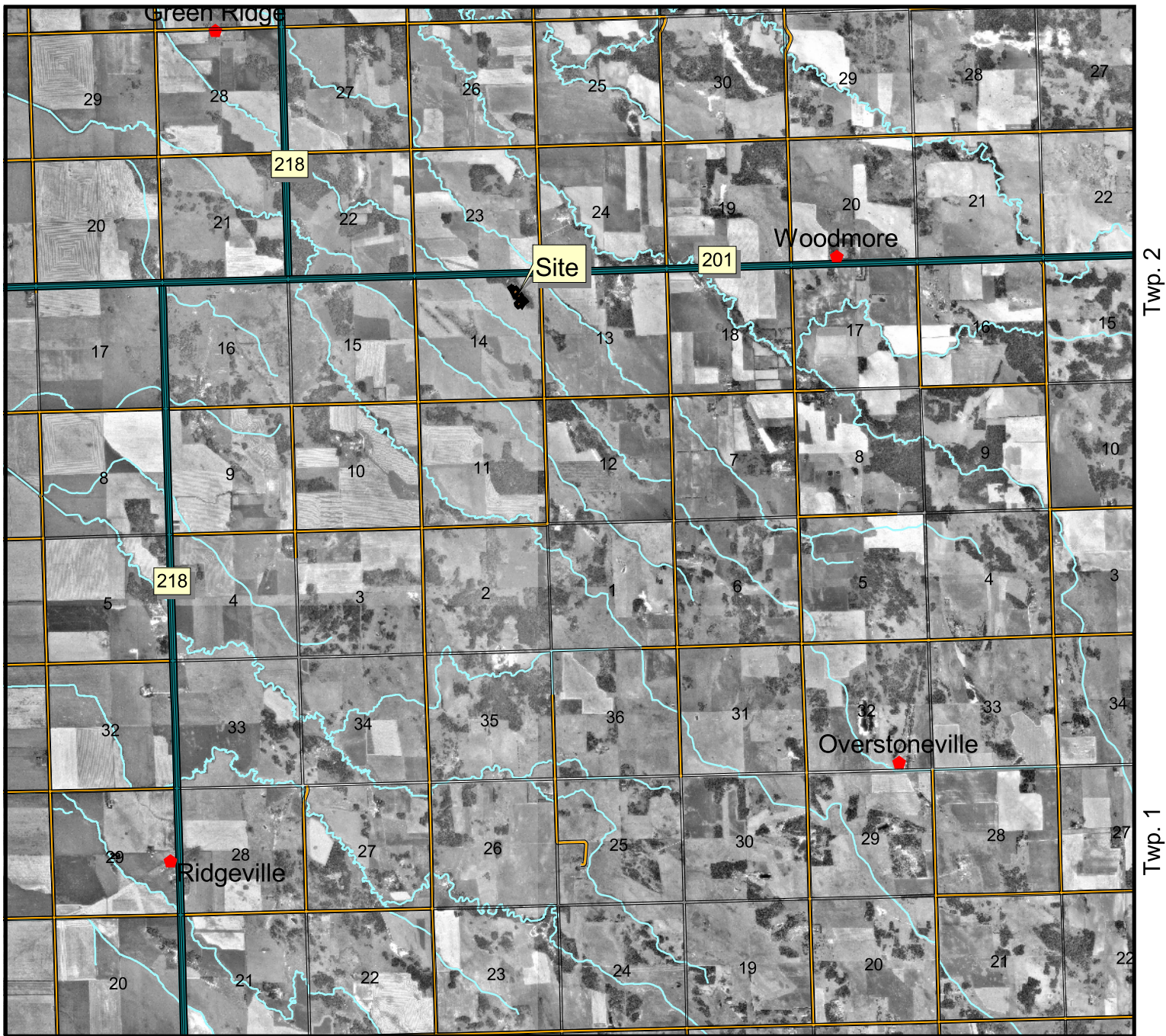
Manitoba Premises Identification Number: _____

Municipal tax roll number(s): 136800.000

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

Location Map attached

Nevin Bender Overview



Rge. 4E







Rge. 5E



1:75000



Legend

-  Existing Confined Livestock Area
-  Sections
-  Towns
-  Highways
-  Municipal Roads
-  Drainage

Data Sources:

Fields and irrigation areas drawn by Tone Ag in consultation with landowner, and subject to change.
 Orthophotos are 1:60,000 from Manitoba Land Initiative website
 Soil Features are 1:50,000 from Manitoba Land Initiative website
 Highways are from Manitoba Highways and Transportation 1:60,000 map 1994
 Sections are from Manitoba Land Initiative website

Map created by Jordan Karpinichik
 Tone Ag Consulting
 Box 333
 St. Pierre, Manitoba
 R0A 1V0
 Tel: (204) 433-7189
 Fax: (204) 433-3335
 www.toneag.com
 2013-11-06

4.0 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 or expanded, state how they will be reused or expanded.

Feedlot is built for 600 A.U., no need for any new buildings/pens.

5.0 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 Units Calculation Table)	Existing number of animals (Column C from Animal Units Calculation Table)	Total Animal Units (Column F from Animal Units Calculation Table)
<u>Backgrounders</u>	<u>599 current</u>	<u>299 current</u>
	<u>1200 proposed</u>	<u>600 proposed</u>

- Animal Units Calculation Table attached

6.0 [Animal Confinement Facilities](#)

Outdoor Confined Livestock Area

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

Confined Livestock Area: outdoor seasonal feeding area feedlot not applicable

Indoor Barn/Animal Housing

Indoor Animal Housing: barn other (describe) _____ not applicable

Animal Units Calculation Table

A	B	C	D	E	F	G
Animal Type	Type of Operation	Existing Number of Animals	Proposed Additional Number of Animals	Animal Units per Head	Total Animal Units	Annual Confinement Period (Days)
Dairy ¹	Mature cows (lactating and dry) including associated livestock			2	-	
	Mature cows (lactating and dry)			1.35	-	
	Heifers (0 to 3 months)			0.16	-	
	Heifers (4 to 13 months)			0.41	-	
	Heifers (> 13 months)			0.87	-	
	Bulls			1.35	-	
	Veal calves			0.13	-	
Beef	Beef cows including associated livestock			1.25	-	
	Backgrounder	599	601	0.5	600.00	300
	Summer pasture / replacement heifers			0.625	-	
	Feeder cattle			0.769	-	
Pigs	Sows - farrow to finish (234-254 lbs)			1.25	-	
	Sows - farrow to weanling (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			0.0033	-	
	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	600.00	

Footnotes:

¹ There are 2 methods for calculating animal units for dairy (Farm Practices Guidelines for Dairy Producers in Manitoba, 1995). You can enter the total number of mature cows in the milking herd under the "Mature cows (lactating and dry) including associated livestock" category and the animal units will be calculated by multiplying this number by 2. This calculation assumes 85 lactating, 15 dry, 12 heifers (0 to 3 months), 36 heifers (4 to 13 months) and 50 heifers (> 13 months) for an operation with 100 mature cows. "Associated livestock" includes all of the heifer calves and replacement heifers. Alternatively, you can enter animal numbers in the individual categories (mature cows, heifers (0 to 3 months), heifers (4 to 13 months) and heifers (> 13 months)) and they will be summed at the bottom of the table. Bulls and veal calves are always calculated separately.

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/aqoffices.html

A permit under the Livestock Manure and Mortalities Management Regulation is not required for an indoor housing area or barn unless there is a manure storage facility within the building (an under barn storage capable of storing manure for 30 days or more).

Show all existing, proposed buildings and additions to existing 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

State the proposed type and size of operation (Table 1) and the proposed type and size of the manure storage facility (Table 2).

Type of operation (Column 1 from Animal Units Calculation Table)	Proposed manure storage facility (Table 2)	Proposed type and size of operation (Table 1)
Barn	1000 sq ft	1000 sq ft

Animal Unit Calculation Table

Animal Unit Calculation Table

Outdoor/Confined Livestock Area

To ensure that it can be built and operated in compliance with the permit, the applicant must provide information regarding the construction and operation of the facility. For operations with 100 Animal Units or more, permit applicants must also provide information regarding [Manure Management Regulation \(MTR\)](#) and the [Livestock Mortality Management Regulation \(LMR\)](#).

Confined Livestock Area: Yes No Not applicable

Indoor Barn/Animal Housing: Yes No Not applicable

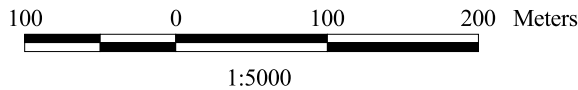
Indoor Animal Housing: Yes No Not applicable

Nevin Bender Project Site Plan (NE 14-2-4E)



Legend

- ▲ Wells
- ▲ Dead Animal Composting Site
- ▲ Feed Storage
- Compost/Field Storage
- Confined Livestock Area
- Property Line
- Highways
- Municipal Roads
- Drainage



Data Sources:
 Fields and irrigation areas drawn by Tone Ag in consultation with landowner, and subject to change.
 Orthophotos are 1:60,000 from Manitoba Land Initiative website
 Soil Features are 1:50,000 from Manitoba Land Initiative website
 Highways are from Manitoba Highways and Transportation 1:60,000 map 1994
 Sections are from Manitoba Land Initiative website



Map created by Jordan Karpinick
 Tone Ag Consulting
 Box 333
 St. Pierre, Manitoba
 R0A 1V0
 Tel: (204) 433-7189
 Fax: (204) 433-3335
 www.toneag.com
 2013-11-06

7.0 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

If so, is it current (completed within past 5 years) yes no

8.0 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. Nutrient generating facilities include barns, confined livestock areas and manure storage facilities.

[Nutrient Buffer Zone](#) as defined in section 3(3) of the regulation includes areas of land along water bodies such as rivers, lakes, streams and drains.

The proposed indoor housing area, barn, confined livestock area and/or manure storage facility:

will
will not

be 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. This information is available from Manitoba Agriculture, Food and Rural Initiatives (MAFRI) at 204-945-3869 in Winnipeg. Alternatively, operations with GIS mapping software can access information through [Manitoba Land Initiative](#) (MLI) website. In addition, information from MLI can also be viewed on Google Earth. Both the download for Google Earth and the registration for MLI are free. Click [here](#) for instructions under the MLI website.

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)
- proposed well
- river
- dugout (dimensions : ____ x ____ x ____)
- water co-operative
- existing well
- lake

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 Conservation and Water Stewardship by calling (204) 945-7418 in Winnipeg; 1-800-214-6497 toll free.

Bender

line
 Well PID: 160106
 Location: NE14-2-4E
 UTMX:649659.1 UTM Y:5444149.1 XY Accuracy:1 EXACT [<5M] [GPS]
 UTMZ:262 Z Accuracy:4 FAIR - Shuttle at Centroid
 Owner: NEVIN BENDER - BENDER FARMS
 Driller: Kiansky Bros. Ltd.
 Well Name:
 Date Completed: 2010 Jul 26
 Well Use: PRODUCTION
 Water Use: Livestock
 Well Status: ACTIVE Aquifer: SAND AND GRAVEL

REMARKS:

WELL LOG (Imperial units)
 From To(ft.) Log
 0.0 13 YELLOW TILL
 13.0 38 GREY SANDY TILL
 38.0 68 BROWN SAND
 68.0 71 SAND & TILL LAYERS

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	57.0	CASING	5.0			INSERT	PVC
57.0	67.0	PERFORATIONS	3.0		0.015	WIRE WOUND	S. S.
43.0	68.0	GRAVEL PACK				NO. 20-40	SILICA S.
30.0	36.0						BENTONITE

Top of Casing: 3.0 ft. above ground

PUMPING TEST

Date : 2010 Jul 26 Pumping 40.0 Imp. gallons/minute
 Water level before test : 10.0 ft below ground
 Water level at end of test : 40.0 ft below ground
 Test duration: 01:00:00
 Test Zone: from 57.0 ft to 67.0 ft

Source Water Analysis Reports

Annual livestock source water monitoring analysis reports must be submitted to Manitoba Conservation and Water Stewardship for any operations of 300 Animal Units or more.

If an existing livestock operation of 300 Animal Units or more, have you submitted an annual source water monitoring report for the current calendar year? yes no

Will livestock have direct access to surface water (not including dugouts)? yes no

If yes, identify:
Name of the surface water feature: _____

List any steps that will be taken to prevent direct access of livestock to the water body.

Water Requirements

Protecting the interests of domestic users and the environment, in addition to existing licensees, is the intended purpose of the water rights licensing scheme.

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

For more information on the Water Rights Licensing process, 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: 10,800 imperial gallons or litres

Maximum annual use: 18 acre-feet or cubic decameters

Water Requirement Calculation Table attached *Have applied for a Water Rights Licence as proposed 600 A.U. is more than 5,499 imp gal/day.*

Groundwater (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.

Water Requirement Calculation Table

Livestock	Number	IG/day per animal in winter	IG/day per animal in summer	IG/day (Imperial gallons per day)
Beef/Dairy/Bison				
Feeder/heifer/steer (600 lb.)	1,200	5	9	10,800
Feeder (900 lb.)		7	12	-
Feeder (1250 lb.)		10	15	-
Cow/calf pair		12	15	-
Dry cow		10	12	-
Milking cow		25	30	-
Bison		8	10	-
Horses				
Horses		8	11	-
Hogs				
Sow (Farrow/wean)			6.5	-
Dry Sow/Boar			4	-
Feeder			3	-
Nursery (33 lb.)			2	-
Chickens				
Broilers			0.035	-
Roasters/Pullets			0.04	-
Layers			0.055	-
Breeders			0.07	-
Turkeys				
Turkey Growers			0.13	-
Turkey Heavies			0.16	-
Sheep/Goats				
Sheep/Goats			2	-
Ewes/Does			3	-
Lambs/Kids (90 lb.)			1.6	-
TOTAL (IG/day)				10,800

For deer, 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.

Enter this number on page 7 of Application Form.

Other consumption values:

Normal household consumption:
40-55 IG/day per person or (180-250 l/day/person)

Hydrant flow:
10 imperial GPM (45 l/min)

Unit Conversions		
Total per day	Total per year	Unit
10,800	3,942,000	IG
49,097	17,920,332	litres
0.049	18	cubic decametres (dam ³)

Enter this number on page 7 of Application Form.

Conversion Factor: 1 IGPM = 4.546 l/m

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

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

Other:

Building in Flood Areas

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 are constructed with 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 site specific design flood level plus freeboard, as provided by the Hydraulic Forecasting Branch of Manitoba Infrastructure and Transportation. Contact the Hydrologic Forecasting 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 structure(s) are located within the 100-year flood plain elevation; or at an elevation set by Manitoba Infrastructure and Transportation.

What are the names of the waterbodies?

Name of waterbody: W/A

Name of sub-waterbody: W/A

Name of proposed project: W/A

Location: W/A

For more on Integrated Watershed Planning and Programs at (204) 944-7102 or www.mw.gov.mb.ca

2.0 Measures

The Integrated Measures and Strategies table in the permit application form outlines the use, management and storage of water. It is intended to ensure that the project is located in an environmentally sensitive area and that the project is designed to minimize the impact on the environment. The project must be designed to minimize the impact on the environment.

Measures are required to ensure that the project is designed to minimize the impact on the environment. The project must be designed to minimize the impact on the environment.

Measure Type

The type of measure selected and the location of the measure are indicated in the application form.

What types of measures will be proposed?

- Avoid
- Minimize
- Restore
- Offset

Measure Volume or Weight

Measure production can be estimated using the Integrated Measures and Strategies table. The table provides information on the types of measures and the volume or weight of the measures. The project must be designed to minimize the impact on the environment.

What will be the total volume or weight of the measures proposed by the project?

Volume/Weight: W/A

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): N/A

Name of sub-watershed(s): N/A

Name of Integrated Watershed Management Plan for the proposed project site, if applicable: N/A

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

9.0 Manure

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 information on this, call Manitoba Conservation and Water Stewardship at (204) 619-2230 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

Manure production can be estimated using the Manure Production Calculator Table. The sizing of the manure storage is the responsibility of the operator and must be constructed in accordance with the Livestock Manure and Mortalities Management Regulation.

Design and construction of a manure storage facility is dependent on the type of structure; earthen manure storage facilities must have between 400 and 500 days capacity, a steel or concrete storage tank must have between 250 and 500 days capacity. This ensures the facility has sufficient capacity eliminating the need for winter application.

What will be the total volume or weight of manure generated annually by the livestock operation? (See Manure Production Calculator Table.)

liquid volume: _____ solid weight: 262,800 t³

Manure Production Calculator 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 facility will be used by the operation?

- under-barn concrete
- earthen manure storage
- concrete tank(s)
- steel tank(s)
- field storage
- molehill

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

N/A Existing and Proposed Manure Storage Facility Dimensions 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 neighbours in the vicinity of the operation.

What odour control measures are you planning to use?

Manure storage cover: yes no

Type of cover: _____

Shelterbelt planting: yes no existing shelterbelt

Other measures (specify): _____

Manure Treatment

Under *The Environment Act*, the director must not issue a permit for the modification, expansion, or construction of a manure storage facility accommodating an increase in the number of animal units for pigs, unless the manure is treated using anaerobic digestion or another environmentally sound treatment that is similar to or better than anaerobic digestion, according to Manitoba Conservation and Water Stewardship.

Does your proposal include anaerobic digestion or another environmentally sound treatment for manure?

- yes
- no
- not applicable

Animal Type (A)	Animal Sub-type (B)	Daily Manure Production				Production Period ² (Days) (G)	Number of Animals ³ (Capacity) (H)	Total Manure Volume (ft ³) (F _x G _x H)	Total Manure Volume for Semi-Solid and Liquid Manure (Imp Gal)	
		References (C)	Manure Type (D)	Default Manure Production (ft ³ /animal/day) (E)	Operation Manure Production ¹ (ft ³ /animal/day) (F)					
Dairy (milking cows ⁴ and associated livestock)	Free Stall	Table 6, pg 59, FPGs for Dairy 1995	Semi-Solid ⁵	3.5				-	0.0	
			Solid	3.4				-		
			Liquid ⁵	3.5				-	0.0	
	Tie Stall		Semi-Solid ⁵	3.6					-	0.0
			Solid	3.5					-	
			Liquid ⁵	3.6					-	0.0
	Loose Housing		Solid	3.0					-	
Milking Parlour Manure and Washwater	Liquid	0.5					-			
Beef	Beef cows including associated livestock	pg 117, FPGs for Hogs 1998	Solid	1.2				-		
	Backgrounder (200 day)		Solid	0.73	0.73	300.00	1,200	262,800.00		
	Summer pasture / replacement heifers		Solid	0.85					-	
	Feeder cattle		Solid	1.1					-	
Pigs	Sows - farrow to finish (234 - 254 lbs)	MAFRI website, FPGs for Pigs 2007	Liquid	2.3					0.0	
	Sows - farrow to wean (up to 11 lbs)		Liquid	0.8					0.0	
	Sows - farrow to nursery (51 lbs)		Liquid	1					0.0	
	Weanlings, Nursery (11 - 51 lbs)		Liquid	0.1					0.0	
	Grower / Finisher (51 - 249 lbs)		Liquid	0.25					0.0	
Animal Type	Type of Operation	Yearly Manure Production		Production Period ² (Days)	Number of Birds ³ (Capacity)	Total Manure Volume (ft ³) (F/365xGxH)	Total Manure Volume for Semi-Solid and Liquid Manure (Imp Gal)			
		Default Manure Production (ft ³ /year/bird space)	Operation Manure Production ¹ (ft ³ /year/bird space)							
Chickens	Broilers – floor ⁶	Table 3, pg 85, FPGs for Poultry 2000		1.23				-		
	Broiler breeder hens ⁷			2.3				-		
	Broiler breeder pullets ⁵			0.99					-	0.0
	Roasters – floor ⁶			1.16					-	
	Layers – cage ⁸			2.33					-	
	Layers – floor ⁷			1.68					-	
	Layers – solid pack ⁹								-	
	Pullets – cage ⁸			0.71					-	0.0
	Pullets – floor ⁶			0.75					-	
	Pullets – solid pack ⁹								-	
Turkeys	Broilers ⁶	Table 3, pg 85, FPGs for Poultry 2000		2.83				-		
	Heavy toms ⁶			5.58				-		
	Heavy hens ⁶			3.32					-	

Sizing of a manure storage facility in accordance with all requirements of the *Livestock Manure and Mortalities Management Regulation* (M.R. 42/98) is the responsibility of the operator.

Instructions and footnotes:

- ¹ ENTER the manure production estimate for your operation. If no estimate is available, use the default value provided in column E. References for default daily and yearly manure production are provided in column C.
- ² ENTER the number of days worth of manure that will be produced. For earthen manure storage facilities the minimum storage requirement is 400 days. For steel and concrete manure storage facilities the minimum storage requirement is 250 days.
- ³ ENTER the total number of animals or birds that the operation can hold (e.g. barn or feedlot capacity).
- ⁴ Milking cows includes all lactating and dry cows.
- ⁵ Default manure production estimates for semi-solid and liquid dairy manure include manure and washwater from the milking parlour.
- ⁶ 2 inches of wood shavings or 4 inches of straw placed on floor. Manure and litter removed from barn at 25% moisture content, with a density of 20 lb/ft³
- ⁷ One-third litter floor, two-thirds slatted floor. Manure and litter removed from barn at 40% moisture content, with a density of 25 lb/ft³
- ⁸ Manure removed from barn at 90% moisture content with a density of 59 lb/ft³
- ⁹ Poultry operations using litter (solid pack) must provide an estimate of yearly manure production

If yes, please describe _____

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.

Does the operation currently file an annual Manure Management Plan with Manitoba Conservation and Water Stewardship? (For operations with 300 Animal Units or more, only)

yes

no

Manure application methods and the season in which manure is applied affect odour, nutrient availability, crop response, land base requirements and the risk of water contamination.

Proposed application method:

broadcast broadcast and incorporation within 48 hours injection

The Livestock Manure and Mortalities Management Regulation prohibits the 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.

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.

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

Nutrients cannot be applied within the Nutrient Buffer Zones as outlined in the Nutrient Management Regulation (62/2008) and illustrated in the [Setback Requirements From Water Features Table](#).

Has the setback area for all water features been observed and excluded from land base calculations for this operation?

yes no

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

Total suitable area available for manure application

1188 acres

Manure Application Field Characteristics Table attached

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 size of livestock, 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 the [Crop Rotation Table](#)).

The [Livestock Manure and Mortalities Management Regulation](#) requires that “sufficient land is available to the operator to implement an appropriate manure management plan” before Manitoba Conservation and Water Stewardship will issue a permit for a manure storage facility.

“*Certain Areas*” are defined by the [Livestock Manure and Mortalities Management Regulation](#) (M.R. 42/98) as areas where the amount of phosphorus in the manure produced annually by livestock in an area of not less than 93.24 km² is greater than two times the annual crop removal rate of P₂O₅ in that area. Currently the rural municipalities of Hanover and La Broquerie are considered to be “*certain areas*”.

A livestock operation is considered to be located within a “*certain area*” if any part of the operation is located within the “*certain area*”. This may include, but not limited to, barn(s), confined livestock area(s), field storage location(s), manure storage facility(ies), and/or spread filed(s).

MANURE APPLICATION FIELD CHARACTERISTICS TABLE

	A	B	C	D	E	F	G	H	I	J	K
Field	Legal Description	Rural Municipality	O/L/A	Total Acreage	Setbacks, including features	Net Acreage for Manure Application	Agriculture Capability Class and Subclass	Soil Nitrate (lb/acre) 0-24 inches	Soil Phosphorus (ppm Olsen P) 0-6 inches	Development Plan Designation	Zoning
NB-01	NE 14-2-4E	FRANKLIN	O	102	15m, Order 3 Drain	101	3M-5M	51	7	Rural Area 2	R2
NB-02	W ½ NW 14-2-4E	FRANKLIN	O	70	None	70	2W-3M	44	10	Rural Area 2	R2
NB-03	Pt. NW & NE 14-2-4E	FRANKLIN	O	93	15m, Order 3 Drain	90	2W-3M	31	11	Rural Area 2	R2
NB-04	NW 19-2-5E	FRANKLIN	O	107	None	107	3M	19	5	Rural Area 2	R2
BB-04	E ½ 29-1-4E	FRANKLIN	A	240	None	240	2W-3W-5WI	24	18	Limited Rural Zone	LR
BB-05	SE 29-1-4E	FRANKLIN	A	70	None	70	2W-3W-5WI	35	32	Limited Rural Zone	LR
BB-06	SE 32-1-4E	FRANKLIN	A	155	15m, Order 3 Drain	150	2W-3W	39	7	Rural Area 1	R1
BB-07	SW & Pt. SE 16-2-5E	FRANKLIN	A	166	None	166	2MP-3M-5W	11	7	Rural Area 2	R2
BG-05	NW 21-1-5E	FRANKLIN	O	81	None	81	3P-5W	11	6	Rural Area 2	R2
BG-31	NE 21-1-5E	FRANKLIN	A	87	6W Soil	50	2MP-5W	7	5	Rural Area 2	R2
BG-35	SE 21-1-5E	FRANKLIN	O	91	6W Soil	63	5W	5	4	Rural Area 2	R2
BG-13	SW 28-1-5E	FRANKLIN	O	115	None	0	5W-3P	Over 12 Months Old		Rural Area 2	R2
Total Net Acreage for Manure Application:						1188					

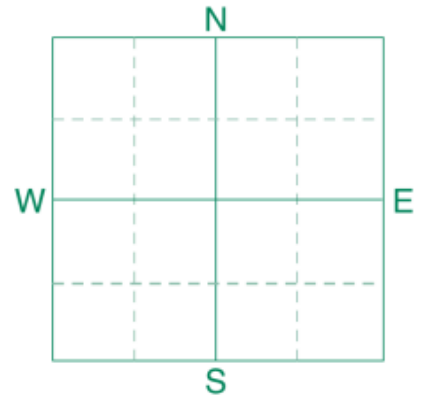
- A. Enter the legal description for each parcel of land that will receive manure: Sec, Twp, Rge or River Lot (including parish).
- B. Identify the Rural Municipality in which the parcel is located.
- C. Indicate how the land has been secured for manure application: O – Own / L – Lease / A – Agreement
- D. Enter the total acreage for the parcel.
- E. Enter setbacks from surface water or groundwater features that reduce the land available for manure application; include identification of type of feature (e.g. 8m, Order 3 drain).
- F. Enter the net long-term acreage available for manure application for the parcel after taking into account setbacks and excluding Class 6, 7 and unimproved organic soils.
- G. Enter the agriculture capability class and subclass ratings for the acreage available for manure application.
- H. Provide soil test results for nitrate-N in lb/ac at the 0-24 inch depth. Soil test results must be no more than 12 months old and must be completed by an accredited soil-testing laboratory.
- I. Provide soil test results for phosphorus ppm Olsen P at 0-6 inch depth. Soil test results must be no more than 12 months old and must be completed by an accredited soil-testing laboratory.
- J. Please indicate the Development Plan and its by-law number in addition to the map designation for each field
- K. Please indicate the Zoning By-law and its by-law number in addition to the zoning for each field



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **NB-01**
 SAMPLE ID
 FIELD NAME **East**
 COUNTY **4E**
 TWP **2** RANGE
 SECTION **14** QTR **NE** ACRES **102**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

Nevin Bender
Nevin 204-427-3311
Box 7
Woodmore, MB R0A 2M0

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB R0A 1V0

REF # **703295** BOX # **0**
 LAB # **NW85483**

Date Sampled **09/30/2013**

Date Received **10/03/2013**

Date Reported **11/4/2013**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High									
Nitrate	0-6" 21 lb/ac					Canola-bu		Soybeans		YIELD GOAL				
	6-24" 30 lb/ac	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL				
	0-24" 51 lb/ac					40 BU		40 BU		0				
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES				
						Band		Band						
Olsen Phosphorus	7 ppm	*****				LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Potassium	52 ppm	*****				N	89	N	***	N				
Chloride						P ₂ O ₅	36 Band *	P ₂ O ₅	34 Band *	P ₂ O ₅				
						K ₂ O	49 Band *	K ₂ O	40 Band *	K ₂ O				
Sulfur	0-6" 46 lb/ac 6-24" 168 lb/ac	*****				Cl		Cl		Cl				
Boron						S	12 Band	S	0	S				
Zinc	0.65 ppm	*****				B		B		B				
Iron						Zn	3 Band (Trial)	Zn	3 Band (Trial)	Zn				
Manganese						Fe		Fe		Fe				
Copper						Mn		Mn		Mn				
Magnesium						Cu		Cu		Cu				
Calcium						Mg		Mg		Mg				
Sodium						Lime		Lime		Lime				
Org.Matter	2.3 %	*****				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.22 mmho/cm 6-24" 0.2 mmho/cm	****				0-6" 8.3								
		****				6-24" 8.6								

Crop 1: * 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 = 36 K2O = 18 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

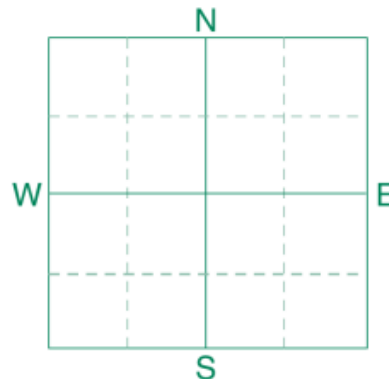
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 35 K2O = 60 AGVISE Band guidelines will build P & K test levels to the medium range over many years. Soybeans may respond to nitrogen on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



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **NB-02**
 SAMPLE ID
 FIELD NAME
 COUNTY **4E**
 TWP **2** RANGE
 SECTION **14** QTR **W1/2NW** ACRES **70**
 PREV. CROP **Oats**



SUBMITTED FOR:
Nevin Bender
Nevin 204-427-3311
Box 7
Woodmore, MB ROA 2M0

SUBMITTED BY: **TO0533**
TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB ROA 1V0

REF # **662768** BOX # **0**
 LAB # **NW48053**

Date Sampled **08/30/2013** Date Received **09/05/2013** Date Reported **11/4/2013**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High								
Nitrate	0-6" 20 lb/ac					Corn-Silage		Corn-Grain					
	6-24" 24 lb/ac	*****				YIELD GOAL		YIELD GOAL		YIELD GOAL			
	0-24" 44 lb/ac					15 Tons		120 BU		0			
						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
						Band		Band		Band			
						LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Phosphorus	Olsen 10 ppm	*****	*****	*****		N 112		N 100		N			
Potassium	59 ppm	*****				P ₂ O ₅ 44	Band *	P ₂ O ₅ 36	Band *	P ₂ O ₅			
Chloride						K ₂ O 62	Band *	K ₂ O 60	Band *	K ₂ O			
Sulfur	0-6" 26 lb/ac	*****	*****	*****	*****	Cl		Cl		Cl			
Boron	6-24" 48 lb/ac	*****	*****	*****	*****	S 5	Band (Trial)	S 5	Band (Trial)	S			
Zinc	0.82 ppm	*****	*****	*****	*****	B		B		B			
Iron						Zn 0		Zn 0		Zn			
Manganese						Fe		Fe		Fe			
Copper	0.45 ppm	*****	*****	*****	*****	Mn		Mn		Mn			
Magnesium						Cu 0		Cu 0		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter	3.8 %	*****	*****	*****	*****								
Carbonate(CCE)													
Sol. Salts	0-6" 0.27 mmho/cm	*****				Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
	6-24" 0.19 mmho/cm	****							% Ca	% Mg	% K	% Na	% H
						0-6" 7.9							
						6-24" 8.2							

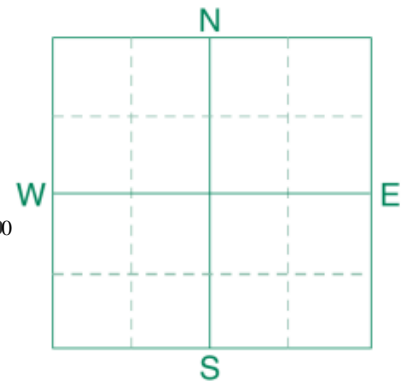
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 54 K20 = 125 AGVISE Band guidelines will build P & K test levels to the medium range over many years.
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P205 = 48 K20 = 32 AGVISE Band guidelines will build P & K test levels to the medium range over many years.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **NB-03**
 SAMPLE ID
 FIELD NAME **West**
 COUNTY **4E**
 TWP **2** RANGE
 SECTION **14** QTR **PtNW&NEACRES 90**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

Nevin Bender
Nevin 204-427-3311
Box 7
Woodmore, MB ROA 2M0

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB ROA 1V0

REF # **703299** BOX # **0**
 LAB # **NW85438**

Date Sampled **09/30/2013**

Date Received **10/03/2013**

Date Reported **11/4/2013**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice				
		VLow	Low	Med	High									
Nitrate	0-6"	10 lb/ac	*****				Canola-bu		Soybeans					
	6-24"						21 lb/ac		YIELD GOAL		YIELD GOAL		YIELD GOAL	
	0-24"	31 lb/ac					40 BU		40 BU		0			
	SUGGESTED GUIDELINES						SUGGESTED GUIDELINES		SUGGESTED GUIDELINES					
	Band						Band		Band					
	LB/ACRE						APPLICATION		LB/ACRE		APPLICATION		LB/ACRE	
Phosphorus	Olsen	11 ppm	*****				N	109	N	***	N			
Potassium		60 ppm	*****				P ₂ O ₅	28	Band *	P ₂ O ₅	27	Band *	P ₂ O ₅	
Chloride							K ₂ O	46	Band *	K ₂ O	38	Band *	K ₂ O	
Sulfur	0-6"	28 lb/ac	*****				Cl		Cl		Cl			
	6-24"		42 lb/ac		*****				S	17	Band	S	7	Band (Trial)
Boron							B		B		B			
Zinc		0.94 ppm	*****				Zn	3	Band (Trial)	Zn	3	Band (Trial)	Zn	
Iron							Fe		Fe		Fe			
Manganese							Mn		Mn		Mn			
Copper							Cu		Cu		Cu			
Magnesium							Mg		Mg		Mg			
Calcium							Lime		Lime		Lime			
Sodium														
Org.Matter		2.3 %	*****											
Carbonate(CCE)														
Sol. Salts	0-6"	0.23 mmho/cm	*****				Soil pH	8.3	Cation Exchange Capacity		% Base Saturation (Typical Range)			
	6-24"	0.17 mmho/cm	****				Buffer pH	8.4	% Ca	% Mg	% K	% Na	% H	

Crop 1: * 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 = 36 K2O = 18 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

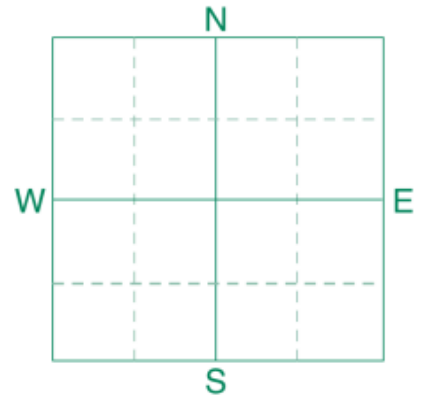
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 35 K2O = 60 AGVISE Band guidelines will build P & K test levels to the medium range over many years. Soybeans may respond to nitrogen on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



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **NB-04**
 SAMPLE ID
 FIELD NAME **Woodmore**
 COUNTY **5E**
 TWP **2** RANGE
 SECTION **19** QTR **NW** ACRES **107**
 PREV. CROP **Grass/Pasture**



SUBMITTED FOR:

Nevin Bender
Nevin 204-427-3311
Box 7
Woodmore, MB **ROA 2M0**

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB **ROA 1V0**

REF # **776927** BOX # **0**
 LAB # **NW145016**

Date Sampled **10/30/2013**

Date Received **11/02/2013**

Date Reported **11/5/2013**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice			3rd Crop Choice			
		V	L	M	H	Oats		Canola-bu			Corn-Silage			
						YIELD GOAL		YIELD GOAL			YIELD GOAL			
Nitrate	0-6" 10 lb/ac	****				100 BU		40 BU			15 Tons			
	6-24" 9 lb/ac		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			SUGGESTED GUIDELINES						
	0-24" 19 lb/ac		Band/Maint.		Band/Maint.			Band/Maint.						
			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION						
Phosphorus	Olsen 5 ppm	*****				N 81	N 121	N 137						
Potassium	63 ppm	*****				P ₂ O ₅ 30 Band *	P ₂ O ₅ 40 Band *	P ₂ O ₅ 54 Band *						
Chloride						K ₂ O 60 Band *	K ₂ O 45 Band *	K ₂ O 125 Band *						
Sulfur						Cl	Cl	Cl						
Boron						S	S	S						
Zinc						B	B	B						
Iron						Zn	Zn	Zn						
Manganese						Fe	Fe	Fe						
Copper						Mn	Mn	Mn						
Magnesium						Cu	Cu	Cu						
Calcium						Mg	Mg	Mg						
Sodium						Lime	Lime	Lime						
Org. Matter	1.6 %	*****				Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)						Buffer pH			% Ca	% Mg	% K	% Na	% H	
Sol. Salts	0-6" 0.13 mmho/cm 6-24" 0.11 mmho/cm	*** **				0-6" 8.2 6-24" 8.4								

Crop 1: * 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 = 25 K2O = 19 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

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. Crop Removal: P2O5 = 36 K2O = 18 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

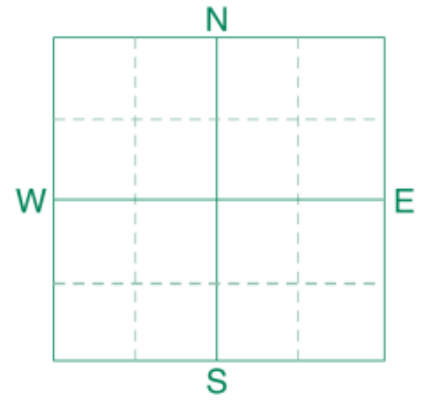
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 54 K2O = 125 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **BB-04**
 SAMPLE ID
 FIELD NAME **Scott Home**
 COUNTY **4E**
 TWP **1** RANGE
 SECTION **29** QTR **NEPtNW** ACRES **240**
 PREV. CROP **Alfalfa**



SUBMITTED FOR:

Brandt Boys Beef & Grain
Scott 324-7410
Box 105
Ridgeville, MB **ROA 1M0**

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB **ROA 1V0**

REF # **820878** BOX # **0**
 LAB # **NW185186**

Date Sampled **12/06/2013**

Date Received **12/11/2013**

Date Reported **12/13/2013**

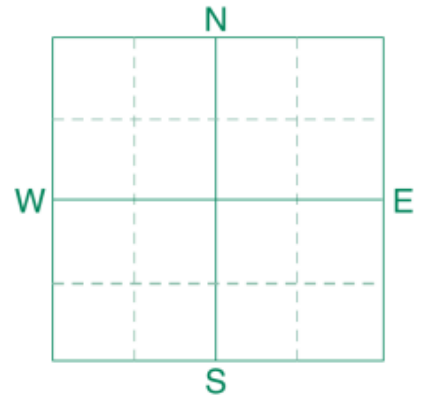
Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice		
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL		
Nitrate	0-6" 15 lb/ac	*****				0		0		0		
	6-24" 9 lb/ac					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		
	0-24" 24 lb/ac					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	
Olsen Phosphorus	18 ppm	*****	*****	*****	N		N		N			
Potassium	359 ppm	*****	*****	*****	P ₂ O ₅		P ₂ O ₅		P ₂ O ₅			
Chloride					K ₂ O		K ₂ O		K ₂ O			
Sulfur					Cl		Cl		Cl			
Boron					S		S		S			
Zinc					B		B		B			
Iron					Zn		Zn		Zn			
Manganese					Fe		Fe		Fe			
Copper					Mn		Mn		Mn			
Magnesium					Cu		Cu		Cu			
Calcium					Mg		Mg		Mg			
Sodium					Lime		Lime		Lime			
Org.Matter	6.0 %	*****	*****	*****	Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)		*****	*****	*****	Buffer pH			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 1.22 mmho/cm 6-24" 3.35 mmho/cm	*****	*****	*****	0-6" 7.5 6-24" 8.1							



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **BB-05**
 SAMPLE ID
 FIELD NAME **Don Ridgeveille**
 COUNTY **4E**
 TWP **1** RANGE
 SECTION **29** QTR **SE** ACRES **70**
 PREV. CROP **Alfalfa**



SUBMITTED FOR:

Brandt Boys Beef & Grain
Scott 324-7410
Box 105
Ridgeville, MB

ROA 1M0

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB

ROA 1V0

REF # **820879** BOX # **0**
 LAB # **NW185185**

Date Sampled **12/06/2013**

Date Received **12/11/2013**

Date Reported **12/13/2013**

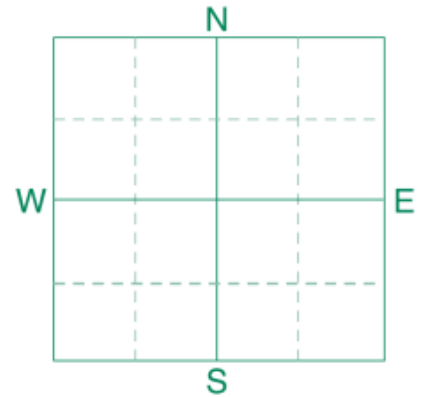
Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL			
Nitrate	0-6" 26 lb/ac					0		0		0			
	6-24" 9 lb/ac	*****				SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
	0-24" 35 lb/ac					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen Phosphorus	32 ppm	*****	*****	*****	*****	N		N		N			
Potassium	388 ppm	*****	*****	*****	*****	P ₂ O ₅		P ₂ O ₅		P ₂ O ₅			
Chloride						K ₂ O		K ₂ O		K ₂ O			
Sulfur						Cl		Cl		Cl			
Boron						S		S		S			
Zinc						B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter	7.1 %	*****	*****	*****	*****	Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)						Buffer pH			% Ca	% Mg	% K	% Na	% H
0-6" 1.24 mmho/cm		*****	*****	*****	*****	0-6" 7.2							
6-24" 3.21 mmho/cm		*****	*****	*****	*****	6-24" 7.9							
Sol. Salts													



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **BB-06**
 SAMPLE ID
 FIELD NAME **Justin Ridgeville**
 COUNTY **4E**
 TWP **1** RANGE
 SECTION **32** QTR **SE** ACRES **150**
 PREV. CROP **Wheat-Spring**



SUBMITTED FOR:

Brandt Boys Beef & Grain
Scott 324-7410
Box 105
Ridgeville, MB

ROA 1M0

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB

ROA 1V0

REF # **681579** BOX # **0**
 LAB # **NW67438**

Date Sampled **09/18/2013**

Date Received **09/23/2013**

Date Reported **11/4/2013**

Nutrient In The Soil		Interpretation				1st Crop Choice			2nd Crop Choice			3rd Crop Choice				
		VLow	Low	Med	High	Wheat-Spring			Corn-Grain			Corn-Silage				
Nitrate	0-6" 18 lb/ac					YIELD GOAL			YIELD GOAL			YIELD GOAL				
	6-24" 21 lb/ac	*****				50 BU			120 BU			15 Tons				
	0-24" 39 lb/ac					SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES				
						Band/Maint.			Band/Maint.			Band/Maint.				
						LB/ACRE	APPLICATION		LB/ACRE	APPLICATION		LB/ACRE	APPLICATION			
Olsen Phosphorus	7 ppm	*****				N	96		N	105		N	117			
Potassium	253 ppm	*****				P ₂ O ₅	31	Band *	P ₂ O ₅	48	Band *	P ₂ O ₅	54	Band *		
Chloride						K ₂ O	10	Band (Starter)*	K ₂ O	10	Band (2x2) *	K ₂ O	10	Band (2x2) *		
Sulfur	0-6" 22 lb/ac 6-24" 360 +lb/ac	*****				Cl			Cl			Cl				
Boron						S	0		S	0		S	0			
Zinc	0.58 ppm	*****				B			B			B				
Iron						Zn	2	Band (Trial)	Zn	3	Band	Zn	3	Band		
Manganese						Fe			Fe			Fe				
Copper	1.62 ppm	*****				Mn			Mn			Mn				
Magnesium						Cu	0		Cu	0		Cu	0			
Calcium						Mg			Mg			Mg				
Sodium						Lime			Lime			Lime				
Org. Matter	5.1 %	*****				Soil pH			% Base Saturation (Typical Range)							
Carbonate(CCE)						Buffer pH			Cation Exchange Capacity			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.44 mmho/cm 6-24" 1.11 mmho/cm	*****				0-6" 8.3										
		*****				6-24" 8.3										

Crop 1: * 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 = 31 K2O = 19 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

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. 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.

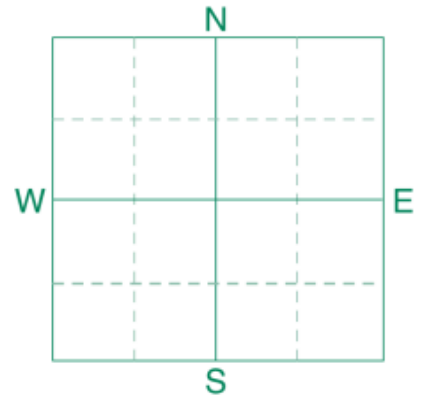
Crop 3: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 54 K2O = 125 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **BB-07**
 SAMPLE ID
 FIELD NAME **Reserve Woodmore**
 COUNTY **5E**
 TWP **2** RANGE
 SECTION **16** QTR **SW** ACRES **155**
 PREV. CROP **Corn-Silage**



SUBMITTED FOR:

Brandt Boys Beef & Grain
Scott 324-7410
Box 105
Ridgeville, MB **ROA 1M0**

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB **ROA 1V0**

REF # **747331** BOX # **0**
 LAB # **NW116469**

Date Sampled **10/16/2013**

Date Received **10/19/2013**

Date Reported **11/4/2013**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High								
Nitrate	0-6" 5 lb/ac	**				Canola-bu		Canola-bu		YIELD GOAL			
	6-24" 6 lb/ac		YIELD GOAL		YIELD GOAL		YIELD GOAL						
	0-24" 11 lb/ac		40 BU		50 BU		0						
			SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES						
			Band/Maint.		Band/Maint.								
Olsen Phosphorus	7 ppm	*****			LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION			
Potassium	126 ppm	*****			N	129	N	164	N				
Chloride	0-6" 12 lb/ac	*****			P ₂ O ₅	36 Band *	P ₂ O ₅	45 Band *	P ₂ O ₅				
	6-24" 48 lb/ac	*****			K ₂ O	20 Band *	K ₂ O	25 Band *	K ₂ O				
Sulfur					Cl		Cl		Cl				
Boron					S	17 Band	S	17 Band	S				
Zinc					B		B		B				
Iron					Zn		Zn		Zn				
Manganese					Fe		Fe		Fe				
Copper					Mn		Mn		Mn				
Magnesium					Cu		Cu		Cu				
Calcium					Mg		Mg		Mg				
Sodium					Lime		Lime		Lime				
Org.Matter					Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)				
Carbonate(CCE)					Buffer pH				% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.23 mmho/cm	*****			0-6" 8.0								
	6-24" 0.26 mmho/cm	*****			6-24" 8.5								

Crop 1: * 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 = 36 K2O = 18 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

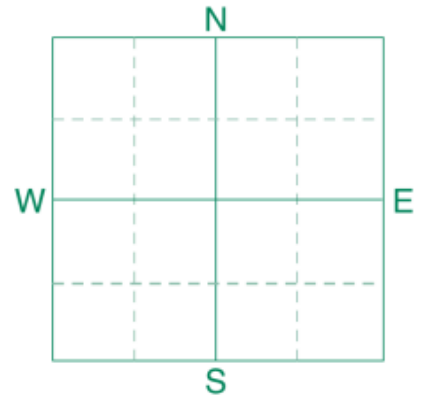
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.



Soil Analysis by Agvise Laboratories
 (http://www.agvise.com)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **BG-31**
 SAMPLE ID
 FIELD NAME **Nevin Bender**
 COUNTY **5E**
 TWP **1** RANGE
 SECTION **21** QTR **NE** ACRES **87**
 PREV. CROP **Grass/Pasture**



SUBMITTED FOR:

Border Genetics
John Nickel 981-9886
Nevin Bender 427-3311
, MB

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB **ROA 1V0**

REF # **682625** BOX # **0**
 LAB # **NW67285**

Date Sampled **09/19/2013**

Date Received **09/23/2013**

Date Reported **11/4/2013**

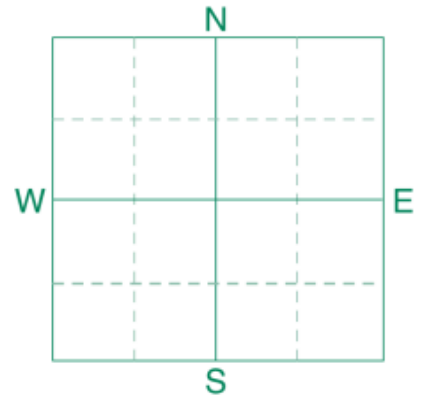
Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		VLow	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL			
Nitrate	0-6"					0		0		0			
	6-24"					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
	0-24"					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Olsen Phosphorus	5 ppm	*****				N		N		N			
Potassium	62 ppm	*****				P ₂ O ₅		P ₂ O ₅		P ₂ O ₅			
Chloride						K ₂ O		K ₂ O		K ₂ O			
Sulfur						Cl		Cl		Cl			
Boron						S		S		S			
Zinc						B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter	8.9 %	*****	*****	*****	*****	Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)						Buffer pH			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.37 mmho/cm 6-24" 0.16 mmho/cm	*****			****	0-6" 8.5							
						6-24" 8.6							



Soil Analysis by Agvise Laboratories
 (<http://www.agvise.com>)
 Northwood: (701) 587-6010
 Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **BG-35**
 SAMPLE ID
 FIELD NAME **Nevin Bender**
 COUNTY **5E**
 TWP **1** RANGE
 SECTION **21** QTR **SE** ACRES **90**
 PREV. CROP **Grass/Pasture**



SUBMITTED FOR:

Border Genetics
John Nickel 981-9886
Nevin Bender 427-3311
, MB

SUBMITTED BY: TO0533

TONE AG CONSULTING LTD.
31022 RAT RIVER RD
BOX 333
ST. PIERRE JOLYS, MB R0A 1V0

REF # **682627** BOX # **0**
 LAB # **NW66267**

Date Sampled **09/19/2013**

Date Received **09/21/2013**

Date Reported **11/4/2013**

Nutrient In The Soil		Interpretation				1st Crop Choice		2nd Crop Choice		3rd Crop Choice			
		V	Low	Med	High	YIELD GOAL		YIELD GOAL		YIELD GOAL			
Nitrate	0-6" 2 lb/ac					0		0		0			
	6-24" 3 lb/ac					SUGGESTED GUIDELINES		SUGGESTED GUIDELINES		SUGGESTED GUIDELINES			
	0-24" 5 lb/ac					LB/ACRE	APPLICATION	LB/ACRE	APPLICATION	LB/ACRE	APPLICATION		
Phosphorus	Olsen 4 ppm	*****				N		N		N			
Potassium	83 ppm	*****	*****			P ₂ O ₅		P ₂ O ₅		P ₂ O ₅			
Chloride						K ₂ O		K ₂ O		K ₂ O			
Sulfur						Cl		Cl		Cl			
Boron						S		S		S			
Zinc						B		B		B			
Iron						Zn		Zn		Zn			
Manganese						Fe		Fe		Fe			
Copper						Mn		Mn		Mn			
Magnesium						Cu		Cu		Cu			
Calcium						Mg		Mg		Mg			
Sodium						Lime		Lime		Lime			
Org.Matter	3.0 %	*****	*****			Soil pH		Cation Exchange Capacity		% Base Saturation (Typical Range)			
Carbonate(CCE)						Buffer pH			% Ca	% Mg	% K	% Na	% H
Sol. Salts	0-6" 0.2 mmho/cm 6-24" 0.19 mmho/cm	*****	****			0-6" 8.3 6-24" 8.5							

CROP ROTATION TABLE

A	B	C	D	E
Expected Crops in the Rotation	Acreage	Historical Yield	Units	Source of Yield Information
Corn - Silage	244	4.8	tons/acre	MASC
Corn - Grain	244	102.4	bus/acre	MASC
Oats	85	68.4	bus/acre	MASC
Canola	85	29.3	bus/acre	MASC
Grass	220	2.99	tons/acre	MASC
Alfalfa	310	2.99	tons/acre	MASC
Total Net Acreage for Manure Application	1188			

- A. List all of the crop(s) to be grown in the rotation on the acreage that will receive manure.
- B. Indicate the average acreage for each crop over the rotation. For example, if there are 720 suitable acres available for manure and approximately 40 these acres will be used to grow canola, enter 288. The total of column B should add up to Total Net Acreage for Manure Application provided in the Manure Application Field Characteristic Table.
- C. Enter the historical yield average for each crop. Long-term yield averages can be determined using MASC data (<http://www.masc.mb.ca/masc.nsf/index.html?OpenPage>) or on-farm yield records. If on-farm yield records are used, please provide copies.
- D. Enter the units for the yields provided (e.g. bu/acre, tons/acre).
- E. Enter the source of the historical yield average provided.



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

MMPP Fertilizer Data Browser

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

Search Summary

Your selected search:

Region(s) Selected: FRANKLIN

Crop(s) Selected: ALFALFA

Soil Zone(s) Selected: SOIL TYPE G

Period Selected: 2002 to 2012

This search returned 9 records from the MASC database, summarized below:

Total Acres: 587 acres
 Yield per Acre: 2.992 Tons / acre (2.715 tonnes / acre)

Fertilizer Applied per Acre (actual product):

Nitrogen: 19.2 lbs / acre (0.009 tonnes / acre)
 Phosphorus: 35.9 lbs / acre (0.016 tonnes / acre)
 Potassium: 25.6 lbs / acre (0.012 tonnes / acre)
 Sulfur: 7.9 lbs / acre (0.004 tonnes / acre)

[View Raw Data](#)





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

MMPP Fertilizer Data Browser

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

Search Summary

Your selected search:

Region(s) Selected: FRANKLIN

Crop(s) Selected: ARGENTINE CANOLA

Soil Zone(s) Selected: All

Period Selected: 2002 to 2012

This search returned 58 records from the MASC database, summarized below:

Total Acres: 299,335 acres
 Yield per Acre: 29.3 Bushels / acre (0.666 tonnes / acre)

Fertilizer Applied per Acre (actual product):

Nitrogen: 108.6 lbs / acre (0.049 tonnes / acre)
 Phosphorus: 30.9 lbs / acre (0.014 tonnes / acre)
 Potassium: 2.3 lbs / acre (0.001 tonnes / acre)
 Sulfur: 10.4 lbs / acre (0.005 tonnes / acre)

[View Raw Data](#)





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

MMPP Fertilizer Data Browser

(Fertilizer Query Help)

Save Raw Data

New Search

Search Summary

Your selected search:

Region(s) Selected: FRANKLIN

Crop(s) Selected: GRAIN CORN

Soil Zone(s) Selected: All

Period Selected: 2002 to 2012

This search returned 30 records from the MASC database, summarized below:

Total Acres: 21,158 acres
 Yield per Acre: 102.4 Bushels / acre (2.602 tonnes / acre)

Fertilizer Applied per Acre (actual product):

Nitrogen: 114.9 lbs / acre (0.052 tonnes / acre)
 Phosphorus: 33.8 lbs / acre (0.015 tonnes / acre)
 Potassium: 12.4 lbs / acre (0.006 tonnes / acre)
 Sulfur: 3.5 lbs / acre (0.002 tonnes / acre)

[View Raw Data](#)

Save Raw Data

New Search





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

MMPP Fertilizer Data Browser

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

Search Summary

Your selected search:

Region(s) Selected: RISK AREA 14

Crop(s) Selected: OATS

Soil Zone(s) Selected: SOIL TYPE G

Period Selected: 2002 to 2012

This search returned 11 records from the MASC database, summarized below:

Total Acres: 27,786 acres
 Yield per Acre: 68.4 Bushels / acre (1.056 tonnes / acre)

Fertilizer Applied per Acre (actual product):

Nitrogen: 58.7 lbs / acre (0.027 tonnes / acre)
 Phosphorus: 25.2 lbs / acre (0.011 tonnes / acre)
 Potassium: 10.0 lbs / acre (0.005 tonnes / acre)
 Sulfur: 2.0 lbs / acre (0.001 tonnes / acre)

[View Raw Data](#)





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

MMPP Fertilizer Data Browser

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

Search Summary

Your selected search:

Region(s) Selected: RISK AREA 14

Crop(s) Selected: SILAGE CORN

Soil Zone(s) Selected: SOIL TYPE G

Period Selected: 2002 to 2012

This search returned 10 records from the MASC database, summarized below:

Total Acres: 1,725 acres
 Yield per Acre: 13.794 Tons / acre (12.517 tonnes / acre)

Fertilizer Applied per Acre (actual product):

Nitrogen: 66.8 lbs / acre (0.030 tonnes / acre)
 Phosphorus: 18.3 lbs / acre (0.008 tonnes / acre)
 Potassium: 24.4 lbs / acre (0.011 tonnes / acre)
 Sulfur: 3.0 lbs / acre (0.001 tonnes / acre)

[View Raw Data](#)



In "certain areas" it is Manitoba Conservation and Water Stewardship policy to consider 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.

Is the livestock operation located in "certain areas"?

yes no

<p>1. Total minimum area required for manure application at one times crop removal rate for operations within the RMA of Hanover and La Broquerie</p> <p>2. Total minimum area required for manure application at two times crop removal rate for operations outside of the RMA of Hanover and La Broquerie</p>	<p>3. Total minimum area required for manure application at one times crop removal rate for operations within the RMA of Hanover and La Broquerie</p> <p>4. Total minimum area required for manure application at two times crop removal rate for operations outside of the RMA of Hanover and La Broquerie</p>
---	---

For more information on applying land use and manure application rates, please refer to the Land Use and Manure Application Handbook (LUMAH) available on the Manitoba Conservation and Water Stewardship website.

Land Use Calculator attached

Land Use Report attached

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

has not been identified

has been identified for two times the crop removal rate of phosphorus for operations outside of the RMA of Hanover and La Broquerie

has been identified for one times the crop removal rate of phosphorus for operations within the RMA of Hanover and La Broquerie

In areas which are not considered to be "*certain areas*", Manitoba Conservation and Water Stewardship 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.

For more information on obtaining a manure storage facility permit, please contact Manitoba Conservation and Water Stewardship, Environmental Approvals branch at (204) 945-5081.

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

<p>Total minimum area required for manure application at two times crop removal, for operations outside of Hanover and La Broquerie</p>	<p>408 ac (N-based) 598 ac (P-based)</p>
<p>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</p>	<p>1196 ac</p>

For more information on completing land base calculations, call Manitoba Agriculture, Food and Rural Initiatives (MAFRI) at (204) 945-3869 in Winnipeg.

Land Base Calculator attached Land base calculator was done by Petra Loro from MAFRI.

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)

Crop Nutrient Removal

Operation Name: **Nevin Bender**

Crop	P ₂ O ₅ Removed per Unit of Crop	N Removed per Unit of Crop	Unit	N Uptake per Unit of Crop	Unit	Historical Average Yield	Unit	Acreage	Total Removal			Uptake
									P ₂ O ₅	2(P ₂ O ₅)	Nitrogen (N)	Nitrogen (N)
Alfalfa	13.80	58.00	lb/ton		lb/ton	2.99	tons/ac	310	10.8	21.5	45.3	45.25
Barley Grain	0.42	0.97	lb/bu	1.39	lb/bu		bu/ac					
Barley Silage	11.80	34.40	lb/ton		lb/ton		tons/ac					
Canola	1.04	1.93	lb/bu	3.19	lb/bu	29.3	bu/ac	85	2.2	4.4	4.0	6.69
Corn Grain	0.44	0.97	lb/bu	1.53	lb/bu	102.4	bu/ac	244	9.3	18.5	20.4	32.18
Corn Silage	12.70	31.20	lb/ton		lb/ton	4.8	tons/ac	244	12.5	25.0	30.8	30.76
Dry edible beans	1.39	4.17	lb/cwt		lb/cwt		cwt/ac					
Fababeans	1.79	5.02	lb/cwt	8.4	lb/cwt		cwt/ac					
Flax	0.65	2.13	lb/bu	2.88	lb/bu		bu/ac					
Grass hay	10.00	34.20	lb/ton		lb/ton	2.99	tons/ac	220	5.5	11.1	18.9	18.94
Lentils	1.03	3.39	lb/cwt	5.08	lb/cwt		cwt/ac					
Oats	0.26	0.62	lb/bu	1.07	lb/bu	68.4	bu/ac	85	1.3	2.5	3.0	5.24
Peas	0.69	2.34	lb/bu	3.06	lb/bu		bu/ac					
Potatoes	0.09	0.32	lb/cwt	0.57	lb/cwt		cwt/ac					
Rye	0.45	1.06	lb/bu	1.67	lb/bu		bu/ac					
Soybeans	0.84	3.87	lb/bu	5.2	lb/bu		bu/ac					
Sunflower	1.10	2.80	lb/cwt		lb/cwt		cwt/ac					
Wheat - Spring	0.59	1.50	lb/bu	2.11	lb/bu		bu/ac					
Wheat - Winter	0.51	1.04	lb/bu	1.35	lb/bu		bu/ac					
								1188	41.5	83.1	122.4	139.05

Footnotes:

- 1 The factsheet on Managing Manure within Tillage Systems and Crop Rotations can be found at http://www.gov.mb.ca/agriculture/soilwater/nutrient/pdf/mmf_manureillage_factsheet.pdf.
- 2 Where there are no estimates for N uptake per unit of crop (column F) to calculate N uptake (column V), N removal values (column D) are used.

Land Base Calculator

Operation Name:		Nevin Bender												
Livestock Information		Species	Type	Livestock Places	Animal Units	Cycle Length (Days)	Cycles / Year	Output per head per cycle		Annual Production Nitrogen		Annual Production P ₂ O ₅		
								kg N	kg P ₂ O ₅	kg	lb	kg	lb	
1	Beef	Backgrounders		1200	600	150	2	17.9	9.41	42960	94512	22584	49685	
2														
3														
4														
5														
6														
7														
8														
9														
10														
				Total AU	600					42960	94512	22584	49685	
Crop Nutrient Removal Information			Uptake (lb/ac)		Removal (lb/ac)		Total Nutrient Excretion:				42960	94512	22584	49685
			Nitrogen (N)	P ₂ O ₅	2 X P ₂ O ₅		Post Manure Storage N:				25776	56707	--	--
1.	Detailed Rotation (Farm Data)		139	42	83		LAND BASE REQUIRED				Acres		Acres	
						2 X P ₂ O ₅ Removal					1 X P ₂ O ₅ Removal			
Nitrogen Loss from the Barn and Storage							Nitrogen (N) based				408	408		
2.	Estimated N Losses		Value (%)		40		Phosphorus (P ₂ O ₅) based				598	1196		

Footnotes:

- 1 The nitrogen (N) and phosphorus (expressed as P₂O₅) land bases provided in the bright yellow boxes are based on nutrient excretion, phosphorus removal, nitrogen uptake and N losses during storage. Nutrient removal includes only the quantity of nutrient that is in the harvested portion of the plant and is exported from the field. More information on nutrient uptake and removal can be found at http://www.gov.mb.ca/agriculture/soilwater/nutrient/pdf/mmf_manureillage_factsheet.pdf.
- 2 The N land base assumes zero volatilization losses during field application using best management practices for N conservation. Field N losses from nitrification, denitrification and leaching are also not included.
- 3 The nutrient excretion values for each livestock category (except sows and turkeys) are adapted from Le Centre de reference en agriculture et agroalimentaire du Quebec - CRAAQ.
- 4 The nutrient excretion value for sows is based upon unpublished data for Manitoba.
- 5 The nutrient values for turkeys are based upon data from "Farm Practices Guidelines for Poultry Producers in Manitoba, 2000".

Long-Term Environmental Sustainability

The Government of Manitoba has included phosphorus as a nutrient by which applications of manure, synthetic fertilizer and municipal waste sludge to agricultural lands may be limited.

Over the short-term for fields with low phosphorus, regulations allow manure to be applied to meet the nitrogen requirements of the crop. This often results in over-application of phosphorus and a build-up of phosphorus in soils. When soil test phosphorus levels reach 60 ppm Olsen P, manure application rates must consider how much phosphorus will be removed in the harvested portion of the crop. At 60 to 119 ppm Olsen P, the amount of phosphorus that can be applied cannot exceed twice (two times) what the crop can remove in order to slow the build-up of soil phosphorus. Once soil test phosphorus levels reach 120 ppm Olsen P, applications of phosphorus are restricted to no more than what the crop can remove (one times) in order to stop further soil test phosphorus build-up. At 180 ppm Olsen P, no additional phosphorus may be applied.

It should be noted that soil-test phosphorus levels of 60 ppm Olsen P or greater are agronomically very high and at these levels most crops will not benefit from additional phosphorus beyond starter phosphorus. As phosphorus levels build up in soils, the concentration of phosphorus in runoff increases.

Therefore, to remain environmentally sustainable over a long-term planning horizon of 25 years or more, phosphorus applications from applied manure and other nutrient sources such as commercial fertilizers must be balanced with crop removal to avoid further build-up in soils. Consequently, sufficient land must be available in relatively close proximity to the operation to balance phosphorus applications with crop phosphorus removals (one times) so that manure treatment and export of phosphorus from the region is not required.

I acknowledge that up to 1196 acres/hectares (one times crop removal from table above) may be required for the long term environmental sustainability of the operation.

10.0 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 helps ensure livestock mortalities are handled in an environmentally sound manner. Winter application of composted mortalities is prohibited.

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

Mass Mortalities

- A plan for [mass mortalities](#) is in place.

N/A - Currently not required by MB Conservation : Water

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

Stewardship

Disposal at an approved landfill site is the most viable option. All situations of mass mortalities will be coordinated through MB Conservation : Water Stewardship

11.0 Project Site Description: Land Use Planning Considerations

For assistance contact your [Community and Regional Planning Regional Office](#).

Development Plan and Zoning Bylaw

The Planning District or Municipal Development Plan and Zoning By-law 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 By-law, 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 Development Plan's land use designation and policies (for the planning district or municipality that affect the site) will help confirm the project site's compliance. The Development Plan designations for the spread fields (if something other than agricultural) will indicate the potential loss of the fields in the future due to possible development.

Name of Planning District	Rm of Franklin
Development Plan by-law number	10-09
Land use designation of project site	Rural Zone 2
Livestock operation policies – quote supportive policy numbers	9-2.1(B)
Other Development Plan policies – quote supportive policy numbers	Section 9.2
Non-supportive Development Plan policies	N/A

The Development Plan livestock operation policies support the size and location of the proposed operation.

The Development Plan designations support the long term use of the proposed spread fields.

Zoning By-law

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 By-law?

	Project site dimensions	Minimum zoning bylaw site requirements
Minimum site area	160 ac	40 acres
Minimum site width	2640 feet	600 feet
Minimum front yard	477 feet	200 feet
Minimum side and rear yard	594 feet	75 feet

Separation Distances (Zoning Bylaw or Provincial Planning Regulation)

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:

- a. earthen manure storage facility or b. feedlot and
- c. animal confinement facility or d. non-earthen manure storage facility...

...to the following land use features (if applicable)	Indicate minimum separation distance required in the zoning bylaw or Provincial Planning Regulation (Check appropriate box(es))		If land use feature is less than the minimum separation distance	
	<input type="checkbox"/> a. <input checked="" type="checkbox"/> b.	<input type="checkbox"/> c. <input checked="" type="checkbox"/> d.	Provide actual distance	Provide location or name of feature (e.g. Red River)
Residence/dwelling	820ft	820ft	2,001 ft	Valerius Brant
Designated area (non-agricultural)	4,364ft	4,364ft	27,880ft	Ridgeville, MB
Surface water	328ft	328ft	492 ft	municipal ditch
Surface watercourse	328ft	328ft	492 ft	municipal ditch
Crown land	N/A	N/A	N/A	} none in immediate area
Wildlife Management Area	N/A	N/A	N/A	
Livestock operation			2,001 ft	Valerius Brant
Other significant features/land uses	N/A	N/A	N/A	

If Crown Lands are located within one mile, provide coding. Information can be obtained from the Interdepartmental Operations Crown Lands Plans through the [Manitoba Legislative Library](#) or contact Manitoba Conservation and Water Stewardship at (204) 619-2230.


If undesignated Crown Lands will be used for manure spreading purposes, including the laying of pipe or clearing activity, and use will require a Crown Lands General Permit disposition for the use and access of the subject Crown Lands Parcel(s).

In cases where minimum separation distances are not stated in the Zoning By-law or Development Plan, the minimum separation distances in the [Provincial Planning Regulation](#) apply.

Note: If any separation distance is less than the zoning by-law minimum, a Variation Order will be required from the Municipality.

Setback Distances (Livestock Manure and Mortalities Management Regulation)

Using the following table to indicate the distance from:

Feature	Structure	Minimum setback distance required	Provide actual distance (m)	Provide location or name of feature (e.g. Red River)
	Manure storage facility	100 m	[REDACTED]	[REDACTED]
Surface watercourse, sinkhole, spring, or well	Field storage	100 m	>174m 	ditch, Caisson Drain
	Composing site	100 m	174m	livestock well
	Confined livestock area	100 m	13m	livestock well*
	Manure storage facility	100 m	[REDACTED]	[REDACTED]
Property Line	Composing site	100 m	>100m	east line
	Confined livestock area	100 m	140m	north line (shed)

If any setback distances have not been met, please provide explanation below:

* Applying for Variation Order from RM of Franklin for well. It is located under shed under enclosed shelter and shielded with 2 feet of cement. Also, applying for set back variation with province for well.

Show: a) location of the project site, location and ownership of spread fields and b) land uses and significant features including dwellings (i) within a 1 mile 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](#)).

Vehicle Type	Estimated Average		Frequency		Direction		Notes
	Truck (FTM)	Tractor (FTM)	Left	Right	Left	Right	
Truck	1	1	✓	✓			
Tractor	1	1	✓	✓			
Other - Heavy	2	2	✓	✓			

Identify what roads and access points will be used for the proposed operations. See [Truck](#)

Identify what roads and access points will be used for the proposed operations. See [Tractor](#)

Identify what roads and access points will be used for the proposed operations. See [Other](#)

For help with mapping, contact your [County Planning Department](#)

Truck Trail Routes and Access Points

130 Construction Data Census Report

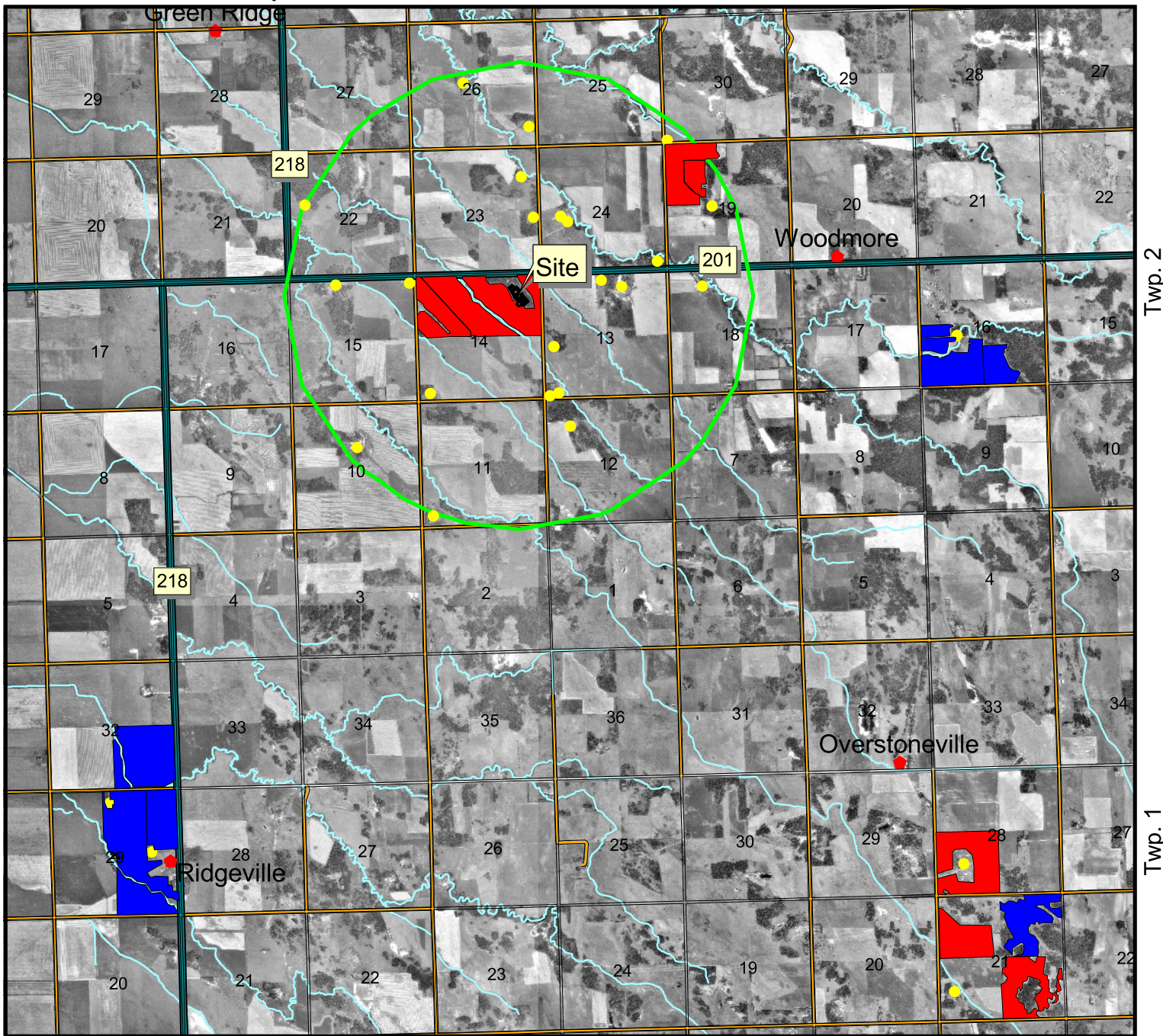
A Construction Data Census Report may be requested for the project site. The report may be requested for the project site. The report may be requested for the project site.

Were any species identified in the Census Report? Yes No

Please Refer to [Page 22](#)

According to the Census Report of the CDC, there is no concern or species in regions related with proposed expansion of the project and a team of experts.

Nevin Bender Land Base and Spread Fields



Rge. 4E

Rge. 5E



1:75000



Legend

- Fields
- Owned
 - Agreement
 - Existing Confined Livestock Area
 - Residences
 - 3km Buffer of Feedlot
 - Sections
 - ◆ Towns
 - Highways
 - Municipal Roads
 - Drainage

Data Sources:

Fields and irrigation areas drawn by Tone Ag in consultation with landowner, and subject to change.
 Orthophotos are 1:60,000 from Manitoba Land Initiative website
 Soil Features are 1:50,000 from Manitoba Land Initiative website
 Highways are from Manitoba Highways and Transportation 1:60,000 map 1994
 Sections are from Manitoba Land Initiative website

Map created by Jordan Karpinchick
 Tone Ag Consulting
 Box 333
 St. Pierre, Manitoba
 R0A 1V0
 Tel: (204) 433-7189
 Fax: (204) 433-3335
 www.toneag.com
 2013-11-13

12.0 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. Complete the following table.

Vehicle Type	Estimated Average Number of times per day accessing		Access from PTH/PR onto site will mainly require a Left or Right Hand Turn Please check one				Access onto PTH/PR from site will mainly require a Left or Right Hand Turn Please check one				
	Provincial Trunk Highway (PTH)	Provincial Road (PR)	Provincial Trunk Highway (PTH)		Provincial Road (PR)		Provincial Trunk Highway (PTH)		Provincial Road (PR)		
			LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	
Truck		1				✓				✓	
Tractor Trailer		1				✓				✓	
Other - Specify <i>passenger veh.</i>		3			✓						✓

Identify 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

13.0 Conservation Data Centre Report

A Conservation Data Centre Report must be requested and the response attached to this site assessment. The request may be submitted electronically at:

www.gov.mb.ca/conservation/cdc

Were rare species identified in the Conservation Data Centre Report?




Yes *Plains Pocket Gopher, S3*

No

According to Chris Friesen at the CDC, there is no concern or special mitigation needed with proposed expansion as the Gopher entry is from 40+ years ago.

Nevin Bender Truck Haul Routes and Access Points



-  Confined Livestock Area
-  Highways
-  Municipal Roads

0.1 0 0.1 0.2 Miles

1:7500

Data Sources:
Fields drawn by Tone Ag in consultation with landowner, and subject to change.
Orthophotos are 1:60,000 from Manitoba Land Initiative website
Highways are from Manitoba Highways and Transportation 1:60,000 map 1994
Sections are from Manitoba Land Initiative website



2013-11-06



----- Original Message -----

Subject: Nevin Bender

Date: Thu, 7 Nov 2013 16:23:51 +0000

From: Friesen, Chris (CWS) <Chris.Friesen@gov.mb.ca>

To: 'rontone@toneag.com' <rontone@toneag.com>

Ron

Thank you for your information request. I completed a search of the Manitoba Conservation Data Centre database for your area of interest and found one occurrence in the area: Plains Pocket Gopher (*Geomys bursarius*), S3.

Further information on this ranking system can be found on our website at <http://www.gov.mb.ca/conservation/cdc/consranks.html>

The information provided in this letter is based on existing data known to the Manitoba Conservation Data Centre of the Wildlife and Ecosystem Protection Branch at the time of the request. These data are dependent on the research and observations of our scientists and reflects our current state of knowledge. An absence of data does not confirm the absence of any rare or endangered species. Many areas of the province have never been thoroughly surveyed, therefore, the absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present. The information should not be regarded as a final statement on the occurrence of any species of concern, nor should it substitute for on-site surveys for species or environmental assessments. Also, because our Biotics database is continually updated and because information requests are evaluated by type of action, any given response is only appropriate for its respective request.

Please contact the Manitoba CDC for an update on this natural heritage information if more than six months passes before it is utilized.

Third party requests for products wholly or partially derived from our Biotics database must be approved by the Manitoba CDC before information is released. Once approved, the primary user will identify the Manitoba CDC as data contributors on any map or publication using data from our database, as the Manitoba Conservation Data Centre; Wildlife and Ecosystem Protection Branch, Manitoba Conservation.

This letter is for information purposes only - it does not constitute consent or approval of the proposed project or activity, nor does it negate the need for any permits or approvals required by the Province of Manitoba.

We would be interested in receiving a copy of the results of any field surveys that you may undertake, to update our database with the most current knowledge of the area.

If you have any questions or require further information contact me directly at (204) 945-7747.

Chris Friesen
Biodiversity Information Manager
Manitoba Conservation Data Centre
204-945-7747
chris.friesen@gov.mb.ca
<http://www.gov.mb.ca/conservation/cdc/>

-----Original Message-----

From:

Sent: October-28-13 11:57 AM

To: Friesen, Chris (CWS)

Subject: WWW Form Submission

Below is the result of your feedback form. It was submitted by WWW Information Request () on Monday, October 28, 2013 at 11:56:33

DocumentID: Manitoba_Conservation

Project Title: Nevin Bender

Date Needed: 2013/11/01

Name: Ron Tone

Company/Organization: Tone Ag Consulting Ltd.

Address: PO Box 333

City: St. Pierre-Jolys

Province/State: Manitoba

Phone: 204-433-7189

Fax: 204-433-3335

Email: rontone@toneag.com

Project Description: The information will be used for a proposed project to expand an existing livestock operation situated on NE 14-2-4E in the RM of Franklin. The information requested will be used by the Provincial Technical Review Committee to assess the impacts of the proposal on the environment and nearby land uses.

Information Requested: A Conservation Data Centre Report is needed.

Format Requested: Microsoft Word Document (preferred) and/or ArcView Shapefile sent by e-mail.

Location: NE 14-2-4E in the RM of Franklin

action: Submit

14.0 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 Units Calculation Table
- Water Requirement Calculation Table
- Manure Production Calculator Table
- ~~N/A~~ Existing and Proposed Manure Storage Facility Dimensions Tables
(if applicable)
- Manure Application Field Characteristics Table
- Crop Rotation 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)
- Response from the Conservation Data Centre
- Other, please specify:

QA Document in response to TRC - Dec 16/13

15.0 Declaration

I do hereby verify that the information contained in the Site Assessment and all required Supporting Documents is accurate and complete to my knowledge

Date: February 11, 2014

Signature: 

Nevin Bender Site Assessment – Clarification Questions and Answers

December 16, 2013

Answers provided by Jordan Karpinchick, Tone Ag Consulting Ltd.

1. Due to some discrepancies and concerns regarding the established size of the confined livestock area (CLA), as identified in the Site Assessment, please provide a history of the operation, specifically:

a. When was the operation purchased by the current owner?

The current owner started building the operation on June 29, 2010 and it was built over next few months.

b. CLA size at time of purchase?

The CLA was not built at the time of purchase.

c. Was the site used as a CLA prior to purchase, if so, what was the capacity (head)?

No, the site was not used as CLA prior to purchase.

d. When was the CLA constructed? To what capacity (head)? What is the total area of the CLA (m2)?

The CLA was constructed on June 29, 2010 (over a period of three months) to hold a capacity of 1,200 head. The total area of the CLA is approximately 22,000 m2.

e. Was the CLA built under permit from Conservation and Water Stewardship?

No. The operator was unaware that there was a need for a permit and is now trying to acquire a permit. The Site Assessment is being done as part of the permit process.

f. Previous size of CLA before expansion (if any)?

There was no expansion. CLA was built to hold 600 A.U. (1,200 head).

2. Please provide the following information with respect to the livestock so there is a better understanding of the operational cycle:

a. Please identify animal weight in and weight out?

The animal weight in is approx. 380-750lb. The animal weight out is approx. 825-1200 lbs.

b. Provide number of days on farm?

i. Days on feed/confinement

100-120 days

ii. Days on pasture

4 months. Separate from CLA.

- 3. Has the operation been at 300AU or greater, if so, has source water monitoring reports been completed for the operation?**

The operation had operated above 300 A.U. prior to the Environment Order 2013-08 issued by Manitoba Conservation and Water Stewardship. The operator had no knowledge of the requirements of submitting source water monitoring reports so they were not completed. The operator is now aware of the requirement and will be submitting them on an annual basis once he is allowed to operate above 300 A.U.

- 4. Please clarify for spread fields identified as BB-04 and BB-05 where the soil nitrogen value of 40lbs/acre is verified by soil test result (if no documented soil test result available, these fields must be removed from the land base calculation)**

Soil tests were redone on December 6, 2013. The new soil tests have been added to the Amended Site Assessment.

- 5. Please clarify the setback distances listed on page 22 of the Site Assessment for the manure storage facility. If a manure storage facility is present, please identify on page 11 what type. If manure is only field stored, then the manure storage facility separation distances should be blank since field storage is not considered a facility.**

There is no manure storage facility present. The manure is only field stored/composted.

- 6. Please provide construction date for the well identified on page 22 of the Site Assessment (identified with a 13m setback distance). Have any mitigation measures been implemented to protect the well from the CLA?**

The well was constructed on July 26, 2010. The well is located in an enclosed shelter with 3 feet of above ground casing (concrete) surrounding the opening. Also, the land has good North to South slope, sloping away from the well.

- 7. Please resubmit the response provided from the CDC, the document attached in the original proposal has been cut-off and cannot be read in full.**

The proper CDC Response has been included in the Amended Site Assessment.