Manitoba

SITE ASSESSMENT: Contact Information and Privacy and Publication Notice

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

Operator Contact Information

Name of Operation: Divorne Farms Ltd.

Corporation Name (if applicable): same as above

☒ Contact Name: Bruno Divorne

Mailing Address: Box 40

City/Town: Haywood Province: Mb Postal Code: R0G 0W0

Phone No: 745-0208 Fax No: _____ E-mail: divorne@sdnet.ca

Design Consultant/Advisor Contact Information

Company Name: DGH Engineering

☒ Contact Person: Gary Plohman

Mailing Address: Box 1466

City/Town: Beausejour Province: Mb Postal Code: R0E 0C0

Phone #: 268-3218 Fax #: _____ E-mail: srossing@mymts.net

√ Please indicate the primary project contact above

Privacy and Publication Notice

Why the information is being collected ("purposes")

The Technical Review Committee ("TRC") requires the information (including any personal information) contained in this form, in your Site Assessment and in your Supporting Documents in order to review your submission and to prepare its report.

Our legal authority to collect the information

The authority to collect this information is found in *The Planning Act,* the *Technical Review Committee Regulation* and *The Freedom of Information and Protection of Privacy Act*.

Information collected will not be used or disclosed for other purposes unless you consent or we are authorized to do so by *The Planning Act*, the *Technical Review Committee Regulation* or *The Freedom of Information and Protection of Privacy Act*.

What information will be published and where it will be published

As required by subsection 5(1) of the *Technical Review Committee Regulation* i**n order to enable public comment on your application, your complete Site Assessment and Supporting Documents** (Location Map, 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, application field soil sample results, Land Base Calculator, Project Site Plan, Land Use & Spread Field Map, Truck Haul Routes and Access Points Map):

- **will be posted on a public website**; and
- sent to the applicable planning district office or municipal office where any interested member of the public may view it.

Please note: This "Site Assessment: Contact Information and Privacy and Publication Notice" form will not be posted or sent to the applicable planning district or municipality.

If you have questions about the collection, use, disclosure or publication of the information please contact the Technical Review Coordination Unit at Manitoba Local Government, phone number: (204) 945-8353.

Verification of Accuracy of Information

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

Date: 13/06/2017

Signature: _____

For Office Use Only

Date of Receipt of completed Site Assessment including all Supporting Documents:

_____

Confirmation of Receipt Sent: _____

Please forward completed Site Assessment and Supporting Documents to:

Technical Review Coordination Unit
Room 604 – 800 Portage Avenue
Winnipeg MB R3G 0N4

SITE ASSESSMENT

FOR LARGE LIVESTOCK OPERATION PROPOSALS
(300 ANIMAL UNITS OR MORE)

Manitoba

1.0 Purpose

The establishment or expansion of a livestock operation that has 300 Animal Units or more is subject to Part 7 of *The Planning Act*. When such proposals are considered a conditional use by a municipal council or planning district board, approval of a conditional use permit is required. This includes a review by the Technical Review Committee (TRC) appointed by the Minister of Indigenous and Municipal Relations. The Technical Review Committee Regulation requires a site assessment be undertaken by the proponent to help the committee complete its review and allow the public affected by the livestock operation to comment on the proposal.

2.0 Assistance

For assistance in completing the Site Assessment Form, the following resources are available:

- Glossary of Terms for definitions
- Manitoba Agriculture for animal unit and suitable spread field acreage calculations
- Manitoba Sustainable Development for information on regulatory requirements
- Government agencies to obtain any required reports. For example, a Conservation Data Centre report is required as per Section 12.0 of the Site Assessment
- Contact the Technical Review Coordination Unit for additional help.

3.0 Description of Livestock Operation

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

Divorne Farms Ltd

Operation location (project site)[1]:

SE 8-8-6W

Rural Municipality (RM):

Grey

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

SE 8-8-6W

Manitoba Premises Identification Number:

MB 1038275

Municipal Tax Roll Number(s):

0154200.000

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

☒ *Location Map Attached*

4.0 Nature of Project[2]

Please indicate if the proposal is for a new or expanding livestock operation. If the operation is expanding, please identify when the operation was established.

☐ New Operation
☒ Expansion of Existing Operation

Date Established: Current operation expanded from 200 milk cows to 250 milk cows in 2014.

Describe what is being proposed:

A new heifer facility will be constructed in 2017 and a further expansion from 250 milk cows to 450 milk cows pus 85 dry cows is proposed for 2018

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.

Dairy heifers will be housed in the new heifer barn and dry cows and calves will be housed in the existing facilities.

5.0 Current and Proposed Type and Size of Operation[3]

Using the Manitoba Agriculture Animal Units Calculator, indicate the total number of animals and animal units for each animal category associated with the current and proposed operation (if applicable).

Table 5-1: Current and Proposed Operation Animal Unit Summary

	Current Operation		Proposed Operation	
Animal Categories (Column B from Animal Units Calculator)	**Current Number of Animals** (Column D)	**Current Number of Animal Units** (Column E)	**Proposed Number of Animals** (Column F)	**Proposed Number of Animal Units** (Column G)
mature cows (lactating and dry) plus associated livestock	300	600	535	1070
Note: the above animal unit calculation includes 50 dry cows.				
	Total Current	600	**Total Proposed**	1070

☐ Manitoba Agriculture Animal Units Calculator attached

6.0 Animal Confinement[4]

Based on the nature of the proposed project indicate the type of animal confinement. (Note: Please check more than one category if applicable)

☑ **Animal Confinement Facility** – means a barn or an outdoor area where livestock are confined by fences or other structures, and includes a seasonal feeding area but does not include a feedlot or a grazing area.

☐ **Confined Livestock Area**[5] – means an outdoor, non-grazing area where livestock are confined by fences or other structures, and includes a feedlot, paddock, corral, exercise yard, holding area and hoop structures.

☐ **Other** (Describe what is being proposed)

Does the operation currently use a confined livestock area:

☐ Yes ■ No

If yes, what is the current capacity (livestock places and animal units)? _____

_____

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

A permit under the Livestock Manure and Mortalities Management Regulation *(M.R. 42/98)* 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).

Note that agricultural buildings such as barns over 600 meters (6,458 sq ft) require a building permit from the Fire Commissioner's Office under *The Building and Mobile Home Act* and the Manitoba Building Code.

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[6].

■ *Project Site Plan attached*

7.0 Water

7.1 Project Sites Unsuitable for Development

To protect water quality, the Nutrient Management Regulation *(M.R. 62/2008)*, under *The Water Protection Act*, prohibits the construction 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.

A 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), including their limitations, of the soils for the project site.

Individuals 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.

7.2 Water Source[7]

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 cooperative
- ☐ Existing well
- ☐ Lake

If using an existing well, provide a copy of the water well log[8] and logs for other wells on the property. Logs can be obtained from Manitoba Sustainable Development by calling (204) 945-6959 in Winnipeg; 1-800-214-6497 toll free.

7.3 Source Water Analysis Reports

Annual livestock source water quality monitoring reports must be submitted to Manitoba Sustainable Development for any operations of 300 Animal Units or more.

Has the operation submitted an annual source water monitoring report?

- ☒ Yes
- ☐ No
- ☐ N/A (new operation or existing operation <300 AU currently)

If yes, please indicate year of last submission: annual report indicating a pipeline water source will be submitted.

Will livestock have direct access to surface water (not including dugouts)?

- ☐ Yes
- ☒ No

If yes, identify the name of the surface water feature:

N/A

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

All livestock will be housed in barns 365 days per year.

7.4 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 License 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[9]

To calculate the total water use for non-dairy operations, go to the Water Requirement Calculator.

For dairy operations, go to the Dairy Barn Water Requirement Estimator.

Maximum daily use for the operation: 20,488 Imp gal

☒ imperial gallons ☐ litres

Maximum annual use for the operation: 33.95

☐ imperial gallons ☒ cubic decameters

☒ *Water Requirement Calculator attached*

☒ *Dairy Barn Water Requirement Estimator attached*

7.5 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.

All unused or abandoned well(s) on site and spread fields should be properly sealed and a seal well report filed with the Groundwater Management Section of Manitoba Sustainable Development. Information on well sealing is available from Manitoba Sustainable Development at (204) 945-6959 or refer to the technical information document. It is recommended that all but the most basic wells should be sealed by a well drilling professional.

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	Not Applicable
Manure is stored in a storage facility built by permit or is registered by Manitoba Sustainable Development	☑	☑	☐
Storage includes leak detection system	☑	☑	☐
Earthen storage has between 400 and 500 days storage	☐	☐	☑
Steel/concrete tank has between 250 and 500 days storage	☑	☑	☐
Manure storage facility meets required setbacks	☑	☑	☐
Field storage (solid manure) locations are changed annually	☑	☑	☐
Field storage meets required setbacks	☑	☑	☐
All fields to receive manure are soil tested annually for nitrate-N and Olsen phosphorus	☑	☑	☐
All manure is applied according to a registered manure management plan	☑	☑	☐
Licensed commercial manure applicator is used to apply manure	☐	☐	☑
Operator applies manure	☑	☑	☐
Abandoned wells have been properly sealed	☐	☐	☑

Other:

Manure generated by the calves, heifers and dry cows will be handled as a solid and field stored.

See manure production calculator showing the annual solid manure production for dry cows as well as calves and heifers on separate lines.

7.6 Building in Flood Areas:

The Livestock Manure and Mortalities Management Regulation prohibits an operator from constructing 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. Contact the Hydrologic Forecasting Branch at (204) 945-2121 in Winnipeg; 1-800-214-6497 toll free, for more information.

The proposed site:

☐ is ☒ is not

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

Note: At the time of permit issuance, 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.

7.7 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): La Salle River Watershed

Name of sub-watershed(s): La Salle River Integrated Water Management Plan

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

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

8.0 Manure

The Livestock Manure and Mortalities Management Regulation *(M.R. 42/98)* 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 Sustainable Development at (204) 945-4384 in Winnipeg.

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

8.1 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

8.2 Manure Volume or Weight

Manure production can be estimated using the Manure Production Calculator. 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 of manure.

What will be the total volume or weight of manure generated annually by the livestock operation?

Liquid volume: 4,226,136.1 Imp gal

AND/OR

Solid volume: 228,672.5 cu ft

☒ *Manure Production Calculator attached*

8.3 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.

Is the operation planning to construct, modify or expand a manure storage facility or use an existing manure storage facility?

☐ Construct
☒ Expand
☐ Modify
☐ Use existing
☐ Not applicable

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

- ☐ Concrete tank(s) manure storage facility
- ☐ Earthen manure storage facility
- ☐ Engineered solid manure storage facility
- ☒ Field storage
- ☐ Molehill manure storage facility
- ☒ Steel tank(s) manure storage facility
- ☐ Under-barn concrete manure storage facility

If the proposed operation or expansion will utilize an existing manure storage facility for the new manure, indicate the construction permit number or facility registration number:

The operation will expand their circular steel tank by one ring when the number of dairy cows is expanded in 2018.

Provide the dimensions of the existing and/or proposed manure storage facilities that will be used to store manure from the proposed operation or expansion. (See Existing and Proposed Manure Storage Facility Dimensions Table.)

☐ *Existing and Proposed Manure Storage Facility Dimensions Table attached*

If an existing manure storage facility that will be used to store any of the manure from the proposed expansion has a leak detection system (monitoring wells or sump pit), annual sampling and reporting to Manitoba Sustainable Development is required. Has the system been sampled and results submitted to Manitoba Sustainable Development? ☒ Yes ☐ No ☐ Not applicable

If yes, please indicate year of last submission: 2016

If a manure storage facility is proposed in a geologically sensitive area, a leak detection system may be required.

For more information on obtaining a manure storage facility permit, please contact Manitoba Sustainable Development, Environmental Approvals Branch at (204) 945-5081.

8.4 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 ☐ Not Applicable

If yes, type of cover: Bedding used in the operation will form a cover in the manure storage.

Shelterbelt planting:

☐ Yes ☒ No ☐ Existing shelterbelt

Other measure (specify):

None.

8.5 Manure Treatment

Pig operations:

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 Sustainable Development. Environmentally sound treatment has been defined in the Hog Production Pilot project. For more information on new or expanding hog operations and the requirements of the Hog Production Pilot project, please contact the Manitoba Pork Council.

Under the Hog Production Pilot project, in addition to existing regulatory requirements, new and expanding pig operations must:

- Subject the manure to treatment using anaerobic digestion or mechanical or gravity separation including multi-celled manure storage structures and settling tanks;
- Have access to sufficient suitable land to accommodate all of the phosphorus generated by the operation;
- Maintain soils below 60 ppm Olsen P; and
- Inject or immediately incorporate pig manure on tilled land. Perennial forages, in-season applications and no-till lands are excluded.

New and expanding pig operations should also consider odour control practices.

If this Site Assessment is for a **pig** operation, does your proposal meet all the criteria outline in the Hog Production Pilot Protocol?

☐ Yes ☐ No

If this Site Assessment is for a **pig** operation, have you included a letter from the Manitoba Pork Council under the Hog Production Pilot Protocol?

☐ Yes ☐ No

☐ *Letter from Manitoba Pork Council attached (if applicable)*

Manure treatment:

Is manure treatment proposed for the operation?

☐ Yes ■ No

If yes, please describe treatment process, including intended end use of treated manure:

N/A

Some manure treatment systems will trigger the requirement for an Environment Act License depending on the type of treatment or intended use of the treated products. The requirement for a license is determined by Manitoba Sustainable Development during their review of the permit application for the construction, modification or expansion of a manure treatment facility.

If treated manure is directed to a retailer, additional approvals may be required in advance of establishing the treatment process. Producers should note that no discharge or burning of treated manure products is allowed.

Manitoba Sustainable Development may require additional supporting documentation to be completed by the operator with respect to the treatment facility. Please contact (204) 945-4384 to determine what information will be required.

8.6 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 (MMP) with Manitoba Sustainable Development?

- ☒ Yes
- ☐ No
- ☐ N/A (new operation or existing operation <300 AU currently)

If yes, please indicate most recent MMP Registration #: 2017-277LS

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 incorporate within 48 hours
- ☒ Injection

8.7 Land Available for Manure Application

Using the Manure Application Field Characteristics Table provide the information requested.

Total land available for manure application: 2258 acres

Suitable Land:

Sufficient suitable land must be available for all of the manure generated by the operation that is to be land applied. Suitable land can be owned, leased or under agreement.

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. In addition, only fields with less than 60 parts per million (ppm) Olsen phosphorus (P) in the top six inches (15 centimeters) of soil will be considered suitable.

The Nutrient Buffer Zones and manure application setback requirements are outlined in the Nutrient Management Regulation (62/2008) and the Livestock Manure and Mortalities Management Regulation (42/98). They have been consolidated in the Setback Requirements from Water Features Table.

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

☒ Yes ☐ No

Total suitable area available for manure application: 2258 acres

For all suitable lands, copies of soil test reports that are no more than 12 months old and that demonstrate that soil phosphorus levels are below 60 ppm Olsen P in the top six inches (15 centimeters) of soil must be included with this submission.

☒ *Manure Application Field Characteristics Table attached*

☒ *Soil test reports for the required land base for manure application attached*

8.8 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 utilization or removal of nutrients by the proposed crops.

The quantity of nitrogen and phosphorus excreted by the livestock depends on the type, number and size of livestock, the quantity and availability of nitrogen and phosphorus fed to the livestock, the amount retained by the livestock and the amount contained in milk and eggs.

The utilization of nitrogen and removal of phosphorus by crops depends on the crops grown and the historical crop yield averages. (See Crop Rotation Table).

"Certain Areas":

The Livestock Manure and Mortalities Management Regulation requires the proponent demonstrate sufficient land is available, to the satisfaction of the director, in order to implement an appropriate manure management plan before Manitoba Sustainable Development will issue a permit for a manure storage facility or confined livestock area. Sufficient suitable land must be available for the manure nitrogen and phosphorus that will land applied.

"*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 km^2 is greater than two times the annual crop removal rate of P_2O_5 in that area.

In "*certain areas*" it is Manitoba Sustainable Development's policy to consider a manure storage facility permit if the operation can demonstrate it has access to sufficient suitable land, within a reasonable distance[10], to apply manure at a rate equivalent to one times the crop removal rate of phosphorus. In areas which are not considered to be "certain areas", Manitoba Sustainable Development may consider a manure storage facility or confined area permit, subject to all applicable legislation, if the operation demonstrates it has access to sufficient suitable land to apply manure at a rate equivalent to two times the crop removal rate of phosphorus.

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 defined 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 field(s).

Is the livestock operation located in "certain areas" (i.e. Hanover or La Broquerie)?

☐ Yes ■ No

Land Base Requirement Calculation:

It is recommended that proponents use Manitoba Agriculture's Land Base Calculator to calculate the minimum area required for manure application and contact Manitoba Agriculture at (204) 945-3869 in Winnipeg for assistance with the land base calculator prior to submitting their site assessments.

Table 8-1: Land Base Requirements

Total acres required for crop utilization of the manure N[a]	acres 1194
Total acres required for two times crop P_2O_5 removal[a]	acres 937
Total acres required for one times crop P_2O_5 removal[b,c]	acres 1875

[a]All operations must demonstrate sufficient suitable land for crop N utilization and two times crop P_2O_5.

[b]Due to high livestock density and reduced land availability for manure application, all livestock operations proposed in "*certain areas*" (i.e. Hanover and La Broquerie) must demonstrate

sufficient suitable land to balance phosphorus over the long-term (one times crop P_2O_5).
[c] Under the Hog Production Pilot Project, pig operations must also demonstrate enough land to balance phosphorus over the long-term (one times crop P_2O_5).

- ☒ *Crop Rotation Table attached*
- ☒ *Manitoba Agriculture's Land Base Calculator attached*

8.9 Land Base Requirement Summary

By comparing the total suitable 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 to meet nitrogen utilization
- ☒ has been identified for two times the crop removal rate of phosphorus
- ☒ has been identified for one times the crop removal rate of phosphorus (for pig operations and operations in "certain areas" [i.e. Hanover and La Broquerie])

8.10 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 ppm, but less than 120 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 to waterways 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 so that manure can be applied at no more than one times the crop removal rate.

☒ I acknowledge that up to 1875 acres (one times crop P_2O_5 removal from table above) may be required for the long term environmental sustainability of the operation.

9.0 Mortalities (Dead Animal) Disposal

The Livestock Manure and Mortalities Management Regulation establishes requirements for the use, management and storage of livestock mortalities in agricultural operations. This helps ensure livestock mortalities are handled in an environmentally sound manner. Winter application, between November 10 of one year and April 10 of the following, of composted mortalities is prohibited.

Type of Disposal:

- ☐ Rendering
- ☒ Composting
- ☐ Burial
- ☐ Incineration (in approved incinerator only)

Does the proposal include a permanent site for composting mortalities?

- ☒ Yes
- ☐ No

If yes, a permit to construct a manure treatment facility is required if the composting process utilizes a substantial amount of manure (>15% by weight) as a primary substrate. Please contact Manitoba Sustainable Development at (204) 945-5081 for more information.

9.1 Mass Mortalities

☐ A plan for mass mortalities is in place

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

Disposal of mass mortalities will be coordinated with Mb Sustainable Development and will require movement of mortalities to an approved land fill site as conditions at the site are not appropriate for burial.

10.0 Project Site Description: Land Use Planning Considerations

For assistance contact your Community and Regional Planning Regional Office.

10.1 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 both documents. In the absence of such documents, the Provincial Planning Regulation under *The Planning Act* applies.

10.2 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.

Table 10-1: Development Plan

Name of Planning District	Grey - St Claude Planning District Development Plan
Development Plan by-law number	2/99
Land use designation of project site	Ag - Agricultural General
Livestock operation policies – quote supportive policy numbers	1.3.1 1.3.2
Other Development Plan policies – quote supportive policy numbers	1.3.5
Non-supportive Development Plan policies	

- 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.

10.3 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 By-law contains specific regulations that govern location and setback of livestock operations.

Identify the minimum project site requirements stated in the Zoning By-law.

Table 10-2: Zoning By-law

	Project Site Dimensions	**Minimum Zoning By-Law Site Requirements**
Minimum Site Area	160 acres	80 acres
Minimum Site Width	2640 ft	1000 ft
Minimum Front Yard	406 ft	125 ft
Minimum Side and Rear Yard	1010 ft	25 ft

If any project (front, side or rear) yard site dimensions are less than the Zoning By-law minimum, a Variation Order from the Municipality will be required.

10.4 Separation Distances (Zoning By-law or Provincial Planning Regulation)[11]

Using the proposed size of the operation (see Animal Units Calculator) 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…

Table 10-3: Separation Distances

…to the following land use features (if applicable)	**Indicate minimum separation distance required in the Zoning By-law or Provincial Planning Regulation (If applicable)** **Check appropriate box(es)**		**If land use feature is less than the minimum separation distance required in the Zoning By-law or Provincial Planning Regulation**	
	☐ **A** ☐ **B**	☒ **C** ☒ **D**	Provide actual distance	Provide location or name of feature (e.g. Red River)
Residence/ dwelling		328 ft	4540 ft	NW8-8-6W
Designated area[12] (non-agricultural)		1320 ft	11,140 ft	Haywood, Mb
Livestock operation			approx 5780 ft	SW 4-8-6W
Other significant features/land uses				

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. If any separation distance is less than the Zoning By-law minimum, a Variation Order will be required from the Municipality.

Indicate on a Land Use and Spread Field Map (See Land Use and Spread Field Map Example[13]):

a) location of the project site, location and ownership of spread fields

b) land uses and significant features including dwellings

i) within a 1 mile radius of the project site

ii) within and adjacent to each spread field.

10.5 Buffer Area from Crown Lands

Indicate in the table below if the proposed livestock operation (project site and spread fields) is located **within 1 mile** of any designated parcel of Crown land which would include: Provincial Park, Wildlife Management Area, Ecological Reserve, Provincial Forest, and Wildlife Refuge/Sanctuary. If applicable, also indicate the name of the Designated Crown Land.

Please complete the following table.

Table 10-4: Buffer Areas

Type of Designated Crown Land	Distance from perimeter of Designated Crown Land	Name of Designated Crown Land (e.g. Spruce Woods Provincial Park)
Provincial Park	☐ 1 mile or less ■ Greater than 1 mile	none in immediate area
Wildlife Management Area	☐ 1 mile or less ■ Greater than 1 mile	none in immediate area
Ecological Reserve	☐ 1 mile or less ■ Greater than 1 mile	none in immediate area
Provincial Forest	☐ 1 mile or less ■ Greater than 1 mile	none in immediate area
Wildlife Refuge/Sanctuary	☐ 1 mile or less ■ Greater than 1 mile	none in immediate area

If any Crown land parcel is to be utilized as part of the proposed planned works where the proposed works will involve the installation of infrastructure (e.g., pipe/hose) that will be placed on the surface of the land, the appropriate Crown land disposition may be required (e.g., General Permit/Work Permit[14]). The proponent is encouraged to contact the Regional Lands Manager with Manitoba Sustainable Development for further discussion. Contact the Crown Lands and Property Agency at http:\clp.gov.mb.ca or toll free at 1-866-210-9589 or 1-204-239-3510.

10.6 Setback Distances

Use the following table to indicate setback distances, as required under the Livestock Manure and Mortalities Management Regulation *(M.R. 42/98).*

Table 10-5: Setback Distances

Feature	Structures	Minimum setback distance required (m)	Actual Setback distance (m)	Provide location or name of feature (e.g. Red River)
Surface watercourses, sinkholes, spring or well	**Manure storage facility**	100 m	186 m	ditch
	Field storage	100 m	> 100 m	ditch, wetland
	Composting site	100 m	186 m	ditch
	Confined livestock area	100 m	> 120 m	existing barn
Property Line	**Manure storage facility**	100 m	186 m	east boundary
	Composting site	100 m	186 m	east boundary
	Confined livestock area	100 m	> 120 m	east boundary

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

All setbacks meet requirements.

11.0 Truck Haul Routes and Access Points[15]

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.

Table 11-1: Truck Haul Routes and Access Points

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		X					X		
Tractor Trailer	1		X					X		
Other, specify	6 passenger vehicles			X			X			

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

☐ *Truck Haul Routes and Access Point Map attached*

12.0 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 ■ No

13.0 Supporting Documents

Check the supporting documents included in this submission:

- ☒ Contact Information and Privacy and Publication Notice
- ☒ Location Map (shows proposed project within rural municipality)
- ☒ Project Site Plan (proposed operation showing current and proposed structures)
- ☒ Animal Units Calculator
- ☐ Water Requirement Calculator
- ☒ Dairy Barn Water Requirement Estimator
- ☒ Manure Production Calculator
- ☒ Existing and Proposed Manure Storage Facility Dimension Tables (if applicable)
- ☐ Manure Treatment Supporting Documentation (if applicable)
- ☒ Manure Application Field Characteristics Table
- ☒ Crop Rotation Table
- ☒ Recent manure application field soil sample results (Olsen Phosphorus – ppm at 0-6 inch depth)
- ☒ Manitoba Agriculture Land Base Calculator
- ☐ Letter from the Manitoba Pork Council under the Hog Production Pilot Protocol (pigs only)
- ☒ Land Use and Spread Field Map (location and ownership of operation, 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:

a) RM of Grey map, b) RM of Grey zoning map, c) RM of Grey property ownership map,

d) manure storage permit for glass lined steel tank, e) well logs for the site area

f) Upper Red River designated flood area map

14.0 Additional Information:

Please include any additional information you deem necessarily in order for the Technical Review Committee to review your proposal.

The RM of Grey currently calculates animal units using the number of milk cows only not including dry cows.

The technical review calculates animal units based on the number of mature cows including dry cows.

This results in the calculation of a larger number of animal units for the same herd size.

15.0 Declaration

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

Date: 2017/June/13
(YYYY/MMM/DD)

Name: Bruno Divorne
(Please Print Clearly)

Signature: _____

Notes

[1] Identifying the location of the project is needed to determine the compliance with zoning and other by-laws. The inclusion of a location map helps to identify the project site within the municipality.

[2] Indicating if the operation is new or expanding helps determine what regulation requirements are needed to be met for the proposal.

[3] The regulatory requirements such as municipal by-laws and provincial regulations will vary with type and size of a livestock operation.

[4] The regulatory requirements such as provincial regulations will vary with the type of housing.

[5] Confined livestock areas most commonly refer to outdoor, open livestock facilities such as beef feedlots or cow-calf operation facilities ("open confined livestock areas"). The LMMMR includes covered structures, open to the elements, used for the rearing of livestock that feature a floor design that constitutes an effective water barrier, such as concrete ("Covered Confined Livestock Areas"). For example biotech shelters for feeder pig production and hoop structures.

[6] The site plan is needed to ensure that required yard and other requirements can be met. Noting other features such as dwellings, shelterbelts, water source locations, drainage patterns, access points and the property dimensions enable the applicant to ensure proper site planning and sufficient separation distances between features to meet provincial regulations.

[7] The province regulates the use of surface and ground water. Identifying the source of water will be required for resource management and licensing purposes.

[8] A water well log is a report completed by the well driller after the construction of the well. Copies of the report are left with the well owner, the well drilling contractor and the Water Science and Management Branch of Manitoba Sustainable Development. Water well logs provide useful information on the geology of the well site and can be used to assess the potential vulnerability of the site to groundwater contamination.

[9] The Province regulates the use of surface and ground water. Identifying the amount of water needed will be required for resource management and licensing purposes.

[10]New or expanding livestock operations **in certain areas** must have access to additional lands suitable for the application of livestock manure located within a reasonable distance, in the opinion of the director of Manitoba Sustainable Development. Reasonable distance is considered to be within a 10 mile radius of the operation for liquid manure. If land is identified beyond the 10 mile radius, a producer must submit a plan to the director of Manitoba Sustainable Development for approval describing the action taken and proposed to be taken to achieve and maintain soil phosphorus levels below 60 ppm.

If a plan is required, the proponent may attach the acceptance letter from the director of Manitoba Sustainable Development in an appendix to the Site Assessment as supporting documentation, demonstrating compliance with section 12.2(1) of the Livestock Manure and Mortalities Management Regulation (M.R. 42/98). For more information, contact Manitoba Sustainable Development at (204) 945-4384.

[11]" Agricultural operations are a source of traffic, noise, dust and odours. One of the key elements to successful siting of a livestock operation is to observe appropriate separation distances between potentially conflicting land uses. This is particularly important for the effective dispersion and dilution of odours from pig production facilities. When deciding where to build a new livestock operation, it is best to choose a site with as few neighbours as possible."

Section 6.2 Setbacks and Other Steps to Avoid Conflicts - Farm Practice Guidelines for Pig Producers in MB (April 2007)

Identifying the distance to the nearest land use features such as a neighbouring agricultural operation or non-agricultural designated uses (such as residential or recreational designated areas in the Development Plan), sensitive areas such as wildlife management areas or critical habitat, individual dwellings and various water bodies and drains

enable the applicant to ensure that minimum separation distances are maintained between those various uses and the proposed animal confinement facility and manure storage facilities.

[12]Is an area identified on a Development Plan Map based on its current or future use?

[13] The mapping of the project site, neighbouring designated residential areas, individual residences and surface water features enables the applicant to describe the geographic setting and general suitability of the area for the project. This may also assist the applicant in determining appropriate setbacks for field storage of manure, composting manure, and composting mortalities. By identifying a 3-kilometer area around the project site, the applicant is made aware of all land owners that will be notified regarding the public Conditional Hearing that will take place as part of the review process.

[14] If undesignated Crown lands will be used for manure spreading purposes; including the laying of pipe, including draglines, or clearing activity, it will require the proponent to obtain a Crown Lands General Permit disposition that will authorize the use and access of the subject Crown Land(s).

Any clearing activity, related construction activity, or works associated with the manure spreading application will also require the appropriate permitting under applicable legislation (e.g., The Crown Lands Act, The Forestry Act etc. Please contact the Regional Lands Manager or Conservation Officer for additional information.

[15]Identifying truck haul routes and access points on municipal and Provincial Roads and/or Provincial Trunk Highways assists the province and municipality in planning and identifies any potential required access permits. The information also allows other stakeholders to determine potential impacts on existing roads and adjacent land uses.

R.M. OF GREY

N

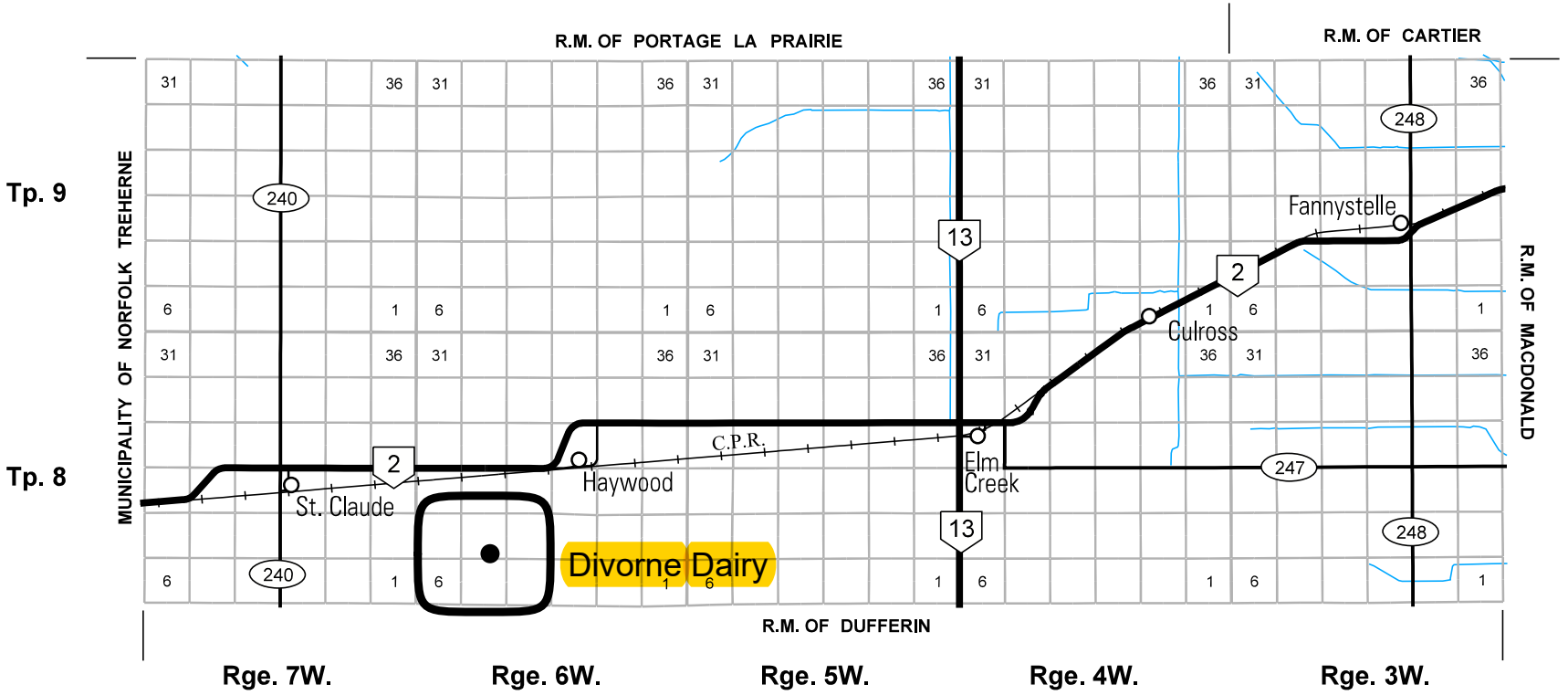
0 5

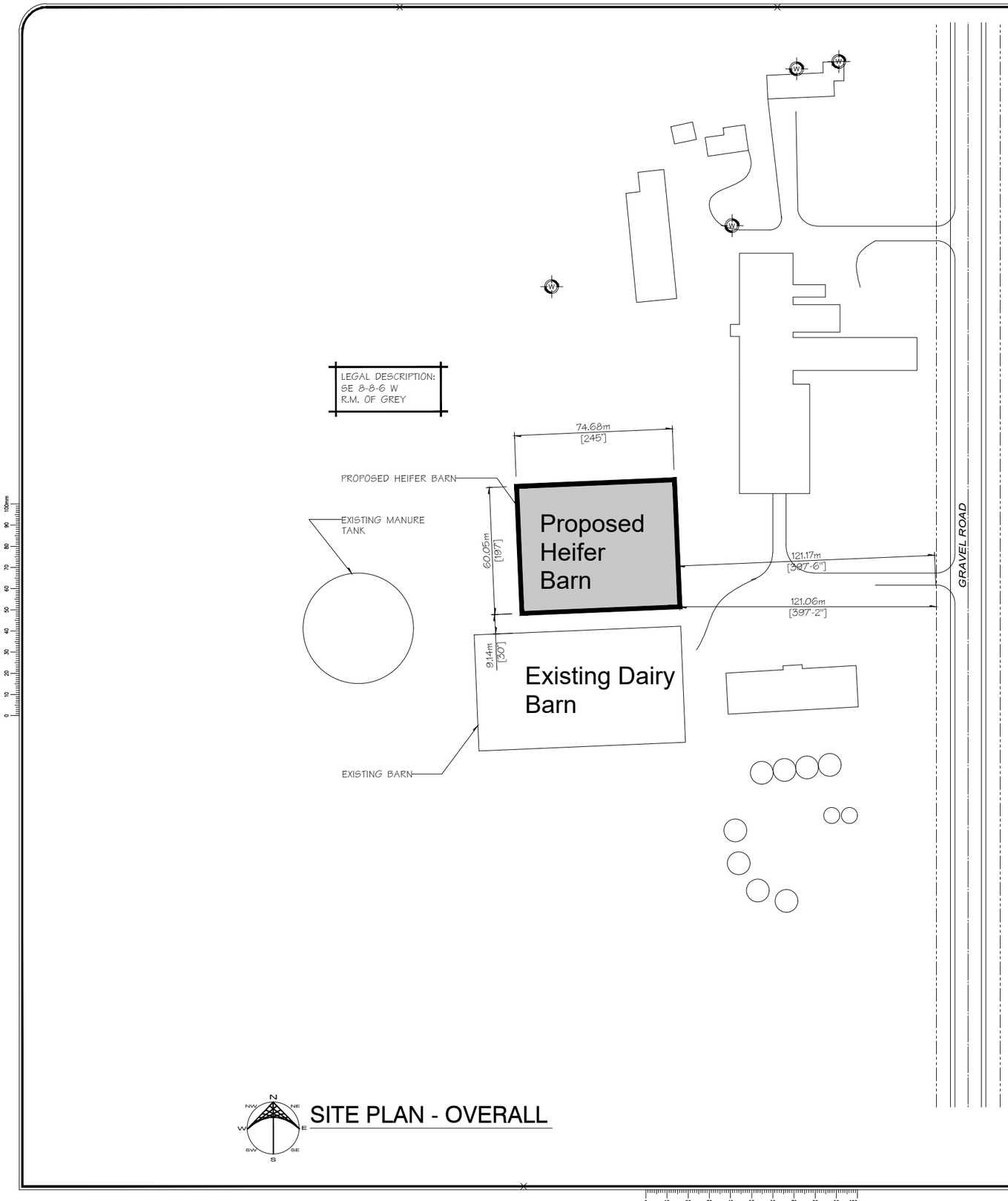
SCALE IN KILOMETRES

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

LEGEND

PROVINCIAL TRUNK HIGHWAYS 13
PROVINCIAL ROADS 247
ACCESS ROADS .....
RAILWAYS .....





SITE PLAN - OVERALL

ISSUE (AND REVISION)

NO./REV.	DATE	DESCRIPTION	INITIAL(S)
01	2017/05/24	ISSUED FOR REVIEW	TR.K

PRINTED DATE: 5/26/2017 9:35:11 AM

ENGINEERS SEAL

ISSUED FOR REVIEW

DGH ENGINEERING LTD
Professional Service | Practical Solutions
12 Aviation Boulevard
St. Andrews MB R1A 3N5 Canada
T: 204-334-8846
F: 204-334-6965

CLIENT
DIVORNE FARMS LTD.
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BOX 40
HAYWOOD, MB

DESIGNED	DRAWN	COORDINATOR
.	.	.

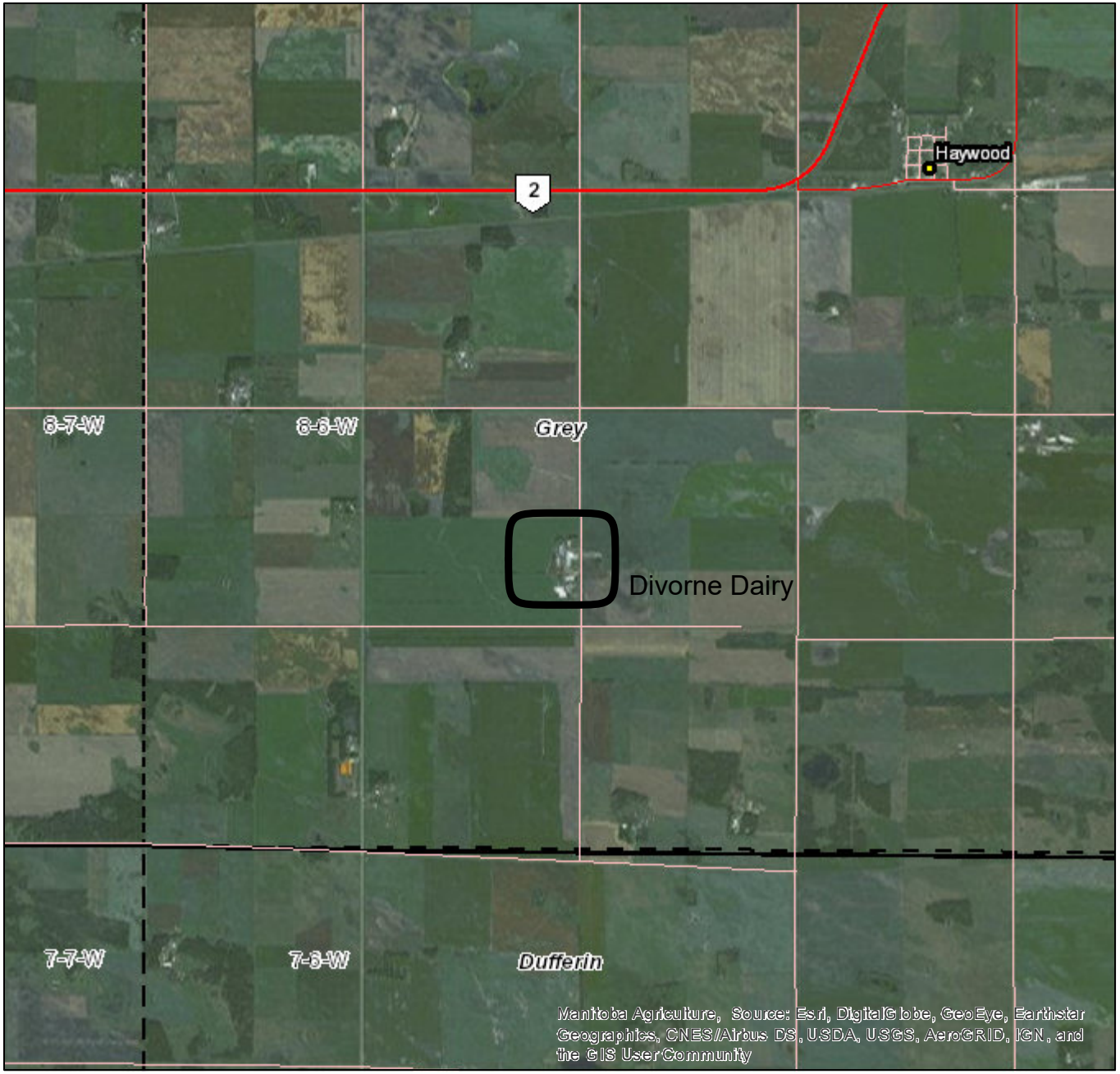
DATE	SCALE	XREF PATH(S)
MAY/2017	AS NOTED	

PROJECT TITLE
TRC SITE ASSESSMENT
.
.
LEGAL DESCRIPTION
SE 8-8-6 W
PROJECT NUMBER: 17-3449-001.00

SITE PLAN
. .

C1-1
REV. R00

Manitoba AgriMaps



Legend

- Towns and Places

Provincial Trunk Highways

- Provincial Trunk Highways

Provincial Roads and Access Roads

- Provincial Roads
- Access Roads
- Municipal Roads and Trails
- Manitoba Boundary
- Municipal Boundaries
- Township Boundaries
- Provincial Parks
- Riding Mountain National Park

0 1 2 3 4 Kms

1:72,224 **19/04/2017**

WGS 1984 Web Mercator Auxiliary Sphere

N

Manitoba Agriculture makes every effort to ensure that soil survey data and interpretations are accurate, verified, and up-to-date. However, as data is continuously updated, sorted and verified, future updates may contain additional information.

Manitoba

Animal Units Calculator

A	B	C	Current Operation		Proposed Operation	
			D	E	F	G
Operation Type	**Animal Categories**	**Animal Units per Head**	**Current Number of Animals [1]**	**Current Animal Units**	**Proposed Number of Animals [2]**	**Proposed Number of Animal Units**
Dairy [3]	Mature cows (lactating and dry) including associated livestock	2	300	600	535	1,070
	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	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 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 Current:	600	Total Proposed:	1,070

Footnotes:

[1] Enter the current number of animals on the farm based on the operation's capacity (animal places) or previous Conditional Use Approval.

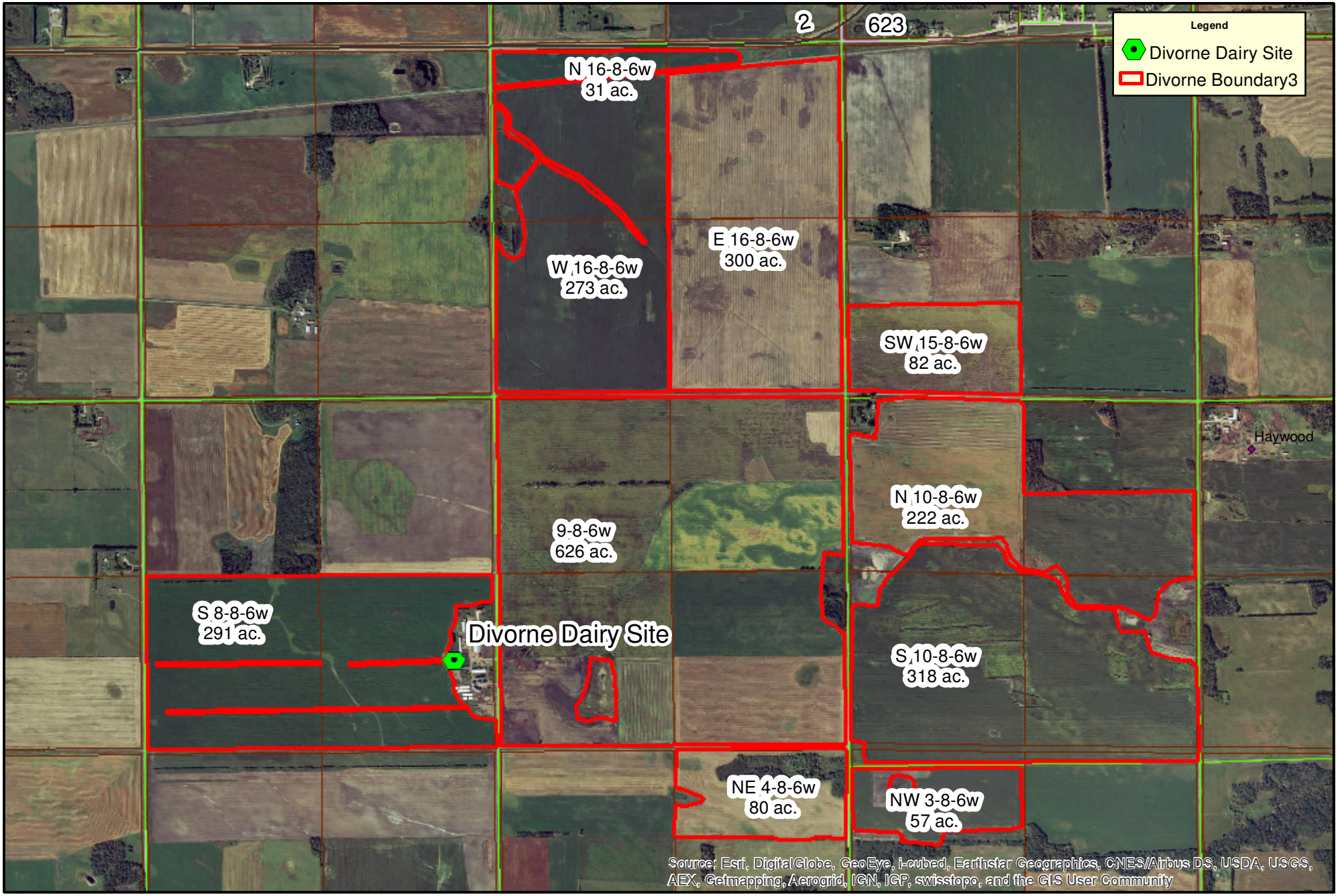
[2] Enter the total number of animals associated with the operation post construction or expansion.

[3] 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 the Manitoba Agriculture Contacts

Manitoba

Divorne Dairy - Spread Acre Map



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Miles

AGRA - GOLD
Consulting Ltd.

Setback Requirements From Water Features

Setback requirements extracted from the Livestock Manure and Mortalities Management Regulation (MR 42/98) and the Nutrient Management Regulation (MR 62/2008).

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

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

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

[3] As defined in 1(2) in the Nutrient Management Regulation under the Water Protection Act. For the purposes of this regulation, a wetland, bog, marsh or swamp is major if it:

- has an area greater than two hectares (4.94 acres)
- is connected to one or more downstream water bodies or groundwater features
- contains standing water or saturated soils for periods of time sufficient to support the development of hydrophytic vegetation.

Nutrient Buffer Zone

Water Body	Setback if applicable area is covered with permanent vegetation (Column A)	Setback if applicable area is not covered with permanent vegetation (Column B)
• a roadside ditch or an Order 1 or 2 drain†	No direct application to ditches and Order 1 and 2 drains	
• a groundwater feature	15 m (49 ft)	20 m (66 ft)
• a wetland, bog, marsh or swamp other than a major wetland, bog, marsh or swamp‡	Distance between the water's edge and the high water mark	
• a lake or reservoir designated as vulnerable**	30 m (98 ft)	35 m (115 ft)
• a lake or reservoir (not including a constructed stormwater retention pond) not designated as vulnerable** • a river, creek or stream designated as vulnerable**	15 m (49 ft)	20 m (66 ft)
• a river, creek or stream not designated as vulnerable** • an Order 3 or higher drain† • a major wetland, bog, marsh or swamp‡ • a constructed stormwater retention pond	3 m (10 ft)	8 m (26 ft)

*Nutrient Buffer Zone is measured from the water body's high water mark or the top of the outermost bank on that side of the waterbody, whichever is further from the water.

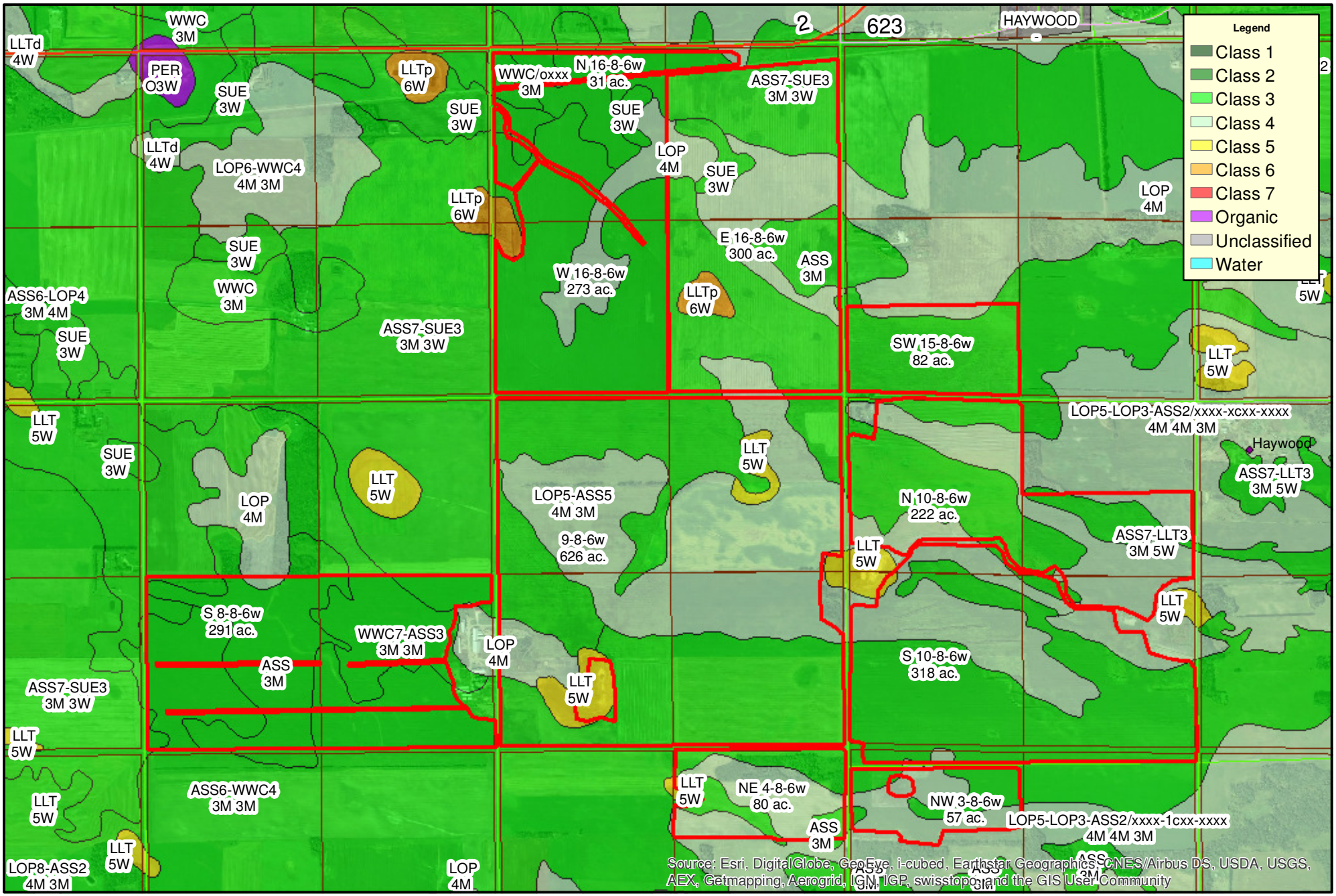
†Designated on a Manitoba Water Stewardship plan that shows the designation of drains.

‡As defined in 1(2) in the Nutrient Management Regulation under *The Water Protection Act*. "For the purposes of this regulation, a wetland, bog, marsh or swamp is major if

a. it has an area greater than 2 ha (4.94 acres)
b. it is connected to one or more downstream water bodies or groundwater features; and
c. it contains standing water or saturated soils for periods of time sufficient to support the development of hydrophytic vegetation."

**Designated as vulnerable if listed in the Schedule in the Nutrient Management Regulation under the *Water Protection Act*.

Divorne Dairy - Soils



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AGRA - GOLD Consulting Ltd.

Dairy Barn Water Requirement Estimator*

Enter the following farm data:

Number of lactating(450) and dry(85) cows	535
Average milk production (litres)	40 **
Parlor or tie stall (P/TS) **robots used**	P
Collection yard if free stall (Y/N)	
Plate cooler (Y/N)	Y
Milkings per day	2.8
Plate cooler water reused? (Y/N)	Y

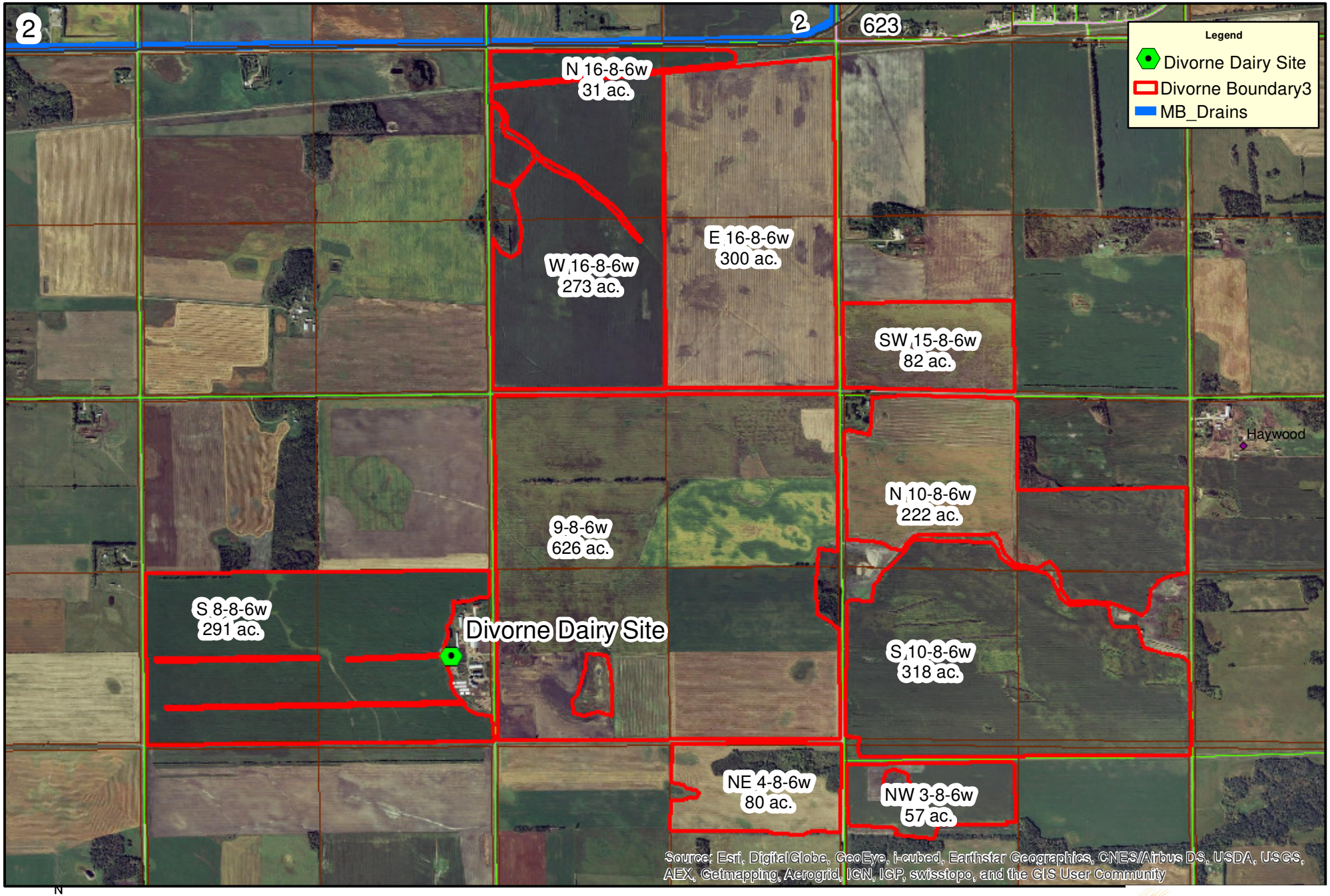
Total water needs estimate per day:	
Litres	93015
Imperial gallons	20488
Cubic decametres	0.09

Total water needs estimate per year:	
Litres	33950566
Imperial gallons	7478098
Cubic decametres	33.95

*Calculations are based on Manitoba AVERAGES for

- Feed composition

Divorne Dairy - Drains Map



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AGRA-GOLD Consulting Ltd.

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) (FxGxH)	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	4.13	365	450	678,352.50	4,226,136.1
			Solid (dry cows)	3.4	3.4	365	85	105,485.00	
			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(heifers/calves)	3.0	1.5	365	225	123,187.50	
	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				-	
	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 [6]		0.99				-	
	Roasters – floor [6]		1.16				-	
	Layers – cage [8]		2.33				-	0.0
	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 colum 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

[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/ft^3

[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/ft^3

[8] Manure removed from barn at 90% moisture content with a density of 59 lb/ft^3

[9] Poultry operations using litter (solid pack) must provide an estimate of yearly manure production

Existing and Proposed Manure Storage Facility Dimension Table

If applicable, indicate the dimensions of any existing manure storage facility (MSF) that will be used to store manure from the proposed project:

CELL	Existing Manure Storage Facility Dimensions						Storage Capacity (days)
	Width	Length	Depth	Height (Above Grade)	Slope (H:L)		
					Inside	Outside	
Primary	ft	ft	ft	ft			
Secondary	ft	ft	ft	ft			
Tertiary	ft	ft	ft	ft			
Circular Tank		Diameter	Height	Depth (Above Grade)			
		171 ft	23.5 ft	19 ft			396

Permit/Registration # LM-1136

Manitoba

CELL	Proposed Manure Storage Facility Dimensions						Storage Capacity (days)
	Width	Length	Depth	Height (Above Grade)	Slope (H:L)		
					Inside	Outside	
Primary	ft	ft	ft	ft			
Secondary	ft	ft	ft	ft			
Tertiary	ft	ft	ft	ft			
Circular Tank		Diameter	Height	Depth			
		171 ft	23.5 ft	22.5 ft			277

The construction, modification or expansion of any manure storage structure requires a permit from Manitoba Sustainable Development as per the *Livestock Manure and Mortalities Management Regulation (M.R. 42/98)*.

Note: New storage capacity with the extra ring will be 3,213,841 Imp. Gallons

Manitoba

MANURE APPLICATION FIELD CHARACTERISTICS TABLE

	A	B	C	D	E	F	G	H	I	J
Field	**Legal Description**	**Rural Municipality**	**O/C/L/ A**	**Total Acreage**	**Setbacks, including features**	**Net Acreage for Manure Application**	**Agriculture Capability Class and Subclass**	**Soil Phosphorus (ppm Olsen P) 0-6 inches**	**Development Plan Designation**	**Zoning**
1	NW 3-8-6W	Grey	O	57	8 m from swamp	56	3m, 4m	8	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
2	NE 4-8-6W	Grey	O	80	8 m from swamp	79	3m, 4m	9	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
3	S10-8-6w	Grey	O	318	8 m from swamp	314	3m, 4m, 5w	8	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
4	N10-8-6w	Grey	O	222	8 m from swamp	218	3m, 3w, 4m	7	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
5	S 8-8-6W	Grey	O	291		291	4m, 3m, 3w	26	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
6	E 1/2 16-8-6W	Grey	O	300	(10 ac removed as class 6w)	290	3m, 3w, 6w, 4m	9	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
7	W 1/2 16-8-6W	Grey	O	273	8 m from swamp	273	3m, 3w, 4m	10	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
8	9-8-6W	Grey	O	626	8 m from swamp	624	4m, 3m, 5w, 3w	13	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
9	SW 15-8-6W	Grey	O	82		82	3m, 3w, 4m	6	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
10	N 16-8-6W	Grey	O	31		31	3m, 3w	7	Grey-St. Claude #2/99: Agriculture "A"	By-law #5/03: Agricultural General Zone "AG"
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Total Net Acreage for Manure Application: 2258

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 / C-Crown / L – Lease / A – Agreement. Multiple designations may be used as appropriate (ex. C/A for Crown lands that are under a spread agreement with the producer that holds the agricultural Crown land lease).
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 (ex. 8m, Order 3 drain).
F. _____ Enter the net 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 phosphorus in ppm Olsen P for soil samples taken at the 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.
I. _____ Indicate the Development Plan and its by-law number in addition to the map designation for each field (ex. By-law #1/2008: AG).
J. _____ Indicate the Zoning By-law and its by-law number in addition to the zoning for each field (ex. By-law 12/2009: AG 80).

CROP ROTATION TABLE

A	B	C	D	E
Expected Crops in the Rotation	**Acreage**	**Historical Yield**	**Units**	**Source of Yield Information**
Alfalfa	176	2.635	tons/ac	MASC
Rye	236	52.7	bu/ac	MASC
Oats	153	105.9	bu/a	MASC
Canola	318	35.3	bu/ac	MASC
Soybeans	296	37.4	bu/ac	MASC
Grain Corn	1079	109.5	bu/ac	MASC
Total Net Acreage for Manure Application	2258			

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.

MASC
Manitoba Agricultural Services Corporation

MMPP - Variety Yield Data Browser

Select Municipalities or MASC Risk Areas

Tip: Click or touch the 'X' (at right) in these tip balloons to hide them permanently.

Tip: Click or touch the button below to select Municipalities or MASC Risk Areas.

Municipalities

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the ⊗ icon to clear all selected items.

GREY ⊗

Tip: If more than one crop is selected, the Yield Variety Data will be returned, but 'Top Varieties by Acres' and 'Top Varieties by Yield' charts won't be generated.

Select Crop(s)

ALFALFA ⊗

Select Varieties

All Varieties ⊗

Select Year Range

1993 1998 2003 2008 2012

2007 to 2016

Search Summary

67 records returned

197 farm varieties grown on **20,853.0** acres

Average Yield

2.391 Tonnes (**2.635** Tons) per acre

Summary includes aggregate data from 'below minimum tolerance' records

Variety Yield Data

MASC
Manitoba Agricultural Services Corporation

MMPP - Variety Yield Data Browser

Select Municipalities or MASC Risk Areas

Tip: Click or touch the 'X' (at right) in these tip balloons to hide them permanently. ×

Tip: Click or touch the button below to select Municipalities or MASC Risk Areas. ×

Municipalities

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the ⊗ icon to clear all selected items. ×

GREY ⊗

Tip: If more than one crop is selected, the Yield Variety Data will be returned, but 'Top Varieties by Acres' and 'Top Varieties by Yield' charts won't be generated. ×

Select Crop(s)

ARGENTINE CANOLA ⊗

Select Varieties

All Varieties ⊗

Select Year Range

1993 1998 2003 2008 2012

2007 to 2016

Search Summary

264 records returned

1,490 farm varieties grown on **351,363.0** acres

Average Yield

0.800 Tonnes (**35.3** Bushels) per acre

Summary includes aggregate data from 'below minimum tolerance' records

Variety Yield Data

MASC
Manitoba Agricultural Services Corporation

MMPP - Variety Yield Data Browser

Select Municipalities or MASC Risk Areas

Tip: Click or touch the 'X' (at right) in these tip balloons to hide them permanently. ×

Tip: Click or touch the button below to select Municipalities or MASC Risk Areas. ×

Municipalities

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the ⊗ icon to clear all selected items. ×

GREY ⊗

Tip: If more than one crop is selected, the Yield Variety Data will be returned, but 'Top Varieties by Acres' and 'Top Varieties by Yield' charts won't be generated. ×

Select Crop(s)

GRAIN CORN ⊗

Select Varieties

All Varieties ⊗

Select Year Range

1993 1998 2003 2008 2012

2007 to **2016**

Search Summary

208 records returned

656 farm varieties grown on **85,141.0** acres

Average Yield

2.783 Tonnes (**109.5** Bushels) per acre

Summary includes aggregate data from 'below minimum tolerance' records

Variety Yield Data

Manitoba Agricultural Services Corporation

MMPP - Variety Yield Data Browser

Select Municipalities or MASC Risk Areas

Tip: Click or touch the 'X' (at right) in these tip balloons to hide them permanently. ×

Tip: Click or touch the button below to select Municipalities or MASC Risk Areas. ×

Municipalities

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the ⊗ icon to clear all selected items. ×

GREY ⊗

Tip: If more than one crop is selected, the Yield Variety Data will be returned, but 'Top Varieties by Acres' and 'Top Varieties by Yield' charts won't be generated. ×

Select Crop(s)

FALL RYE ⊗

Select Varieties

All Varieties ⊗

Select Year Range

1993 1998 2003 2008 2012

2007 to 2016

Search Summary

24 records returned

70 farm varieties grown on **9,543.0** acres

Average Yield

1.338 Tonnes (**52.7** Bushels) per acre

Summary includes aggregate data from 'below minimum tolerance' records

Variety Yield Data

MASC
Manitoba Agricultural Services Corporation

MMPP - Variety Yield Data Browser

Select Municipalities or MASC Risk Areas

Tip: Click or touch the 'X' (at right) in these tip balloons to hide them permanently. ×

Tip: Click or touch the button below to select Municipalities or MASC Risk Areas. ×

Municipalities

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the ⊗ icon to clear all selected items. ×

GREY ⊗

Tip: If more than one crop is selected, the Yield Variety Data will be returned, but 'Top Varieties by Acres' and 'Top Varieties by Yield' charts won't be generated. ×

Select Crop(s)

OATS ⊗

Select Varieties

All Varieties ⊗

Select Year Range

1993 1998 2003 2008 2012

2007 to 2016

Search Summary

89 records returned

802 farm varieties grown on **178,704.5** acres

Average Yield

1.633 Tonnes (**105.9** Bushels) per acre

Summary includes aggregate data from 'below minimum tolerance' records

Variety Yield Data

MASC
Manitoba Agricultural Services Corporation

MMPP - Variety Yield Data Browser

Select Municipalities or MASC Risk Areas

Tip: Click or touch the 'X' (at right) in these tip balloons to hide them permanently. ×

Tip: Click or touch the button below to select Municipalities or MASC Risk Areas. ×

Municipalities

Tip: Click or touch in the select boxes (below) to select at least one item from each list. Click or touch the ⊗ icon to clear all selected items. ×

GREY ⊗

Tip: If more than one crop is selected, the Yield Variety Data will be returned, but 'Top Varieties by Acres' and 'Top Varieties by Yield' charts won't be generated. ×

Select Crop(s)

SOYBEANS ⊗

Select Varieties

All Varieties ⊗

Select Year Range

1993 1998 2003 2008 2012

2007 to **2016**

Search Summary

285 records returned

1,282 farm varieties grown on **274,046.0** acres

Average Yield

1.018 Tonnes (**37.4** Bushels) per acre

Summary includes aggregate data from 'below minimum tolerance' records

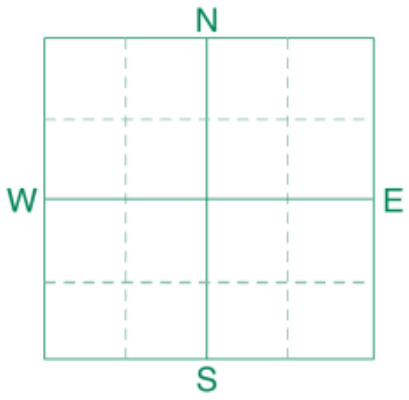
Variety Yield Data

AGVISE LABORATORIES

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

SOIL TEST REPORT

FIELD ID **FIELD 4**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6 W1** RANGE
SECTION **3** QTR ACRES **80**
PREV. CROP **Canola-bu**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14131963** BOX # **0**
LAB # **NW61914**

Date Sampled **09/01/2016** Date Received **09/04/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 6-24" Nitrate	15 lb/ac 45 lb/ac	**********	**********		
0-24'' Nitrate	60 lb/ac				
Olsen Phosphorus	8 ppm	**********	**********		
Potassium	69 ppm	**********	**********		
0-24'' Chloride	168 lb/ac	**********	**********	**********	**********
0-6" Sulfur	56 lb/ac	**********	**********	**********	**********
6-24" Sulfur	78 lb/ac	**********	**********	**********	**********
Boron	0.7 ppm	**********	**********		
Zinc	0.70 ppm	**********	**********	**********	
Iron	24.6 ppm	**********	**********	**********	**********
Manganese	4.1 ppm	**********	**********	**********	**********
Copper	0.2 ppm	**********			
Magnesium	328 ppm	**********	**********	**********	**********
Calcium	3236 ppm	**********	**********	**********	**********
Sodium	19 ppm	**********			
Org.Matter	2.3 %	**********	**********		
Carbonate(CCE)	1.2 %	**********	**********		
0-6" Sol. Salts	0.33 mmho/cm	**********	**********		
6-24" Sol. Salts	0.25 mmho/cm	**********	**********		

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Oats								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
120 BU								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	60		N			N		
P_2O_5	31	Band *	P_2O_5			P_2O_5		
K_2O	69	Band *	K_2O			K_2O		
Cl	0		Cl			Cl		
S	0		S			S		
B	0		B			B		
Zn	2	Band (Trial)	Zn			Zn		
Fe	0		Fe			Fe		
Mn	0		Mn			Mn		
Cu	2	Band	Cu			Cu		
Mg	0		Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.0** 6-24" **8.1**		**19.2 meq**	(65-75) **84.4**	(15-20) **14.3**	(1-7) **0.9**	(0-5) **0.4**	(0-5)

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

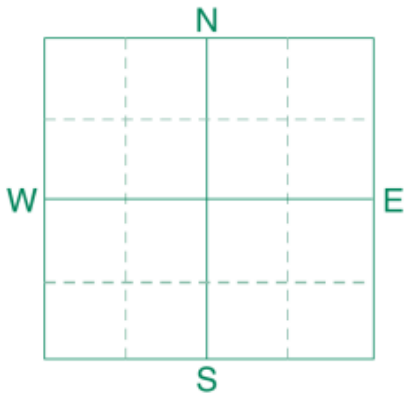
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 30 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

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

SOIL TEST REPORT

FIELD ID **BESIDE MARCEK**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6 W1** RANGE
SECTION **4** QTR ACRES **80**
PREV. CROP **Canola-bu**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14131962** BOX # **0**
LAB # **NW61913**

Date Sampled **09/01/2016** Date Received **09/04/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 16 lb/ac 6-24" 21 lb/ac 0-24'' 37 lb/ac Nitrate		*******			
Olsen Phosphorus	9 ppm	**********			
Potassium	72 ppm	**********			
0-24'' Chloride	136 lb/ac	**********	**********	**********	**********
0-6" 78 lb/ac 6-24" 78 lb/ac Sulfur		**********	**********	**********	**********
Boron	1.0 ppm	**********	**********		
Zinc	0.98 ppm	**********	**********	**********	
Iron	23.7 ppm	**********	**********	**********	**********
Manganese	3.6 ppm	**********	**********	**********	
Copper	0.29 ppm	**********			
Magnesium	524 ppm	**********	**********	**********	**********
Calcium	3863 ppm	**********	**********	**********	**********
Sodium	47 ppm	**********			
Org.Matter	2.5 %	**********	**********		
Carbonate(CCE)	3.4 %	**********	**********	**********	
0-6" 0.34 mmho/cm 6-24" 0.2 mmho/cm Sol. Salts		**********	**********		

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Oats								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
120 BU								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	83		N			N		
P_2O_5	30	Band *	P_2O_5			P_2O_5		
K_2O	67	Band *	K_2O			K_2O		
Cl	0		Cl			Cl		
S	0		S			S		
B	0		B			B		
Zn	3	Band (Trial)	Zn			Zn		
Fe	0		Fe			Fe		
Mn	0		Mn			Mn		
Cu	2	Band	Cu			Cu		
Mg	0		Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.2** 6-24" **8.4**		**24.1 meq**	(65-75) **80.2**	(15-20) **18.1**	(1-7) **0.8**	(0-5) **0.8**	(0-5)

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

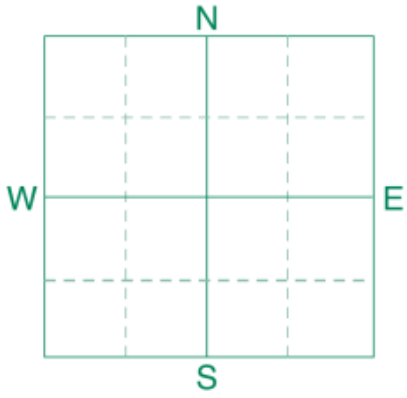
Crop 1: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 30 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

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

SOIL TEST REPORT

FIELD ID **FIELD 3 S**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6 W1** RANGE
SECTION **10** QTR **S1/2** ACRES **300**
PREV. CROP **Canola-bu**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14131964** BOX # **0**
LAB # **NW61915**

Date Sampled **09/01/2016** Date Received **09/04/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 25 lb/ac 6-24" 36 lb/ac 0-24'' 61 lb/ac Nitrate		**********	**********		
Olsen Phosphorus	8 ppm	**********	**********		
Potassium	83 ppm	**********	**********		
0-24'' Chloride	132 lb/ac	**********	**********	**********	**********
0-6" 64 lb/ac 6-24" 102 lb/ac Sulfur		**********	**********	**********	**********
Boron	1.1 ppm	**********	**********	**********	
Zinc	0.84 ppm	**********	**********	**********	
Iron	23.6 ppm	**********	**********	**********	**********
Manganese	2.9 ppm	**********	**********	**********	**********
Copper	0.19 ppm	****			
Magnesium	560 ppm	**********	**********	**********	**********
Calcium	3485 ppm	**********	**********	**********	**********
Sodium	39 ppm	**********			
Org.Matter	2.2 %	**********	**********		
Carbonate(CCE)	2.3 %	**********	**********		
0-6" 0.37 mmho/cm 6-24" 0.21 mmho/cm Sol. Salts		**********	**********		

1st Crop Choice		
Oats		
YIELD GOAL		
120 BU		
SUGGESTED GUIDELINES		
Band/Maint.		
LB/ACRE		APPLICATION
N	59	
P_2O_5	31	Band *
K_2O	62	Band *
Cl	0	
S	0	
B	0	
Zn	3	Band (Trial)
Fe	0	
Mn	0	
Cu	2	Band
Mg	0	
Lime		

2nd Crop Choice		
Rye		
YIELD GOAL		
90 BU		
SUGGESTED GUIDELINES		
Band/Maint.		
LB/ACRE		APPLICATION
N	182	
P_2O_5	56	Band *
K_2O	74	Band *
Cl	0	
S	0	
B	0	
Zn	3	Band (Trial)
Fe	0	
Mn	0	
Cu	1	Band
Mg	0	
Lime		

3rd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.2** 6-24" **8.5**		**22.5 meq**	(65-75) **77.5**	(15-20) **20.8**	(1-7) **0.9**	(0-5) **0.8**	(0-5)

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

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 = 30 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

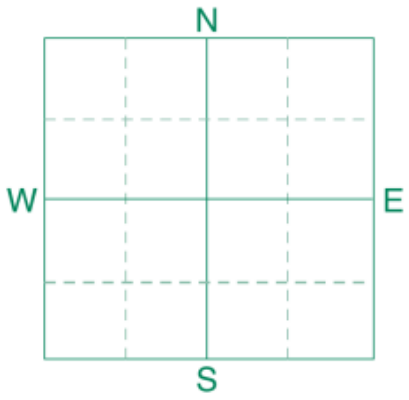
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 56 K2O = 34 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

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

SOIL TEST REPORT

FIELD ID **FIELD 3 N**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6 W1** RANGE
SECTION **10** QTR **N1/2** ACRES **300**
PREV. CROP **Alfalfa**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14131965** BOX # **0**
LAB # **NW61916**

Date Sampled **09/01/2016** Date Received **09/04/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 13 lb/ac 6-24" 9 lb/ac 0-24'' 22 lb/ac Nitrate		****			
Olsen Phosphorus	7 ppm	**********			
Potassium	85 ppm	**********	**********		
0-24'' Chloride	236 lb/ac	**********	**********	**********	**********
0-6" 92 lb/ac 6-24" 114 lb/ac Sulfur		**********	**********	**********	**********
Boron	1.0 ppm	**********	**********	**********	
Zinc	0.78 ppm	**********	**********	**********	
Iron	38.5 ppm	**********	**********	**********	**********
Manganese	3.7 ppm	**********	**********	**********	**********
Copper	0.22 ppm	****			
Magnesium	777 ppm	**********	**********	**********	**********
Calcium	3035 ppm	**********	**********	**********	**********
Sodium	72 ppm	**********	**********		
Org.Matter	2.4 %	**********	**********		
Carbonate(CCE)	1.7 %	**********	**********		
0-6" 0.43 mmho/cm 6-24" 0.3 mmho/cm Sol. Salts		**********	**********		

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Alfalfa								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
5 Tons								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	0		N			N		
P_2O_5	55	Band *	P_2O_5			P_2O_5		
K_2O	250	Band *	K_2O			K_2O		
Cl		Not Available	Cl			Cl		
S	0		S			S		
B	1	Broadcast	B			B		
Zn	3	Band (Trial)	Zn			Zn		
Fe	0		Fe			Fe		
Mn	0		Mn			Mn		
Cu	2	Band	Cu			Cu		
Mg	0		Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.3** 6-24" **8.4**		**22.2 meq**	(65-75) **68.4**	(15-20) **29.2**	(1-7) **1.0**	(0-5) **1.4**	(0-5)

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

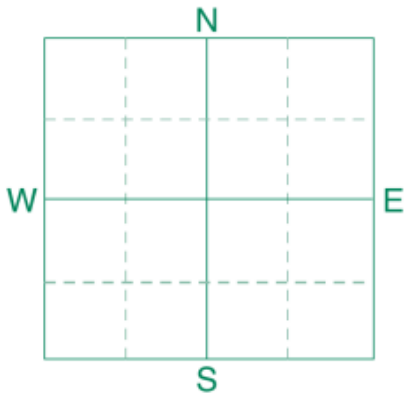
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 25 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 250 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

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

SOIL TEST REPORT

FIELD ID **WEST OF YARD**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6 W1** RANGE
SECTION **8** QTR **S1/2** ACRES **290**
PREV. CROP **Corn-Grain**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14136243** BOX # **0**
LAB # **NW197171**

Date Sampled **12/01/2016** Date Received **12/05/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 16 lb/ac 6-24" 57 lb/ac 0-24'' 73 lb/ac Nitrate		**********	**********	**	
Olsen Phosphorus	26 ppm	**********	**********	**********	**********
Potassium	156 ppm	**********	**********	**********	**********
0-24'' Chloride	88 lb/ac	**********	**********	**********	**********
0-6" 30 lb/ac 6-24" 96 lb/ac Sulfur		**********	**********	**********	**********
Boron	0.6 ppm	**********	**********		
Zinc	1.69 ppm	**********	**********	**********	**********
Iron	18.9 ppm	**********	**********	**********	**********
Manganese	1.6 ppm	**********	**********	**********	
Copper	0.34 ppm	**********			
Magnesium	419 ppm	**********	**********	**********	**********
Calcium	3369 ppm	**********	**********	**********	**********
Sodium	20 ppm	***			
Org.Matter	2.0 %	**********	**		
Carbonate(CCE)	1.4 %	**********	**********		
0-6" 0.2 mmho/cm 6-24" 0.22 mmho/cm Sol. Salts		*****			

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Canola-bu								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
50 BU								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	102		N			N		
P_2O_5	45	Band *	P_2O_5			P_2O_5		
K_2O	23	Band *	K_2O			K_2O		
Cl		Not Available	Cl			Cl		
S	17	Band	S			S		
B	1	Broadcast	B			B		
Zn	0		Zn			Zn		
Fe	0		Fe			Fe		
Mn	0		Mn			Mn		
Cu	0		Cu			Cu		
Mg	0		Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **7.9** 6-24" **8.4**		**20.8 meq**	(65-75) **80.9**	(15-20) **16.8**	(1-7) **1.9**	(0-5) **0.4**	(0-5)

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

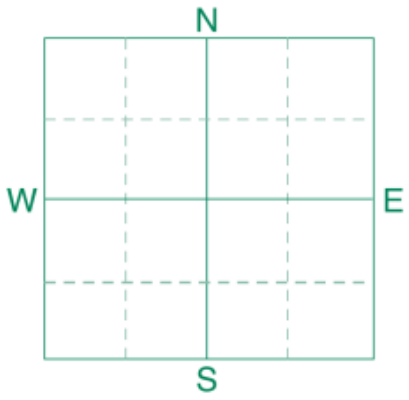
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium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

AGVISE LABORATORIES

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

SOIL TEST REPORT

FIELD ID **HENRY'S SW**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6 W1** RANGE
SECTION **16** QTR **E1/2** ACRES **0**
PREV. CROP **Oats**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14131966** BOX # **0**
LAB # **NW61917**

Date Sampled **09/01/2016** Date Received **09/04/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 14 lb/ac 6-24" 9 lb/ac 0-24'' 23 lb/ac Nitrate		*****			
Olsen Phosphorus	9 ppm	**********			
Potassium	119 ppm	**********	**********	**********	
0-24'' Chloride	204 lb/ac	**********	**********	**********	**********
0-6" 112 lb/ac 6-24" 330 lb/ac Sulfur		**********	**********	**********	**********
Boron	1.5 ppm	**********	**********	**********	**********
Zinc	2.11 ppm	**********	**********	**********	**********
Iron	22.1 ppm	**********	**********	**********	**********
Manganese	3.0 ppm	**********	**********	**********	**
Copper	0.38 ppm	********			
Magnesium	719 ppm	**********	**********	**********	**********
Calcium	3916 ppm	**********	**********	**********	**********
Sodium	61 ppm	**********	**********		
Org.Matter	2.5 %	**********	**********		
Carbonate(CCE)	4.8 %	**********	**********	**********	
0-6" 0.51 mmho/cm 6-24" 0.53 mmho/cm Sol. Salts		**********	**********		

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Corn-Grain								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
125 BU								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	127		N			N		
P_2O_5	50	Band *	P_2O_5			P_2O_5		
K_2O	37	Band *	K_2O			K_2O		
Cl		Not Available	Cl			Cl		
S	0		S			S		
B	0		B			B		
Zn	0		Zn			Zn		
Fe	0		Fe			Fe		
Mn	0		Mn			Mn		
Cu	0		Cu			Cu		
Mg	0		Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.3** 6-24" **8.4**		**26.1 meq**	(65-75) **74.9**	(15-20) **22.9**	(1-7) **1.2**	(0-5) **1.0**	(0-5)

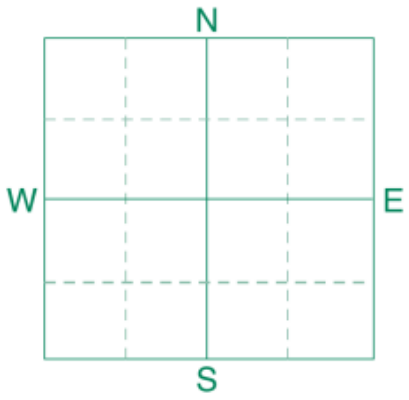
General Comments: Texture is not estimated on high pH soils.

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 = 50 K2O = 34 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 **1 BY TRACKS**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6W1** RANGE
SECTION **16** QTR **W1/2** ACRES **300**
PREV. CROP **Alfalfa**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14131998** BOX # **0**
LAB # **NW98474**

Date Sampled **09/30/2016** Date Received **10/04/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
Nitrate 0-6" / 6-24"	12 lb/ac / 6 lb/ac	****			
Nitrate 0-24''	18 lb/ac				
Phosphorus Olsen	10 ppm	**********	**********	****	
Potassium	91 ppm	**********	**********	**	
Chloride 0-24''	24 lb/ac	*********	*********		
Sulfur 0-6"	36 lb/ac	**********	**********	**********	**
Sulfur 6-24"	42 lb/ac	**********	**********	**********	**********
Boron	0.5 ppm	*********	*********		
Zinc	1.38 ppm	**********	**********	**********	**
Iron	20.9 ppm	**********	**********	**********	**********
Manganese	0.8 ppm	*********	*********		
Copper	0.31 ppm	*******	*******		
Magnesium	447 ppm	**********	**********	**********	**********
Calcium	3286 ppm	**********	**********	**********	**********
Sodium	21 ppm	***	***		
Org.Matter	1.9 %	*******	*******		
Carbonate(CCE)	1.0 %	*******	*******		
Sol. Salts 0-6"	0.18 mmho/cm	****	****		
Sol. Salts 6-24"	0.16 mmho/cm	****	****		

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Canola-bu			Corn-Grain					
YIELD GOAL			YIELD GOAL			YIELD GOAL		
50 BU			140 BU					
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.			Broadcast/Maint.					
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	132		N	100		N		
P_2O_5	45	Band *	P_2O_5	83	Broadcast	P_2O_5		
K_2O	42	Band *	K_2O	103	Broadcast	K_2O		
Cl		Not Available	Cl		Not Available	Cl		
S	17	Band	S	0		S		
B	1	Broadcast	B	0		B		
Zn	0		Zn	2	Broadcast(Trial)	Zn		
Fe	0		Fe	0		Fe		
Mn	2	Band	Mn	2	Broadcast	Mn		
Cu	0		Cu	0		Cu		
Mg	0		Mg	0		Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.3** 6-24" **8.7**		**20.5 meq**	(65-75) **80.2**	(15-20) **18.2**	(1-7) **1.1**	(0-5) **0.4**	(0-5)

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

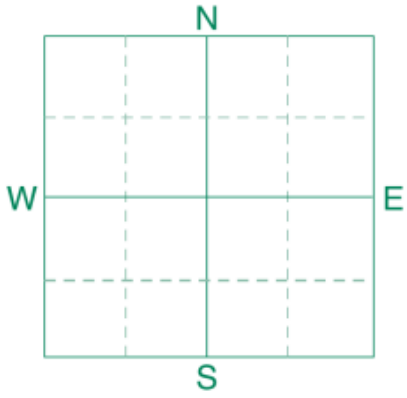
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Nitrogen is credited 25 lbs for the previous crop. Nitrogen credits may need to be adjusted based on local conditions. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 45 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. Nitrogen is credited 50 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 = 56 K2O = 38 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
(http://www.agvise.com)
Northwood: (701) 587-6010
Benson: (320) 843-4109

SOIL TEST REPORT

FIELD ID **EAST OF YARD**
SAMPLE ID **RE-TEST**
FIELD NAME
COUNTY
TWP **8-6 W1** RANGE
SECTION **9** QTR ACRES **630**
PREV. CROP **Corn-Grain**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14136241** BOX # **0**
LAB # **NW197169**

Date Sampled **12/01/2016** Date Received **12/05/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 14 lb/ac 6-24" 60 lb/ac 0-24'' 74 lb/ac Nitrate		**********	**********	***	
Olsen Phosphorus	13 ppm	**********	**********	********	**
Potassium	159 ppm	**********	**********	**********	**********
0-24'' Chloride	104 lb/ac	**********	**********	**********	**********
0-6" 28 lb/ac 6-24" 60 lb/ac Sulfur		**********	**********	******	
		**********	**********	**********	**********
Boron	0.9 ppm	**********	**********	********	
Zinc	0.82 ppm	**********	**********	**********	***
Iron	11.3 ppm	**********	**********	**********	**********
Manganese	1.9 ppm	**********	**********	**********	*****
Copper	0.28 ppm	*******			
Magnesium	594 ppm	**********	**********	**********	**********
Calcium	3944 ppm	**********	**********	**********	**********
Sodium	35 ppm	******			
Org.Matter	1.9 %	********			
Carbonate(CCE)	1.9 %	**********	**********		
0-6" 0.27 mmho/cm 6-24" 0.27 mmho/cm Sol. Salts		******** ********			

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Corn-Grain								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
125 BU								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	76		N			N		
P_2O_5	50	Band *	P_2O_5			P_2O_5		
K_2O	34	Band *	K_2O			K_2O		
Cl		Not Available	Cl			Cl		
S	7	Band (Trial)	S			S		
B	0		B			B		
Zn	2	Band	Zn			Zn		
Fe	0		Fe			Fe		
Mn	0		Mn			Mn		
Cu	1	Band	Cu			Cu		
Mg	0		Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.2** 6-24" **8.4**		**25.2 meq**	(65-75) **78.2**	(15-20) **19.6**	(1-7) **1.6**	(0-5) **0.6**	(0-5)

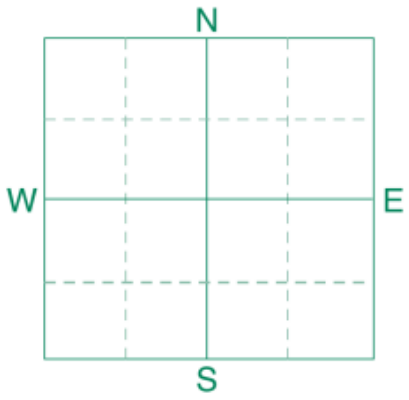
General Comments: Texture is not estimated on high pH soils.

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 = 50 K2O = 34 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

SOIL TEST REPORT

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

FIELD ID **HENRYS SOUTH**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6W1** RANGE
SECTION **15** QTR **SW** ACRES **80**
PREV. CROP **Corn-Grain**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14131997** BOX # **0**
LAB # **NW98472**

Date Sampled **09/30/2016** Date Received **10/04/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
Nitrate	0-6" 17 lb/ac 6-24" 15 lb/ac 0-24'' 32 lb/ac	******			
Phosphorus	Olsen 6 ppm	**********			
Potassium	100 ppm	**********	**********	***	
Chloride	0-24'' 164 lb/ac	**********	**********	**********	**********
Sulfur	0-6" 120 +lb/ac 6-24" 360 +lb/ac	**********	**********	**********	**********
Boron	1.4 ppm	**********	**********	**********	***
Zinc	0.63 ppm	**********	**********		
Iron	11.9 ppm	**********	**********	**********	**********
Manganese	0.9 ppm	**********	**********		
Copper	0.44 ppm	**********	**********		
Magnesium	1030 ppm	**********	**********	**********	**********
Calcium	4212 ppm	**********	**********	**********	**********
Sodium	174 ppm	**********	**********	**********	**********
Org.Matter	2.7 %	**********	**********		
Carbonate(CCE)	4.6 %	**********	**********	**********	
Sol. Salts	0-6" 0.75 mmho/cm 6-24" 0.44 mmho/cm	**********	**********	**********	

1st Crop Choice		
Canola-bu		
YIELD GOAL		
50 BU		
SUGGESTED GUIDELINES		
Band/Maint.		
LB/ACRE		APPLICATION
N	143	
P_2O_5	48	Band *
K_2O	38	Band *
Cl		Not Available
S	12	Band
B	0	
Zn	3	Band (Trial)
Fe	0	
Mn	2	Band
Cu	0	
Mg	0	
Lime		

2nd Crop Choice		
Oats		
YIELD GOAL		
120 BU		
SUGGESTED GUIDELINES		
Band/Maint.		
LB/ACRE		APPLICATION
N	88	
P_2O_5	34	Band *
K_2O	54	Band *
Cl	0	
S	0	
B	0	
Zn	3	Band (Trial)
Fe	0	
Mn	2	Band
Cu	1	Band (Trial)
Mg	0	
Lime		

3rd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.5** 6-24" **8.6**		**30.7 meq**	(65-75) **68.7**	(15-20) **28.0**	(1-7) **0.8**	(0-5) **2.5**	(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/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

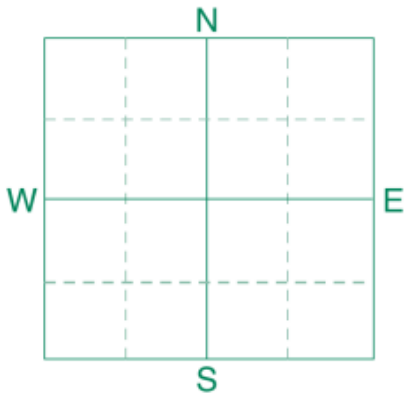
Crop 2: * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 30 K2O = 23 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

AGVISE LABORATORIES

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

SOIL TEST REPORT

FIELD ID **NORTH OF TRACKS**
SAMPLE ID
FIELD NAME
COUNTY
TWP **8-6 W1** RANGE
SECTION **16** QTR **NW** ACRES **0**
PREV. CROP **Alfalfa**



SUBMITTED FOR:
DIVORNE FARMS

SUBMITTED BY: **TE0509**
R-WAY AG.
PO BOX 388
ST CLAUDE, MB **R0G 1Z0**

REF # **14131967** BOX # **0**
LAB # **NW61918**

Date Sampled **09/01/2016** Date Received **09/04/2016** Date Reported **5/3/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
Nitrate	0-6" 10 lb/ac 6-24" 39 lb/ac 0-24'' 49 lb/ac	**********			
Phosphorus	Olsen 7 ppm	**********			
Potassium	80 ppm	**********			
Chloride	0-24'' 448 lb/ac	**********	**********	**********	**********
Sulfur	0-6" 64 lb/ac 6-24" 132 lb/ac	**********	**********	**********	**********
Boron	1.0 ppm	**********	**********	**********	
Zinc	1.30 ppm	**********	**********	**********	**
Iron	25.9 ppm	**********	**********	**********	**********
Manganese	3.7 ppm	**********	**********	**********	***
Copper	0.38 ppm	*********	**		
Magnesium	617 ppm	**********	**********	**********	**********
Calcium	3177 ppm	**********	**********	**********	**********
Sodium	93 ppm	**********	**********	**	
Org.Matter	1.9 %	*******			
Carbonate(CCE)	1.7 %	*********	***		
Sol. Salts	0-6" 0.46 mmho/cm 6-24" 0.44 mmho/cm	**********	******		
		**********	****		

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Alfalfa								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
4 Tons								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band/Maint.								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	0		N			N		
P_2O_5	44	Band *	P_2O_5			P_2O_5		
K_2O	200	Band *	K_2O			K_2O		
Cl		Not Available	Cl			Cl		
S	0		S			S		
B	1	Broadcast	B			B		
Zn	0		Zn			Zn		
Fe	0		Fe			Fe		
Mn	0		Mn			Mn		
Cu	1	Band (Trial)	Cu			Cu		
Mg	0		Mg			Mg		
Lime			Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" **8.3** 6-24" **8.5**		**21.6 meq**	(65-75) **73.4**	(15-20) **23.8**	(1-7) **0.9**	(0-5) **1.9**	(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 * Nitrogen is credited 25 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 = 40 K2O = 200 AGVISE Band/Maintenance guidelines will build P & K test levels to the medium range over many years and then maintain them.

Type	Storage Type	Volatilization	Animal Numbers	Weight In (lb)	Weight Out (lb)	Average Animal Wt (lb)	Days on Feed per Cycle (days)	Number of Cycles per Year	N Excreted Per Herd Adjusted for Storage N Loss (lb/yr/herd)	P2O5 Excreted per Herd Per Year (lb/yr/herd)
Lactating Cows	Liquid Uncovered Earthen	30%	0	1400	1440	1420	365	1	0	0
Dry Cows	Liquid Uncovered Earthen	30%	0	1440	1440	1440	365	1	0	0
Calves, 0-3 months	Liquid Uncovered Earthen	30%	0	90	275	183	365	1	0	0
Calves, 4-13 months	Liquid Uncovered Earthen	30%	0	275	810	543	365	1	0	0
Replacements, >13 months	Liquid Uncovered Earthen	30%	0	810	1250	1030	365	1	0	0
Mature Cows, plus associated livestock	Liquid Uncovered Steel/Concrete	10%	535	n/a	n/a	n/a	n/a	n/a	179370	74032

Last revised August 20, 2014

Crop	Removal P2O5	Removal N	Uptake N	Units	Yield	Units	Acreage	Removal P2O5 (lb)	Removal N (lb)	Uptake N (lb)
Alfalfa	13.8	58	58	lb/ton	2.635	ton/ac	176	6400	26898	26898
Barley Grain	0.42	0.97	1.39	lb/bu		bu/ac		-	-	-
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-
Canola	1.04	1.93	3.19	lb/bu	35.3	bu/ac	318	11674	21665	35809
Corn Grain	0.44	0.97	1.53	lb/bu	109.5	bu/ac	1079	51986	114606	180770
Corn Silage	12.7	31.2	31.2	lb/ton		tons/ac		-	-	-
Dry Edible Beans	1.39	4.17		lb/cwt		cwt/ac		-	-	-
Fababeans	1.79	5.02	8.4	lb/cwt		cwt/ac		-	-	-
Flax	0.65	2.13	2.88	lb/bu		bu/ac		-	-	-
Grass Hay	10	34.2	34.2	lb/ton		tons/ac		-	-	-
Lentils	1.03	3.39	5.08	lb/cwt		cwt/ac		-	-	-
Oats	0.26	0.62	1.07	lb/bu	105.9	bu/ac	153	4213	10046	17337
Pasture (grazed)	10	34.2	34.2	lb/ton	0.5	ton/ac		-	-	-
Peas	0.69	2.34	3.06	lb/bu		bu/ac		-	-	-
Potatoes	0.09	0.32	0.57	lb/cwt		cwt/ac		-	-	-
Rye	0.45	1.06	1.67	lb/bu	52.7	bu/ac	236	5597	13183	20770
Soybeans	0.84	3.87	5.2	lb/bu	37.4	bu/ac	296	9299	42842	57566
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu		bu/ac		-	-	-
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-
						Sub Total	2258	89169	229241	339150
						Estimated Average Removal/Uptake (lb/ac)		39.5	101.5	150.2
						Additional Acres				
						Crop Planned on Additional Acres				
						Total Acreage	2258			

Note: Additional acres include acres for which crop removal or soil data is limited or unavailable.

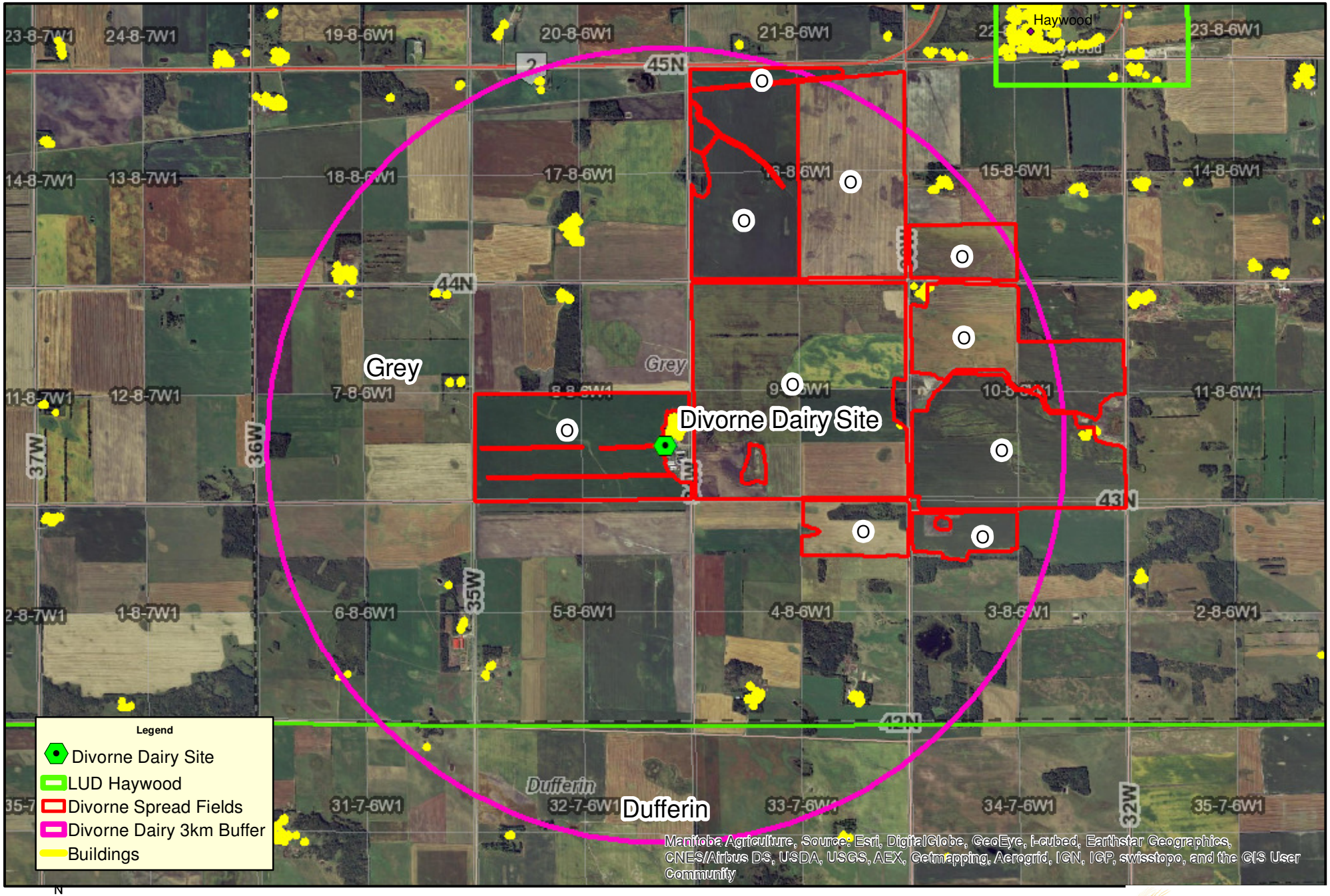
Last revised August 20, 2014

Species	Animal Category/Operation type	N (lb/year)	P2O5 (lb/year)
Pigs	Gestating Sow	0	0
	Nursing Sow	0	0
	Nursing Litter	0	0
	Live Cull Sows	0	0
	Bred Gilts	0	0
	Gilts	0	0
	Boars	0	0
	Weanlings	0	0
	Growers/finishers	0	0
	Sows, farrow to 5 kg	0	0
	Sows, farrow to 23 kg	0	0
	Sows, farrow to finish	0	0
Beef	Mature Cows (>2 years old)	0	0
	Bred Heifer (14 mo - 2 years)	0	0
	Replacement Heifers (7 mo-14 mo)	0	0
	Unweaned Calves (0-7 mo)	0	0
	Bulls	0	0
	Mature Cows and Bred Heifers, plus associated livestock	0	0
	Feedlot Cattle - long keep	0	0
	Feedlot Cattle - short keep	0	0
	Backgrounders - pasture	0	0
	Backgrounders - confined	0	0
Dairy	Lactating cow	0	0
	Dry cow	0	0
	Calf, 0-3 months	0	0
	Calf, 4-13 months	0	0
	Replacements, >13 months	0	0
	Mature Cows, plus assoc livestock	179370	74032
Sheep	Ewes	0	0
	Replacement Ewes	0	0
	Rams	0	0
	Lambs	0	0
	Ewes, plus assoc livestock	0	0
	Feeder	0	0
Chickens	Broilers	0	0
	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
Layers	Layer Pullets	0	0
	Layer Hens	0	0
	Breeder Pullets	0	0
	Breeder Hens	0	0
Turkeys	Broiler Hens (0-9 wks)	0	0
	Hens (0-11 wks)	0	0
	Heavy Hens (0-14 wks)	0	0
	Light Toms (0-12 wks)	0	0
	Toms (0-13 wks)	0	0
	Heavy Toms (0-15 wks)	0	0
	Breeding Hen Growers (0-30 wks)	0	0
	Breeding Hens (30-60 wks)	0	0
	Breeding Tom Grower (0-18 wks)	0	0
	Breeding Tom Grower (0-30 wks)	0	0
	Breeding Tom (30-60 wks)	0	0
	Total	**179370**	**74032**

Note: Be sure all livestock species on your farm are represented in this table, not just the livestock in the proposed expansion.

Nutrients Excreted	lbs
Nitrogen	179370
P2O5	74032
Crop Nutrient Use	**lb/ac**
Nitrogen Uptake	150.2
P2O5 Removal	39.5
Land Base Requirements	**acres**
Acres for Nitrogen Uptake	**1194**
Acres for 2 x P2O5 Removal	**937**
Acres for 1 x P2O5 Removal	**1875**

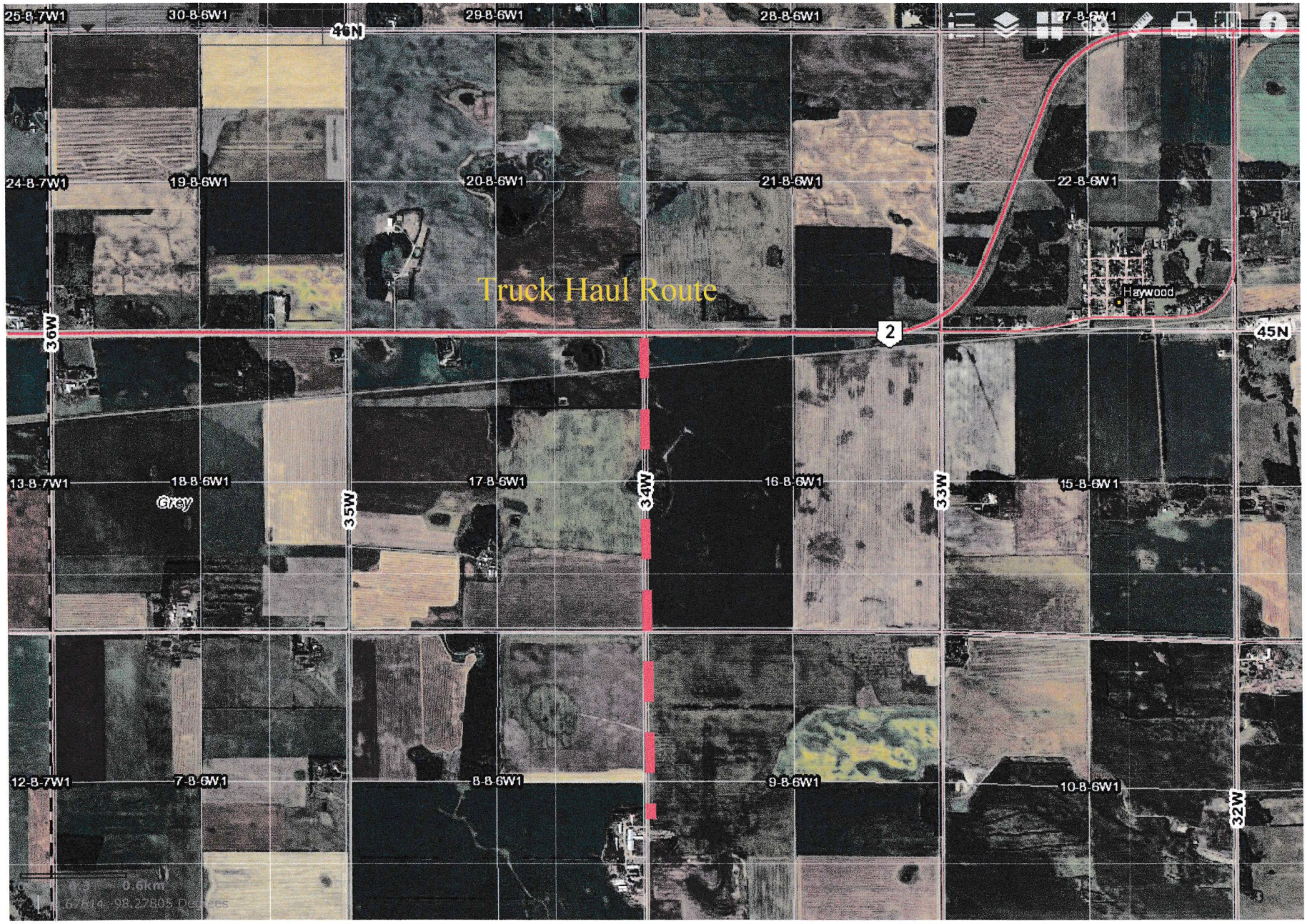
Divorne Dairy - Land Use



N
W E
S

0 0.4 0.8 1.6 2.4 Miles

AGRA-GOLD Consulting Ltd.


25-8-7W1
30-8-6W1
46N
29-8-6W1
28-8-6W1
27-8-6W1
24-8-7W1
19-8-6W1
20-8-6W1
21-8-6W1
22-8-6W1
Truck Haul Route
Haywood
36W
2
45N
13-8-7W1
18-8-6W1
Grey
35W
17-8-6W1
34W
16-8-6W1
33W
15-8-6W1
12-8-7W1
7-8-6W1
8-8-6W1
9-8-6W1
10-8-6W1
32W
0.3
0.6km

R.M. OF GREY

N

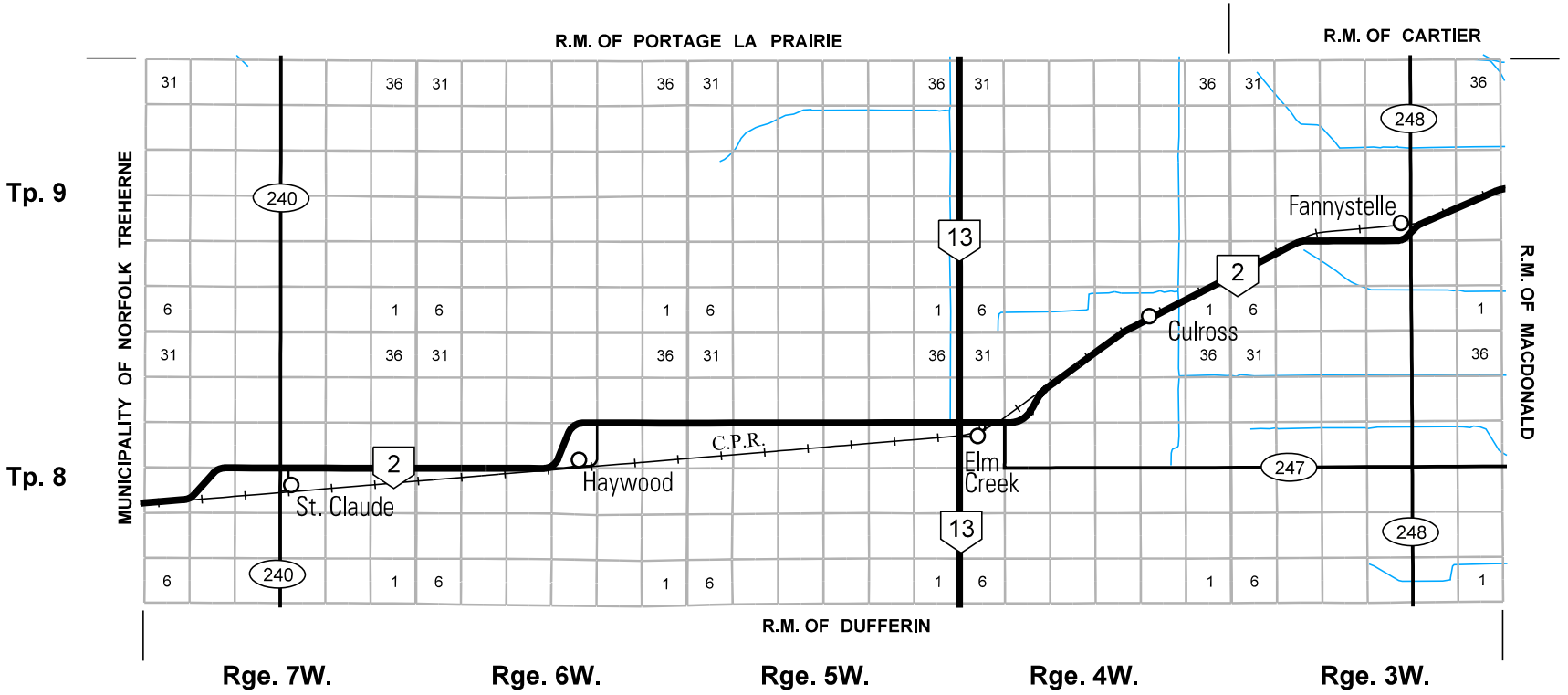
0 5

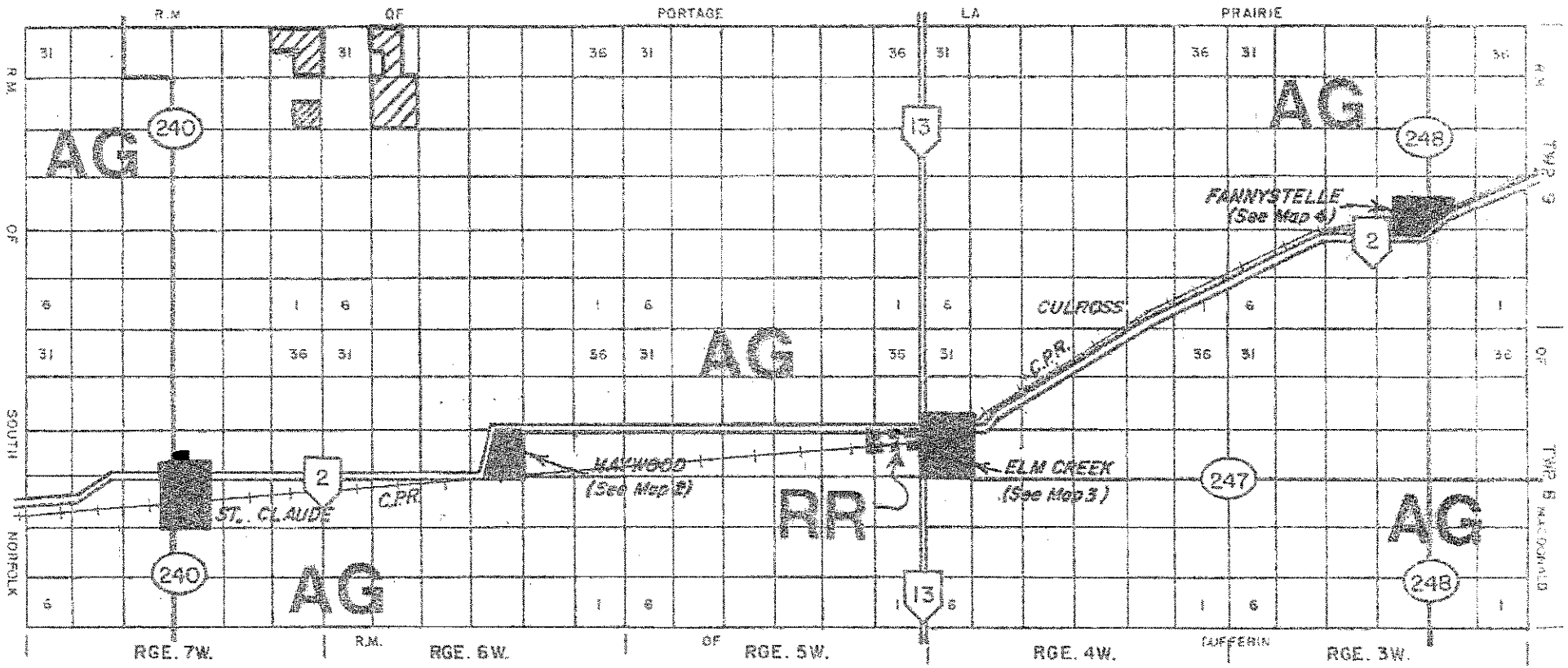
SCALE IN KILOMETRES

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

LEGEND

PROVINCIAL TRUNK HIGHWAYS 13
PROVINCIAL ROADS 247
ACCESS ROADS .....
RAILWAYS .....





ZONING MAP 1

APPENDIX "A" OF THE R.M. OF GREY ZONING BY-LAW NO. 5/03

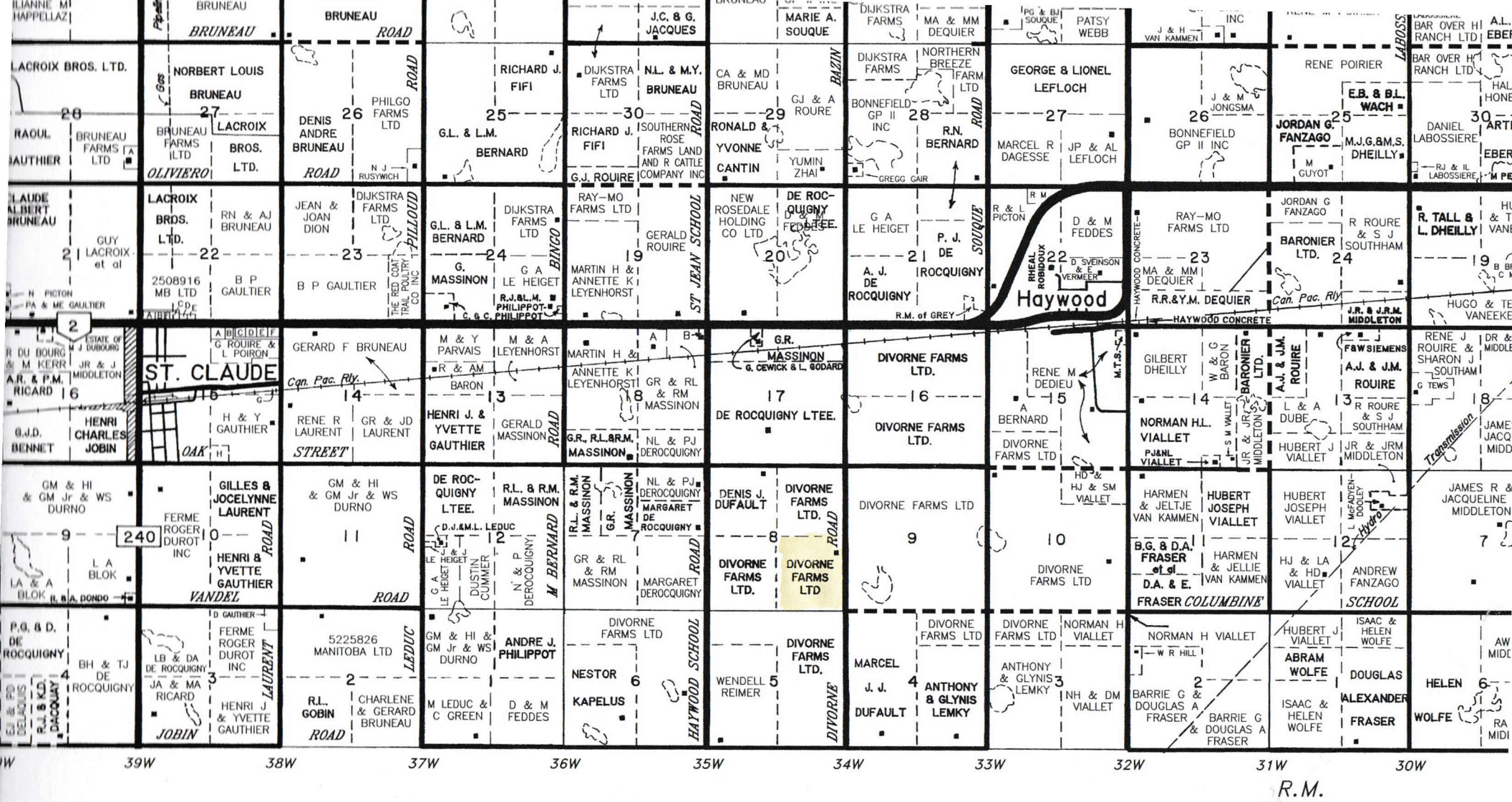
R.M. OF GREY

Legend

- Commercial General Zone
- AG Agricultural General Zone
- RR Residential Rural Zone
- Natural Environment and Outdoor Rural Zone
- Village Limits

INTERGOVERNMENTAL AFFAIRS
COMMUNITY PLANNING SERVICES

DRAWING NO. 133-03- DATE March 2004


RGE. 7 W.P.M.
RGE. 6 W.P.M.
R.M.
RURAL MUNICIPALITY OF
GREY
No. 133
ST. CLAUDE
Haywood
BRUNEAU
LACROIX BROS. LTD.
NORBERT LOUIS BRUNEAU
DENIS ANDRE BRUNEAU
PHILGO FARMS LTD
RICHARD J. FIFI
DIJKSTRA FARMS LTD
N.L. & M.Y. BRUNEAU
SOUTHERN ROSE FARMS LAND AND R CATTLE COMPANY INC
CA & MD BRUNEAU
GJ & A ROURE
RONALD & YVONNE CANTIN
YUMIN ZHAI
NORTHERN BREEZE FARM LTD
BONNEFIELD GP II INC
R.N. BERNARD
GEORGE & LIONEL LEFLOCH
MARCEL R DAGESSE
JP & AL LEFLOCH
J & M JONGSMA
RENE POIRIER
E.B. & B.L. WACH
JORDAN G. FANZAGO
M.J.G.&M.S. DHEILLY
DANIEL LABOSSIERE
BAR OVER H RANCH LTD
GUY LACROIX et al
2508916 MB LTD
B P GAULTIER
JEAN & JOAN DION
THE RED COAT TRAIL POULTRY CO INC
G.L. & L.M. BERNARD
G. MASSINON
G A LE HEIGET
RAY-MO FARMS LTD
MARTIN H & ANNETTE K LEYENHORST
GERALD ROUIRE
NEW ROSEDALE HOLDING CO LTD
DE ROCQUIGNY LTEE.
G A LE HEIGET
P. J. DE ROCQUIGNY
A. J. DE ROCQUIGNY
R & L PICTON
RHEAL ROBIDOUX
D & M FEDDES
D SVEINSON & E VERMEER
RAY-MO FARMS LTD
MA & MM DEQUIER
R.R.&Y.M. DEQUIER
JORDAN G FANZAGO
BARONIER LTD.
R ROURE & S J SOUTHHAM
J.R. & J.R.M. MIDDLETON
R. TALL & L. DHEILLY
HUGO & TE VANEEKE
R DU BOURG & M KERR
A.R. & P.M. RICARD
G.J.D. BENNET
HENRI CHARLES JOBIN
H & Y GAUTHIER
GERARD F BRUNEAU
RENE R LAURENT
GR & JD LAURENT
M & Y PARVAIS
HENRI J. & YVETTE GAUTHIER
M & A LEYENHORST
GERALD MASSINON
MARTIN H & ANNETTE K LEYENHORST
GR & RL & RM MASSINON
G.R., R.L.&R.M. MASSINON
NL & PJ DEROCQUIGNY
G.R. MASSINON
G. CEWICK & L. GODARD
DE ROCQUIGNY LTEE.
DIVORNE FARMS LTD.
RENE M DEDIEU
A BERNARD
DIVORNE FARMS LTD
GILBERT DHEILLY
W & G BARON
NORMAN H.L. VIALLET
PJ&NL VIALLET
A.J. & J.M. ROUIRE
L & A DUBE
HUBERT J VIALLET
F&W SIEMENS
A.J. & J.M. ROUIRE
R ROURE & S J SOUTHHAM
JR & JRM MIDDLETON
RENE J ROUIRE & SHARON J SOUTHHAM
GM & HI & GM Jr & WS DURNO
L A BLOK
FERME ROGER DUROT INC
GILLES & JOCELYNNE LAURENT
HENRI & YVETTE GAUTHIER
VANDEL
GM & HI & GM Jr & WS DURNO
DE ROC-QUIGNY LTEE.
D.J.&M.L. LEDUC
R.L. & R.M. MASSINON
G A LE HEIGET
DUSTIN CUMMER
N & P DEROCQUIGNY
NL & PJ DEROCQUIGNY
MARGARET DE ROCQUIGNY
MARGARET DEROCQUIGNY
DENIS J. DUFAULT
DIVORNE FARMS LTD.
DIVORNE FARMS LTD
DIVORNE FARMS LTD
HD & HJ & SM VIALLET
HARMEN & JELTJE VAN KAMMEN
HUBERT JOSEPH VIALLET
B.G. & D.A. FRASER et al
D.A. & E. FRASER
HARMEN & JELLIE VAN KAMMEN
HUBERT JOSEPH VIALLET
HJ & LA & HD VIALLET
L McFADYEN-DOOLEY
ANDREW FANZAGO
SCHOOL
JAMES R & JACQUELINE MIDDLETON
P.G. & D. DE ROCQUIGNY
BH & TJ DE ROCQUIGNY
LB & DA DE ROCQUIGNY
JA & MA RICARD
JOBIN
FERME ROGER DUROT INC
HENRI J & YVETTE GAUTHIER
LAURENT
5225826 MANITOBA LTD
R.L. GOBIN
CHARLENE & GERARD BRUNEAU
LEDUC
GM & HI & GM Jr & WS DURNO
M LEDUC & C GREEN
ANDRE J. PHILIPPOT
D & M FEDDES
DIVORNE FARMS LTD
NESTOR KAPELUS
HAYWOOD SCHOOL
WENDELL REIMER
DIVORNE FARMS LTD.
DIVORNE
MARCEL J. J. DUFAULT
DIVORNE FARMS LTD
ANTHONY & GLYNIS LEMKY
DIVORNE FARMS LTD
NORMAN H VIALLET
ANTHONY & GLYNIS LEMKY
NH & DM VIALLET
NORMAN H VIALLET
W R HILL
BARRIE G & DOUGLAS A FRASER
HUBERT J VIALLET
ABRAM WOLFE
ISAAC & HELEN WOLFE
ISAAC & HELEN WOLFE
DOUGLAS ALEXANDER FRASER
HELEN WOLFE
Transmission
Hydro
Can. Pac. Rly.
HAYWOOD CONCRETE
LABOSSIERE
39W
38W
37W
36W
35W
34W
33W
32W
31W
30W

Manitoba

Conservation and Water Stewardship
Environmental Stewardship Division
Environmental Approvals Branch
123 Main Street, Suite 160, Winnipeg, Manitoba R3C 1A5
T 204 945-8321 F 204 945-5229
www.gov.mb.ca/conservation/eal

July 31, 2014

Bruno Divorne
Divorne Farms Ltd.
Box 40
Haywood MB R0G 0W0
Via Email: divorne@sdnet.ca

Dear Bruno Divorne:

Re: Divorne Farms Ltd., Steel Tank (above ground) Manure Storage Facility – Permit # LM-1136
SE 08-08-06 WPM, Rural Municipality of Grey, Construction

Enclosed is **Permit # LM-1136**, dated July 31, 2014 issued in accordance with the *Livestock Manure and Mortalities Management Regulation* (M.R. 42/98) to Bruno Divorne (operating as Divorne Farms Ltd.) for the Construction of a manure storage facility located at SE 08-08-06 W in the Rural Municipality of Grey.

In addition to the enclosed Permit requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with.

Pursuant to Section 27 of *The Environment Act*, this permit decision may be appealed by any person who is affected by the issuance of this Permit to the Minister of Manitoba Conservation and Water Stewardship within 30 days of the date of the Permit.

If you have any questions on the above, please call (204) 945-8321.

Yours truly,

Tracey Braun, M.Sc.
Director
Environmental Approvals

cc: Livestock Central South Region: Winnipeg Office — **Via Email: Marguerite.Reimer@gov.mb.ca**
Charles Liu, DGH Engineering Ltd — **Via Email: cliu@dghengineering.com**
Rural Municipality of Grey — **Via Fax: (204) 436-2543**

NOTE: Confirmation of Receipt of this Permit LM-1136 *(by the Permittee only)* is required. Please acknowledge receipt by signing in the space provided below and faxing a copy back to Environmental Approvals at 204-945-5229 within 10 days of receipt of this document OR prior to commencement of any construction works.

Name	Date	Signature
_____	_____	_____

LIVESTOCK MANURE AND MORTALITIES MANAGEMENT REGULATION

Permit to Construct, Modify or Expand a Manure Storage Facility

Manitoba

Conservation and Water Stewardship

Permit No. LM-1136

In accordance with the *Livestock Manure and Mortalities Management Regulation*, Man. Reg. 42/98 (the "LMMMR") under *The Environment Act*, C.C.S.M. c. E125, this permit is issued to:

Divorne Farms Ltd. (the permittee)

for the **construction** of a steel manure storage facility located at **SE 08-08-06 WPM** in the **Rural Municipality of Grey** in the Province of Manitoba and is subject to the **TERMS AND CONDITIONS** in the following sections.

1. The permittee shall ensure that the terms and conditions contained in Permit **LM-1136** are strictly adhered to unless any amendments to the terms and conditions are approved in writing by the Director.

2. The **construction** of the manure storage facility shall be in accordance with the plans and specifications of the permit application as submitted by **Mr. Charles Liu, P.Eng.,** with **DGH Engineering Ltd** to this office on **July 2, 2014, including amendment(s) submitted on July 30, 2014**, the siting and construction requirements set out in Schedule A of the LMMMR, and the terms and conditions of this permit.

3. An Environment Officer with the Environmental Approvals Branch of Manitoba Conservation and Water Stewardship shall be notified in writing not more than 10 calendar days and not less than 5 calendar days prior to commencement of construction, modification, or expansion of the manure storage facility.

4. Unless otherwise approved in writing by the Director, no person shall construct, modify, or expand the manure storage facility between November 1 of one year and April 30 of the following year.

5. If the **construction** of the manure storage facility is not completed prior to November 1 of one year as referred to in section 4 of this permit, then work on the facility shall cease, and an Environment Officer with the Environmental Approvals Branch of Manitoba Conservation and Water Stewardship shall be notified in writing within 10 calendar days.

6. If the **construction** of the manure storage facility is suspended, an Environment Officer with the Environmental Approvals Branch of Manitoba Conservation and Water Stewardship shall be notified in writing before resuming **construction** of the manure storage facility.

7. Any proposed amendments to the plans or specifications of the permit application related to siting and construction requirements set out in Schedule A of the LMMMR and the terms and conditions of this permit shall be provided in writing to an Environment Officer with the Environmental Approvals Branch of Manitoba Conservation and Water Stewardship for consideration. Proposed amendments shall only be incorporated into the **construction** of the manure storage facility after the Director has approved them in writing.

8. Any amendments referred to in section 7 of this permit, and any other amendments to the plans or specifications of the permit application, shall be reflected in the sealed professional engineer's certificate and construction report referred to in sections 10 and 11 of this permit.

9. No person shall set the manure storage facility into operation until the Director has been provided with a sealed professional engineer's certificate satisfactory to the Director, and the Director notifies the operator in writing that the certificate is satisfactory.

10. The sealed professional engineer's certificate shall certify that:
    (i) the work of any contractor or other person performing work for which the permit is required conforms to the siting and construction requirements set out in Schedule A of the LMMMR and the permit;
    (ii) the completed **construction** of the manure storage facility conforms to the siting and construction requirements set out in Schedule A of the LMMMR and the permit; and
    (iii) the work has been completed in accordance with the approved original plans and specifications of the professional engineer referred to in Section 2 of this permit or any amended plans or specifications approved by the Director in writing.

11. The sealed professional engineer's certificate shall be accompanied by a construction report that includes items listed below and in Attachment 1:
    (i) "record" drawings;
    (ii) any construction details that are not consistent with plans and specifications of the permit application;
    (iii) a construction progress summary, including any inspection records;
    (iv) the name of the general contractor;
    (v) any site or laboratory results collected for quality assurance or quality control; and
    (vi) a site description confirming compliance with siting requirements of Schedule A of the LMMMR.

12. The failure to comply with any term or condition of this permit may result in the immediate revocation of this permit.

13. The Director reserves the right to amend any term or condition of this permit.

July 31, 2014
Date

Tracey Braun, M.Sc.
Director, *Environmental Approvals*

Attachment 1: Items to be included in Construction Report

- Copies of each concrete mix delivery tickets;
- Date stamped pictures of critical check points (e.g., form work) - this information is to be forwarded to Environmental Approvals Branch during the construction;
- Pipeline hydrostatic pressure test results on a form acceptable to the Director;
- Proof of certification of the concrete supplier;
- Concrete cylinder 28-day test results;
- Type of concrete vibrating equipment and where used during concrete placement;
- Voids and honeycomb areas patched;
- Curing agents/methodologies used;
- Subsurface drain installed and details about the material used to cover the drains
- Water quality analysis report for any liquid accumulating in leak detection system collection sumps.

LOCATION: SE8-8-6W

Owner: P DIVORNE
Driller: HAYWOOD CONCRETE PRODUCTS LTD.
Well Name:
Well Use: PRODUCTION
Water Use: Domestic,Livestock
Date Completed: 1988 Oct 01

WELL LOG

From (ft.)	To (ft.)	Log
0	8.0	FINE BROWN SAND
8.0	23.5	FINE SAND, BLUE

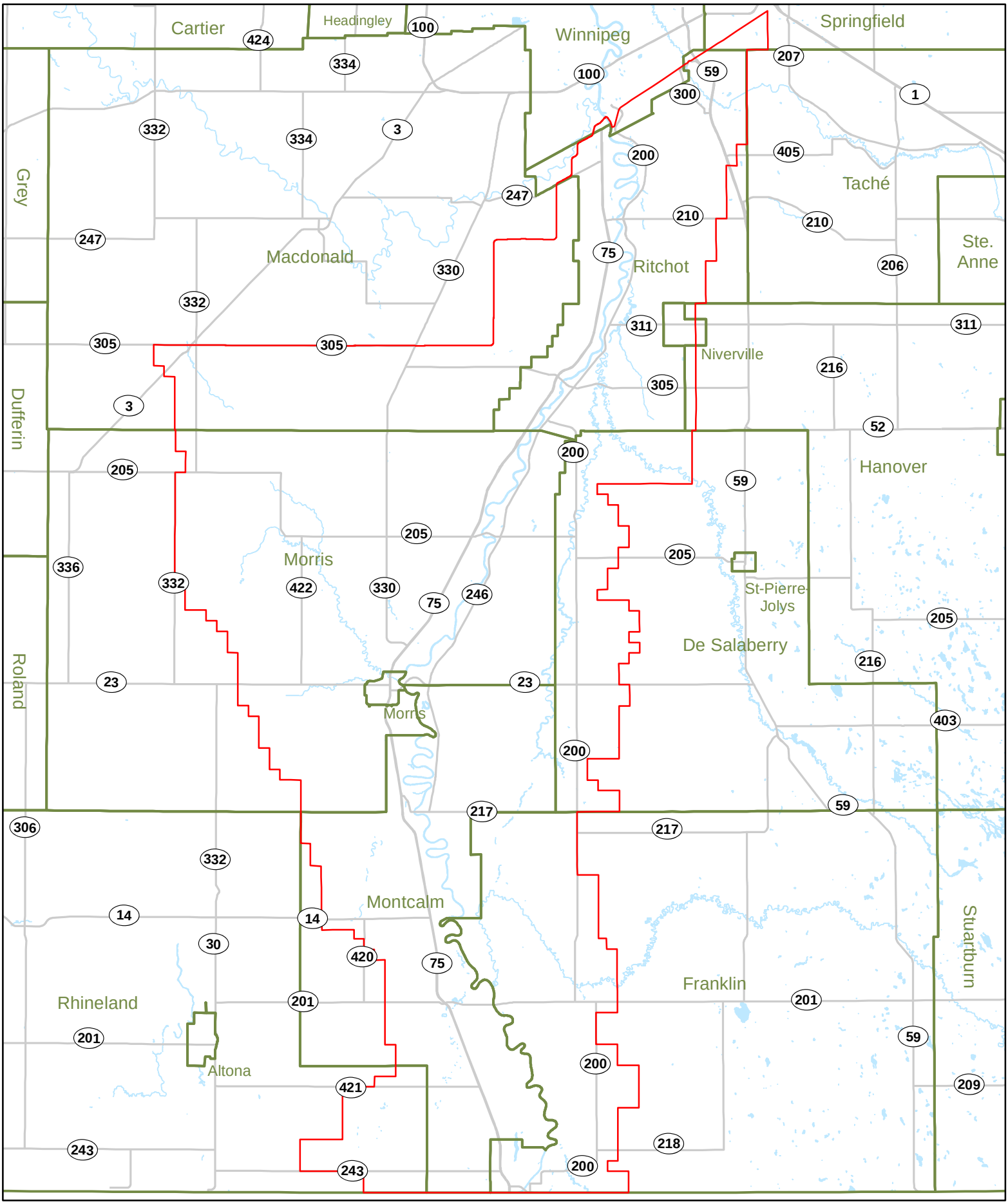
WELL CONSTRUCTION

From (ft.)	To (ft.)	Casing Type	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0	23.5	casing	92.00			INSERT	CONCRETE
0	23.0	gravel pack					

Top of Casing: ft. below ground

PUMPING TEST

Date: 1988 Oct 01
Pumping Rate: 9.0 Imp. gallons/minute
Water level before pumping: ft. below ground
Pumping level at end of test: ?? ft. below ground
Test duration: 14 hours, minutes
Water temperature: ?? degrees F



Upper Red River Designated Flood Area

Manitoba
Indigenous & Municipal Relations

Manitoba

SITE ASSESSMENT: Contact Information and Privacy and Publication Notice

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

Operator Contact Information

Name of Operation: Divorne Farms Ltd.

Corporation Name (if applicable): same as above

[X] Contact Name: Bruno Divorne

Mailing Address: Box 40

City/Town: Haywood Province: Mb Postal Code: R0G 0W0

Phone No: 745-0208 Fax No: _____ E-mail: divorne@sdnet.ca

Design Consultant/Advisor Contact Information

Company Name: DGH Engineering

[X] Contact Person: Gary Plohman

Mailing Address: Box 1466

City/Town: Beausejour Province: Mb Postal Code: R0E 0C0

Phone #: 268-3218 Fax #: _____ E-mail: srossing@mymts.net

√ Please indicate the primary project contact above

Privacy and Publication Notice

Why the information is being collected ("purposes")

The Technical Review Committee ("TRC") requires the information (including any personal information) contained in this form, in your Site Assessment and in your Supporting Documents in order to review your submission and to prepare its report.

Our legal authority to collect the information

The authority to collect this information is found in *The Planning Act,* the *Technical Review Committee Regulation* and *The Freedom of Information and Protection of Privacy Act*.

Information collected will not be used or disclosed for other purposes unless you consent or we are authorized to do so by *The Planning Act*, the *Technical Review Committee Regulation* or *The Freedom of Information and Protection of Privacy Act*.

What information will be published and where it will be published

As required by subsection 5(1) of the *Technical Review Committee Regulation* **in order to enable public comment on your application, your complete Site Assessment and Supporting Documents** (Location Map, 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, application field soil sample results, Land Base Calculator, Project Site Plan, Land Use & Spread Field Map, Truck Haul Routes and Access Points Map):

- **will be posted on a public website**; and
- sent to the applicable planning district office or municipal office where any interested member of the public may view it.

Please note: This "Site Assessment: Contact Information and Privacy and Publication Notice" form will not be posted or sent to the applicable planning district or municipality.

If you have questions about the collection, use, disclosure or publication of the information please contact the Technical Review Coordination Unit at Manitoba Local Government, phone number: (204) 945-8353.

Verification of Accuracy of Information

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

Date: 13/06/2017

Signature: _____

For Office Use Only

Date of Receipt of completed Site Assessment including all Supporting Documents:

_____

Confirmation of Receipt Sent: _____

Please forward completed Site Assessment and Supporting Documents to:

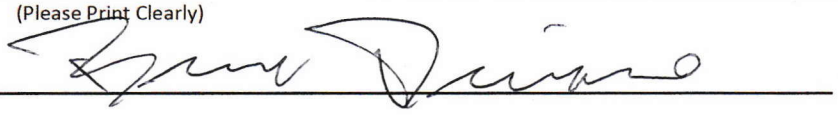
Technical Review Coordination Unit
Room 604 – 800 Portage Avenue
Winnipeg MB R3G 0N4

15.0 Declaration

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

Date: 2017/June/13
(YYYY/MMM/DD)

Name: Bruno Divorne
(Please Print Clearly)

Signature: 

Mon 2017-05-29 8:40 AM

Friesen, Chris (SD)

RE: species at risk identification

To 'Gary & Shaunda'

Gary

Thank you for your information request. I completed a search of the Manitoba Conservation Data Centre's rare species database and found no occurrences at this time for your area of interest.

The information provided in this letter is based on existing data known to the Manitoba Conservation Data Centre at the time of the request. These data are dependent on the research and observations of CDC staff and others who have shared their data, and reflect our current state of knowledge. **An absence of data in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present**; in many areas, comprehensive surveys have never been completed. Therefore, this information should be regarded neither as a final statement on the occurrence of any species of concern, nor as a substitute for on-site surveys for species as part of environmental assessments.

Because the Manitoba CDC's 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 pass before it is utilized.

Third party requests for products wholly or partially derived from Biotics 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 Biotics data, as follows as: Data developed by the Manitoba Conservation Data Centre; Wildlife & Fisheries Branch, Manitoba Sustainable Development.

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 please contact me directly at (204) 945-7747.

Chris Friesen
Coordinator
Manitoba Conservation Data Centre
204-945-7747
chris.friesen@gov.mb.ca
http://www.manitoba.ca/conservation/cdc/

From: Gary & Shaunda [mailto:srossing@mymts.net]
Sent: May-18-17 12:29 PM
To: Friesen, Chris (SD)
Subject: re: species at risk identification

Hi Chris
I am working with Divorne Dairy near Haywood on a technical review application for a farm expansion and am required to determine whether any species at risk are present at the building site or manure spread acres. I am hoping that you can provide the necessary information. A map showing the spread fields to be used for the expanded operation is attached.
The farm did an expansion in 2014 at which time you evaluated the manure spread fields with regard to species at risk and reported that none were present. The 2014 application was slightly different than the present one as some additional acres have been identified for manure application.
I trust this is the information you need.
Thankyou