Appendix A – Drawings

BURNS MACENDEL
CONSULTING ENGINEERS LTD.
1331 Princess Ave.
Brandon, Manitoba
R7A 0R4
Tel: (204) 728-7364
Fax: (204) 728-4418

2 - 81 HOLDING CO. LTD

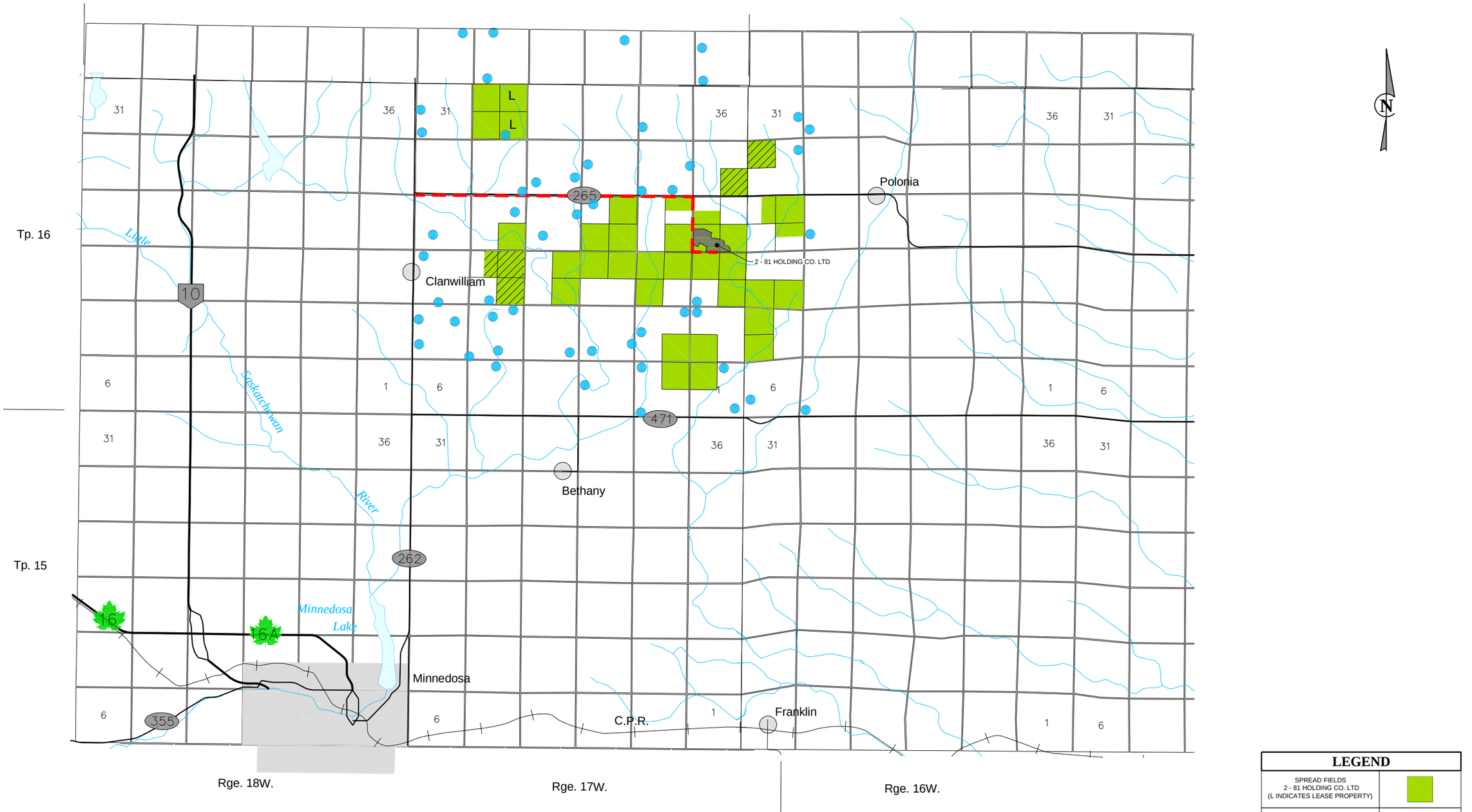
BARN EXPANSION

SE 24-26-17 WPM
MINNEDOSA, MB

CIVIL DRAWINGS

DWG NO.	DRAWING NAME	REV
C1.1	LOCATION MAP AND MANURE APPLICATION PLAN	B
C1.2	SITE PLAN	C
C1.3	PREVAILING WIND DIRECTION PLAN	A
C1.4	AREA ZONING AND LIVESTOCK USE	A

DATE	PROJECT NO:
AUG 9, 2019	BMCE18-067



LEGEND

SPREAD FIELDS 2 - 81 HOLDING CO. LTD (L INDICATES LEASE PROPERTY)	
SOLID MANURE STORAGE & SPREADING	
TRUCK HAULING ACCESS ROUTE	
RESIDENCE NOT ASSOCIATED WITH OPERATION	

NO:	DATE	APP.	BY	DESCRIPTION
B	AUG 9, 2019	D.B.	J.K.	ISSUED FOR REVIEW AND COMMENT
A	JUNE 21, 2018	D.B.	J.K.	ISSUED FOR REVIEW AND COMMENT

REVISIONS

PRELIMINARY
FOR REVIEW AND COMMENT ONLY

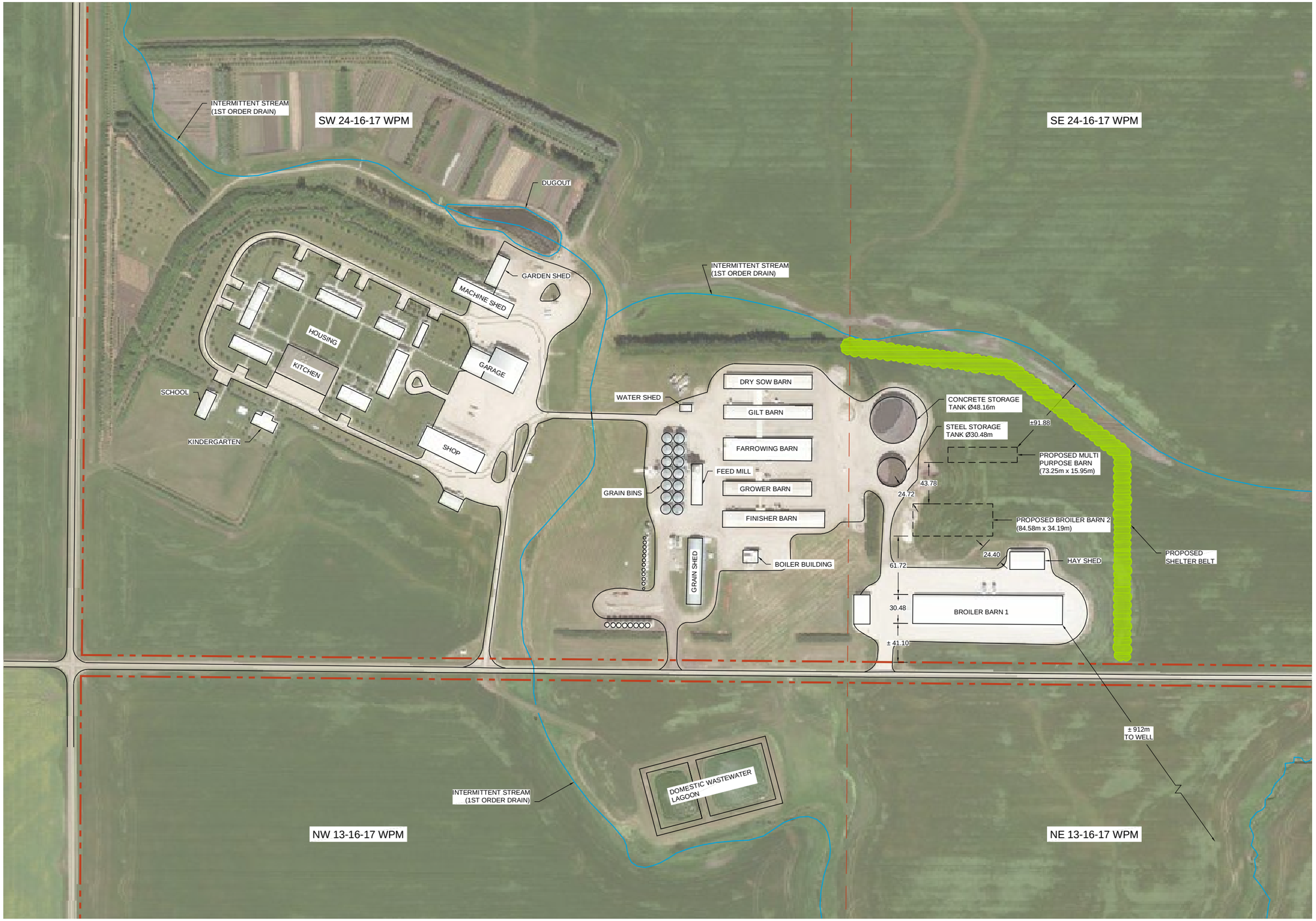
DESIGNED BY: --
REVIEWED BY: D.B.
DRAWN BY: J.K.
PROJECT START DATE: JUNE 2018
PLOT SIZE: A1 (594x841)
SCALE: N.T.S

PROJECT NAME:
2 - 81 HOLDING CO. LTD
BARN EXPANSION
MINNEDOSA, MB

BURNS MAENDEL
CONSULTING ENGINEERS LTD.
1331 Princess Ave.
Brandon, Manitoba
R7A 0R4
Tel: (204) 728-7364
Fax: (204) 728-4418

DRAWING TITLE:
LOCATION MAP AND
MANURE APPLICATION PLAN

PROJECT NUMBER: BMCE18-067
DRAWING NO: C1.1



NO:	DATE	APP.	BY	DESCRIPTION
C	AUG 9, 2019	D.B.	J.K.	ADDED PROPOSED SHELTER BELT. ISSUED FOR REVIEW AND COMMENT
B	JULY 5, 2018	D.B.	J.K.	ADDED ADDITIONAL SITE DIMS, ISSUED FOR REVIEW AND COMMENT
A	JUNE 21, 2018	D.B.	J.K.	ISSUED FOR REVIEW AND COMMENT

REVISIONS

PRELIMINARY
FOR REVIEW AND COMMENT ONLY

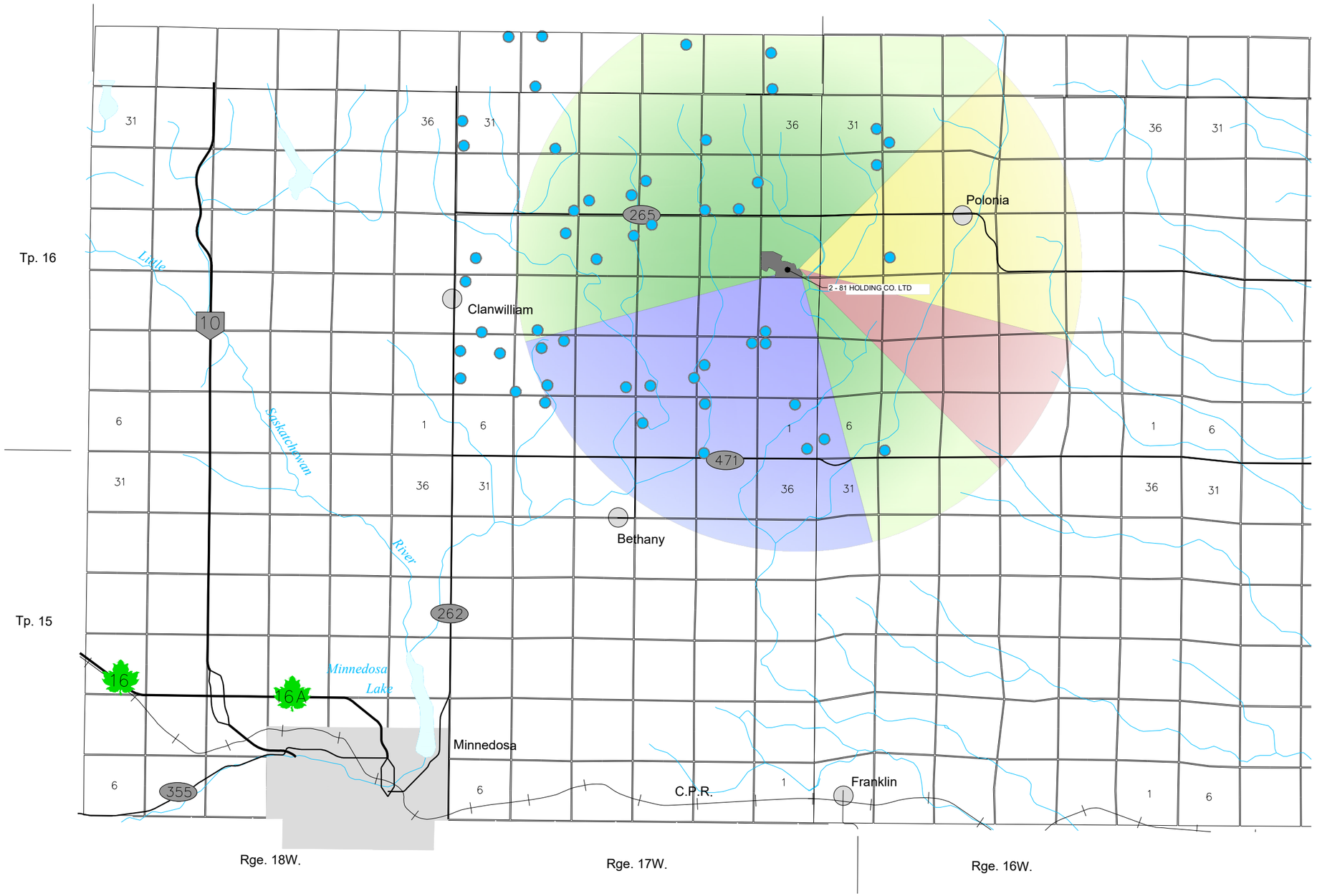
DESIGNED BY: --
REVIEWED BY: D.B.
DRAWN BY: J.K.
PROJECT START DATE: JUNE 2018
PLOT SIZE: A1 (594x841)
SCALE: N.T.S

PROJECT NAME:
2 - 81 HOLDING CO. LTD
BARN EXPANSION
MINNEDOSA, MB

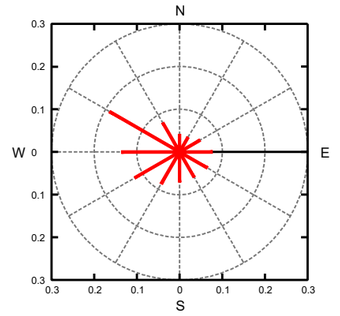
BURNS MAENDEL CONSULTING ENGINEERS LTD.
1331 Princess Ave.
Brandon, Manitoba
R7A 0R4
Tel: (204) 728-7364
Fax: (204) 728-4418

DRAWING TITLE:
SITE PLAN

PROJECT NUMBER: BMCE18-067
DRAWING NO: C1.2



ANNUAL PREVAILING WIND DIAGRAM



ANNUAL PREVAILING WIND %

WIND SOURCE DIRECTION	ANNUAL PERCENT OCCURANCE	WIND SOURCE DIRECTION	ANNUAL PERCENT OCCURANCE
N	3.3%	S	6.8%
N-NE	3.2%	S-SW	8.8%
E-NE	4.9%	W-SW	11.9%
E	7.5%	W	13.9%
E-SE	7.4%	W-NW	18.7%
S-SE	6.9%	N-NW	7.1%

LEGEND

% OF PREVAILING WIND 0% - 4.9%	
% OF PREVAILING WIND 5.0% - 9.9%	
% OF PREVAILING WIND 5.0% - 9.9%	
% OF PREVAILING WIND 15.0% - 19.9%	
RESIDENCE NOT ASSOCIATED WITH OPERATION	

NO:	DATE	APP.	BY	REVISIONS
A	AUG 9, 2019	D.B.	J.K.	ISSUED FOR REVIEW AND COMMENT

PRELIMINARY
FOR REVIEW AND COMMENT ONLY

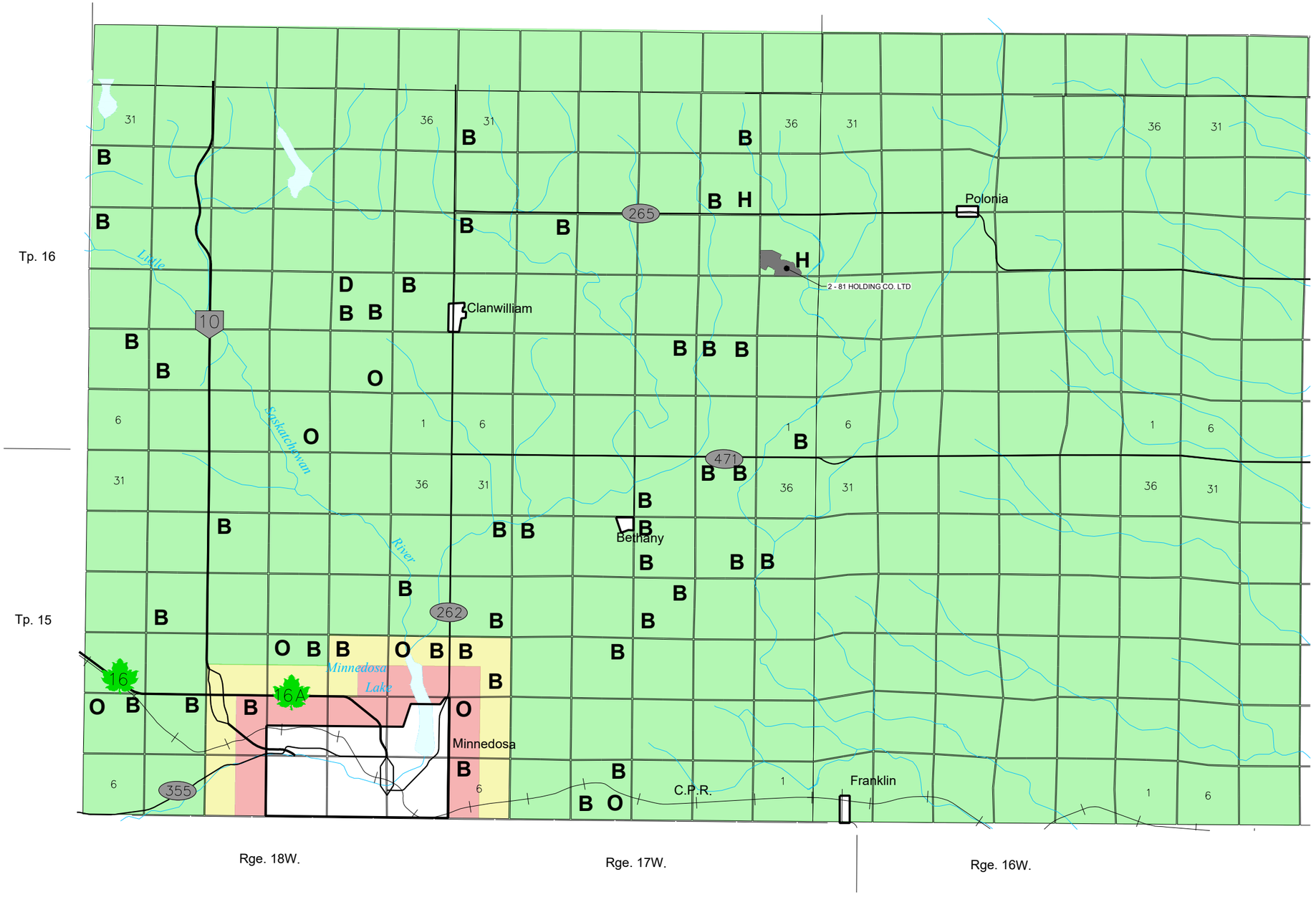
DESIGNED BY: --
REVIEWED BY: D.B.
DRAWN BY: J.K.
PROJECT START DATE: JUNE 2018
PLOT SIZE: A1 (594x841)
SCALE: N.T.S

PROJECT NAME:
2 - 81 HOLDING CO. LTD
BARN EXPANSION
MINNEDOSA, MB

BURNS MAENDEL CONSULTING ENGINEERS LTD.
1331 Princess Ave.
Brandon, Manitoba
R7A 0R4
Tel: (204) 728-7364
Fax: (204) 728-4418

DRAWING TITLE:
PREVAILING WIND DIRECTION PLAN

PROJECT NUMBER: BMCE18-067
DRAWING NO: C1.3



GENERAL NOTES:

1. LIVESTOCK USE SHOWN FOR RM OF MINTO ODANAH ONLY.

LEGEND	
AGRICULTURAL (GENERAL) ZONE	
AGRICULTURAL (LIMITED ZONE)	
AGRICULTURAL (MODERATELY LIMITED ZONE)	
HOG PRODUCTION OPERATION	H
BEEF PRODUCTION OPERATION	B
DAIRY PRODUCTION OPERATION	D
OTHER PRODUCTION OPERATION	O

NO:	DATE	APP.	BY	DESCRIPTION
A	AUG 9, 2019	D.B.	J.K.	ISSUED FOR REVIEW AND COMMENT

REVISIONS

PRELIMINARY
FOR REVIEW AND COMMENT ONLY

DESIGNED BY: --
REVIEWED BY: D.B.
DRAWN BY: J.K.
PROJECT START DATE: JUNE 2018
PLOT SIZE: A1 (594x841)
SCALE: N.T.S

PROJECT NAME:
2 - 81 HOLDING CO. LTD
BARN EXPANSION
MINNEDOSA, MB

BURNS MAENDEL CONSULTING ENGINEERS LTD.
1331 Princess Ave.
Brandon, Manitoba
R7A 0R4
Tel: (204) 728-7364
Fax: (204) 728-4418

DRAWING TITLE:
AREA ZONING AND LIVESTOCK USE

PROJECT NUMBER: BMCE18-067
DRAWING NO: C1.4

Appendix B – Animal Units Calculator

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		-	4	8.00
	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	575	718.75	575	718.75
	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	65,000	325.00	96,000	480.00
	Roasters	0.01		-		-
	Layers	0.0083		-	500	4.15
	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: Ducks (Broilers)	0.017		-	400	6.80
	Type:			-		-
			Total Current:	1,043.75	Total Proposed:	1,217.70

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

AU value of 0.017 for broiler ducks was obtainted from Amy Johnston (204-619-4704), Poultry Specialist at MB Ag via phone call on June 8, 2018. She said for the other calculations (manure production, water requirements), a conservative estimate is to treat the broiler ducks as broiler turkeys.

Manitoba

Appendix C – Water Related Documents

Water Requirement Calculation Table

Livestock	Number	IG/day per animal in winter	IG/day per animal in summer	IG/day (Imperial gallons per day)
Beef/Dairy/Bison*				
Feeder/heifer/steer (600 lb.)		5	9	—
Feeder (900 lb.)		7	12	—
Feeder (1250 lb.)		10	15	—
Cow/calf pair		12	15	—
Dry milking cow **		10	12	—
Lactating cow **	4	25	30	120
Bison		8	10	—
Horses				
Horses		8	11	—
Hogs				
Sow (Farrow/wean)	575	6.5		3738
Dry Sow/Boar		4		—
Feeder		3		—
Nursery (33 lb.)		2		—
Chickens				
Broilers	96,000	0.035		3360
Roasters/Pullets		0.04		—
Layers	500	0.055		28
Breeders		0.07		—
Turkeys				
Turkey Growers (Ducks - Broilers)	400	0.13		52
Turkey Heavies		0.16		—
Sheep/Goats				
Sheep/Goats		2		—
Ewes/Does		3		—
Lambs/Kids (90 lb.)		1.6		—
		TOTAL (IG/day)		7,297
	***	TOTAL with 10% wash water		8,027
		TOTAL with Domestic Deman		17,101

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

** For intensive Dairy operations, please use the Dairy Barn Water Requirement Estimator found on separate sheet.

***** 10% of the total is added to allow for wash water**

Enter this number on page 6 of Application Form

Other consumption:

Normal household consumption: 60-75 IG/day per person or (272-340 l/day/person)

Unit Conversions

Total Per day	Total per year	Unit
17,101	6,241,756	IG
77,740	28,375,021	litres
0.078	28.375	**Cubic decametres** (dam^3)

Enter this number on page 6 of Application Form

Domestic Consumption:
150 people x 275 l/d/p
= 41,250 L/d (9074 IG/d)
= 15 056 250 L/y (3,311,905 IG/y)

Licence to Use Water for
Municipal
Purposes

Manitoba
Sustainable Development
200 Saulteaux Cresc.
Winnipeg, Manitoba
R3J 3W3

Issued in accordance with the provisions
The Water Rights Act and regulations made thereunder.

Project:	Cool Spring Colony
Licence No.:	**2019-025**
(Previous Lic. No.:	2008-016)
U.T.M.:	451798 E 5579647 N

Subject to the terms and conditions contained in this Licence, the Minister of Sustainable Development authorizes:

2-81 Holding Co. Ltd.

in the **Rural Municipality of Minto-Odanah** in the Province of Manitoba (the "LICENSEE") to construct, operate, establish and maintain a project consisting of water well(s), pump(s), transmittal pipeline(s) and other works specific to the type of use (the "WORKS") and divert water from a **shale** aquifer located on the following land:

NE 13-16-17 W1

as more particularly located and shown on the attached Exhibit "A" for **Municipal** purposes on the following lands:

Cool Spring Colony

This licence is issued upon the express condition that it shall be subject to the provisions of The Water Rights Act and Regulation and all amendments thereto and, without limiting the generality of the aforesaid, to the following terms and conditions, namely:

1. The water shall be used solely for **Municipal** purposes.

2. The WORKS shall be operated in accordance with the terms herein contained.

3. *a) The maximum rate at which water may be diverted pursuant hereto shall not exceed* **0.0038 cubic metres per second (0.13 cubic feet per second)**.

   b) The total quantity of water diverted in any one year shall not exceed **45.00 cubic decametres (36.48 acre feet).**

4. *Water shall not be diverted during any period when the water level in the aquifer is below the casing of any project well.*

5. *The LICENSEE does hereby remise, release and forever discharge Her Majesty the Queen in Right of the Province of Manitoba, of and from all manner of action, causes of action, claims and demands whatsoever which against Her Majesty the LICENSEE ever had, now has or may hereafter have, resulting from the use of water for* **Municipal** purposes.

6. In the event that the rights of others are infringed upon and/or damage to the property of others is sustained as a result of the operation or maintenance of the WORKS and the rights herein granted, the LICENSEE shall be solely responsible and shall save harmless and fully indemnify Her Majesty the Queen in Right of the Province of Manitoba, from and against any liability to which Her Majesty may become liable by virtue of the issue of this Licence and anything done pursuant hereto.

7. This Licence is not assignable or transferable by the LICENSEE and when no longer required by the LICENSEE this Licence shall be returned to the Water Use Licensing Section for cancellation on behalf of the Minister.

8. Upon the execution of this Licence the LICENSEE hereby grants the Minister or the Minister's agents the right of ingress and egress to and from the lands on which the WORKS are located for the purpose of inspection of the WORKS and the LICENSEE shall at all times comply with such directions and/or orders that may be given by the Minister or the Minister's agents in writing from time to time with regard to the operation and maintenance of the WORKS.

9. This Licence may be amended, suspended or cancelled by the Minister in accordance with The Water Rights Act by letter addressed to the LICENSEE at **P.O. Box 1015, Minnedosa, MB, R0J 1E0, Canada** and thereafter this Licence shall be determined to be at an end.

10. Notwithstanding anything preceding in this Licence, the LICENSEE must have legal control, by ownership or by rental, lease, or other agreement, of the lands on which the WORKS shall be placed and the water shall be used.

11. The term of this Licence shall be **ten (10) years** and this Licence shall become effective only on the date of execution hereof by a person so authorized in the Department of Sustainable Development. The LICENSEE may apply for renewal of this Licence not more than 365 days and not less than 90 days prior to the expiry date.

12. This Licence expires automatically upon the loss of the legal control of any of the lands on which the WORKS are located or on which water is used, unless the Licence is transferred or amended by the Minister upon application for Licence transfer or amendment.

13. The LICENSEE shall keep records of monthly and annual water use and shall provide a copy of such records to the Water Use Licensing Section not later than February 1st of the following year.

14. A flow meter must be installed, positioned to accurately measure instantaneous pumping rate and accumulative withdrawals from the water source.

15. The LICENSEE does hereby agree to correct, to the satisfaction of the Minister, any water supply problems to wells or other forms of supply, which were constructed and operating prior to the date of the original application for the project and which are partly or wholly attributable, in the opinion of the Minister, to the diversion of water as authorized by this Licence.

16. The LICENSEE shall hold and maintain all other regulatory approvals that may be required and shall comply with all other regulatory requirements for the construction, operation, or maintenance of the WORKS or to divert or use water as provided by this Licence.

In witness whereof I the undersigned hereby agree to accept the aforesaid Licence on the terms and conditions set forth therein and hereby set my hand and seal this 13th day of MAY A.D. 2019.

SIGNED, SEALED AND DELIVERED
in the presence of:

Johnny J W
Witness

J Waldner (Seal)
Licensee

Johnny J W
Witness (Print Name)

John Waldner (Seal)
Licensee (Print Name)

FOR OFFICE USE ONLY

Issued at the City of Winnipeg, in the Province of Manitoba, this 30th day of May A.D. 2019.

P. Gouletsane
Print Name

Signature

Signed by the Honourable Minister of Sustainable Development (or her/his designate)

LOCATION OF SUPPLY WELL
IN NE 13-16-17 WPM, RM OF MINTO-ODANAH
2-81 HOLDING CO., LTD. (COOL SPRING COLONY)
MUNICIPAL PURPOSES

EXHIBIT "A"

THIS PLAN IS AN INTEGRAL PART OF
LICENCE NO. ___2019-025___
ISSUED UNDER THE WATER RIGHTS ACT

250 125 0 250 Meters

2018 Jun 18

WELL INFORMATION REPORT

Manitoba

Well PID: 80399
Location: NE13-16-17W
UTMX:451458.3 UTMY:5579915.1 XY Accuracy:UNKNOWN
Owner: COOL SPRING COLONY
Driller: M & M Drilling Rivers Ltd.
Well Name: WELL NO.3
Date Completed: 1995 Jun 09
Well Use: PRODUCTION
Water Use: Domestic
Well Status: UNKNOWN Aquifer: SAND AND GRAVEL

REMARKS:
160 FT W OF N/S RD ALLOW + APPROX 2300 FT S OF E/W RD ALLOW, OVERNITE SWL=48.33 FT, PUMP TEST STARTED AFTER WELL HAD BEEN PUMPED AND NOT FULL RECOVERED, TIME DRAWDOWN + RECOVERY BOTH GAVE T=15,840 IGPD/FT, EC=1000, FE=1, SPEC CAP=6.9 IGPM/FT @ 30 MINS, PUMP TEST DATA FILE

WELL LOG (Imperial units)

From	To(ft.)	Log
0.0	2	SOIL
2.0	20	TILL, STONY, BROWN
20.0	22	TILL, GREY
22.0	32	SAND
32.0	46	TILL, GREY
46.0	50	SAND AND GRAVEL
50.0	53	TILL, GREY
53.0	58	TILL, BROWN
58.0	82.9	TILL, GREY, BOULDER AT 83 FEET
82.9	200.9	TILL, STONY, GREY
200.9	309.8	SHALE, ODANAH, FRACTURED LAYERS

WELL CONSTRUCTION

From	To(ft)	Const.Method	Inside Dia.(in)	Outside Dia.(in)	Slot Size(in)	Type	Material
0.0	195.9	casing	5.0			INSERT	PVC
195.9	295.8	perforations	5.0			SAW CUT	PVC
179.9	295.8	gravel pack	5.0	8.0		PEA SIZE	GRAVEL
0.0	179.9	casing grout	5.0	8.0			

Top of Casing: 2.0 ft. above ground

PUMPING TEST
Date : Pumping 60.0 Imp. gallons/minute
Water level before test : 55.0 ft below ground
Water level at end of test : 64.0 ft below ground

Test duration : hours, 30 minutes

Water temperature : ?? degrees F

REMARKS

160 FT W OF N/S RD ALLOW + APPROX 2300 FT S OF E/W RD ALLOW, OVERNITE SWL=48.33 FT, PUMP TEST STARTED AFTER WELL HAD BEEN PUMPED AND NOT FULL RECOVERED, TIME DRAWDOWN + RECOVERY BOTH GAVE T=15,840 IGPD/FT, EC=1000, FE=1, SPEC CAP=6.9 IGPM/FT @ 30 MINS, PUMP TEST DATA FILE

REPORTING FORM
MONITORING WELL SAMPLING

Note: This form should be used to report manure storage facility monitoring well results. If you are reporting source water results, please refer to Information Bulletin 2004-01E.

Facility Reference Number (permit or registration #): 4291-LS

Name of Operation: Coolspring colony

Mailing Address: box 1015

minnedosa m.b. Postal Code ROJ-1EO

Location of Operation: SW 24-16-17

Qtr Sec Twp Rge E/WPM or River Lot/Parish

Rural Municipality: MINTO/ODANAH

Name of Contact: Josh Waldner

Contact Numbers: 204 867-7243

Business Residence Cellular Facsimile

Sampling Date: dec 14 2017

Well #	Water Depth To Top Of Well Casing (inches)	Ground Surface To Top Of Well Casing (inches)	Depth Of Water Level To Ground Surface (inches)

REMEMBER TO ATTACH ANALYTICAL RESULTS!

Please submit form and analytical results to: Technical Review Officer, Manitoba Conservation and Water Stewardship, 1007 Century Street, Winnipeg, MB R3H 0W4 Fax (204) 948-2420, SourceWater@gov.mb.ca

Proprietary (confidential) information will be protected in accordance with Manitoba law.
Personal information is collected under the authority of *The Environment Act*, the *Livestock Manure and Mortalities Management Regulation*, and will be used for administration and enforcement purposes. Information collected is protected by the privacy provisions of *The Freedom of Information and Protection of Privacy Act.* If you have any questions, contact the Access & Privacy Coordinator, Box 85, 200 Saulteaux Crescent, Winnipeg MB R3J 3W3; 1-204-945-4170.

BLAINE SANGSTER 204-834-3356

12 - 1329 Niakwa Rd. E.
Winnipeg, Manitoba R2J 3T4
Tel: (204) 255-97
Fax: (204) 255-9
Toll Free: 1 800 6

L2035531-COFC

Chain of Custody / Analytical Request Form
CHEMISTRY INFO: (204) 255 9739
MICRO INFO: (204) 255 9740 OR (204) 255 9737

WORK ORDER NO:

FOR LABORATORY USE
Sample Condition Upon Re TABLE
☐ Frozen ☐ Cold ☐ Ambient ☐ Broken ☐ Leakage ☐ Incorrect Sample Container
COMMENT: 16.4

LAB NO.: L2035531
DATE RECEIVED: 14/12/17
TIME RECEIVED: 2:10
BY: AAL

Date Sampled: 14 DEC 17 Time: 10 : 00 A.M. ☒ P.M. ☐
Date Required:

Location: Cool Spring Colony (Town, Community, City)
Submitter's Name Printed: COOL SPRING COLONY
Sample Submitted By: BLAINE SANGSTER

Community Code Number:
Rural Municipality/LGC/UVD: RM Minto-Odanah

SAMPLE TYPE

DRINKING WATER
- ☐ Untreated Well
- ☐ Treated Well
- ☐ Treated Municipal
- ☐ Non-Treated Municipal
- ☐ Water-Surface-Raw
- ☐ Water-Surface-Treated

NON-DRINKING WATER
- ☐ Sewage/Waste Water
- ☐ Lake/River
- ☐ Swimming Pool
- ☐ Whirl Pool
- ☐ Other

PURPOSE OF TEST
☐ Private ☐ Real Estate ☐ Water Main

PLEASE PRINT & PRESS FIRMLY

NOTES & CONDITIONS
1. Quote number must be provided to insure proper pricing.
2. Failure to properly complete all portions of this form may delay analysis.
3. ALS's liability limited to cost of analysis.

SERVICE REQUESTED
☐ REGULAR ☐ PRIORITY (50% SURCHARGE) ☐ EMERGENCY (100% SURCHARGE)

LAB NUMBER	SAMPLE IDENTIFICATION
	COOL SPRING

ALS CUSTOMER #: QUOTE #:

REPORT TO BE SENT TO
NAME: BLAINE SANGSTER
COMPANY: REDFERN FARM SERVICES
ADDRESS: BOX 930
CITY/TOWN: CARBERRY / PROV.: MB
POSTAL CODE: R0K0H0
PHONE: 204 834 3356
BY: MAIL ☐ FAX ☒ 204-834-3558 (FAX NUMBER)
PICKUP ☐ E-MAIL ☒ bsangster@redferns.ca (EMAIL ADDRESS)

CC
NAME:
ADDRESS:
CITY/TOWN: / PROV.:
POSTAL CODE:
PHONE:
BY: MAIL ☐ FAX ☐ (FAX NUMBER)
PICKUP ☐ E-MAIL ☐ (EMAIL ADDRESS)

Analyses required FOR MANURE MANAGEMENT WA7

BILLING ADDRESS SAME AS REPORT TO ☒
NAME:
COMPANY:
ADDRESS:
CITY/TOWN: / PROV.:
POSTAL CODE:

PAYMENT PARTICULARS
☒ INVOICE NEEDED / CLIENT'S P.O. NO. CARBERRY
☐ INTERAC
☐ CHEQUE
☐ VISA / MASTERCARD
Subtotal $
G.S.T. $
Total $
* OUR POLICY IS NOT TO ACCEPT SAMPLES FROM THE PRIVATE CITIZEN WITHOUT PREPAYMENT

ENTERED IN LIMS BY:

SAMPLING INSTRUCTIONS ON REVERSE SIDE

Manitoba Technology Centre Ltd.
Part of the **ALS Laboratory Group**
12 - 1329 Niakwa Rd. E., Winnipeg, MB Canada R2J 3T4
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A Campbell Brothers Limited Company

SUBMITTER COPY

Redfern Farm Services - Carberry
ATTN: BLAINE SANGSTER
PO Box 930
Carberry MB R0K 0H0

Date Received: 14-DEC-17
Report Date: 19-DEC-17 11:23 (MT)
Version: FINAL

Client Phone: 204-834-3356

Certificate of Analysis

Lab Work Order #: L2035531
Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers:
Legal Site Desc: RM MINTO ODANAH

Hua Wo
Chemistry Laboratory Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2035531-1 COOL SPRING							
Sampled By: BS on 14-DEC-17 @ 10:00							
Matrix: WATER							
Manure Monitoring Well							
Ammonia by colour							
Ammonia, Total (as N)	2.28		0.10	mg/L		16-DEC-17	R3915830
Chloride in Water by IC							
Chloride (Cl)	3.1		1.0	mg/L		15-DEC-17	R3915716
Conductivity							
Conductivity	1240		1.0	umhos/cm		15-DEC-17	R3914970
Nitrate in Water by IC							
Nitrate (as N)	<0.040	DLM	0.040	mg/L		15-DEC-17	R3915716
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		19-DEC-17	
Nitrite in Water by IC							
Nitrite (as N)	<0.020	DLM	0.020	mg/L		15-DEC-17	R3915716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CL-IC-N-WP	Water	Chloride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-N-WP	Water	Nitrite in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-IC-N-WP	Water	Nitrate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

ALS Environmental

Quality Control Report

Workorder: L2035531 Report Date: 19-DEC-17

Client: Redfern Farm Services - Carberry
PO Box 930
Carberry MB R0K 0H0
Contact: BLAINE SANGSTER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WP	Water							
Batch R3915716								
WG2685039-2 LCS								
Chloride (Cl)			100.7		%		90-110	15-DEC-17
WG2685039-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	15-DEC-17
EC-WP	Water							
Batch R3914970								
WG2686091-8 LCS								
Conductivity			99.6		%		90-110	15-DEC-17
WG2686091-6 MB								
Conductivity			<1.0		umhos/cm		1	15-DEC-17
NH3-COL-WP	Water							
Batch R3915830								
WG2685831-6 LCS								
Ammonia, Total (as N)			99.0		%		85-115	16-DEC-17
WG2685831-5 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	16-DEC-17
NO2-IC-N-WP	Water							
Batch R3915716								
WG2685039-2 LCS								
Nitrite (as N)			101.1		%		90-110	15-DEC-17
WG2685039-1 MB								
Nitrite (as N)			<0.010		mg/L		0.01	15-DEC-17
NO3-IC-N-WP	Water							
Batch R3915716								
WG2685039-2 LCS								
Nitrate (as N)			101.1		%		90-110	15-DEC-17
WG2685039-1 MB								
Nitrate (as N)			<0.020		mg/L		0.02	15-DEC-17

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Appendix D – Manure Production Calculator

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				-	0.0
			Solid	3.4				-	
			Liquid [5]	3.5				-	0.0
	Tie Stall		Semi-Solid [5]	3.6	3.6	400	4	5,760.00	35,884.8
			Solid	3.5				-	
			Liquid [5]	3.6				-	0.0
	Loose Housing		Solid	3.0				-	
	Milking Parlour Manure and Washwater		Liquid	0.5					
Beef	Beef cows including associated livestock	pg 117, FPGs for Hogs 1998	Solid	1.2				-	
	Backgrounder (200 day)		Solid	0.73				-	
	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	2.3	400	575	529,000.00	3,295,670.0
	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	1.23	400	96,000	129,403	
	Broiler breeder hens [7]		2.3				-	
	Broiler breeder pullets [6]		0.99				-	
	Roasters – floor [6]		1.16				-	
	Layers – cage [8]		2.33	2.33	400	500	1,277	7,953.9
	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	2.83	400	400	1,241	
	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 days.

[3] ENTER the total number of animals or birds that the operation can hold (e.g. barn or feedlot capacity).

[4] Milking cows includes all lactating and dry cows.

[5] Default manure production estimates for semi-solid and liquid dairy manure include manure and washwater from the milking parlour.

[6] 2 inches of wood shavings or 4 inches of straw placed on floor. Manure and litter removed from barn at 25% moisture content, with a density of 20 lb/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

Reporting on Page 9 of Site Assessment

Manure Type	Existing	Proposed	Total
Liquid (IG/400 days)	3,295,670.0	35,884.8	3,331,554.8
Solid (ft3/400 days)	72,789.0	59,131.0	131,920.0

Appendix E – Manure Application Field Characteristics Table

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 07-16-16 W	Rosedale	O	150	8m, Order 3 drain	146	3t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
2	SW 07-16-16 W	Rosedale	O	150	8m, Order 3 drain	147	3t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
3	SE 18-16-16 W	Rosedale	O	198	N/A	198	3t	31	Rural Agricultural Area	Agricultural General (AG)
4	SW 18-16-16 W	Rosedale	O	162	8m, Order 3 drain	159	3t	31	Rural Agricultural Area	Agricultural General (AG)
5	NE 19-16-16 W	Rosedale	O	150	8m, swamp	135	5w	20	Rural Agricultural Area	Agricultural General (AG)
6	NW 19-16-16 W	Rosedale	O	70	8m, swamp	66	3t(8)2tw(1)5w(1)	20	Rural Agricultural Area	Agricultural General (AG)
7	SE 19-16-16 W	Rosedale	O	70	8m, swamp	51	3t	20	Rural Agricultural Area	Agricultural General (AG)
8	NW 30-16-16 W	Rosedale	O	140	8m, swamp, Order 3 drain	132	2t(8)2tw(10)5w(1)	22	Rural Agricultural Area	Agricultural General (AG)
9	NW 01-16-17 W	Minto-Odanah	O	135	8m, swamp, Order 3 drain	129	3t(7)2w(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
10	NE 02-16-17 W	Minto-Odanah	O	160	N/A	160	3t(7)2tw(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
11	SE 11-16-17 W	Minto-Odanah	O	150	N/A	150	3t(7)2tw(2)5w(1)	9	Rural Agricultural Area	Agricultural General (AG)
12	SW 12-16-17 W	Minto-Odanah	O	155	8m, swamp	150	3t(7)2tw(2)5w(1)	9	Rural Agricultural Area	Agricultural General (AG)
13	NE 13-16-17 W	Minto-Odanah	O	140	8m, swamp, Order 3 drain	133	2t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
14	NW 13-16-17 W	Minto-Odanah	O	135	8m, swamp	133	2t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
15	SE 13-16-17 W	Minto-Odanah	O	145	8m, swamp, Order 3 drain	140	3t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
16	NE 14-16-17 W	Minto-Odanah	O	160	N/A	160	2t(8)2tw(1)5w(1)	40	Rural Agricultural Area	Agricultural General (AG)
17	NW 14-16-17 W	Minto-Odanah	O	160	N/A	160	2t(7)2tw(2)5w(1)	40	Rural Agricultural Area	Agricultural General (AG)
18	SW 14-16-17 W	Minto-Odanah	O	160	N/A	160	2t(7)2w(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
19	NE 15-16-17 W	Minto-Odanah	O	160	N/A	160	2t(7)2w(2)5w(1)	12	Rural Agricultural Area	Agricultural General (AG)
20	NW 15-16-17 W	Minto-Odanah	O	160	N/A	160	2t(7)2w(2)5w(1)	12	Rural Agricultural Area	Agricultural General (AG)

Total Net Acreage: 2910

Total Net Acreage for Manure Application: 2829

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).

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**
21	NE 16-16-17 W	Minto-Odanah	O	140	N/A	140	3t(7)2tw(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
22	SE 16-16-17 W	Minto-Odanah	O	145	8m, swamp, Order 3 drain	142	3t(7)2tw(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
23	NE 17-16-17 W	Minto-Odanah	O	155	8m, swamp	151	2t(8)2tw(10)5w(1)	18	Rural Agricultural Area	Agricultural General (AG)
24	NW 17-16-17 W	Minto-Odanah	O	70	8m, swamp	68	2t(7)2w(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
25	SE 17-16-17 W	Minto-Odanah	O	70	8m, swamp	65	2t(7)2w(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
26	SE 20-16-17 W	Minto-Odanah	O	100	8m, swamp, Order 3 drain	96	2t(7)2w(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
27	NE 22-16-17 W	Minto-Odanah	O	155	8m, swamp	144	2t(7)2w(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
28	SE 22-16-17 W	Minto-Odanah	O	155	8m, swamp	154	2t(8)2tw(1)5w(1)	43	Rural Agricultural Area	Agricultural General (AG)
29	SW 22-16-17 W	Minto-Odanah	O	160	N/A	160	2t(7)2w(2)5w(1)		Rural Agricultural Area	Agricultural General (AG)
30	NE 23-16-17 W	Minto-Odanah	O	75	8m, swamp	74	2t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
31	SE 23-16-17 W	Minto-Odanah	O	160	N/A	160	2t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
32	NW 24-16-17 W	Minto-Odanah	O	80	8m, swamp, Order 3 drain	72	2t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
33	SE 24-16-17 W	Minto-Odanah	O	155	8m, Order 3 drain	152	2t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
34	SW 24-16-17 W	Minto-Odanah	O	100	N/A	100	2t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
35	SE 25-16-17 W	Minto-Odanah	O	160	8m, swamp	159	2t(8)2tw(10)5w(1)		Rural Agricultural Area	Agricultural General (AG)
36	NE 32-16-17 W	Minto-Odanah	L	110	8m, swamp	80	3t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
37	NW 32-16-17 W	Minto-Odanah	O	140	8m, swamp	129	2t(8)2tw(1)5w(1)		Rural Agricultural Area	Agricultural General (AG)
38	SE 32-16-17 W	Minto-Odanah	L	120	8m, swamp	100	2t(8)2tw(1)5w(1)	13	Rural Agricultural Area	Agricultural General (AG)
39	SW 32-16-17 W	Minto-Odanah	O	150	8m, swamp	135	2t(8)2tw(1)5w(1)	13	Rural Agricultural Area	Agricultural General (AG)

Total Net Acreage: 2400

Total Net Acreage for Manure Application: 2281

Summary:
Total Net Acreage: 5310
Total Net Acreage for Manure Application: 5110

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).

Appendix F – Manure Related Documents

FILE #1

CROP YEAR 2019 SUBMITTED 2018

COOLSPRING SPRING SPREAD CONFERMATION

LIVESTOCK MANURE AND MORTALITIES MANAGEMENT REGULATION

Manure Management Plan

Manitoba Sustainable Development

Section A – Operation Information

Name of Operation	COOL SPRING COLONY
Legal Name of Operation (if different)	
Affiliate (legal name)	☑ Not Applicable
Mailing Address	BOX 1015
	MINNEDOSA, MB Postal Code R0J 1E0
Location of Operation	SW 24-16-17 W MINTO
	Qtr Sec. Twp. Rge. E/WPM or River Lot/Parish — Rural Municipality
Civic Address	
Date Operation Established	JUNE 1, 1986
Date Last Expanded (if applicable)	
Name of Contact Person	JOSH WALDNER
Contact Numbers	204-867-7243 — 204-865-2363 — 204-865-2215
	Business — Residence — Cellular — Facsimile
Email	
Owner (legal name)	COOL SPRING COLONY
Mailing Address	BOX 1015
	MINNEDOSA, MB Postal Code R0J 1E0
Contact Numbers	
	Business — Residence — Cellular — Facsimile
Email	

Preferred Correspondence ☑ Email ☐ Fax ☐ Mail

Submit completed plan to:

By mail: Environmental Approvals Branch,
Manitoba Sustainable Development,
160-123 Main Street (Box 80), Winnipeg MB R3C 1A5

By fax: 204-948-2420

By email: mmpregistration@gov.mb.ca

For Department Use Only

Proprietary (confidential) information will be protected in accordance with Manitoba law.
Personal information is collected under the authority of *The Environment Act*, the Livestock Manure and Mortalities Management Regulation, and will be used to issue receipts, for surveys, administration and enforcement purposes. Information collected is protected by the privacy provisions of *The Freedom of Information and Protection of Privacy Act*.

Section B - Animal Unit Inventory

Livestock Species and Type[1]	A.U. Produced by One Livestock		Number of Livestock of Each Type	A.U. for Each Livestock Type
Eg. Beef – Feedlot Cattle	.769	X	500	385
HOGS - FARROW TO FINNISH	1.25	X	575	718.75
WEANLINGS	.033	X	2150	70.95
GROWERS-FINISHER	.143	X	4220	603.46
BOARS	.2	X	15	3
		X		0
		X		0

[1] Refer to Animal Unit Worksheet - Schedule A and retain for your records. If additional room is required, the operator may choose to submit a copy of Schedule A. **USE ONLY CATEGORIES LISTED IN THE WORKSHEET**. For a copy of Schedule A, refer to the livestock program website at: www.gov.mb.ca/conservation/envprograms/livestock

Section C – Manure Storage Systems Information[1]

Form of livestock manure stored

- ☑ Liquid manure (pumped as liquid; 0-5% dry matter)
- ☐ Semi-solid (paste like; 5-25% dry matter)
- ☐ Solid (handled with loader; over 25% dry matter)

Location of central manure storage facilities

Legal description of the location(s):	G.P.S. Coordinates (Decimal Degrees) (if available)	Anticipated Storage Time months	Construction Permit Number(s)[2] or Registration Number(s)[3] for Storage
SW 24-16-17 W		13	LM-687

Location of solid manure field storage (complete only if you have field storage)

Field Storage Site #1 : Legal Location: _____	Anticipated Storage Duration (months) _____
Field Storage Site #2 : Legal Location: _____	Anticipated Storage Duration (months) _____
Field Storage Site #3 : Legal Location: _____	Anticipated Storage Duration (months) _____

[1] Use additional pages as necessary

[2] A construction permit has been required by Manitoba Sustainable Development for construction of earthen manure storage structures since 1994 and for all other types of constructed manure storage structures since 1998. You may inquire about your permit number at your Manitoba Sustainable Development regional office (see last page).

[3] Registration numbers will be issued by Manitoba Sustainable Development for earthen manure storage structures built before 1994 and all other constructed storage structures built prior to 1998.

Section D – Manure Information for Land Application

Total Volume of Manure to be Land Applied

Liquid manure: 3,750,000 Imp. gals.
Semi-solid manure: _____ ☑ Imp. gals. ☐ Tons ☐ Cubic feet
Solid manure: _____ ☐ Tons ☐ Cubic feet

If no manure is to be applied, check here: ☐

Manure Analysis #1 – Livestock Species & Type: HOGS LIQUID

Total Nitrogen	32	☑ lbs/1000 Imp. gals.	☐ lbs/ton
NH_4	20	☑ lbs/1000 Imp. gals.	☐ lbs/ton
Total P	9	**P_2O_5 (P x 2.3)** 9	☑ lbs/1000 Imp. gals. ☐ lbs/ton
% Dry Matter	2		

The nutrient values stated above are:
☑ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Manure Analysis #2 – Livestock Species & Type: _____

Total Nitrogen	_____	☐ lbs/1000 Imp. gals.	☐ lbs/ton
NH_4	_____	☐ lbs/1000 Imp. gals.	☐ lbs/ton
Total P	_____	**P_2O_5 (P x 2.3)** _____	☐ lbs/1000 Imp. gals. ☐ lbs/ton
% Dry Matter	_____		

The nutrient values stated above are:
☐ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Manure Analysis #3 – Livestock Species & Type: _____

Total Nitrogen	_____	☐ lbs/1000 Imp. gals.	☐ lbs/ton
NH_4	_____	☐ lbs/1000 Imp. gals.	☐ lbs/ton
Total P	_____	**P_2O_5 (P x 2.3)** _____	☐ lbs/1000 Imp. gals. ☐ lbs/ton
% Dry Matter	_____		

The nutrient values stated above are:
☑ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Earliest anticipated manure application starting date[1]: 9/12/2017
(Month / Day / Year)

[1]This is the earliest date the first spread of manure will occur on this plan (plan year begins August 15 and ends August 14 of the following year).

NOTE: At least one manure nutrient analysis or estimate is required for each manure form per livestock species.
If manure is to be treated, please complete and attach Schedule B – Manure Treatment
If manure is to be transferred to another party, please complete and attach Schedule C – Transfer of Manure or Effluent to a Second Party. For copies of Schedules B and C refer to the livestock program website at:
www.gov.mb.ca/conservation/environmentalprograms/livestock

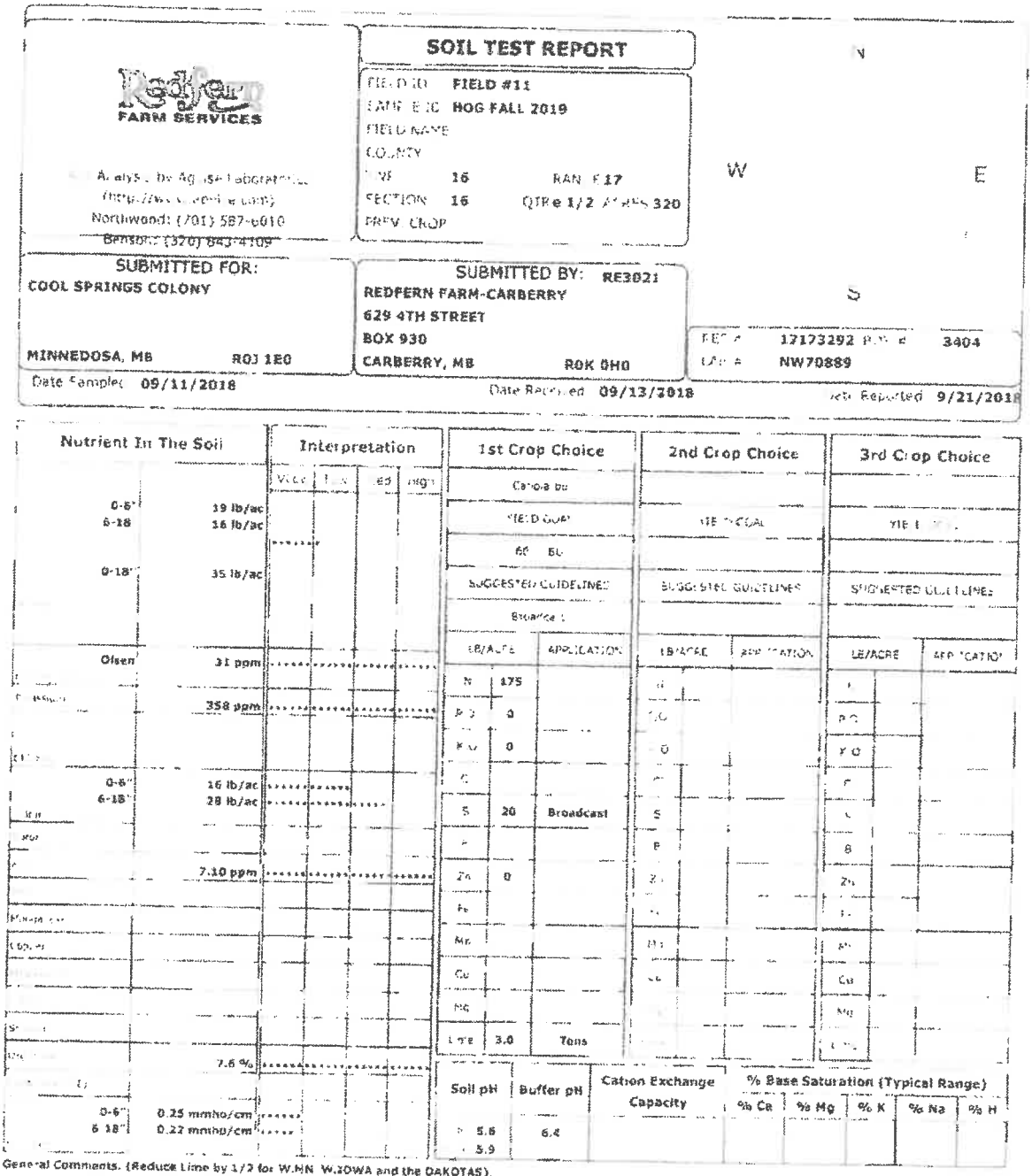
Section E - Field Application Summary

(Use additional pages as necessary)

ALL information below must be completed for each field listed BEFORE any manure spreading occurs.

Legal Land Description	n 1/2 15-16-17	e1/216-16-17		
Field ID (optional)	12	11		
Legal Owner's Name and Phone	COOL SPRING COLONY	COOL SPRING COLONY		
Land: Own, Lease, or Agreement	Own	Own		
Field Size [1] (acres)	320	320		
Soil Class and Subclass [2]	2t(8)2tw(1)5w(1)	2t(8)2tw(1)5w(1)		
Proposed Crop	canola	canola		
Is the Proposed Crop Grazed?	No	No		
0 – 6 inch (15 cm) depth soil phosphorus (P_2 in ppm [3]	30 ppm	31 ppm		
0 – 24 inch (60 cm) depth soil nitrate (NO_3-N) in lbs/acre [3]	31	35		
Target Yield (bus/acre, lbs/acre tons/acre)	60	60		
Crop Nitrogen Recommendation (lbs N/acre)	179	175		
Crop Removal of Phosphate [5] (lbs P_2O_5/acre)	60	60		
Manure Application Rate (Imp. gal/acre or tons/acre) * if using multi-year P_2O_5 rate, select the # equal to multiple of years [6]	6000	6000		
Manure Analysis #1, #2, or #3 (from Section D)	1	1		
Application Start Date (month / day / year)	6/1/2018	6/1/2018		
Application Method - Select the corresponding letter [7]	F	F		
Non manure Nitrogen Fertilizer (lbs N/acre)	0	0		
Non manure Phosphate Fertilizer (lbs P_2O_5/acre)	0	0		
Manure Applicator – Name, Phone, Licence # [8]	coolspring	coolspring		

[1] Indicate only the available acres for manure spreading (exclusive of setbacks from surface water courses, etc.).
[2] Must list correct Agricultural Capability Class and Subclass as determined by Published Manitoba Soil Survey Report or electronic data distributed by Manitoba Land Initiative website. Use the worst class manure will be spread on.
[3] As shown on the soil analysis report appended to this form. If soil analysis reports are not available at the time of submitting the form, they must be forwarded to Manitoba Sustainable Development 14 days before application of manure to allow for processing.
[4] Indicate the recommended nitrogen (N) application rate suggested by the soil fertility guide or soil analysis report, whichever is lower.
[5] Indicate the crop removal rate of phosphate (P_2O_5) as determined by the most appropriate source of information.
[6] When soil test phosphorus levels are 60 ppm to 179 ppm manure may be applied at a rate of up to 5 times the annual crop removal rate of P_2O_5. Schedule D must be completed when using a multi-year option.
[7] Choose one of the following and put the corresponding letter on the form: A. Broadcast and incorporate after 2 days. B. Broadcast + incorporate after 3 days. C. Broadcast and incorporate within 2 days. D. Broadcast and no incorporation. E. Broadcast and no incorporation on forages. F. Injection. G. Irrigation and incorporation within 3 days. H. Irrigation and no incorporation.
[8] As of January 1, 2008 Commercial and Off-farm Manure Applicators must be trained and Licenced with Manitoba Agriculture.



REDFERN FARM SERVICES

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

SOIL TEST REPORT

FIELD ID: FIELD #11
SAMPLE ID: HOG FALL 2019
FIELD NAME:
COUNTY:
TWP: 16 RANGE: 17
SECTION: 16 QTR: 1/2 ACRES: 320
PREV. CROP:

N / W / E / S

SUBMITTED FOR:
COOL SPRINGS COLONY
MINNEDOSA, MB R0J 1E0

SUBMITTED BY: RE3021
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

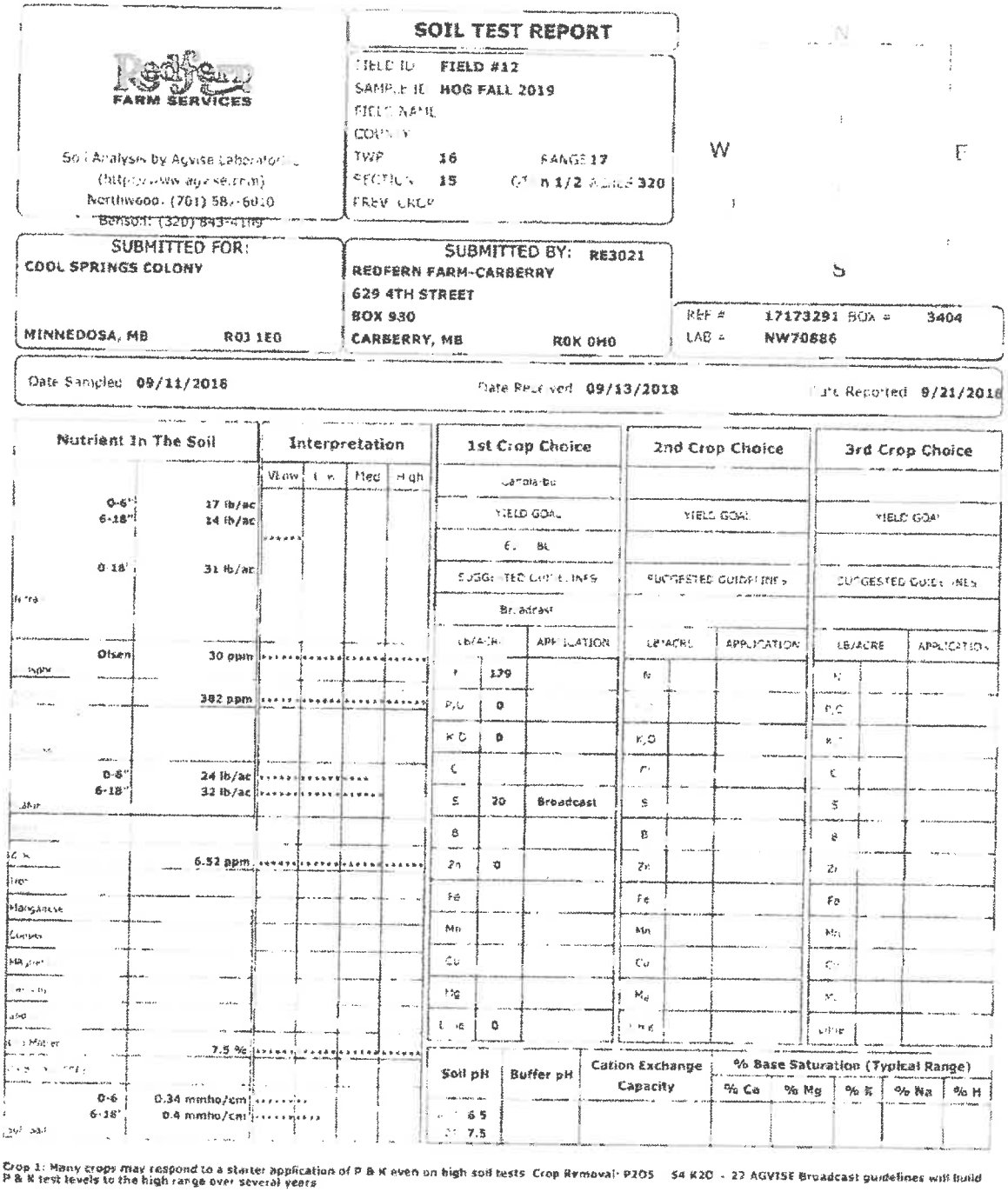
FIELD #: 17173292 P.V. #: 3404
LAB #: NW70889

Date Sampled: 09/11/2018 Date Received: 09/13/2018 Date Reported: 9/21/2018

Nutrient In The Soil		Interpretation	1st Crop Choice	2nd Crop Choice	3rd Crop Choice
		Very Low / Low / Med / High	Canola bu		
0-6"	19 lb/ac		YIELD GOAL	YIELD GOAL	YIELD GOAL
6-18"	16 lb/ac		60 BU		
0-18"	35 lb/ac		SUGGESTED GUIDELINES	SUGGESTED GUIDELINES	SUGGESTED GUIDELINES
			Broadcast		
Olsen	31 ppm		LB/ACRE / APPLICATION	LB/ACRE / APPLICATION	LB/ACRE / APPLICATION
	358 ppm		N 175		
			P2O5 0		
			K2O 0		
0-6"	16 lb/ac				
6-18"	28 lb/ac		S 20 Broadcast		
	7.10 ppm		Zn 0		
			Fe		
			Mn		
			Cu		
			B		
			Lime 3.0 Tons		
	7.6 %				
0-6"	0.25 mmho/cm				
6-18"	0.22 mmho/cm				

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
5.6	6.4						
5.9							

General Comments. (Reduce Lime by 1/2 for W.MN, W.IOWA and the DAKOTAS)
Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal. P2O5 = 54 X2Q = 27 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.



REDFERN FARM SERVICES

Soil Analysis by Agvise Laboratories
(http://www.agvise.com)
Northwood: (701) 587-6010
Benson: (320) 843-4189

SOIL TEST REPORT

FIELD ID: FIELD #12
SAMPLE ID: HOG FALL 2019
FIELD NAME:
COUNTY:
TWP: 16 RANGE: 17
SECTION: 15 QTR: N 1/2 ACRES: 320
PREV CROP:

W E S

SUBMITTED FOR:
COOL SPRINGS COLONY

MINNEDOSA, MB R0J 1E0

SUBMITTED BY: RE3021
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # 17173291 BOX # 3404
LAB # NW70686

Date Sampled: 09/11/2018 Date Received: 09/13/2018 Date Reported: 9/21/2018

Nutrient In The Soil		Interpretation			
		Very Low	Low	Med	High
0-6"	17 lb/ac				
6-18"	14 lb/ac				
0-18"	31 lb/ac				
Olsen	30 ppm				
	382 ppm				
0-6"	24 lb/ac				
6-18"	32 lb/ac				
	6.52 ppm				
	7.5 %				
0-6	0.34 mmho/cm				
6-18"	0.4 mmho/cm				

1st Crop Choice		
Canola-Bu		
YIELD GOAL		
60 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	139	
P_2O_5	0	
K_2O	0	
S	20	Broadcast
Zn	0	

2nd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
K_2O		
S		
Zn		

3rd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
S		
Zn		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
6.5							
7.5							

Crop 1: Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P_2O_5 54 K_2O - 22 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years

FARM SERVICES

P O Box 510, NORTHWOOD, ND 58267
Northwood (701) 587-6010
Benson (320) 843-4109

MANURE REPORT

SAMPLE 1
TYPE Liquid Manure
SOURCE Swine
STORAGE
Lab No. MW885

SUBMITTED FOR:
NA
Carberry

SUBMITTED BY: RE3021
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

MOISTURE 98
DRY MATTER 2.0

Date Sampled 10/20/15
Date Received 10/09/15
Date Reported 6/29/201

	Dry basis	As Received	lbs/1000 gal
Total Nitrogen (N)		0.38 %	32
Ammonium Nitrogen:		0.24 %	20
Nitrate Nitrogen:			
Inorganic Nitrogen			
Phosphate (P2O5)	5.5 %	0.11 %	9.0
Potash (K2O)	10.0 %	0.20 %	17
Sodium			
Calcium			
Magnesium			
Zinc			
Iron			
Manganese			
Copper			
Sulfur			
Chlorine			
pH			
Solids			
Volatile Solids			
Organic Matter			

N
W E
S

Section F -Certification of Manure Management Plan

This plan must be certified by the person who prepares it. Select the appropriate box.

Plan prepared by:

☐ **Operator**

I hereby certify the information contained in this plan is true and believe this plan complies with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of The Environment Act.

Signature of the operator _____ Date: _____

☑ **Other**[1]

I hereby certify the information contained in this plan is true and believe this plan complies with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of The Environment Act.

I meet the requirements to prepare manure management plans in accordance with Section 13(7) of M.R. 42/98.

BLAINE SANGSTER

Name of person preparing the plan on behalf of the operator

Address: 629 4TH AVE.
CARBERRY, MB R0K 0H0

Contact number: 204-570-0319

MIA #[2]/CCA #. 26200

Blaine Sangster _____ Date: july 9 2018

Signature

[1]Must meet the requirements to prepare manure management plans as per Section 13(7) of M.R. 42/98.
[2]If exempt from registration with MIA for the purposes of preparing manure management plans, enter 0000.

Certain livestock operations in Manitoba are required under Section 13(1) of the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of *The Environment Act*, to submit an annual manure management plan to Manitoba Sustainable Development. The plan must be submitted by **July 10** for fertilization programs beginning in the fall or by **February 10** for fertilization programs beginning in the spring. Late submissions are subjected to $100 (+ 5% GST) administration fee.

Note: Confirmation of manure spreading including legal land description, actual application rates, analysis of manure, field maps, manure applicator licence # (if applicable), must be submitted after manure is spread. Additional plans will not be registered unless this information is received by Manitoba Sustainable Development.

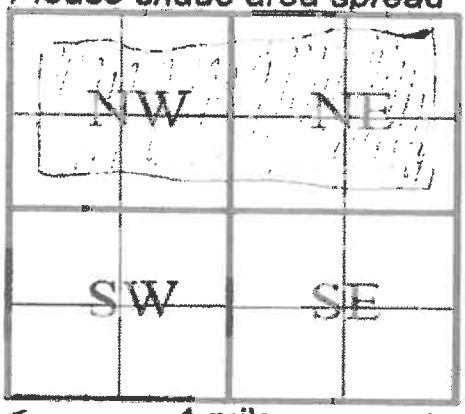
Forms and other relevant information can be accessed online at
http://www.gov.mb.ca/conservation/cmp/programs/livestock

Spreading Confirmation Sheet

- Spreading Confirmation Sheet must be submitted AFTER spreading to confirm manure application details.
- Subsequent plan will not be registered unless Spreading Confirmation Sheets for all applied fields are received.

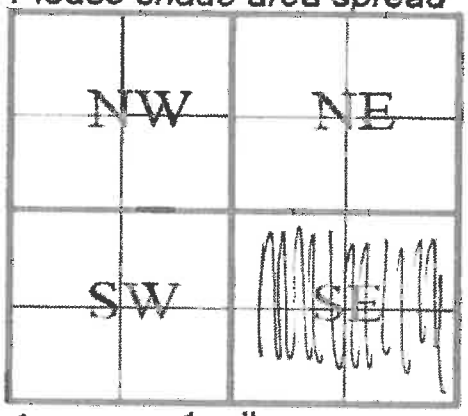
Operation Name coolspring colony **MMP Receipt #** 20194295

Please shade area spread



Legal Description	n 1/2 15-16-17
Field ID (optional)	12
Area Spread (ac)	310
Application Date (Month/Day/Year)	Oct 9-10 / 18
Application Rate* Imp gal/ac or ton/ac	6000
Manure Analysis**	32 lb/1000 Imp gal avail N or lb/ton
	9 lb/1000 Imp gal P_2O_5 or lb/ton
Proposed Crop	canola

Please shade area spread



Legal Description	E ½ 16-16-17
Field ID (optional)	
Area Spread (ac)	160
Application Date (Month/Day/Year)	May 17+18 / 19
Application Rate* gal/ac (imp) or ton/ac	6000
Manure Analysis**	32 lb/1000 Imp gal avail N or lb/ton
	9 lb/1000 Imp gal P_2O_5 or lb/ton
Proposed Crop	CANOLA

* To convert US gallons to Imperial gallons, multiply US gal by 0.83 (i.e. Imp gal = US gal X 0.83)
** To convert manure phosphorus (P) to phosphate (P_2O_5), multiply P by 2.3 (i.e. P_2O_5 = P X 2.3)

If manure was not applied to any fields, state the reason in the space provided below:

E ½ of 16-16-17 will be spring applied

Signature [signature] Date May 1 / 18

FILE 2 SUBMITTED 2019 CROP YEAR 2020

HOG'S

LIVESTOCK MANURE AND MORTALITIES MANAGEMENT REGULATION

Manure Management Plan

Manitoba Sustainable Development

Section A – Operation Information

Name of Operation COOL SPRING COLONY

Legal Name of Operation (if different)

Affiliate (legal name) ☑ Not Applicable

Mailing Address BOX 1015

MINNEDOSA, MB Postal Code R0J 1E0

Location of Operation SW 24-16-17 W MINTO

Qtr. Sec. Twp. Rge. E/WPM or River Lot/Parish — Rural Municipality

Civic Address

Date Operation Established JUNE 1, 1986

Date Last Expanded (if applicable)

Name of Contact Person JOSH WALDNER

Contact Numbers 204-867-7243 — 204-865-2363 — 204-865-2215

Business — Residence — Cellular — Facsimile

Email

Owner (legal name) COOL SPRING COLONY

Mailing Address BOX 1015

MINNEDOSA, MB Postal Code R0J 1E0

Contact Numbers

Business — Residence — Cellular — Facsimile

Email

Preferred Correspondence ☑ Email ☐ Fax ☐ Mail

Submit completed plan to:

By mail: Environmental Approvals Branch,.
Manitoba Sustainable Development,
160-123 Main Street (Box 80), Winnipeg MB R3C 1A5

By fax: 204-948-2420

By email: mmpregistration@gov.mb.ca

For Department Use Only

Proprietary (confidential) information will be protected in accordance with Manitoba law.
Personal information is collected under the authority of *The Environment Act*, the Livestock Manure and Mortalities Management Regulation, and will be used to issue receipts, for surveys, administration and enforcement purposes. Information collected is protected by the privacy provisions of *The Freedom of Information and Protection of Privacy Act*.

Section B - Animal Unit Inventory

Livestock Species and Type[1]	A.U. Produced by One Livestock		Number of Livestock of Each Type	A.U. for Each Livestock Type
Eg. Beef – Feedlot Cattle	*.769*	X	*500*	*385*
HOGS - FARROW TO FINNISH	1.25	X	575	718.75
WEANLINGS	.033	X	2150	70.95
GROWERS-FINNISHER	.143	X	4220	603.46
BOARS	.2	X	15	3
		X		0
		X		0

[1] Refer to Animal Unit Worksheet –Schedule A and retain for your records. If additional room is required, the operator may choose to submit a copy of Schedule A. **USE ONLY CATEGORIES LISTED IN THE WORKSHEET.** For a copy of Schedule A, refer to the livestock program website at: www.gov.mb.ca/conservation/envprograms/livestock

Section C – Manure Storage Systems Information[1]

Form of livestock manure stored

- ☑ Liquid manure (pumped as liquid; 0-5% dry matter)
- ☐ Semi-solid (paste like; 5-25% dry matter)
- ☐ Solid (handled with loader; over 25% dry matter)

Location of central manure storage facilities

Legal description of the location(s):	G.P.S. Coordinates (Decimal Degrees) (if available)	Anticipated Storage Time (months)	Construction Permit Number(s)[2] or Registration Number(s)[3] for Storage
SW 24-16-17 W		13	LM-687

Location of solid manure field storage **(complete only if you have field storage)**

Field Storage Site #1 :

Legal Location: _____

Anticipated Storage Duration (months) _____

Field Storage Site #2 :

Legal Location: _____

Anticipated Storage Duration (months) _____

Field Storage Site #3 :

Legal Location: _____

Anticipated Storage Duration (months) _____

[1] Use additional pages as necessary

[2] A construction permit has been required by Manitoba Sustainable Development for construction of earthen manure storage structures since 1994 and for all other types of constructed manure storage structures since 1998. You may inquire about your permit number at your Manitoba Sustainable Development regional office (see last page).

[3] Registration numbers will be issued by Manitoba Sustainable Development for earthen manure storage structures built before 1994 and all other constructed storage structures built prior to 1998.

Section D – Manure Information for Land Application

Total Volume of Manure to be Land Applied

Liquid manure: 3,750,000 Imp. gals.
Semi-solid manure: ☑ Imp. gals. ☐ Tons ☐ Cubic feet
Solid manure: ☐ Tons ☐ Cubic feet

If no manure is to be applied, check here: ☐

Manure Analysis #1 – Livestock Species & Type: HOGS LIQUID

Total Nitrogen	32	☑ lbs/1000 Imp. gals.	☐ lbs/ton
NH_4	20	☑ lbs/1000 Imp. gals.	☐ lbs/ton
Total P	9	**P_2O_5** (P x 2.3) 9	☑ lbs/1000 Imp. gals. ☐ lbs/ton
% Dry Matter	2		

The nutrient values stated above are:
☑ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Manure Analysis #2 – Livestock Species & Type: _____

Total Nitrogen		☐ lbs/1000 Imp. gals.	☐ lbs/ton
NH_4		☐ lbs/1000 Imp. gals.	☐ lbs/ton
Total P		**P_2O_5** (P x 2.3)	☐ lbs/1000 Imp. gals. ☐ lbs/ton
% Dry Matter			

The nutrient values stated above are:
☐ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Manure Analysis #3 – Livestock Species & Type: _____

Total Nitrogen		☐ lbs/1000 Imp. gals.	☐ lbs/ton
NH_4		☐ lbs/1000 Imp. gals.	☐ lbs/ton
Total P		**P_2O_5** (P x 2.3)	☐ lbs/1000 Imp. gals. ☐ lbs/ton
% Dry Matter			

The nutrient values stated above are:
☑ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Earliest anticipated manure application starting date[1]: 9/1/2019
(Month / Day / Year)

[1]This is the earliest date the first spread of manure will occur on this plan (plan year begins August 15th and ends August 14th of the following year).

NOTE: At least one manure nutrient analysis or estimate is required for each manure form per livestock species.
If manure is to be treated, please complete and attach Schedule B – Manure Treatment
If manure is to be transferred to another party, please complete and attach Schedule C – Transfer of Manure or Effluent to a Second Party. For copies of Schedules B and C refer to the livestock program website at:
www.gov.mb.ca/conservation/envprograms/livestock

Section E - Field Application Summary

(Use additional pages as necessary)

ALL information below must be completed for each field listed BEFORE any manure spreading occurs.

Legal Land Description	w1/2ne1/414-16-17	e1/2mw1/413-16-17	s1/2,24-16-17	s1/218-16-16
Field ID (optional)	13	14	9	15
Legal Owner's Name and Phone	COOL SPRING COLONY	COOL SPRING COLONY	coolspring	coolspring
Land: Own, Lease, or Agreement	Own	Own	Own	Own
Field Size [1] (acres)	480	480	360	320
Soil Class and Subclass [2]	2t(8)2tw(1)5w(1)	2t(8)2tw(1)5w(1)	2t(8)2tw(1)5w(1)	2t(8)2tw(1)5w(1)
Proposed Crop	canola	canola	canola	canola
Is the Proposed Crop Grazed?	No	No	No	No
0 – 6 inch (15 cm) depth soil phosphorus (P) in ppm [3]				
0 – 24 inch (60 cm) depth soil nitrate (NO_3^--N) in lbs/acre [3]				
Target Yield (bus/acre, lbs/acre, tons/acre)				
Crop Nitrogen Recommendation [4] (lbs N/acre)				
Crop Removal of Phosphate [5] (lbs P_2O_5/acre)				
Manure Application Rate (Imp. gal/acre or tons/acre) * if using multi-year P_2O_5 rate, select the # equal to multiple of years [6]				
Manure Analysis #1, #2, or #3 (from Section D)	1	1	1	1
Application Start Date (month / day / year)				
Application Method - Select the corresponding letter [7]	F	F	F	F
Non manure Nitrogen Fertilizer (lbs N/acre)				
Non manure Phosphate Fertilizer (lbs P_2O_5/acre)				
Manure Applicator – Name, Phone, Licence # [8]				

[1] Indicate only the available acres for manure spreading (exclusive of setbacks from surface water courses, etc.).
[2] Must list correct Agricultural Capability Class and Subclass as determined by Published Manitoba Soil Survey Report or electronic data distributed by Manitoba Land Initiative website. Use the worst class manure will be spread on.
[3] As shown on the soil analysis report appended to this form. If soil analysis reports are not available at the time of submitting the form, they **must** be forwarded to Manitoba Sustainable Development 14 days **before** application of manure to allow for processing.
[4] Indicate the recommended nitrogen (N) application rate suggested by the soil fertility guide or soil analysis report, whichever is lower.
[5] Indicate the crop removal rate of phosphate (P_2O_5) as determined by the most appropriate source of information.
[6] When soil test phosphorus levels are 60 ppm to 179 ppm manure may be applied at a rate of up to 5 times the annual crop removal rate of P_2O_5. Schedule D must be completed when using a multi-year option.
[7] Choose one of the following and put the corresponding letter on the form: **A.** Broadcast and incorporate after 2 days, **B.** Broadcast + Incorporate after 3 days. **C.** Broadcast and incorporate within 2 days. **D.** Broadcast and no incorporation. **E.** Broadcast and no incorporation on forages. **F.** Injection. **G.** Irrigation and incorporation within 3 days. **H.** Irrigation and no incorporation.
[8] As of January 1, 2008 Commercial and Off-farm Manure Applicators must be trained and Licenced with Manitoba Agriculture.

Section F -Certification of Manure Management Plan

This plan must be certified by the person who prepares it. Select the appropriate box.

Plan prepared by:

☐ **Operator**

I hereby certify the information contained in this plan is true and believe this plan complies with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of The Environment Act.

_____ Date: _____
Signature of the operator

☑ **Other**[1]

I hereby certify the information contained in this plan is true and believe this plan complies with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of The Environment Act.

I meet the requirements to prepare manure management plans in accordance with Section 13(7) of M.R. 42/98.

BLAINE SANGSTER
Name of person preparing the plan on behalf of the operator

Address: 629 4TH AVE.
CARBERRY, MB R0K 0H0

Contact number: 204-570-0319

MIA #[2]/CCA #: 26200

Blaine Sangster Digitally signed by Blaine Sangster DN: cn=Blaine Sangster, o=Redfern Farm Services, ou, email=bsangster@redfarms.ca, c=CA Date: 2017.06.16 15:42:19 -05'00' Date: june 28 2019
Signature

[1]Must meet the requirements to prepare manure management plans as per Section 13(7) of M.R. 42/98.
[2]If exempt from registration with MIA for the purposes of preparing manure management plans, enter 0000.

Certain livestock operations in Manitoba are required under Section 13(1) of the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of *The Environment Act*, to submit an annual manure management plan to Manitoba Sustainable Development. The plan must be submitted by **July 10** for fertilization programs beginning in the fall, or by **February 10** for fertilization programs beginning in the spring. Late submissions are subjected to $100 (+ 5% GST) administration fee.

Note: Confirmation of manure spreading including legal land description, actual application rates, analysis of manure, field maps, manure applicator licence # (if applicable), must be submitted after manure is spread. Additional plans will not be registered unless this information is received by Manitoba Sustainable Development.

Forms and other relevant information can be accessed online at
http://www.gov.mb.ca/conservation/envprograms/livestock

FILE #3

Chickens

Submitted 2019

CROP YEAR 2020

LIVESTOCK MANURE AND MORTALITIES MANAGEMENT REGULATION

Manure Management Plan

Manitoba Sustainable Development

Section A – Operation Information

Name of Operation COOL SPRING COLONY

Legal Name of Operation (if different)

Affiliate (legal name) ☑ Not Applicable

Mailing Address BOX 1015

MINNEDOSA, MB Postal Code R0J 1E0

Location of Operation SW 24-16-17 W MINTO

Qtr. Sec. Twp. Rge. E/WPM or River Lot/Parish — Rural Municipality

Civic Address

Date Operation Established JUNE 1, 1986

Date Last Expanded (if applicable)

Name of Contact Person JOSH WALDNER

Contact Numbers 204-867-7243 — Business; Residence; 204-865-2363 — Cellular; 204-865-2215 — Facsimile

Email

Owner (legal name) COOL SPRING COLONY

Mailing Address BOX 1015

MINNEDOSA, MB Postal Code R0J 1E0

Contact Numbers

Business Residence Cellular Facsimile

Email

Preferred Correspondence ☑ Email ☐ Fax ☐ Mail

Submit completed plan to:

By mail: Environmental Approvals Branch,.
Manitoba Sustainable Development,
160-123 Main Street (Box 80), Winnipeg MB R3C 1A5

By fax: 204-948-2420

By email: mmpregistration@gov.mb.ca

For Department Use Only

Proprietary (confidential) information will be protected in accordance with Manitoba law.
Personal information is collected under the authority of *The Environment Act*, the Livestock Manure and Mortalities Management Regulation, and will be used to issue receipts, for surveys, administration and enforcement purposes. Information collected is protected by the privacy provisions of *The Freedom of Information and Protection of Privacy Act*.

Section B - Animal Unit Inventory

Livestock Species and Type[1]	A.U. Produced by One Livestock		Number of Livestock of Each Type	A.U. for Each Livestock Type
Eg. Beef – Feedlot Cattle	*.769*	X	*500*	*385*
Broilers	.0050	X	60000	300
		X		0
		X		0
		X		0
		X		0
		X		0

[1] Refer to Animal Unit Worksheet –Schedule A and retain for your records. If additional room is required, the operator may choose to submit a copy of Schedule A. **USE ONLY CATEGORIES LISTED IN THE WORKSHEET.** For a copy of Schedule A, refer to the livestock program website at: www.gov.mb.ca/conservation/envprograms/livestock

Section C – Manure Storage Systems Information[1]

Form of livestock manure stored

- ☐ Liquid manure (pumped as liquid; 0-5% dry matter)
- ☐ Semi-solid (paste like; 5-25% dry matter)
- ☑ Solid (handled with loader; over 25% dry matter)

Location of central manure storage facilities

Legal description of the location(s):	G.P.S. Coordinates (Decimal Degrees) (if available)	Anticipated Storage Time (months)	Construction Permit Number(s)[2] or Registration Number(s)[3] for Storage

Location of solid manure field storage (complete only if you have field storage)

Field Storage Site #1 :

Legal Location: 17-16-7

Anticipated Storage Duration (months) 22

Field Storage Site #2 :

Legal Location: 36-16-16

Anticipated Storage Duration (months) 22

Field Storage Site #3 :

Legal Location: _____

Anticipated Storage Duration (months) _____

[1] Use additional pages as necessary

[2] A construction permit has been required by Manitoba Sustainable Development for construction of earthen manure storage structures since 1994 and for all other types of constructed manure storage structures since 1998. You may inquire about your permit number at your Manitoba Sustainable Development regional office (see last page).

[3] Registration numbers will be issued by Manitoba Sustainable Development for earthen manure storage structures built before 1994 and all other constructed storage structures built prior to 1998.

Section D – Manure Information for Land Application

Total Volume of Manure to be Land Applied

Liquid manure: _____ Imp. gals.
Semi-solid manure: _____ ☑ Imp. gals. ☐ Tons ☐ Cubic feet
Solid manure: 200 ☑ Tons ☐ Cubic feet

If no manure is to be applied, check here: ☐

Manure Analysis #1 – Livestock Species & Type: Chicken's (Broiler) 300 A. U.

Total Nitrogen	32.9	☐ lbs/1000 Imp. gals.	☑ lbs/ton
NH_4		☐ lbs/1000 Imp. gals.	☑ lbs/ton
Total P	18.3	P_2O_5 (P x 2.3) _____	☐ lbs/1000 Imp. gals. ☑ lbs/ton
% Dry Matter	898.6		

The nutrient values stated above are:
☑ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Manure Analysis #2 – Livestock Species & Type: _____

Total Nitrogen		☐ lbs/1000 Imp. gals.	☐ lbs/ton
NH_4		☐ lbs/1000 Imp. gals.	☐ lbs/ton
Total P		P_2O_5 (P x 2.3) _____	☐ lbs/1000 Imp. gals. ☐ lbs/ton
% Dry Matter			

The nutrient values stated above are:
☐ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Manure Analysis #3 – Livestock Species & Type: _____

Total Nitrogen		☐ lbs/1000 Imp. gals.	☐ lbs/ton
NH_4		☐ lbs/1000 Imp. gals.	☐ lbs/ton
Total P		P_2O_5 (P x 2.3) _____	☐ lbs/1000 Imp. gals. ☐ lbs/ton
% Dry Matter			

The nutrient values stated above are:
☐ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Earliest anticipated manure application starting date[1]: 9/1/2019
(Month / Day / Year)

[1]This is the earliest date the first spread of manure will occur on this plan (plan year begins August 15th and ends August 14th of the following year).

NOTE: At least one manure nutrient analysis or estimate is required for each manure form per livestock species.
If manure is to be treated, please complete and attach Schedule B – Manure Treatment
If manure is to be transferred to another party, please complete and attach Schedule C – Transfer of Manure or Effluent to a Second Party. For copies of Schedules B and C refer to the livestock program website at:
www.gov.mb.ca/conservation/envprograms/livestock

Section E - Field Application Summary

(Use additional pages as necessary)

ALL information below must be completed for each field listed BEFORE any manure spreading occurs.

Legal Land Description	NW 30-16-16	SE 25-16-17	n 1/217 16 17	se20-16-17
Field ID (optional)	4	3	24	21
Legal Owner's Name and Phone	COOL SPRING COLONY	COOL SPRING COLONY	COOL SPRING COLONY	coolspring colony
Land: Own, Lease, or Agreement	Own	Own	Own	Own
Field Size [1] (acres)	160	160	360	100
Soil Class and Subclass [2]	2t(8)2tw(191)5w(1)	2t(8)2tw(1)5w(1)	2t(8)2tw(10)5w(1)	2t(8)2tw(1)5w(1)
Proposed Crop				
Is the Proposed Crop Grazed?	No	No	No	No
0 – 6 inch (15 cm) depth soil phosphorus (P) in ppm [3]				
0 – 24 inch (60 cm) depth soil nitrate (NO_3^--N) in lbs/acre [3]				
Target Yield (bus/acre, lbs/acre, tons/acre)				
Crop Nitrogen Recommendation [4] (lbs N/acre)				
Crop Removal of Phosphate [5] (lbs P_2O_5/acre)				
Manure Application Rate (Imp. gal/acre or tons/acre) * if using multi-year P_2O_5 rate, select the # equal to multiple of years [6]				
Manure Analysis #1, #2, or #3 (from Section D)	1	1	1	1
Application Start Date (month / day / year)				
Application Method - Select the corresponding letter [7]	C	C	C	C
Non manure Nitrogen Fertilizer (lbs N/acre)				
Non manure Phosphate Fertilizer (lbs P_2O_5/acre)				
Manure Applicator – Name, Phone, Licence # [8]				

[1] Indicate only the available acres for manure spreading (exclusive of setbacks from surface water courses, etc.).
[2] Must list correct Agricultural Capability Class and Subclass as determined by Published Manitoba Soil Survey Report or electronic data distributed by Manitoba Land Initiative website. Use the worst class manure will be spread on.
[3] As shown on the soil analysis report appended to this form. If soil analysis reports are not available at the time of submitting the form, they must be forwarded to Manitoba Sustainable Development 14 days **before** application of manure to allow for processing.
[4] Indicate the recommended nitrogen (N) application rate suggested by the soil fertility guide or soil analysis report, whichever is lower.
[5] Indicate the crop removal rate of phosphate (P_2O_5) as determined by the most appropriate source of information.
[6] When soil test phosphorus levels are 60 ppm to 179 ppm manure may be applied at a rate of up to 5 times the annual crop removal rate of P_2O_5. Schedule D must be completed when using a multi-year option.
[7] Choose one of the following and put the corresponding letter on the form: **A.** Broadcast and incorporate after 2 days, **B.** Broadcast + Incorporate after 3 days. **C.** Broadcast and incorporate within 2 days. **D.** Broadcast and no incorporation. **E.** Broadcast and no incorporation on forages. **F.** Injection. **G.** Irrigation and incorporation within 3 days. **H.** Irrigation and no incorporation.
[8] As of January 1, 2008 Commercial and Off-farm Manure Applicators must be trained and Licenced with Manitoba Agriculture.

Section F -Certification of Manure Management Plan

This plan must be certified by the person who prepares it. Select the appropriate box.

Plan prepared by:

☐ **Operator**

I hereby certify the information contained in this plan is true and believe this plan complies with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of The Environment Act.

_____ Date: _____

Signature of the operator

☑ **Other**[1]

I hereby certify the information contained in this plan is true and believe this plan complies with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of The Environment Act.

I meet the requirements to prepare manure management plans in accordance with Section 13(7) of M.R. 42/98.

BLAINE SANGSTER

Name of person preparing the plan on behalf of the operator

Address: 629 4TH AVE.

CARBERRY, MB R0K 0H0

Contact number: 204-570-0319

MIA #[2]/CCA #: 26200

Blaine Sangster Digitally signed by Blaine Sangster DN: cn=Blaine Sangster, o=Redfern Farm Services, ou, email=beangster@redferns.ca, c=CA Date: 2017.06.16 15:28:03 -05'00'

Date: june 28 2019

Signature

[1]Must meet the requirements to prepare manure management plans as per Section 13(7) of M.R. 42/98.
[2]If exempt from registration with MIA for the purposes of preparing manure management plans, enter 0000.

Certain livestock operations in Manitoba are required under Section 13(1) of the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of *The Environment Act*, to submit an annual manure management plan to Manitoba Sustainable Development. The plan must be submitted by **July 10** for fertilization programs beginning in the fall, or by **February 10** for fertilization programs beginning in the spring. Late submissions are subjected to $100 (+ 5% GST) administration fee.

Note: Confirmation of manure spreading including legal land description, actual application rates, analysis of manure, field maps, manure applicator licence # (if applicable), must be submitted after manure is spread. Additional plans will not be registered unless this information is received by Manitoba Sustainable Development.

Forms and other relevant information can be accessed online at
http://www.gov.mb.ca/conservation/envprograms/livestock

FILE #4 CONFERMATION #

FOR CROP YEAR 2020

Manitoba
Conservation and Water Stewardship
Environmental Approvals / Livestock Section
160 – 123 Main Street (Box 80) Winnipeg, MB R3C 1A5
T 204 945-3078 F 204 948-2420

Coolspring Colony
P.O. Box 1015
Minnedosa, Manitoba
R0J 1E0

17-Jul-19

Receipt number	**2020429LS**
Location of operation	SW-24-16-17-W
RM:	Minto-Odanah

Re: Notice of Conditional Registration for Manure Management Plan (MMP)

Dear Sir or Madam:

Conservation and Water Stewardship has received and reviewed the manure management plan (MMP) for your livestock operation for the next growing season. Any missing information is indicated in the **MMP Submission Report** on the following page. The MMP has been conditionally registered and has been assigned an MMP number, as indicated above.

It is understandable not all information can be provided during the initial MMP submission when filed by the regulated deadline (February 10th or July 10th). For example, it is likely a recent soil test is not yet available and the associated Section E (Field Application Summary) cannot be completed in full. As a result, the plan is incomplete.

In order to approve fields for manure application, the MMP must be updated to address any deficiencies. An MMP can be updated by filing an amendment prior to manure application. Please note, MMPs will only be fully registered on the condition all missing or incomplete information is submitted prior to manure application. It is a violation of the *Livestock Manure and Mortalities Management Regulation* – M.R. 42/98 to store, handle, or dispose of livestock manure, or apply livestock manure to agricultural land, without a registered MMP.

In addition, spreading confirmations must also be submitted once manure application is complete. Confirmation sheets (attached) must be completed, including shading of the field diagram. **It is important to remember, spreading confirmations are required to register your succeeding MMP.**

The following pages include important information and we highly recommend taking time to read them as they significantly pertain to the requirements of completing your MMP.

Regards,

Richard Balog
Environment Officer

NO CONFERMATION NOTICE FOR CHICKEN'S YET

Manitoba
Conservation and Water Stewardship
Environmental Programs and Strategies / Livestock Section
1007 Century Street, Winnipeg, MB R3H 0W4
T 204 945-3078 **F** 204 948-2420

MMP SUBMISSION REPORT

Date of Receipt: 17-Jul-19 Name of Operation: **Coolspring Colony**

Receipt number **2020429LS**

An "X" indicates missing or incomplete information. Ensure this information is provided in order to register fields for manure application/complete the MMP. Be reminded a registered plan is required to store, handle, or dispose of livestock manure, or to apply livestock manure to agricultural land.

Unapproved Format		Manure information incomplete (Section D of approved form)	
February 10 or July 10 filing deadlines missed		Land application details incomplete (Section E of approved form)	
Soil tests missing	X	Field Application Summary incomplete (Section E of approved form)	X
Operation information incomplete (Section A of approved form)		Signature missing (Section F of approved form)	
Animal units inventory missing (Section B of approved form)		Other **See comments below**	X
Manure storage information incomplete (Section C of approved form)		No deficiencies noted	

COMMENTS/FOLLOW UP

Soil test reports along with completed field application summary must be submitted prior to manure application.

Date Received: 28-Jun-19

Anticipated Manure Application Date: 01-Sep-19

Location of Operation: SW-24-16-17-W

MASC
Manitoba Agricultural Services Corporation

NEEPAWA MASC INS. OFFICE
Phone: (204) 476-7050
Fax: (204) 476-7094

2019 SEEDED ACREAGE REPORT (SAR)

Filing Deadline - June 30, 2019

This report must be filed with MASC by June 30, 2019, unless you have an Excess Moisture Insurance claim or have aerial seeded crops, in which case your SAR must be filed by June 22. If your SAR is not returned by June 30, 2019, then: i) a $100 late filing fee may be charged; ii) all crops will be inspected for insurability and any losses prior to inspection will not be insurable; and iii) the cost of the inspection will be charged to your account. **This report must be signed and returned or completed online whether or not acres have been seeded.**

COOL SPRING COLONY LTD

EMI: 5%

12 577973 (204) 865-2363 (STN. 12)

Legal Description & Soil Zone	Share	Unit	Previous Year's Declared Acres	Summer-fallow Acres	Acres Too Wet To Seed	Crop and Forage	Variety	Seeded Acres	Seeding Date	
NW 99-99-99 W E01	667	2	EXAMPLE 160	50	10	Red Spring Wheat EXAMPLE	AAC Brandon EXAMPLE	100	May	20
NW 07-16-16 W D06	XXX	1	150	ϕ	ϕ	Feed Bly	Austenson	150	May	17
SW 07-16-16 W D06	XXX	1	150	ϕ	ϕ	Feed Bly	Austenson	150	May	17
SE 18-16-16 W C06	XXX	1	198	ϕ	ϕ	Red Spring Wht	AAC Brandon	198	May	10
SW 18-16-16 W D06	XXX	1	162	ϕ	ϕ	Red Spring Wht	AAC Brandon	162	May	10
NE 19-16-16 W C06	XXX	1	150	ϕ	ϕ	Red Spring Wht	ACC Brandon	150	May	9
NW 19-16-16 W C06	XXX	1	75	ϕ	ϕ	Red Spring Wht	ACC Brandon	75	May	9
SE 19-16-16 W C06	XXX	1	75	ϕ	ϕ	Red Spring Wht	ACC Brandon	75	May	9
								960		

Did you seed any fields by plane or helicopter? Yes ☐ No ☑

Will you seed any greenfeed after filing this report? Yes ☐ No ☑

Did you seed any forage (hay or seed) this spring or last fall? Yes ☐ No ☑

DECLARATION: I/We hereby certify that the information given in this Seeded Acreage Report is a complete and correct statement of: (i) the total 2019 acres, whether insured or not, of each crop seeded, as well as forages, forage seed and summerfallow; (ii) the acreage indicated as **"Acres Too Wet To Seed" was available for seeding prior to June 20, 2019** and is normally used for that purpose, but was too wet to seed; and (iii) for pasture, the total number of pastured livestock. I/We understand that this information may be used to calculate an Excess Moisture Insurance claim and that any overpayment arising from such claim will be repayable on demand. I/We acknowledge that in the event the Corporation elects to process my/our claim for indemnity on the basis of this declaration, an appeal of indemnity is not available. I/We further understand that any misrepresentation, misstatement or non-disclosure of required information is contrary to the terms of my/our AgriInsurance Contract and may result in serious consequences, including but not limited to, the repayment or forfeiture of indemnities and/or the termination of my/our participation in the AgriInsurance program. The information in this form is collected under the authority of The Manitoba Agricultural Services Corporation Act and will be used to administer your AgriInsurance and for research purposes. If you have any questions about the collection of such information, contact your MASC insurance agent. Reminder: If the Insured is a corporation, promptly notify MASC of any changes in shares, shareholders, directors, officers or agents.

Mail	Office	Fax	Drop Box	MB AG	Declared
MASC Representative:			Date Received:		
Checked By:	689/624 Reconciled By:		Keyed By:		

COOL SPRING COLONY LTD

6/20/19
DATE

X J Waldner
INSURED OR INSURED'S AUTHORIZED REPRESENTATIVE

Manitoba
CANADIAN AGRICULTURAL PARTNERSHIP
Canada
(ASA)

MASC
Manitoba Agricultural Services Corporation

NEEPAWA MASC INS. OFFICE
Phone: (204) 476-7050
Fax: (204) 476-7094

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COOL SPRING COLONY LTD

12 577973 (204) 865-2363 (STN. 12)

EMI: 5%

Legal Description & Soil Zone	Share	Unit	Previous Year's Declared Acres	Summer-fallow Acres	Acres Too Wet To Seed	Crop and Forage	Variety	Seeded Acres	Seeding Date	
NW 99-99-99 W E01	667	2	EXAMPLE 160	50	10	Red Spring Wheat EXAMPLE	AAC Brandon EXAMPLE	100	May	20
CONTINUED C06	XXX	1								
NW 30-16-16 W D06	XXX	1	140	Ø	Ø	L.L Canola	L-233P	140	May	18
NW 01-16-17 W C06	XXX	1	135	Ø	Ø	L.L Canola	L-233P	135	May	15
NE 02-16-17 W B06	XXX	1	160	Ø	Ø	L.L Canola	L-233P	160	May	15
SE 11-16-17 W B06	XXX	1	150	Ø	Ø	L.L Canola	L-233P	150	May	16
SW 12-16-17 W B06	XXX	1	155	Ø	Ø	L.L Canola	L-233P	155	May	16
NE 13-16-17 W C06	XXX	1	140	Ø	Ø	Feed Bly	Austenson	140	May	12
NW 13-16-17 W C06	XXX	1	140	Ø	Ø	Feed Bly	Austenson	140	May	12
								1000		

Did you seed any fields by plane or helicopter? Yes ☐ No ☑

Will you seed any greenfeed after filing this report? Yes ☐ No ☑

Did you seed any forage (hay or seed) this spring or last fall? Yes ☐ No ☑

DECLARATION: I/We hereby certify that the information given in this Seeded Acreage Report is a complete and correct statement of: (i) the total 2019 acres, whether insured or not, of each crop seeded, as well as forages, forage seed and summerfallow; (ii) the acreage indicated as **"Acres Too Wet To Seed" was available for seeding prior to June 20, 2019** and is normally used for that purpose, but was too wet to seed; and (iii) for pasture, the total number of pastured livestock. I/We understand that this information may be used to calculate an Excess Moisture Insurance claim and that any overpayment arising from such claim will be repayable on demand. I/We acknowledge that in the event the Corporation elects to process my/our claim for indemnity on the basis of this declaration, an appeal of indemnity is not available. I/We further understand that any misrepresentation, misstatement or non-disclosure of required information is contrary to the terms of my/our AgriInsurance Contract and may result in serious consequences, including but not limited to, the repayment or forfeiture of indemnities and/or the termination of my/our participation in the AgriInsurance program. The information in this form is collected under the authority of The Manitoba Agricultural Services Corporation Act and will be used to administer your AgriInsurance and for research purposes. If you have any questions about the collection of such information, contact your MASC insurance agent. Reminder: If the Insured is a corporation, promptly notify MASC of any changes in shares, shareholders, directors, officers or agents.

Mail	Office	Fax	Drop Box	MB AG	Declared
MASC Representative:			Date Received:		
Checked By:		689/624 Reconciled By:		Keyed By:	

COOL SPRING COLONY LTD

6/20/19
DATE

X J Woldner
INSURED OR INSURED'S AUTHORIZED REPRESENTATIVE

MASC
Manitoba Agricultural Services Corporation

NEEPAWA MASC INS. OFFICE
Phone: (204) 476-7050
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NW 99-99-99 W E01	667	2	EXAMPLE 160	50	10	Red Spring Wheat EXAMPLE	AAC Brandon EXAMPLE	100	May	20
CONTINUED C06	XXX	1								
SE 13-16-17 W C06	XXX	1	145	Ø	Ø	Feed Bly	Austenson	145	May	12
NE 14-16-17 W B06	XXX	1	160	Ø	Ø	Feed Bly	Austenson	160	May	11
NW 14-16-17 W B06	XXX	1	160	Ø	Ø	Feed Bly	Austenson	160	May	11
SW 14-16-17 W B06	XXX	1	160	Ø	Ø	Feed Bly	Austenson	160	May	11
NE 15-16-17 W B06	XXX	1	160	Ø	Ø	L.L. Canola	DKLL 81 BL	160	May	14
NW 15-16-17 W B06	XXX	1	160	Ø	Ø	L.L Canola	DKLL 81 BL	160	May	14
								945		

Did you seed any fields by plane or helicopter? Yes ☐ No ☑

Did you seed any forage (hay or seed) this spring or last fall? Yes ☐ No ☑

Will you seed any greenfeed after filing this report? Yes ☐ No ☑

DECLARATION: I/We hereby certify that the information given in this Seeded Acreage Report is a complete and correct statement of: (i) the total 2019 acres, whether insured or not, of each crop seeded, as well as forages, forage seed and summerfallow; (ii) the acreage indicated as **"Acres Too Wet To Seed" was available for seeding prior to June 20, 2019** and is normally used for that purpose, but was too wet to seed; and (iii) for pasture, the total number of pastured livestock. I/We understand that this information may be used to calculate an Excess Moisture Insurance claim and that any overpayment arising from such claim will be repayable on demand. I/We acknowledge that in the event the Corporation elects to process my/our claim for indemnity on the basis of this declaration, an appeal of indemnity is not available. I/We further understand that any misrepresentation, misstatement or non-disclosure of required information is contrary to the terms of my/our AgriInsurance Contract and may result in serious consequences, including but not limited to, the repayment or forfeiture of indemnities and/or the termination of my/our participation in the AgriInsurance program. The information in this form is collected under the authority of The Manitoba Agricultural Services Corporation Act and will be used to administer your AgriInsurance and for research purposes. If you have any questions about the collection of such information, contact your MASC insurance agent. Reminder: If the Insured is a corporation, promptly notify MASC of any changes in shares, shareholders, directors, officers or agents.

Mail	Office	Fax	Drop Box	MB AG	Declared
MASC Representative:			Date Received:		
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COOL SPRING COLONY LTD

6/20/19
DATE

X J Wolfe
INSURED OR INSURED'S AUTHORIZED REPRESENTATIVE

MASC
Manitoba Agricultural Services Corporation

NEEPAWA MASC INS. OFFICE
Phone: (204) 476-7050
Fax: (204) 476-7094

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COOL SPRING COLONY LTD

12 577973 (204) 865-2363 (STN. 12)

EMI: 5%

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NW 99-99-99 W E01	667	2	EXAMPLE 160	50	10	Red Spring Wheat EXAMPLE	AAC Brandon EXAMPLE	100	May	20
NE 16-16-17 W B06	XXX	1	140	Ø	Ø	L.L Canola	L-255PC	140	May	18
SE 16-16-17 W B06	XXX	1	145	Ø	Ø	L.L Canola	L-255PC	145	May	18
NE 17-16-17 W B06	XXX	1	155	Ø	Ø	Red Spring Wht	ACC Brandon	155	May	9
NW 17-16-17 W B06	XXX	1	70	Ø	Ø	Red Spring Wht	ACC Brandon	70	May	9
SE 17-16-17 W B06	XXX	1	70	Ø	Ø	Red Spring Wht	ACC Brandon	70	May	9
SE 20-16-17 W B06	XXX	1	100	Ø	Ø	Red Spring Wht	ACC Brandon	100	May	9
NE 22-16-17 W C06	XXX	1	150	Ø	Ø	Red Spring Wht	ACC Brandon	150	May	7
								830		

Did you seed any fields by plane or helicopter? Yes ☐ No ☑

Did you seed any forage (hay or seed) this spring or last fall? Yes ☐ No ☑

Will you seed any greenfeed after filing this report? Yes ☐ No ☑

DECLARATION: I/We hereby certify that the information given in this Seeded Acreage Report is a complete and correct statement of: (i) the total 2019 acres, whether insured or not, of each crop seeded, as well as forages, forage seed and summerfallow; (ii) the acreage indicated as **"Acres Too Wet To Seed" was available for seeding prior to June 20, 2019** and is normally used for that purpose, but was too wet to seed; and (iii) for pasture, the total number of pastured livestock. I/We understand that this information may be used to calculate an Excess Moisture Insurance claim and that any overpayment arising from such claim will be repayable on demand. I/We acknowledge that in the event the Corporation elects to process my/our claim for indemnity on the basis of this declaration, an appeal of indemnity is not available. I/We further understand that any misrepresentation, misstatement or non-disclosure of required information is contrary to the terms of my/our AgriInsurance Contract and may result in serious consequences, including but not limited to, the repayment or forfeiture of indemnities and/or the termination of my/our participation in the AgriInsurance program. The information in this form is collected under the authority of The Manitoba Agricultural Services Corporation Act and will be used to administer your AgriInsurance and for research purposes. If you have any questions about the collection of such information, contact your MASC insurance agent. Reminder: If the Insured is a corporation, promptly notify MASC of any changes in shares, shareholders, directors, officers or agents.

Mail	Office	Fax	Drop Box	MB AG	Declared
MASC Representative:			Date Received:		
Checked By:	689/624 Reconciled By:		Keyed By:		

COOL SPRING COLONY LTD

6/20/19
DATE

X J Waldner
INSURED OR INSURED'S AUTHORIZED REPRESENTATIVE

MASC
Manitoba Agricultural Services Corporation

NEEPAWA MASC INS. OFFICE
Phone: (204) 476-7050
Fax: (204) 476-7094

2019 SEEDED ACREAGE REPORT (SAR)

Filing Deadline - June 30, 2019

This report must be filed with MASC by June 30, 2019, unless you have an Excess Moisture Insurance claim or have aerial seeded crops, in which case your SAR must be filed by June 22. If your SAR is not returned by June 30, 2019, then: i) a $100 late filing fee may be charged; ii) all crops will be inspected for insurability and any losses prior to inspection will not be insurable; and iii) the cost of the inspection will be charged to your account. **This report must be signed and returned or completed online whether or not acres have been seeded.**

COOL SPRING COLONY LTD

12 577973 (204) 865-2363 (STN. 12)

EMI: 5%

Legal Description & Soil Zone	Share	Unit	Previous Year's Declared Acres	Summer-fallow Acres	Acres Too Wet To Seed	Crop and Forage	Variety	Seeded Acres	Seeding Date	
NW 99-99-99 W E01	667	2	EXAMPLE 160	50	10	Red Spring Wheat EXAMPLE	AAC Brandon EXAMPLE	100	May	20
CONTINUED C06	XXX	1								
SE 22-16-17 W B06	XXX	1	155	Ø	Ø	Red Spring Wht	ACC Brandon	155	May	7
SW 22-16-17 W B06	XXX	1	160	Ø	Ø	Red Spring Wht	ACC Brandon	160	May	7
NE 23-16-17 W C06	XXX	1	75	Ø	Ø	L.L. Canola	L-255PC	75	May	18
SE 23-16-17 W C06	XXX	1	160	Ø	Ø	L.L Canola	L-255 PC	160	May	20
NW 24-16-17 W C06	XXX	1	80	Ø	Ø	Red Spring Wht	ACC Brandon	80	May	10
SE 24-16-17 W C06	XXX	1	155	Ø	Ø	Red Spring Wht	ACC Brandon	155	May	10
SW 24-16-17 W C06	XXX	1	100	Ø	Ø	Red Spring Wht	ACC Brandon	100	May	10
								885		

Did you seed any fields by plane or helicopter? Yes ☐ No ☑

Did you seed any forage (hay or seed) this spring or last fall? Yes ☐ No ☑

Will you seed any greenfeed after filing this report? Yes ☐ No ☑

DECLARATION: I/We hereby certify that the information given in this Seeded Acreage Report is a complete and correct statement of: (i) the total 2019 acres, whether insured or not, of each crop seeded, as well as forages, forage seed and summerfallow; (ii) the acreage indicated as **"Acres Too Wet To Seed" was available for seeding prior to June 20, 2019** and is normally used for that purpose, but was too wet to seed; and (iii) for pasture, the total number of pastured livestock. I/We understand that this information may be used to calculate an Excess Moisture Insurance claim and that any overpayment arising from such claim will be repayable on demand. I/We acknowledge that in the event the Corporation elects to process my/our claim for indemnity on the basis of this declaration, an appeal of indemnity is not available. I/We further understand that any misrepresentation, misstatement or non-disclosure of required information is contrary to the terms of my/our AgriInsurance Contract and may result in serious consequences, including but not limited to, the repayment or forfeiture of indemnities and/or the termination of my/our participation in the AgriInsurance program. The information in this form is collected under the authority of The Manitoba Agricultural Services Corporation Act and will be used to administer your AgriInsurance and for research purposes. If you have any questions about the collection of such information, contact your MASC insurance agent. Reminder: If the Insured is a corporation, promptly notify MASC of any changes in shares, shareholders, directors, officers or agents.

Mail	Office	Fax	Drop Box	MB AG	Declared
MASC Representative:			Date Received:		
Checked By:	689/624 Reconciled By:		Keyed By:		

COOL SPRING COLONY LTD

6/20/19
DATE

X J Woldner
INSURED OR INSURED'S AUTHORIZED REPRESENTATIVE

Manitoba | CANADIAN AGRICULTURAL PARTNERSHIP | Canada (ASA)

jr653RevMay2019
("Version française disponible")

MASC Manitoba Agricultural Services Corporation
NEEPAWA MASC INS. OFFICE
Phone: (204) 476-7050
Fax: (204) 476-7094

2019 SEEDED ACREAGE REPORT (SAR)

Filing Deadline - June 30, 2019

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COOL SPRING COLONY LTD

12 577973 (204) 865-2363 (STN. 12)

EMI: 5%

Legal Description & Soil Zone	Share	Unit	Previous Year's Declared Acres	Summer-fallow Acres	Acres Too Wet To Seed	Crop and Forage	Variety	Seeded Acres	Seeding Date	
NW 99-99-99 W E01	667	2	EXAMPLE 160	50	10	Red Spring Wheat EXAMPLE	AAC Brandon EXAMPLE	100	May	20
CONTINUED C06	XXX	1								
SE 25-16-17 W C06	XXX	1	160	Ø	Ø	L-L. Canola	L-233P	160	May	20
NE 32-16-17 W C06	XXX	1	110	Ø	Ø	Red Spring Wht	ACC Brandon	110	May	8
NW 32-16-17 W C06	XXX	1	140	Ø	Ø	Red Spring Wht	ACC Brandon	140	May	8
SE 32-16-17 W C06	XXX	1	120	Ø	Ø	Red Spring Wht	ACC Brandon	120	May	8
SW 32-16-17 W C06	XXX	1	150	Ø	Ø	Red Spring Wht	ACC Brandon	150	May	8
								680		

Did you seed any fields by plane or helicopter? Yes ☐ No ☑ Will you seed any greenfeed after filing this report? Yes ☐ No ☑

Did you seed any forage (hay or seed) this spring or last fall? Yes ☐ No ☑

DECLARATION: I/We hereby certify that the information given in this Seeded Acreage Report is a complete and correct statement of: (i) the total 2019 acres, whether insured or not, of each crop seeded, as well as forages, forage seed and summerfallow; (ii) the acreage indicated as **"Acres Too Wet To Seed" was available for seeding prior to June 20, 2019** and is normally used for that purpose, but was too wet to seed; and (iii) for pasture, the total number of pastured livestock. I/We understand that this information may be used to calculate an Excess Moisture Insurance claim and that any overpayment arising from such claim will be repayable on demand. I/We acknowledge that in the event the Corporation elects to process my/our claim for indemnity on the basis of this declaration, an appeal of indemnity is not available. I/We further understand that any misrepresentation, misstatement or non-disclosure of required information is contrary to the terms of my/our AgriInsurance Contract and may result in serious consequences, including but not limited to, the repayment or forfeiture of indemnities and/or the termination of my/our participation in the AgriInsurance program. The information in this form is collected under the authority of The Manitoba Agricultural Services Corporation Act and will be used to administer your AgriInsurance and for research purposes. If you have any questions about the collection of such information, contact your MASC insurance agent. Reminder: If the Insured is a corporation, promptly notify MASC of any changes in shares, shareholders, directors, officers or agents.

Mail	Office	Fax	Drop Box	MB AG	Declared
MASC Representative:			Date Received:		
Checked By:		689/624 Reconciled By:		Keyed By:	

COOL SPRING COLONY LTD

6/20/19
DATE

X J Woldner
INSURED OR INSURED'S AUTHORIZED REPRESENTATIVE

LIVESTOCK MANURE AND MORTALITIES MANAGEMENT REGULATION

Manure Management Plan

Manitoba Sustainable Development

Section A – Operation Information

Name of Operation COOL SPRING COLONY

Legal Name of Operation (if different)

Affiliate (legal name) ☑ Not Applicable

Mailing Address BOX 1015

MINNEDOSA, MB Postal Code R0J 1E0

Location of Operation SW 24-16-17 W MINTO

Qtr. Sec. Twp. Rge. E/W/PM or River Lot/Parish Rural Municipality

Civic Address

Date Operation Established JUNE 1, 1986

Date Last Expanded (if applicable)

Name of Contact Person JOSH WALDNER

Contact Numbers 204-867-7243 204-865-2363 204-865-2215

Business Residence Cellular Facsimile

Email

Owner (legal name) COOL SPRING COLONY

Mailing Address BOX 1015

MINNEDOSA, MB Postal Code R0J 1E0

Contact Numbers

Business Residence Cellular Facsimile

Email

Preferred Correspondence ☑ Email ☐ Fax ☐ Mail

Submit completed plan to:

By mail: Environmental Approvals Branch,.
Manitoba Sustainable Development,
160-123 Main Street (Box 80), Winnipeg MB R3C 1A5

By fax: 204-948-2420

By email: mmpregistration@gov.mb.ca

For Department Use Only

Proprietary (confidential) information will be protected in accordance with Manitoba law.
Personal information is collected under the authority of *The Environment Act*, the Livestock Manure and Mortalities Management Regulation, and will be used to issue receipts, for surveys, administration and enforcement purposes. Information collected is protected by the privacy provisions of *The Freedom of Information and Protection of Privacy Act*.

Section B - Animal Unit Inventory

Livestock Species and Type[1]	A.U. Produced by One Livestock		Number of Livestock of Each Type	A.U. for Each Livestock Type
Eg. Beef – Feedlot Cattle	*.769*	X	*500*	*385*
Broilers	.0050	X	60000	300
		X		0
		X		0
		X		0
		X		0
		X		0

[1] Refer to Animal Unit Worksheet –Schedule A and retain for your records. If additional room is required, the operator may choose to submit a copy of Schedule A. **USE ONLY CATEGORIES LISTED IN THE WORKSHEET**. For a copy of Schedule A, refer to the livestock program website at: www.gov.mb.ca/conservation/envprograms/livestock

Section C – Manure Storage Systems Information[1]

Form of livestock manure stored

- ☐ Liquid manure (pumped as liquid; 0-5% dry matter)
- ☐ Semi-solid (paste like; 5-25% dry matter)
- ☑ Solid (handled with loader; over 25% dry matter)

Location of central manure storage facilities

Legal description of the location(s):	G.P.S. Coordinates (Decimal Degrees) (if available)	Anticipated Storage Time (months)	Construction Permit Number(s)[2] or Registration Number(s)[3] for Storage

Location of solid manure field storage (complete only if you have field storage)

Field Storage Site #1 :	Anticipated Storage Duration (months) 22
Legal Location: 17-16-7	
Field Storage Site #2 :	Anticipated Storage Duration (months) 22
Legal Location: 36-16-16	
Field Storage Site #3 :	Anticipated Storage Duration (months) _____
Legal Location: _____	

[1] Use additional pages as necessary
[2] A construction permit has been required by Manitoba Sustainable Development for construction of earthen manure storage structures since 1994 and for all other types of constructed manure storage structures since 1998. You may inquire about your permit number at your Manitoba Sustainable Development regional office (see last page).
[3] Registration numbers will be issued by Manitoba Sustainable Development for earthen manure storage structures built before 1994 and all other constructed storage structures built prior to 1998.

Section D – Manure Information for Land Application

Total Volume of Manure to be Land Applied

Liquid manure:		☐ Imp. gals.	
Semi-solid manure:		☑ Imp. gals.	☐ Tons ☐ Cubic feet
Solid manure:	2000	☑ Tons	☐ Cubic feet

If no manure is to be applied, check here: ☐

Manure Analysis #1 – Livestock Species & Type: Chicken's (Broiler) 300 A. U.

Total Nitrogen	32.9	☐ lbs/1000 Imp. gals.	☑ lbs/ton		
NH_4		☐ lbs/1000 Imp. gals.	☑ lbs/ton		
Total P	18.3	**P_2O_5** (P x 2.3)		☐ lbs/1000 Imp. gals.	☑ lbs/ton
% Dry Matter	898.6				

The nutrient values stated above are:
☑ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Manure Analysis #2 – Livestock Species & Type: _____

Total Nitrogen		☐ lbs/1000 Imp. gals.	☐ lbs/ton		
NH_4		☐ lbs/1000 Imp. gals.	☐ lbs/ton		
Total P		**P_2O_5** (P x 2.3)		☐ lbs/1000 Imp. gals.	☐ lbs/ton
% Dry Matter					

The nutrient values stated above are:
☐ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Manure Analysis #3 – Livestock Species & Type: _____

Total Nitrogen		☐ lbs/1000 Imp. gals.	☐ lbs/ton		
NH_4		☐ lbs/1000 Imp. gals.	☐ lbs/ton		
Total P		**P_2O_5** (P x 2.3)		☐ lbs/1000 Imp. gals.	☐ lbs/ton
% Dry Matter					

The nutrient values stated above are:
☐ Actual. (Attach laboratory analysis report)
☐ Estimated. (Indicate source of information) _____

Earliest anticipated manure application starting date[1]: 9/1/2017
(Month / Day / Year)

[1]This is the earliest date the first spread of manure will occur on this plan (plan year begins August 15th and ends August 14th of the following year).

NOTE: At least one manure nutrient analysis or estimate is required for each manure form per livestock species.
If manure is to be treated, please complete and attach Schedule B – Manure Treatment
If manure is to be transferred to another party, please complete and attach Schedule C – Transfer of Manure or Effluent to a Second Party. For copies of Schedules B and C refer to the livestock program website at:
www.gov.mb.ca/conservation/envprograms/livestock

Section E - Field Application Summary

(Use additional pages as necessary)

ALL information below must be completed for each field listed BEFORE any manure spreading occurs.

Legal Land Description	NW 30-16-16	SE 25-16-17	SE 26-16-17	17-16-17
Field ID (optional)				
Legal Owner's Name and Phone	COOL SPRING COLONY	COOL SPRING COLONY	COOL SPRING COLONY	COOL SPRING COLONY
Land: Own, Lease, or Agreement	Own	Own	Own	Own
Field Size [1] (acres)	160	160	160	400
Soil Class and Subclass [2]	2t(8)2tw(10)5w(1)	2t(8)2tw(10)5w(1)	2t(8)2tw(10)5w(1)	2t(8)2tw(10)5w(1)
Proposed Crop	canola	canola	canola	canola
Is the Proposed Crop Grazed?	No	No	No	No
0 – 6 inch (15 cm) depth soil phosphorus (P) in ppm [3]	22ppm			
0 – 24 inch (60 cm) depth soil nitrate (NO_3^--N) in lbs/acre [3]	42lbs			
Target Yield (bus/acre, lbs/acre, tons/acre)	55	50	50	50
Crop Nitrogen Recommendation [4] (lbs N/acre)	150	155	155	155
Crop Removal of Phosphate [5] (lbs P_2O_5/acre)	40	40	40	40
Manure Application Rate (Imp. gal/acre or tons/acre) * if using multi-year P_2O_5 rate, select the # equal to multiple of years [6]	4.5 ton			
	2			
Manure Analysis #1, #2, or #3 (from Section D)	1	1	1	1
Application Start Date (month / day / year)	6/1/2017	6/1/2017	6/1/2017	6/1/2017
Application Method - Select the corresponding letter [7]	C	C	C	C
Non manure Nitrogen Fertilizer (lbs N/acre)	0	0	0	0
Non manure Phosphate Fertilizer (lbs P_2O_5/acre)	0	0	0	0
Manure Applicator – Name, Phone, Licence # [8]				

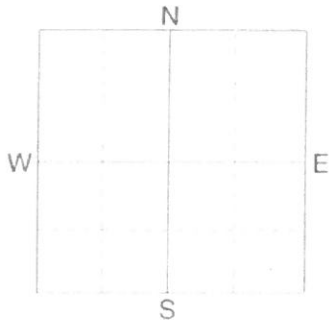
[1] Indicate only the available acres for manure spreading (exclusive of setbacks from surface water courses, etc.).
[2] Must list correct Agricultural Capability Class and Subclass as determined by Published Manitoba Soil Survey Report or electronic data distributed by Manitoba Land Initiative website. Use the worst class manure will be spread on.
[3] As shown on the soil analysis report appended to this form. If soil analysis reports are not available at the time of submitting the form, they **must** be forwarded to Manitoba Sustainable Development 14 days **before** application of manure to allow for processing.
[4] Indicate the recommended nitrogen (N) application rate suggested by the soil fertility guide or soil analysis report, whichever is lower.
[5] Indicate the crop removal rate of phosphate (P_2O_5) as determined by the most appropriate source of information.
[6] When soil test phosphorus levels are 60 ppm to 179 ppm manure may be applied at a rate of up to 5 times the annual crop removal rate of P_2O_5. Schedule D must be completed when using a multi-year option.
[7] Choose one of the following and put the corresponding letter on the form: **A**. Broadcast and incorporate after 2 days, **B**. Broadcast + Incorporate after 3 days. **C**. Broadcast and incorporate within 2 days. **D**. Broadcast and no incorporation. **E**. Broadcast and no incorporation on forages. **F**. Injection. **G**. Irrigation and incorporation within 3 days. **H**. Irrigation and no incorporation.
[8] As of January 1, 2008 Commercial and Off-farm Manure Applicators must be trained and Licenced with Manitoba Agriculture.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **4**
SAMPLE ID **NW 30-16-16**
FIELD NAME
COUNTY **16**
TWP **16** RANGE
SECTION **30** QTR **NW** ACRES **0**
PREV. CROP **Canola-bu**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB **R0K 0H0**

REF # **19427701** BOX # **0**
LAB # **NW84929**

Date Sampled **09/12/2017** Date Received **09/26/2017** Date Reported **9/28/2017**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" / 6-24" Nitrate	24 lb/ac / 18 lb/ac	********			
0-24" Nitrate	42 lb/ac				
Phosphorus	Olsen 22 ppm	******	******	******	******
Potassium	190 ppm	******	******	******	******
0-24" Chloride	20 lb/ac	********			
0-6" / 6-24" Sulfur	24 lb/ac / 54 lb/ac	******	******	******	******
Boron	0.5 ppm	*******			
Zinc	2.60 ppm	******	******	******	******
Iron	121.0 ppm	******	******	******	******
Manganese	22.2 ppm	******	******	******	******
Copper	1.84 ppm	******	******	*******	*
Magnesium	387 ppm	******	******	******	******
Calcium	2441 ppm	******	******	******	******
Sodium	29 ppm	****			
Org Matter	4.1 %	******	******	****	
Carbonate(CCE)	0.6 %	****			
0-6" / 6-24" Sol. Salts	0.29 mmho/cm / 0.22 mmho/cm	*******	*		

1st Crop Choice		
Canola-bu		
YIELD GOAL		
55 BU		
SUGGESTED GUIDELINES		
Band		
LB/ACRE		APPLICATION
N	151	
P_2O_5	10	Band (Starter)*
K_2O	0	
Cl		Not Available
S	15	Band
B	1	Broadcast
Zn	0	
Fe	0	
Mn	0	
Cu	0	
Mg	0	
Lime	0	

2nd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
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" 6.1 6-24" 6.4		16.0 meq	(65-75) 76.1	(15-20) 20.1	(1-7) 3.0	(0-5) 0.8	(0-5)

General Comments: Coarse Loams (CEC range = 11 to 20) (Medium)

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 = 25 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Section F -Certification of Manure Management Plan

This plan must be certified by the person who prepares it. Select the appropriate box.

Plan prepared by:

☐ **Operator**

I hereby certify the information contained in this plan is true and believe this plan complies with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of The Environment Act.

_____ Date: _____

Signature of the operator

☑ **Other**[1]

I hereby certify the information contained in this plan is true and believe this plan complies with the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of The Environment Act.

I meet the requirements to prepare manure management plans in accordance with Section 13(7) of M.R. 42/98.

BLAINE SANGSTER

Name of person preparing the plan on behalf of the operator

Address: 629 4TH AVE.

CARBERRY, MB R0K 0H0

Contact number: 204-570-0319

MIA #[2]/CCA #: 26200

Blaine Sangster Digitally signed by Blaine Sangster DN: cn=Blaine Sangster, o=Redberry Farm Services, ou= email=bsangster@redberry.ca, c=CA Date: 2017.06.16 15:38:03 -05'00'

Signature

Date: June 16/17

[1]Must meet the requirements to prepare manure management plans as per Section 13(7) of M.R. 42/98.
[2]If exempt from registration with MIA for the purposes of preparing manure management plans, enter 0000.

Certain livestock operations in Manitoba are required under Section 13(1) of the Livestock Manure and Mortalities Management Regulation (M.R. 42/98) of *The Environment Act*, to submit an annual manure management plan to Manitoba Sustainable Development. The plan must be submitted by **July 10** for fertilization programs beginning in the fall, or by **February 10** for fertilization programs beginning in the spring. Late submissions are subjected to $100 (+ 5% GST) administration fee.

Note: Confirmation of manure spreading including legal land description, actual application rates, analysis of manure, field maps, manure applicator licence # (if applicable), must be submitted after manure is spread. Additional plans will not be registered unless this information is received by Manitoba Sustainable Development.

Forms and other relevant information can be accessed online at
http://www.gov.mb.ca/conservation/envprograms/livestock

REPORTING FORM
MONITORING WELL SAMPLING

Note: This form should be used to report manure storage facility monitoring well results. If you are reporting source water results, please refer to Information Bulletin 2004-01E.

Facility Reference Number (permit or registration #): 4291-LS

Name of Operation: Coolspring colony

Mailing Address: box 1015

minnedosa m.b. Postal Code ROJ-1EO

Location of Operation: SW 24-16-17

Qtr Sec Twp Rge E/WPM or River Lot/Parish

Rural Municipality: MINTO/ODANAH

Name of Contact: Josh Waldner

Contact Numbers: 204 867-7243

Business Residence Cellular Facsimile

Sampling Date: dec 14 2017

Well #	Water Depth To Top Of Well Casing (inches)	Ground Surface To Top Of Well Casing (inches)	Depth Of Water Level To Ground Surface (inches)

REMEMBER TO ATTACH ANALYTICAL RESULTS!

Please submit form and analytical results to: Technical Review Officer, Manitoba Conservation and Water Stewardship, 1007 Century Street, Winnipeg, MB R3H 0W4 Fax (204) 948-2420, SourceWater@gov.mb.ca

Proprietary (confidential) information will be protected in accordance with Manitoba law.
Personal information is collected under the authority of *The Environment Act*, the *Livestock Manure and Mortalities Management Regulation*, and will be used for administration and enforcement purposes. Information collected is protected by the privacy provisions of *The Freedom of Information and Protection of Privacy Act*. If you have any questions, contact the Access & Privacy Coordinator, Box 85, 200 Saulteaux Crescent, Winnipeg MB R3J 3W3; 1-204-945-4170.

BLAINE SANGSTER 204-834-3356

12 - 1329 Niakwa Rd. E.
Winnipeg, Manitoba R2J 3T4
Tel: (204) 255-97
Fax: (204) 255-9
Toll Free: 1 800 6

L2035531-COFC

Chain of Custody / Analytical Request Form
CHEMISTRY INFO: (204) 255 9739
MICRO INFO: (204) 255 9740 OR (204) 255 9737

WORK ORDER NO:

FOR LABORATORY USE
Sample Condition Upon Re ...TABLE
☐ Frozen ☐ Cold ☐ Ambient ☐ Broken ☐ Leakage ☐ Incorrect Sample Container
COMMENT: 16.4

LAB NO.: L2035531
DATE RECEIVED: 14/12/17
TIME RECEIVED: 2:10
BY: AAL

Date Sampled: 14 DEC 17 Time: 10 : 00 A.M. ☒ P.M. ☐
Date Required:

Location: Cool Spring Colony (Town, Community, City)
Submitter's Name Printed: COOL SPRING COLONY
Sample Submitted By: BLAINE SANGSTER

Community Code Number:
Rural Municipality/LGC/UVD: RM Minto-Odanah

SAMPLE TYPE
DRINKING WATER
☐ Untreated Well
☐ Treated Well
☐ Treated Municipal
☐ Non-Treated Municipal
☐ Water-Surface-Raw
☐ Water-Surface-Treated

PURPOSE OF TEST
☐ Private ☐ Real Estate ☐ Water Main

PLEASE PRINT & PRESS FIRMLY
NON-DRINKING WATER
☐ Sewage/Waste Water
☐ Lake/River
☐ Swimming Pool
☐ Whirl Pool
☐ Other

NOTES & CONDITIONS
1. Quote number must be provided to insure proper pricing.
2. Failure to properly complete all portions of this form may delay analysis.
3. ALS's liability limited to cost of analysis.

SERVICE REQUESTED
☐ REGULAR ☐ PRIORITY (50% SURCHARGE) ☐ EMERGENCY (100% SURCHARGE)

LAB NUMBER	SAMPLE IDENTIFICATION
	COOL SPRING

ALS CUSTOMER #: QUOTE #:

REPORT TO BE SENT TO
NAME: BLAINE SANGSTER
COMPANY: REDFERN FARM SERVICES
ADDRESS: BOX 930
CITY/TOWN: CARBERRY / PROV.: MB
POSTAL CODE: R0K0H0
PHONE: 204 834 3356
BY: MAIL ☐ FAX ☒ 204-834-3558 (FAX NUMBER)
PICKUP ☐ E-MAIL ☒ bsangster@redferns.ca (EMAIL ADDRESS)

CC
NAME:
ADDRESS:
CITY/TOWN: / PROV.:
POSTAL CODE:
PHONE:
BY: MAIL ☐ FAX ☐ (FAX NUMBER)
PICKUP ☐ E-MAIL ☐ (EMAIL ADDRESS)

Analyses required FOR MANURE MANAGEMENT WA7

BILLING ADDRESS SAME AS REPORT TO ☒
NAME:
COMPANY:
ADDRESS:
CITY/TOWN: / PROV.:
POSTAL CODE:

PAYMENT PARTICULARS
☒ INVOICE NEEDED / CLIENT'S P.O. NO. CARBERRY
☐ INTERAC
☐ CHEQUE
☐ VISA / MASTERCARD
Subtotal $
G.S.T. $
Total $
* OUR POLICY IS NOT TO ACCEPT SAMPLES FROM THE PRIVATE CITIZEN WITHOUT PREPAYMENT

SAMPLING INSTRUCTIONS ON REVERSE SIDE

Manitoba Technology Centre Ltd.
Part of the **ALS Laboratory Group**
12 - 1329 Niakwa Rd. E., Winnipeg, MB Canada R2J 3T4
Phone: +1 204 255 9720 Fax: +1 204 255 9721 **www.alsglobal.com**
A Campbell Brothers Limited Company

SUBMITTER COPY

ENTERED IN LIMS BY:

Redfern Farm Services - Carberry
ATTN: BLAINE SANGSTER
PO Box 930
Carberry MB R0K 0H0

Date Received: 14-DEC-17
Report Date: 19-DEC-17 11:23 (MT)
Version: FINAL

Client Phone: 204-834-3356

Certificate of Analysis

Lab Work Order #: L2035531
Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers:
Legal Site Desc: RM MINTO ODANAH

Hua Wo
Chemistry Laboratory Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2035531-1 COOL SPRING							
Sampled By: BS on 14-DEC-17 @ 10:00							
Matrix: WATER							
Manure Monitoring Well							
Ammonia by colour							
Ammonia, Total (as N)	2.28		0.10	mg/L		16-DEC-17	R3915830
Chloride in Water by IC							
Chloride (Cl)	3.1		1.0	mg/L		15-DEC-17	R3915716
Conductivity							
Conductivity	1240		1.0	umhos/cm		15-DEC-17	R3914970
Nitrate in Water by IC							
Nitrate (as N)	<0.040	DLM	0.040	mg/L		15-DEC-17	R3915716
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		19-DEC-17	
Nitrite in Water by IC							
Nitrite (as N)	<0.020	DLM	0.020	mg/L		15-DEC-17	R3915716

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CL-IC-N-WP	Water	Chloride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-N-WP	Water	Nitrite in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-IC-N-WP	Water	Nitrate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

ALS Environmental

Quality Control Report

Workorder: L2035531 Report Date: 19-DEC-17

Client: Redfern Farm Services - Carberry
PO Box 930
Carberry MB R0K 0H0

Contact: BLAINE SANGSTER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WP	Water							
Batch R3915716								
WG2685039-2 LCS								
Chloride (Cl)			100.7		%		90-110	15-DEC-17
WG2685039-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	15-DEC-17
EC-WP	Water							
Batch R3914970								
WG2686091-8 LCS								
Conductivity			99.6		%		90-110	15-DEC-17
WG2686091-6 MB								
Conductivity			<1.0		umhos/cm		1	15-DEC-17
NH3-COL-WP	Water							
Batch R3915830								
WG2685831-6 LCS								
Ammonia, Total (as N)			99.0		%		85-115	16-DEC-17
WG2685831-5 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	16-DEC-17
NO2-IC-N-WP	Water							
Batch R3915716								
WG2685039-2 LCS								
Nitrite (as N)			101.1		%		90-110	15-DEC-17
WG2685039-1 MB								
Nitrite (as N)			<0.010		mg/L		0.01	15-DEC-17
NO3-IC-N-WP	Water							
Batch R3915716								
WG2685039-2 LCS								
Nitrate (as N)			101.1		%		90-110	15-DEC-17
WG2685039-1 MB								
Nitrate (as N)			<0.020		mg/L		0.02	15-DEC-17

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Spreading Confirmation Sheet

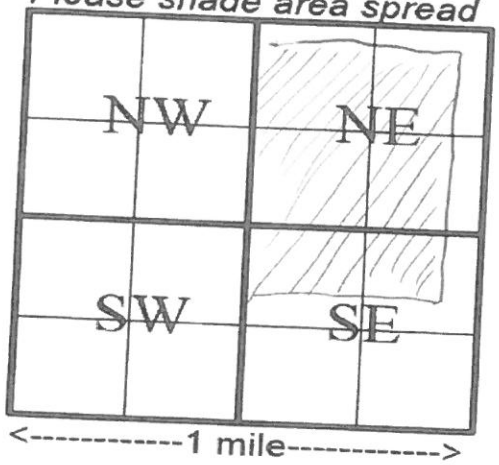
Chicken

- Spreading Confirmation Sheet must be submitted AFTER spreading to confirm manure application details.
- Subsequent plan will not be registered unless Spreading Confirmation Sheets for all applied fields are received.

Operation Name Cool Spring Colony

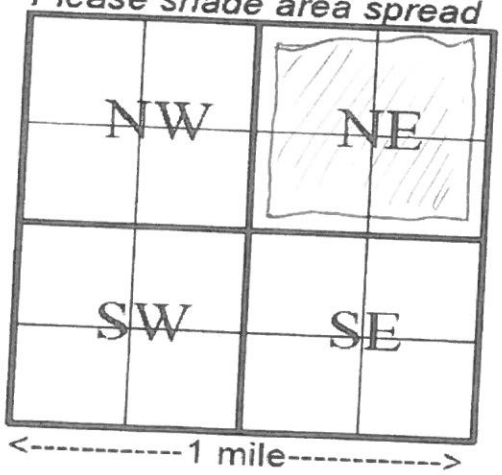
MMP Receipt # 2018-4291-5

Please shade area spread



Legal Description	E½ 17-16-17
Field ID (optional)	22
Area Spread (ac)	300
Application Date (Month/Day/Year)	Oct 26 / 2017
Application Rate* Imp gal/ac **or** ton/ac	5 Ton
Manure Analysis**	32.9 lb/1000 Imp gal avail N **or** lb/ton
	18.3 lb/1000 Imp gal P_2O_5 **or** lb/ton
Proposed Crop	Canola

Please shade area spread



Legal Description	NE 30-16-16
Field ID (optional)	4
Area Spread (ac)	160
Application Date (Month/Day/Year)	Oct 26 / 2017
Application Rate* gal/ac (imp) **or** ton/ac	4.5 Ton
Manure Analysis**	32.9 lb/1000 Imp gal avail N **or** lb/ton
	18.3 lb/1000 Imp gal P_2O_5 **or** lb/ton
Proposed Crop	Canola

* To convert US gallons to Imperial gallons, multiply US gal by 0.83 (i.e. Imp gal = US gal X 0.83)
** To convert manure phosphorus (P) to phosphate (P_2O_5), multiply P by 2.3 (i.e. P_2O_5 = P X 2.3)

If manure was not applied to any fields, state the reason in the space provided below:

Signature [signature]

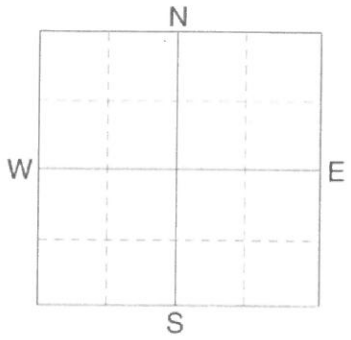
Date Nov 15 / 2017

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **4**
SAMPLE ID **NW 30-16-16**
FIELD NAME
COUNTY **16**
TWP **16** RANGE
SECTION **30** QTR **NW** ACRES **0**
PREV. CROP **Canola-bu**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # **19427701** BOX # **0**
LAB # **NW84929**

Date Sampled **09/12/2017** Date Received **09/26/2017** Date Reported **6/11/2018**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 6-24" Nitrate	24 lb/ac 18 lb/ac	********			
0-24''	42 lb/ac				
Olsen Phosphorus	22 ppm	**********	**********	**********	**********
Potassium	190 ppm	**********	**********	**********	**********
0-24'' Chloride	20 lb/ac	********	**		
0-6" 6-24" Sulfur	24 lb/ac 54 lb/ac	**********	**********	******	**********
Boron	0.5 ppm	********	*		
Zinc	2.60 ppm	**********	**********	**********	**********
Iron	121.0 ppm	**********	**********	**********	**********
Manganese	22.2 ppm	**********	**********	**********	**********
Copper	1.84 ppm	**********	**********	**********	*
Magnesium	387 ppm	**********	**********	**********	**********
Calcium	2441 ppm	**********	**********	**********	**********
Sodium	29 ppm	****			
Org.Matter	4.1 %	**********	**********	****	
Carbonate(CCE)	0.6 %	****			
0-6" 6-24" Sol. Salts	0.29 mmho/cm 0.22 mmho/cm	******** *****			

1st Crop Choice		
Canola-bu		
YIELD GOAL		
55 BU		
SUGGESTED GUIDELINES		
Broadcast		
LB/ACRE		APPLICATION
N	151	
P_2O_5	0	
K_2O	0	
Cl		Not Available
S	20	Broadcast
B	1	Broadcast
Zn	0	
Fe	0	
Mn	0	
Cu	0	
Mg	0	
Lime	0	

2nd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
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" 6.1 6-24" 6.4		16.0 meq	(65-75) 76.1	(15-20) 20.1	(1-7) 3.0	(0-5) 0.8	(0-5)

General Comments: Coarse Loams (CEC range = 11 to 20) (Medium)

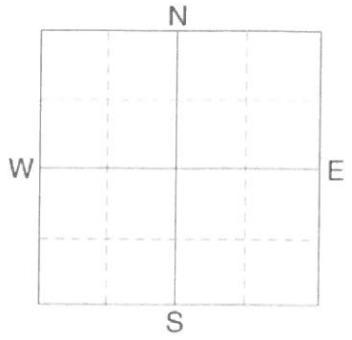
Crop 1: ** Chloride yield data is limited for this crop. Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 25 AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **15**
SAMPLE ID **S1/2 18-16-16**
FIELD NAME
COUNTY **16**
TWP **16** RANGE
SECTION **18** QTR **S1/2** ACRES **0**
PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # **19427702** BOX # **0**
LAB # **NW84934**

Date Sampled **09/12/2017** Date Received **09/26/2017** Date Reported **6/11/2018**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 14 lb/ac 6-24" 6 lb/ac 0-24" 20 lb/ac Nitrate		****			
Olsen Phosphorus	31 ppm	**********	**********	**********	**********
Potassium	203 ppm	**********	**********	**********	**********
0-24" Chloride	20 lb/ac	********			
0-6" 18 lb/ac 6-24" 30 lb/ac Sulfur		**********	**********	**********	
Boron	0.6 ppm	********	**		
Zinc	3.02 ppm	**********	**********	**********	**********
Iron	91.8 ppm	**********	**********	**********	**********
Manganese	13.3 ppm	**********	**********	**********	**********
Copper	1.66 ppm	**********	**********	**********	*
Magnesium	329 ppm	**********	**********	**********	****
Calcium	2334 ppm	**********	**********	**********	**********
Sodium	33 ppm	*****			
Org.Matter	4.0 %	**********	**********	*****	
Carbonate(CCE)	0.1 %	*			
0-6" 0.3 mmho/cm 6-24" 0.38 mmho/cm Sol. Salts		********	**		

1st Crop Choice		
Canola-bu		
YIELD GOAL		
55 BU		
SUGGESTED GUIDELINES		
Band		
LB/ACRE		APPLICATION
N	173	
P_2O_5	10	Band (Starter)*
K_2O	0	
Cl		Not Available
S	15	Band
B	1	Broadcast
Zn	0	
Fe	0	
Mn	0	
Cu	0	
Mg	0	
Lime	0	

2nd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
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" 6.0 6-24" 7.5		15.1 meq	(65-75) 77.4	(15-20) 18.2	(1-7) 3.5	(0-5) 1.0	(0-5)

General Comments: Coarse Loams (CEC range = 11 to 20) (Medium)

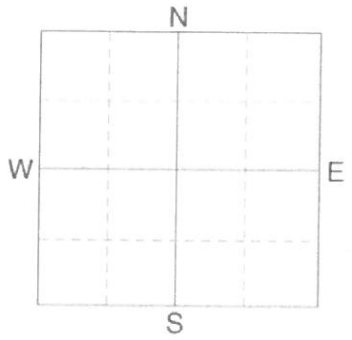
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 25 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **10**
SAMPLE ID **19-16-16**
FIELD NAME
COUNTY **16**
TWP **16** RANGE
SECTION **19** QTR ACRES **0**
PREV. CROP **Barley**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # **19427717** BOX # **0**
LAB # **NW89881**

Date Sampled **09/28/2017** Date Received **09/30/2017** Date Reported **6/11/2018**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
Nitrate	0-6" 4 lb/ac 6-24" 12 lb/ac 0-24" 16 lb/ac	***			
Phosphorus	Olsen 20 ppm	******	******	******	******
Potassium	210 ppm	******	******	******	******
Chloride	0-24" 20 lb/ac	********	**		
Sulfur	0-6" 18 lb/ac 6-24" 60 lb/ac	******	********	******	******
Boron	0.5 ppm	*******	*		
Zinc	2.87 ppm	******	******	******	******
Iron	83.1 ppm	******	******	******	******
Manganese	10.7 ppm	******	******	******	******
Copper	1.45 ppm	******	******	*******	**
Magnesium	402 ppm	******	******	******	******
Calcium	2699 ppm	******	******	******	******
Sodium	25 ppm	****			
Org.Matter	3.9 %	******	******	***	
Carbonate(CCE)	0.0 %				
Sol. Salts	0-6" 0.3 mmho/cm 6-24" 0.51 mmho/cm	*******	*		
		******	******		

1st Crop Choice		
Canola-bu		
YIELD GOAL		
60 BU		
SUGGESTED GUIDELINES		
Band		
LB/ACRE		APPLICATION
N	194	
P_2O_5	15	Band *
K_2O	0	
Cl		Not Available
S	15	Band
B	1	Broadcast
Zn	0	
Fe	0	
Mn	0	
Cu	0	
Mg	0	
Lime	0	

2nd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
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" 6.3 6-24" 7.3		17.5 meq	(65-75) 77.1	(15-20) 19.2	(1-7) 3.1	(0-5) 0.6	(0-5)

General Comments: Coarse Loams (CEC range = 11 to 20) (Medium)

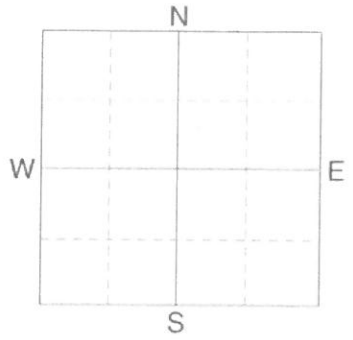
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 54 K2O = 27 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **6**
SAMPLE ID **SE22-16-17**
FIELD NAME
COUNTY **17**
TWP **16** RANGE
SECTION **22** QTR **SE** ACRES **0**
PREV. CROP **Barley**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # **19427718** BOX # **0**
LAB # **NW89882**

Date Sampled **09/28/2017** Date Received **09/30/2017** Date Reported **6/11/2018**

Nutrient In The Soil			Interpretation			
			VLow	Low	Med	High
Nitrate	0-6"	14 lb/ac				
	6-24"	18 lb/ac	******			
	0-24''	32 lb/ac				
Phosphorus	Olsen	43 ppm	******	******	******	******
Potassium		305 ppm	******	******	******	******
Chloride	0-24''	48 lb/ac	******	******	******	**
Sulfur	0-6"	20 lb/ac	******	******	**	
	6-24"	72 lb/ac	******	******	******	******
Boron		0.9 ppm	******	******	*	
Zinc		7.87 ppm	******	******	******	******
Iron		105.5 ppm	******	******	******	******
Manganese		7.4 ppm	******	******	******	******
Copper		1.81 ppm	******	******	******	**
Magnesium		503 ppm	******	******	******	******
Calcium		3869 ppm	******	******	******	******
Sodium		33 ppm	*****			
Org.Matter		6.8 %	******	******	******	******
Carbonate(CCE)		0.3 %	**			
Sol. Salts	0-6"	0.45 mmho/cm	******	*****		
	6-24"	0.44 mmho/cm	******	****		

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Canola-bu								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
60 BU								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	178		N			N		
P_2O_5	10	Band (Starter)*	P_2O_5			P_2O_5		
K_2O	0		K_2O			K_2O		
Cl		Not Available	Cl			Cl		
S	15	Band	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	0		Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" 6.4 6-24" 7.5		24.5 meq	(65-75) 79.1	(15-20) 17.1	(1-7) 3.2	(0-5) 0.6	(0-5)

General Comments: Fine Loams (CEC range 21 to 30) (Medium)

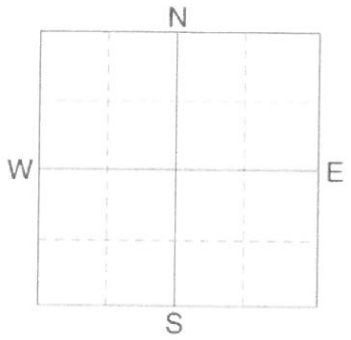
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 54 K2O = 27 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **1**
SAMPLE ID **S32-16-17**
FIELD NAME
COUNTY **17**
TWP **16** RANGE
SECTION **32** QTR **S** ACRES **0**
PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # **19427719** BOX # **0**
LAB # **NW89883**

Date Sampled **09/28/2017** Date Received **09/30/2017** Date Reported **6/11/2018**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
Nitrate	0-6" 20 lb/ac 6-24" 12 lb/ac 0-24" 32 lb/ac	******			
Phosphorus	Olsen 13 ppm	******	******	******	**
Potassium	152 ppm	******	******	******	******
Chloride	0-24" 24 lb/ac	******	***		
Sulfur	0-6" 26 lb/ac 6-24" 42 lb/ac	******	******	****	******
Boron	0.7 ppm	******	****		
Zinc	2.50 ppm	******	******	******	******
Iron	114.2 ppm	******	******	******	******
Manganese	16.0 ppm	******	******	******	******
Copper	0.81 ppm	******	******	******	
Magnesium	360 ppm	******	******	******	****
Calcium	3196 ppm	******	******	******	******
Sodium	21 ppm	***			
Org.Matter	4.6 %	******	******	******	
Carbonate(CCE)	0.6 %	****			
Sol. Salts	0-6" 0.58 mmho/cm 6-24" 0.53 mmho/cm	******	******	**	

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Canola-bu								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
55 BU								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	161		N			N		
P_2O_5	33	Band *	P_2O_5			P_2O_5		
K_2O	13	Band *	K_2O			K_2O		
Cl		Not Available	Cl			Cl		
S	15	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	0		Lime			Lime		

Soil pH	Buffer pH	Cation Exchange Capacity	% Base Saturation (Typical Range)				
			% Ca	% Mg	% K	% Na	% H
0-6" 6.5 6-24" 7.2		19.5 meq	(65-75) 82.1	(15-20) 15.4	(1-7) 2.0	(0-5) 0.5	(0-5)

General Comments: Coarse Loams (CEC range = 11 to 20) (Medium)

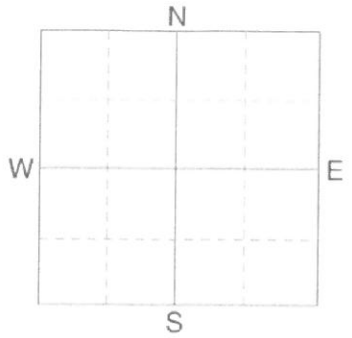
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 25 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **22**
SAMPLE ID **NE17-16-17**
FIELD NAME
COUNTY **17**
TWP **16** RANGE
SECTION **17** QTR **NE** ACRES **0**
PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # **19427720** BOX # **0**
LAB # **NW89884**

Date Sampled **09/28/2017** Date Received **09/30/2017** Date Reported **6/11/2018**

Nutrient In The Soil			Interpretation			
			VLow	Low	Med	High
Nitrate	0-6"	9 lb/ac	****			
	6-24"	12 lb/ac				
	0-24"	21 lb/ac				
Phosphorus	Olsen	18 ppm	******	******	******	******
Potassium		240 ppm	******	******	******	******
Chloride	0-24"	40 lb/ac	******	******	******	
Sulfur	0-6"	30 lb/ac	******	******	******	
	6-24"	102 lb/ac	******	******	******	******
Boron		0.8 ppm	******	*****		
Zinc		2.03 ppm	******	******	******	******
Iron		41.6 ppm	******	******	******	******
Manganese		2.9 ppm	******	******	******	**
Copper		0.99 ppm	******	******	******	
Magnesium		567 ppm	******	******	******	******
Calcium		3831 ppm	******	******	******	******
Sodium		22 ppm	***			
Org.Matter		6.1 %	******	******	******	******
Carbonate(CCE)		0.3 %	**			
Sol. Salts	0-6"	0.34 mmho/cm	******	**		
	6-24"	0.41 mmho/cm	******	****		

1st Crop Choice		
Canola-bu		
YIELD GOAL		
55 BU		
SUGGESTED GUIDELINES		
Band		
LB/ACRE		APPLICATION
N	172	
P_2O_5	19	Band *
K_2O	0	
Cl		Not Available
S	15	Band
B	1	Broadcast
Zn	0	
Fe	0	
Mn	0	
Cu	0	
Mg	0	
Lime		

2nd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
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" **7.2**		**24.6 meq**	(65-75) **77.9**	(15-20) **19.2**	(1-7) **2.5**	(0-5) **0.4**	(0-5)
6-24" **7.9**							

General Comments: Fine Loams (CEC range 21 to 30) (Medium)

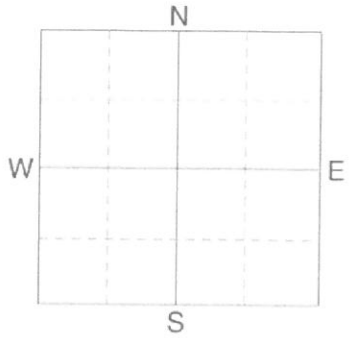
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 25 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **12**
SAMPLE ID **N15-16-17**
FIELD NAME
COUNTY **17**
TWP **16** RANGE
SECTION **15** QTR **N** ACRES **0**
PREV. CROP **Barley**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # **19427721** BOX # **0**
LAB # **NW89878**

Date Sampled **09/28/2017** Date Received **09/30/2017** Date Reported **6/11/2018**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
0-6" 6-24" Nitrate	11 lb/ac 18 lb/ac	******			
0-24" Nitrate	29 lb/ac				
Olsen Phosphorus	12 ppm	******	******	******	
Potassium	265 ppm	******	******	******	******
0-24" Chloride	48 lb/ac	******	******	******	**
0-6" 6-24" Sulfur	20 lb/ac 72 lb/ac	******	******	**	
		******	******	******	******
Boron	0.6 ppm	********	**		
Zinc	3.41 ppm	******	******	******	******
Iron	101.7 ppm	******	******	******	******
Manganese	12.1 ppm	******	******	******	******
Copper	1.27 ppm	******	******	******	**
Magnesium	442 ppm	******	******	******	******
Calcium	3234 ppm	******	******	******	******
Sodium	25 ppm	****			
Org.Matter	6.1 %	******	******	******	******
Carbonate(CCE)	0.2 %	*			
0-6" 6-24" Sol. Salts	0.23 mmho/cm 0.47 mmho/cm	******	******		

1st Crop Choice		
Canola-bu		
YIELD GOAL		
60 BU		
SUGGESTED GUIDELINES		
Band		
LB/ACRE		APPLICATION
N	181	
P_2O_5	39	Band *
K_2O	0	
Cl		Not Available
S	15	Band
B	1	Broadcast
Zn	0	
Fe	0	
Mn	0	
Cu	0	
Mg	0	
Lime	0	

2nd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
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" 6.0 6-24" 7.4		20.6 meq	(65-75) 78.3	(15-20) 17.8	(1-7) 3.3	(0-5) 0.5	(0-5)

General Comments: Fine Loams (CEC range 21 to 30) (Medium)

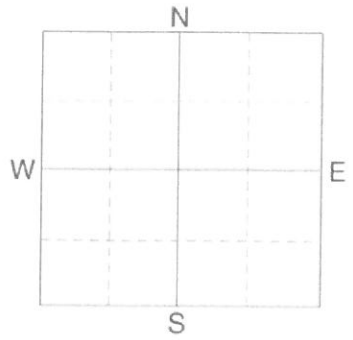
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 54 K2O = 27 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **13**
SAMPLE ID **N14-16-17**
FIELD NAME
COUNTY **17**
TWP **16** RANGE
SECTION **14** QTR **N** ACRES **0**
PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB R0K 0H0

REF # **19427722** BOX # **0**
LAB # **NW89879**

Date Sampled **09/28/2017** Date Received **09/30/2017** Date Reported **6/11/2018**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
Nitrate 0-6"	13 lb/ac				
Nitrate 6-24"	24 lb/ac				
Nitrate 0-24"	37 lb/ac	*******			
Phosphorus Olsen	40 ppm	******	******	******	******
Potassium	268 ppm	******	******	******	******
Chloride 0-24"	64 lb/ac	******	******	******	******
Sulfur 0-6"	24 lb/ac	******	******	****	
Sulfur 6-24"	54 lb/ac	******	******	******	******
Boron	0.7 ppm	******	****		
Zinc	5.80 ppm	******	******	******	******
Iron	75.1 ppm	******	******	******	******
Manganese	5.6 ppm	******	******	******	******
Copper	0.88 ppm	******	******	******	
Magnesium	332 ppm	******	******	******	***
Calcium	2986 ppm	******	******	******	******
Sodium	24 ppm	****			
Org.Matter	7.2 %	******	******	******	******
Carbonate(CCE)	0.3 %	**			
Sol. Salts 0-6"	0.19 mmho/cm	****			
Sol. Salts 6-24"	0.18 mmho/cm	****			

1st Crop Choice			2nd Crop Choice			3rd Crop Choice		
Canola-bu								
YIELD GOAL			YIELD GOAL			YIELD GOAL		
55 BU								
SUGGESTED GUIDELINES			SUGGESTED GUIDELINES			SUGGESTED GUIDELINES		
Band								
LB/ACRE		APPLICATION	LB/ACRE		APPLICATION	LB/ACRE		APPLICATION
N	156		N			N		
P_2O_5	10	Band (Starter)*	P_2O_5			P_2O_5		
K_2O	0		K_2O			K_2O		
Cl		Not Available	Cl			Cl		
S	15	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" 7.0 6-24" 7.7		18.5 meq	(65-75) 80.8	(15-20) 15.0	(1-7) 3.7	(0-5) 0.6	(0-5)

General Comments: Coarse Loams (CEC range = 11 to 20) (Medium)

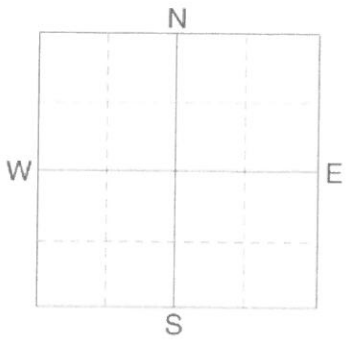
Crop 1: ** Chloride yield data is limited for this crop. * Caution: Seed Placed Fertilizer Can Cause Injury * Many crops may respond to a starter application of P & K even on high soil tests. Crop Removal: P2O5 = 50 K2O = 25 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Redfern FARM SERVICES

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

SOIL TEST REPORT

FIELD ID **16+17**
SAMPLE ID **S11+12-16-17**
FIELD NAME
COUNTY **17**
TWP **16** RANGE
SECTION **11** QTR **SEC 12 S** ACRES **0**
PREV. CROP **Wheat-Spring**



SUBMITTED FOR:
COOL SPRING COLONY

SUBMITTED BY: **RE3021**
REDFERN FARM-CARBERRY
629 4TH STREET
BOX 930
CARBERRY, MB **R0K 0H0**

REF # **19427723** BOX # **0**
LAB # **NW89880**

Date Sampled **09/28/2017** Date Received **09/30/2017** Date Reported **6/11/2018**

Nutrient In The Soil		Interpretation			
		VLow	Low	Med	High
Nitrate	0-6" 5 lb/ac 6-24" 12 lb/ac 0-24" 17 lb/ac	***			
Phosphorus	Olsen 9 ppm	**********			
Potassium	217 ppm	**********	**********	**********	**********
Chloride	0-24" 20 lb/ac	********	**		
Sulfur	0-6" 20 lb/ac 6-24" 60 lb/ac	**********	**********	**********	**********
Boron	0.5 ppm	********	**		
Zinc	0.62 ppm	**********	**********		
Iron	64.3 ppm	**********	**********	**********	**********
Manganese	11.8 ppm	**********	**********	**********	**********
Copper	0.85 ppm	**********	**********	**********	
Magnesium	461 ppm	**********	**********	**********	**********
Calcium	3389 ppm	**********	**********	**********	**********
Sodium	17 ppm	**			
Org.Matter	4.1 %	**********	**********	**********	
Carbonate(CCE)	0.4 %	**			
Sol. Salts	0-6" 0.44 mmho/cm 6-24" 0.46 mmho/cm	**********	**********		

1st Crop Choice		
Canola-bu		
YIELD GOAL		
55 BU		
SUGGESTED GUIDELINES		
Band		
LB/ACRE		APPLICATION
N	176	
P_2O_5	44	Band *
K_2O	0	
Cl		Not Available
S	15	Band
B	1	Broadcast
Zn	2	Band (Trial)
Fe	0	
Mn	0	
Cu	0	
Mg	0	
Lime	0	

2nd Crop Choice		
YIELD GOAL		
SUGGESTED GUIDELINES		
LB/ACRE		APPLICATION
N		
P_2O_5		
K_2O		
Cl		
S		
B		
Zn		
Fe		
Mn		
Cu		
Mg		
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" 6.7 6-24" 7.8		21.4 meq	(65-75) 79.1	(15-20) 17.9	(1-7) 2.6	(0-5) 0.3	(0-5)

General Comments: Fine Loams (CEC range 21 to 30) (Medium)

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 = 25 AGVISE Band guidelines will build P & K test levels to the medium range over many years.

Appendix G – Crop Rotation Table

CROP ROTATION TABLE

A	B	C	D	E
Expected Crops in the Rotation	**Acreage**	**Historical Yield**	**Units**	**Source of Yield Information**
Liberty Links (Canola)	1548	55	bu/ac	MASC Data
CPS Wheat	737	80	bu/ac	MASC Data
Feed Barley	1312	90	bu/ac	MASC Data
Red Spring Wheat	1513	60	bu/ac	MASC Data
Total Net Acreage for Manure Application	5110			

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.

Appendix H – Manitoba Agriculture Land Base Calculator

Manitoba Agriculture
Land Base Calculator

Colour Conventions:

Farm specific data can be entered in the yellow cells of each tab. Where appropriate, default values have been provided but can be changed.
Fixed data are provided in the grey cells of each tab.
Calculated values are shown in the green cells of each tab.
The land base required for nitrogen (N) and phosphorus (P2O5) are provided in the amber cells on tab 4.

Data Entry and Tab Information:

Enter the operation name on all of the livestock tabs (1a to 1e) associated with your farm.
Enter all of the livestock for your farm and associated data in the yellow cells under tabs 1a to 1e.
Enter all of the crop rotation data on tab 2. Long-term crop yield averages using MASC records are required for Provinical Technical Review Site Assessments.
Total nitrogen (N) and total phosphorus (P2O5) excreted by the livestock are summarized on tab 3.
Nutrient excretion, crop nutrient use and acres required for nitrogen (N) and phosphorus (P2O5) are summarized on tab 4.

For assistance, contact:

Clay Sawka, Nutrient Management Specialist, Manitoba Agriculture, (204) 750-3066
Petra Loro, Livestock Environment Specialist, Manitoba Agriculture, (204) 918-0325

Last revised October 16, 2018

1a - Pigs

Operation Name: **2-81 Holdings Co. Ltd.**

Operation Type	Storage Type	Volatilization	Animal Numbers (Places)	Average Animal Wt (lb)	N Excreted Per Herd Adjusted for Storage N Loss (lb/yr/herd)	P2O5 Excreted Per Herd Per Year (lb/yr/herd)
Boars (Purchased)	Liquid Uncovered Earthen	30%	0	465	0	0
			0			
Weanlings	Liquid Uncovered Earthen	30%	0	38	0	0
Growers/Finishers	Liquid Uncovered Earthen	30%	0	171	0	0
			0			
Sows, farrow to 6.2 kg	Liquid Uncovered Earthen	30%	0	n/a	0	0
Sows, farrow to 28 kg	Liquid Uncovered Earthen	30%	0	n/a	0	0
Sows, farrow to finish	Liquid Uncovered Earthen	30%	575	n/a	163083	86242

Last Revised April 26, 2018

1b - Beef

Operation Name:

Operation Type	Animal Category	Storage Type	Volatilization	Animal Numbers	Weight In (lb)	Weight Out (lb)	Average Animal Wt (lb)	Days per Cycle (Days)	Cycles per Year	Rate of Gain (lb/day)	Days Place is Occupied per Year (days)	P2O5 Excreted Per Herd Per Year (lb P2O5/year)
Cow Calf	Mature Cows and Bred Heifers, plus associated livestock	Field Storage	40%	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0
Feeder	Feedlot Cattle - long keep	Field Storage	40%	0	581	1300	941	240	1.0	3.00	240	0
Feeder	Feedlot Cattle - short keep	Field Storage	40%	0	975	1300	1138	116	1.0	2.80	116	0
Feeder	Backgrounders - pasture	Field Storage	40%	0	793	975	884	105	1.0	1.73	105	0
Feeder	Backgrounders - confined	Field Storage	40%	0	500	793	647	180	1.0	1.63	180	0

1c - Dairy

Operation Name:

Type	Storage Type	Volatilization	Animal Numbers	N Excreted Per Herd Adjusted for Storage N Loss (lb/yr/herd)	P2O5 Excreted per Herd Per Year (lb/yr/herd)
Mature Cows, plus associated livestock	Liquid Uncovered Earthen	30%	4	1043	554

Last revised August 20, 2014

1d -Sheep

Operation Name

Sheep/Operation Type	Storage Type	Volatilization	Animal Numbers	Weight In lb	Weight Out lb	Ave Weight lb	Days on Feed	Cycles per Year	N Excreted per Flock adjusted for Loss lb/flock/yr	P2O5 Excreted Per Flock lb/flock/yr
Ewes	Field Storage	40%	0	120	170	145	365	1	0	0
Replacement Ewes	Field Storage	40%	0	45	80	63	210	1	0	0
Rams	Field Storage	40%	0	100	200	150	365	1	0	0
Lambs	Field Storage	40%	0	8	45	27	70	1.4	0	0
Ewes, plus assoc livestock	Field Storage	40%	0	n/a	n/a	n/a	n/a	n/a	0	0
Feeder	Field Storage	40%	0	45	100	73	365	1	0	0

1e - Poultry

Operation Name:

Species / Commodity	Type of Operation	Storage Type	Volatilization	Bird Places	Weight In (lb)	Weight Out (lb)	Average Weight (lb)	Days on Feed	Cycles per Year	N Excreted Adjusted for N Loss lb/flock/yr	P2O5 Excreted lb/flock/yr
Chickens	Broilers	Field Storage	40%	96000	0.05	4.36	2.20	33	7.4	29748	33115
Chickens	Broiler Breeder Pullets	Field Storage	40%	0	0.05	4.40	2.23	140	2	0	0
Chickens	Broiler Breeder Hens	Field Storage	40%	0	4.40	8.67	6.53	273	1	0	0
Eggs	Layer Pullets	Liquid Covered	10%	0	0.05	3.04	1.54	133	2	0	0
Eggs	Layer Hens	Liquid Covered	10%	500	3.03	3.74	3.38	355	1	615	469
Eggs	Breeder Pullets	Liquid Covered	10%	0	0.05	3.04	1.54	133	2	0	0
Eggs	Breeder Hens	Liquid Covered	10%	0	3.03	3.74	3.38	351	1	0	0
Turkey	Broiler Hens (0-9 wks)	Field Storage	40%	400	0.06	12.39	6.22	63	4	271	287
Turkey	Hens (0-11 wks)	Field Storage	40%	0	0.06	16.46	8.26	77	3.5	0	0
Turkey	Heavy Hens (0-14 wks)	Field Storage	40%	0	0.06	21.19	10.62	98	3	0	0
Turkey	Light Toms (0-12 wks)	Field Storage	40%	0	0.06	21.19	10.62	84	3	0	0
Turkey	Toms (0-13 wks)	Field Storage	40%	0	0.06	26.84	13.45	91	3	0	0
Turkey	Heavy Toms (0-15 wks)	Field Storage	40%	0	0.06	30.29	15.18	105	2.5	0	0
Turkey	Breeding Hen Growers (0-30 wks)	Field Storage	40%	0	0.06	26.95	13.51	210	1	0	0
Turkey	Breeding Hens (30-60 wks)	Field Storage	40%	0	26.95	24.95	25.95	210	1	0	0
Turkey	Breeding Tom Grower (0-18 wks)	Field Storage	40%	0	0.06	33.92	16.99	126	2	0	0
Turkey	Breeding Tom Grower (0-30 wks)	Field Storage	40%	0	0.06	50.89	25.47	210	1	0	0
Turkey	Breeding Tom (30-60 wks)	Field Storage	40%	0	50.89	61.86	56.38	210	1	0	0

2 - Crop Rotation

Operation Name: **2-81 Holdings Co. Ltd.**

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		ton/ac	0	-	-	-
Barley Grain	0.42	0.97	1.39	lb/bu	76.9	bu/ac	1179	38079	87945	126024
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac	0	-	-	-
Canola	1.04	1.93	3.19	lb/bu	42.2	bu/ac	1716	75312	139761	231004
Corn Grain	0.44	0.97	1.53	lb/bu		bu/ac	0	-	-	-
Corn Silage	12.7	31.2	31.2	lb/ton		tons/ac	0	-	-	-
Dry Edible Beans	1.39	4.17		lb/cwt		cwt/ac	0	-	-	-
Fababeans	1.79	5.02	8.4	lb/cwt		cwt/ac	0	-	-	-
Flax	0.65	2.13	2.88	lb/bu		bu/ac	0	-	-	-
Grass Hay	10	34.2	34.2	lb/ton		tons/ac	0	-	-	-
Lentils	1.03	3.39	5.08	lb/cwt		cwt/ac	0	-	-	-
Oats	0.26	0.62	1.07	lb/bu		bu/ac	0	-	-	-
Pasture (grazed)	10	34.2	34.2	lb/ton	0.5	ton/ac	0	-	-	-
Peas	0.69	2.34	3.06	lb/bu		bu/ac	0	-	-	-
Potatoes	0.09	0.32	0.57	lb/cwt		cwt/ac	0	-	-	-
Rye	0.45	1.06	1.67	lb/bu		bu/ac	0	-	-	-
Soybeans	0.84	3.87	5.2	lb/bu		bu/ac	0	-	-	-
Sunflower	1.1	2.8		lb/cwt		cwt/ac	0	-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu	61.7	bu/ac	2215	80633	204998	288364
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac	0	-	-	-
						Total Acres	5110	194024	432705	645393
						Estimated Average Removal/Uptake (lb/ac)		38.0	84.7	126.3
						Acres in Hanover and La Broquerie	0			
						Proportion in Hanover or La Broquerie	0%			
						Additional Acres	0			
						Crop Planned on Additional Acres	0			
						Total Acreage	5110			

***Notes:** Enter the number of acres that are in the RM's of Hanover or La Broquerie in cell H26.
Additional acres include acres for which crop removal or soil data is limited or unavailable.

3 - Farm Excretion

Operation Name: **2-81 Holdings Co. Ltd.**

Species	Animal Category/Operation type	N (lb/year)	P2O5 (lb/year)
Pigs	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	163083	86242
Beef	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	Mature Cows, plus assoc livestock	1043	554
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	29748	33115
	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
Layers	Layer Pullets	0	0
	Layer Hens	615	469
	Breeder Pullets	0	0
	Breeder Hens	0	0
Turkeys	Broiler Hens (0-9 wks)	271	287
	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	**194760**	**120667**

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

4 - Land Base Summary	
Operation Name:	**2-81 Holdings Co. Ltd.**
Nutrients Excreted	**lbs**
Nitrogen	194760
Phosphorus (P2O5)	120667
Crop Nutrient Use	**lb/ac**
Crop N Uptake	126.3
Crop Phosphorus (P2O5) Removal	38.0
Operation-specific Phosphorus (P2O5) Credit	75.9
Land Available	5110
Land Base Required	**acres**
Acres for Nitrogen	**1542**
Acres for Phosphorus (P2O5)	**1589**
Phosphorus Balance	**acres**
Acres for Phosphorus Balance (1X)	**3178**

Last revised October 16, 2018

Appendix I – Conservation Data Centre Report

Kyla Dietrich

From: Murray, Colin (SD) <Colin.Murray@gov.mb.ca>
Sent: Wednesday, August 7, 2019 2:33 PM
To: Kyla Dietrich
Subject: Data request K Dietrich 20190807 SW SE-24-016-17W1

Hi Kyla
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. This includes the primary location: SW and SE-24-016-17W1; and a two kilometer radius buffer from the edge of the quarter section.

The information provided in this letter is based on existing data known to the Manitoba Conservation Data Centre (CDC) 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 and Fisheries Branch, Manitoba Sustainable Development.

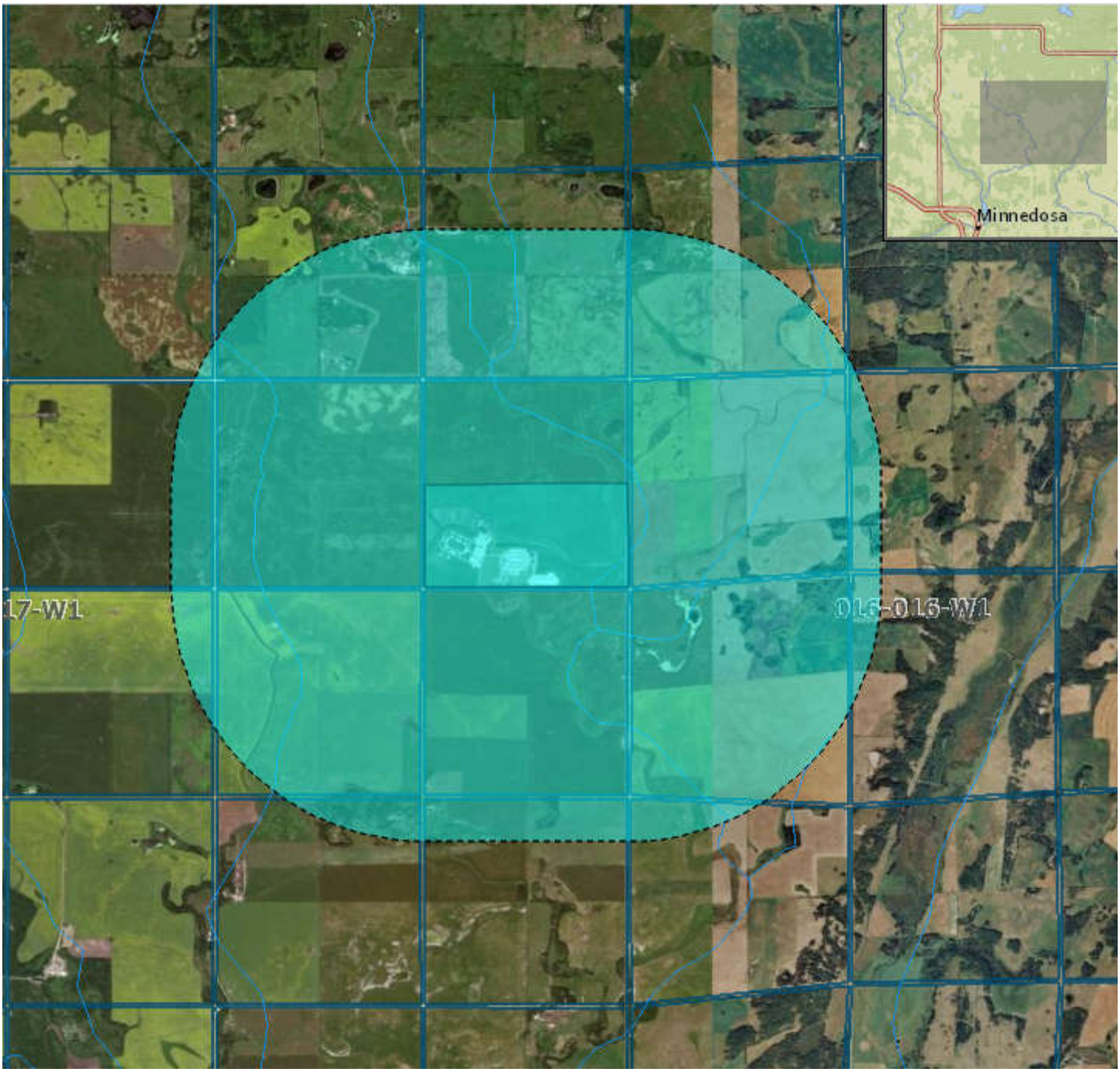
This letter is for information purposes only - it does not constitute consent or approval of the proposed project or activity, nor does it negate the need for any permits or approvals required by the Province of Manitoba.

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) 945-7760.

Colin

Reference screen clip:



Colin Murray
Information Manager
Manitoba Conservation Data Centre
Wildlife and Fisheries Branch
Department of Sustainable Development

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Winnipeg, Manitoba, R3J3W3
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http://www.gov.mb.ca/sd/cdc/index.html

-----Original Message-----
From: Friesen, Chris (SD) <Chris.Friesen@gov.mb.ca>
Sent: August-07-19 1:02 PM
To: Murray, Colin (SD) <Colin.Murray@gov.mb.ca>
Subject: FW: Conservation Data Centre Review
Importance: High

For your attention.