

Platinum Member - Canada's Best Managed Companies

Our Vision

We will be the BEST Canadian Food Company in the World

Core Values

- Teamwork
- Do What We Say, Say What We Do
- Open Door Policy
- Respecting People
- Respecting Animals
- Turning Challenges into Opportunities
- Empowering People
- Striving to be the Best
- Community Partners
- Get 'er Done
- Sustainable Profitability
- Work Hard, Play Hard
- Work Safe

Mission Statement

We take care of our employees, our customers and our communities.



January 7, 2019

Dear Neighbour / Resident,

Re: Proposed HyLife Livestock Development Project

HyLife is a company which started back in the 1994 as a collaboration of 2 family farm operations. Our head office is located in La Broquerie, Manitoba. Today, we are a fully integrated company that produces and sells high quality pork products around the world. While pork is our passion, we recognize that much of our success depends on our ability to produce a sustainable supply of quality pigs on the farm in our local communities.

HyLife has been operating in Western Manitoba since 2004; fully invested in the local communities with our livestock operations, local offices, feed mill and most importantly the many local people who work for us.

We dropped by today in the hopes of introducing ourselves and to discuss our preliminary HyLife nursery barn project with you.

While no formal application has been made yet, we want you to have a first-hand opportunity to learn more about the project which we hope to propose. Unfortunately, we missed you this time and look forward to getting in touch with you soon.

We would be happy to sit down with you should you have any questions.

Please contact me at (204) 355-7775 or Matt Reimer at (204) 392-8351 should you wish to arrange another time to meet.

Sincerely,

Sheldon Stott, HyLife Ltd.

Please attend our Public Open House on January 24th, from 1:00 - 8:00 pm at Boissevain Community Center, 468 South Railway Street, Boissevain, Manitoba for further information related to HyLife Ltd. and this proposed project.

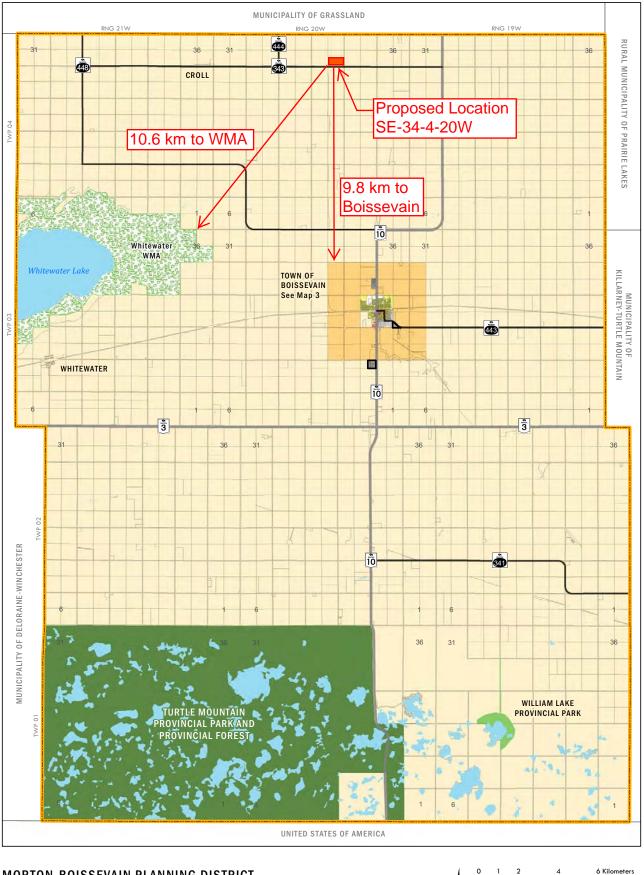


RM of Boissevain-Morton - Proposed Site









MORTON-BOISSEVAIN PLANNING DISTRICT

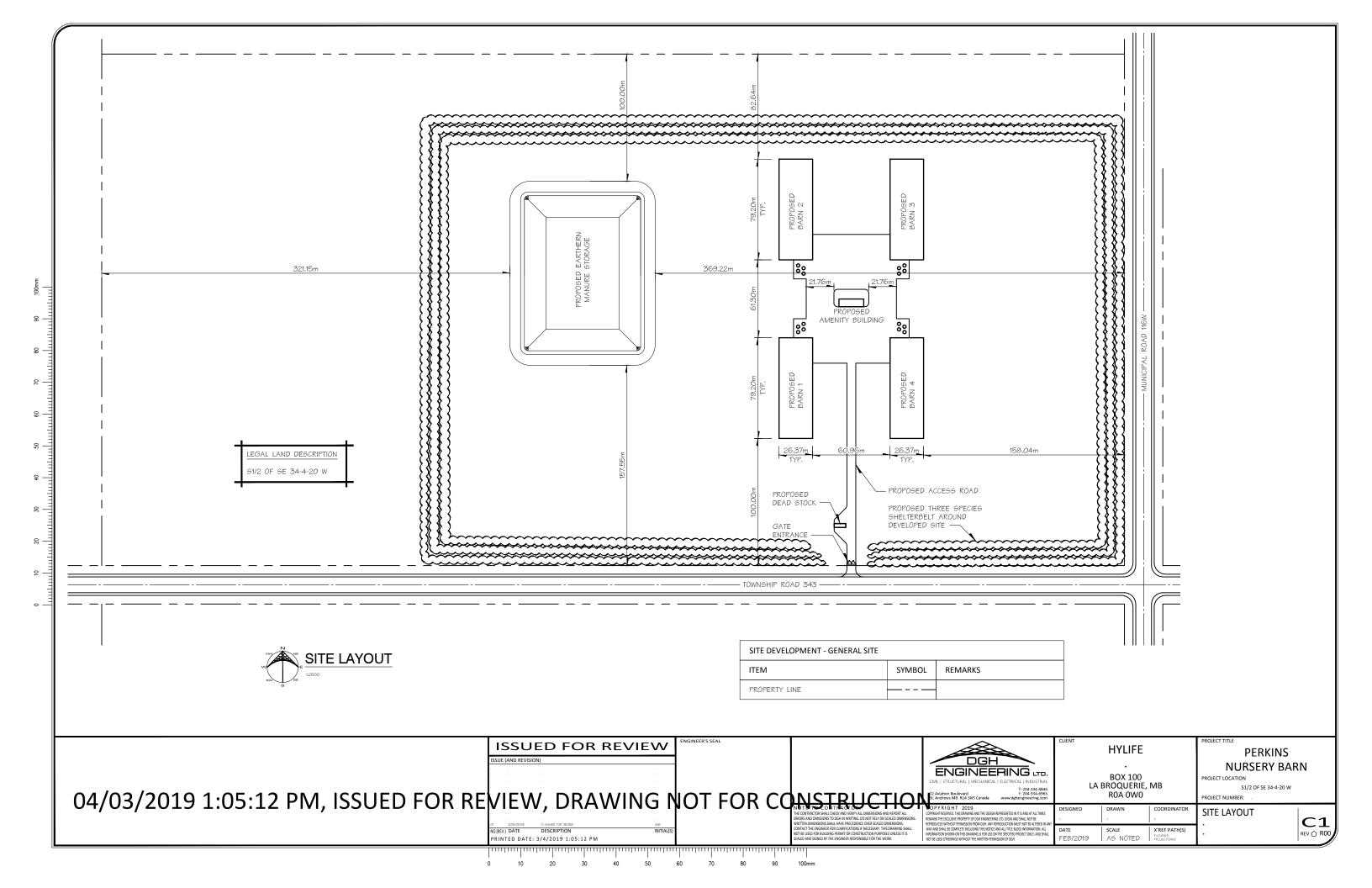
MAP 2 **RURAL LAND USE POLICY AREAS**





OFFICE CONSOLIDATION
UP TO AND INLCUDING
BY-LAW No. 2011-01
July 11, 2012





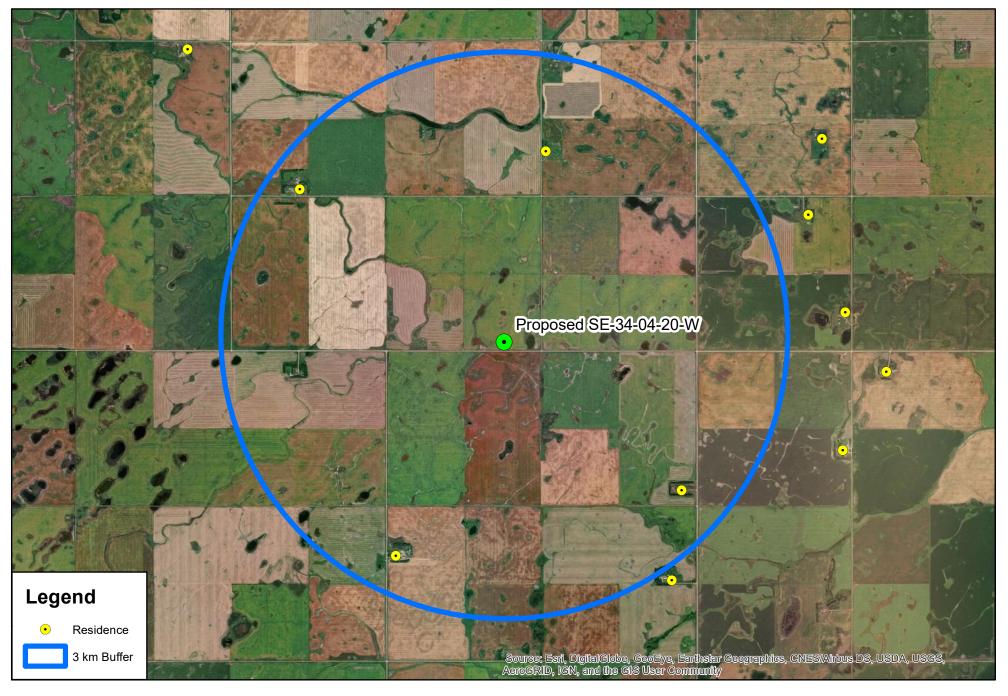
Proposed Site [SE-34-04-20-W] - Surface Drainage

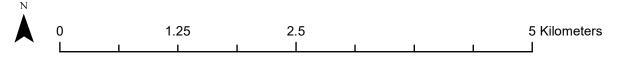






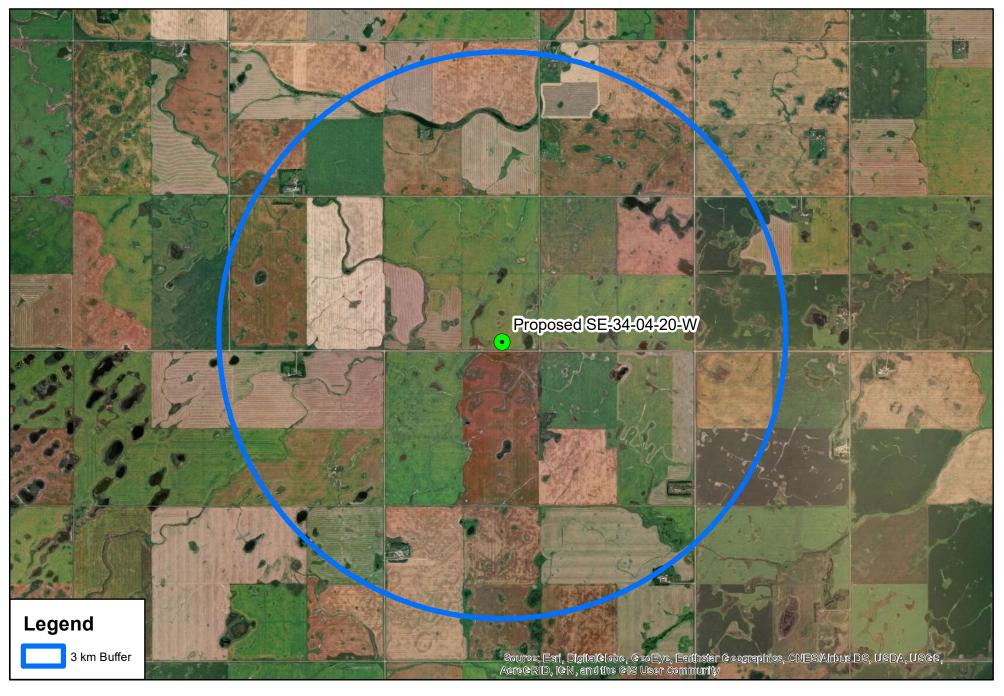
Proposed Site [SE-34-04-20-W] - Residence within 3km







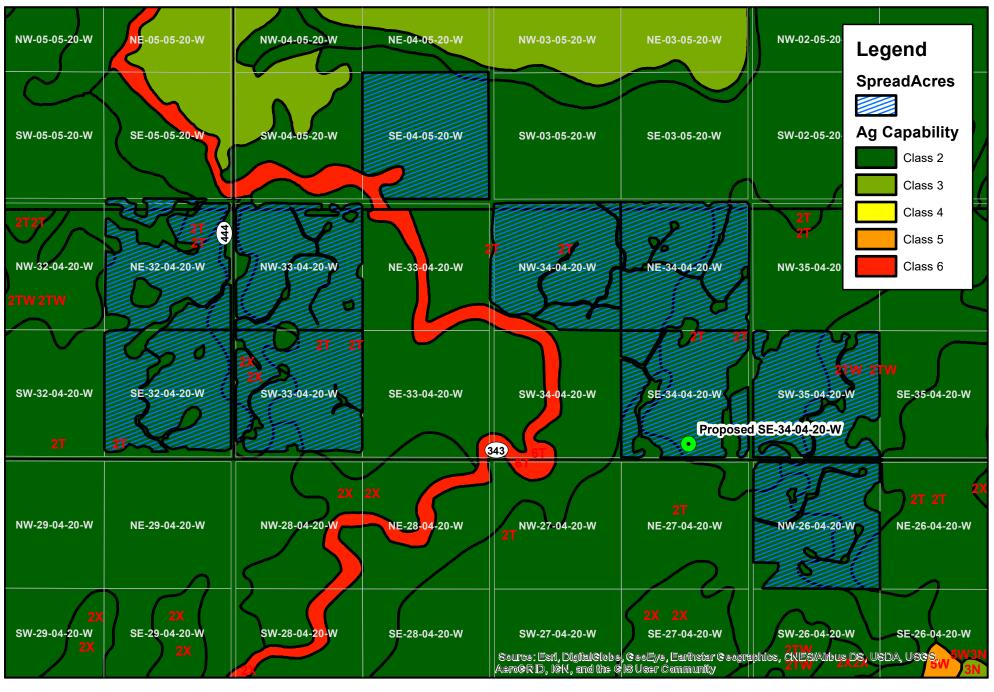
Proposed Site [SE-34-04-20-W] - Livestock Operations within 3km







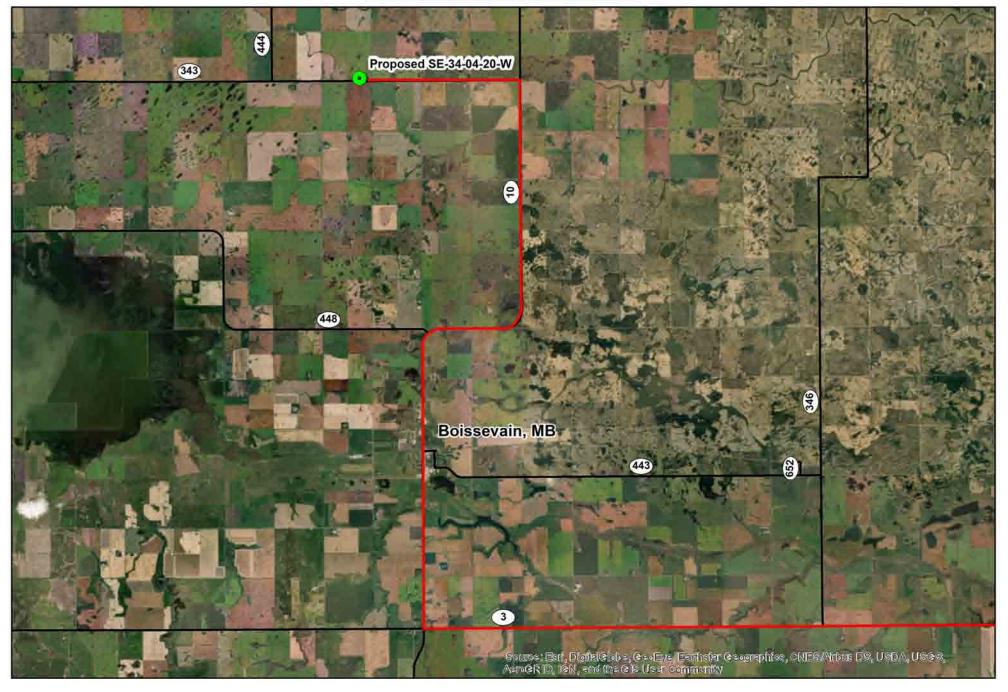
Proposed Site [SE-34-04-20-W] - Spread Acres & Ag Capability







Approved Truck Haul Route







Animal Units Calculator

			Current	Operation	Proposed	Operation
Α	В	С	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
	Mature cows (lactating and dry) including associated livestock	2		-		-
	Mature cows (lactating and dry)	1.35		-		-
	Heifers (0 to 3 months)	0.16		-		-
Dairy ³	Heifers (4 to 13 months)	0.41		-		-
	Heifers (> 13 months)	0.87		-		-
	Bulls	1.35		-		-
	Veal calves	0.13		-		-
	Beef cows including associated livestock	1.25		-		-
Beef	Backgrounder	0.5		-		-
веет	Summer pasture / replacement heifers	0.625		-		-
	Feeder cattle	0.769		-		-
	Sows - farrow to finish (234-254 lbs)	1.25		-		-
	Sows - farrow to weanling (up to 11 lbs)	0.25		-		-
Di	Sows - farrow to nursery (51 lbs)	0.313		-		-
Pigs	Boars (artificial insemination units)	0.2		-		-
	Weanlings, Nursery (11-51 lbs)	0.033		-	24,000	792
	Growers / Finishers (51-249 lbs)	0.143		-		-
	Broilers	0.005		-		-
	Roasters	0.01		-		-
Chickens	Layers	0.0083		-		-
Cnickens	Pullets	0.0033		-		-
	Broiler breeder pullets	0.0033		-		-
	Broiler breeder hens	0.01		-		-
	Broilers	0.01		-		-
Turkeys	Heavy Toms	0.02		-		-
	Heavy Hens	0.01		-		-
Horses	Mares	1.333		-		-
01	Ewes	0.2		-		-
Sheep	Feeder lambs	0.063		-		-
Other Livertee	Type:			-		-
Other Livestock	Type:			-		-
			Total Current:	-	Total Proposed:	79

Footnotes

For all other livestock or operation types please inquire with the Manitoba Agriculture Contacts



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.



Groundwater Exploration Permit

Pursuant to The Water Rights Act

Hylife Ltd.

is hereby permitted to construct a water well or wells on the following described lands to explore for groundwater in **SE 34-4-20 WPM** for **agricultural** purposes, subject, however, to the following conditions:

- The permittee must have legal access to the site where the exploration work and project wells are to be located.
- 2. This Authorization is not transferable or assignable to any other party.
- 3. Prior to undertaking any work or construction of any works authorized by this permit the permittee is required to retain the services of a hydrogeologist registered with Association of Professional Engineers and Geoscientists of Manitoba, who would be required to:
 - Plan and supervise the drilling of boreholes, test wells, production wells, observation wells and well
 pump testing as authorized by this permit.
 - Conduct a constant rate pumping test on proposed production well(s) in accordance with Form H (http://www.gov.mb.ca/conservation/waterstewardship/licensing/wlb/pdf/form_h_july_2013.pdf).
 - Conduct a recovery test for a period equal to pump test or 90% recovery.
 - Carry out an inventory of private and commercial wells within a 1600 m radius of the project well site.
 The inventory may need to be expanded based on the assessment of the expected area of water level drawdown impact resulting from future pumping.
 - Prepare and submit to the Water Use Licensing Section a technical report on drilling of boreholes and wells, pump testing of wells, well inventory and water quality sampling. The report would contain, but not limited to, such things as: well driller's reports for test wells, production wells; a plan showing the location of these wells on the property and/or GPS locations of the wells; an analysis of aquifer pumping tests; and calculations of transmissivity. The report would also indicate if any local wells are expected to be adversely affected by the proposed use of water and where these wells are located. Two copies of the report shall be submitted, one hardcopy and one digital copy.
- 4. During any purnping tests that may be conducted, pumping must cease immediately if any local water supplies are negatively impacted as a result of the tests. The permittee is also responsible to correct any water supply problems or provide temporary water supply to anyone whose water supplies are negatively impacted as a result of the tests.
- 5. This permit expires within twelve (12) months of the date of issuance.
- 6. Please note that diversion of water without a Water Rights Licence or written authorization would constitute a violation of The Water Rights Act and may be subject to enforcement.

Issued at the City of Winnipeg in the Province of Manitoba, this 28th day of November, A.D. 20 (8)

for The Honourable Minister of Sustainable Development

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 **		25	30	-
Bison		8	10	-
Horses				
Horses		8	11	-
Hogs				
Sow (Farrow/wean)		6	-	
Dry Sow/Boar		4	-	
Feeder			3	-
Nursery (33 lb.)	24,000	2	2	48,000
Chickens				
Broilers		0.0)35	-
Roasters/Pullets		0.	04	-
Layers		0.0)55	-
Breeders		0.	07	-
Turkeys				
Turkey Growers		0.	13	-
Turkey Heavies		0.	16	-
Sheep/Goats				
Sheep/Goats			2	-
Ewes/Does			3	-
Lambs/Kids (90 lb.)			.6	-
			(IG/day)	48,000
	***	TOTAL with 10	% wash water	52,800

^{*} For beet, 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.

Enter this number on page 7 of Application Form.

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

Other consumption:

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

Unit Conversions											
Total per day	Total per year	Unit									
52,800	19,272,000	IG									
218,208	79,645,920	litres									
0.218	80	cubic decametres (dam³)									

Enter this number on page 7 of Application Form.

Conversion Factor: 1 IGPM = 4.546 I/m

			Daily M	Manure Production		Production Period	Number of Animals		Total Manure Volume	
Animal Type (A)	Animal Sub-type (B)	References (C)	Manure Type (D)	Default Manure Production (ft ³ /animal/day) (E)	Operation Manure Production ¹ (ft ³ /animal/day) (F)	² (Days) (G)	³ (Capacity) (H)	Total Manure Volume (ft ³) (FxGxH)	for Semi-Solid and Liquid Manure (Imp Gal)	
			Semi-Solid 5	3.5				-	0.0	
	Free Stall		Solid	3.4				-		
- 4		T-bl- 0 50	Liquid ⁵	3.5				-	0.0	
Dairy (milking cows ⁴ and associated		Table 6, pg 59, FPGs for Dairy	Semi-Solid 5	3.6				-	0.0	
livestock)	Tie Stall	1995		Solid	3.5				-	
irrodiodity			Liquid ⁵	3.6				-	0.0	
	Loose Housing		Solid	3.0				-		
	Milking Parlour Manure and Washwater		Liquid	0.5						
	Beef cows including associated livestock		Solid	1.2				-		
Beef	Backgrounder (200 day)	pg 117, FPGs for	Solid	0.73				-		
Deel	Summer pasture / replacement heifers	Hogs 1998	Solid	0.85				-		
	Feeder cattle		Solid	1.1				-		
	Sows - farrow to finish (234 - 254 lbs)		Liquid	2.3				-	0.0	
	Sows - farrow to wean (up to 11 lbs)	MAFRI website,	Liquid	0.8				-	0.0	
Pigs	Sows - farrow to nursery (51 lbs)	FPGs for Pigs	Liquid	1				-	0.0	
	Weanlings, Nursery (11 - 51 lbs)	2007	Liquid	0.1	0.1	400.00	24,000	960,000.00	5,980,800.0	
	Grower / Finisher (51 - 249 lbs)		Liquid	0.25				-	0.0	
				Yearly Manure Produ	ıction			Total Manure	Total Manure Volume	
Animal Type	Type of Operation			nure Production r/bird space)	Operation Manure Production ¹ (ft³/year/bird space)	Production Period ² (Days)	Number of Birds ³ (Capacity)	Volume (ft ³) (F/365xGxH)	for Semi-Solid and Liquid Manure (Imp Gal)	
	Broilers – floor ⁶			1.23				-		
	Broiler breeder hens ⁷]		2.3				-		
	Broiler breeder pullets ⁶			0.99				-		
	Roasters – floor ⁶	T.I. 0 05		1.16				-		
Chickens	Layers – cage ⁸	Table 3, pg 85, FPGs for Poultry		2.33				-	0.0	
Chickens	Layers – floor ⁷	2000		1.68				-		
	Layers – solid pack ⁹	1						-		
	Pullets – cage ⁸]		0.71				-	0.0	
	Pullets – floor ⁶]		0.75				-		
	Pullets – solid pack ⁹	<u> </u>						-		
	Broilers ⁶	Table 3, pg 85,		2.83				-		
Turkeys	Heavy toms ⁶	FPGs for Poultry		5.58				-		
	Heavy hens ⁶	2000	3.32					-		

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

Instructions and footnotes:

¹ ENTER the manure production estimate for your operation. If no estimate is available, use the default value provided in colum E. References for default daily and yearly manure production are provided in column C.

² ENTER the number of days worth of manure that will be produced. For earthen manure storage facilities the minimum storage requirement is 400 days. For steel and concrete manure storage facilities the minimum storage requirement is 250

 $^{^{3}}$ ENTER the total number of animals or birds that the operation can hold (e.g. barn or feedlot capacity).

⁴ Milking cows includes all lactating and dry cows.

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

⁶ 2 inches of wood shavings or 4 inches of straw placed on floor. Manure and litter removed from barn at 25% moisture content, with a density of 20 lb/ft³

⁷ One-third litter floor, two-thirds slatted floor. Manure and litter removed from barn at 40% moisture content, with a density of 25 lb/ft³

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

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

If available, indicate the dimensions of any <u>proposed</u> manure storage facility (MSF) that will be used to store manure from the proposed project:

	Prop	osed Manu	ire Storage	Facility D	imensio	ons	Storage
CELL	Width	Length	Depth	Height (Above	Slope	(H:L)	Capacity (days)
CELL	.,, = 0.0==	8	P	Grade)	Inside	Outside	(days)
Primary	rimary 400 ft		14 ft	ft	1:4	1:5	401
Secondary	ft	ft	ft	ft			
Tertiary	ft	ft	ft	ft			
Circular Tank		Diameter	Height	Depth			
Circular	1 alik	ft	ft	ft			

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

The proposed site is rolling. The height of the EMS will be verified on site.



Manure Application Field Characteristics Table - Perkins

	А	В	С	D	E	F	G	Н	I	J
Field	Legal Description	Rural Municipality	O/C/L /A	Total Acreage	Setbacks	Net Acreage For Application	Ag Capability Class/Subclass	Soil Phos (0- 6" Olsen ppm)	Development Plan Designation	Zoning
1	SE-4-5-20-W	Grassland	Α	160	3	157	2T	7	Rural Policy Area	AG - Agricultural General
2	NE-32-04-20-W	Boissevain-Morton	Α	160	37	123	2T/2X	10	Agricultural Area	AG - Agricultural General
3	SE-32-04-20-W	Boissevain-Morton	Α	160	23	137	2T/2X	10	Agricultural Area	AG - Agricultural General
4	NW-33-04-20-W	Boissevain-Morton	Α	160	14	146	2T/2X	5	Agricultural Area	AG - Agricultural General
5	SW-33-04-20-W	Boissevain-Morton	Α	160	20	140	2T/2X	5	Agricultural Area	AG - Agricultural General
6	NW-34-04-20-W	Boissevain-Morton	Α	160	9	151	2T	8	Agricultural Area	AG - Agricultural General
7	NE-34-04-20-W	Boissevain-Morton	Α	160	5	155	2T	8	Agricultural Area	AG - Agricultural General
8	SE-34-04-20-W	Boissevain-Morton	Α	160	24	136	2T	9	Agricultural Area	AG - Agricultural General
9	SW-35-04-20-W	Boissevain-Morton	Α	160	24	136	2T/2TW	8	Agricultural Area	AG - Agricultural General
10	NW-26-04-20-W	Boissevain-Morton	Α	160	16	144	2T/2TW	9	Agricultural Area	AG - Agricultural General
11			Α	160						
12			Α	160						
13			Α	160						
14			Α	160						
15			Α	160						
16			Α	160						
17			Α	160						
18			Α	160						
19			Α	160						
20			Α	160						
							•			

Total Net Acreage for Manure Application 1425



Farm: PERKIN LAND & CATTLE CO.

Subfield: SE 4-5-20 W1

Report generated: 2018-11-20 07:39, season: 2019, scenario: Soybeans 2019

		Sample De	escription					M	acronutrien	ts		
Zone	Lab ID	Lab ID	Zone	Sample	Sample		NO ₃ -N		P - Olsen	K	so	₄ -S
	Surface	Sub Surface	Acres	Depth	Depth	lb/Ac Surf	lb/Ac Sub	Total lb/Ac	ppm	ppm	lb/Ac Surface	lb/Ac Sub
1	181010_054	181010_054	13	0-6	6-12	18	4	22	16	300	180	390
2	181010_054	181010_054	19	0-6	6-12	9	2	13	8	210	400	2000
3	181010_054	181010_054	29	0-6	6-12	12	6	18	5	360	140	2600
4	181010_054	181010_054	54	0-6	6-12	12	8	20	2	200	140	1800
5	181010_054	181010_054	29	0-6	6-12	13	2	16	3	290	310	1600
6	181010_054	181010_054	12	0-6	6-12	28	16	44	8	260	510	2100

	Macron	utrients			Cation I	Exchange a	nd Base Sa	turation		Texture
Zone	Ca	Mg	Na	CEC	Base Sat.	Ca	Na	K	Mg	Texture
	ppm	ppm	ppm	meq/100g	%	%	%	%	%	
1	5600	970	42	37.1	100.0	75.9	0.5	2.0	21.5	
2	5500	980	59	36.5	100.0	75.6	0.7	1.5	22.2	
3	5900	690	34	36.2	100.0	81.3	0.4	2.5	15.7	
4	5400	850	65	34.7	100.0	77.7	0.8	1.5	20.0	
5	5400	830	76	34.7	100.0	77.3	0.9	2.1	19.6	
6	4500	770	62	29.9	100.0	75.7	0.9	2.2	21.2	

			Micron	utrients				Soil Quality					
Zone	Cu	Fe	Mn	Zn	В	С	:I	pH(1:2)		EC(Sat. Paste Equiv.)		ОМ	
	ppm	ppm	ppm	ppm	ppm	lb/Ac Surface	lb/Ac Sub	Surface	Sub Surface	dS/m Surf	dS/m Sub	%	
1	0.8	12.0	2.1	0.9	0.5	23	31	8.3	8.4	0.78	1.10	5.9	
2	0.8	9.0	2.3	0.6	0.6	18	66	8.2	8.3	1.00	3.04	4.6	
3	0.6	7.9	1.9	0.7	0.6	13	33	8.3	8.2	0.58	3.38	5.9	
4	0.7	15.3	2.5	1.2	0.4	19	56	8.1	8.4	0.66	2.42	4.8	
5	0.7	11.6	2.3	0.7	0.5	18	96	8.1	8.4	1.00	2.80	5.6	
6	0.6	22.3	4.9	1.0	0.8	19	86	7.8	8.4	1.46	2.98	6.0	



Farm: PERKIN LAND & CATTLE CO.

Subfield: W 33-4-20 W1

Report generated: 2018-11-20 07:39, season: 2019, scenario: Soybeans 2019

		Sample De	escription					M	acronutrien	ts		
Zone	Lab ID	Lab ID	Zone	Sample	Sample		NO ₃ -N		P - Olsen	K	so	₄ -S
	Surface	Sub Surface	Acres	Depth	Depth	lb/Ac Surf	lb/Ac Sub	Total lb/Ac	ppm	ppm	lb/Ac Surface	lb/Ac Sub
1			12	0-6	6-24	14	16	30	7	310	170	620
2	181010_053	181010_053	33	0-6	6-12	12	5	18	6	350	770	580
3			62	0-6	6-24	11	22	33	7	280	310	1200
4	181010_053	181010_053	88	0-6	6-12	12	6	18	3	340	71	550
5			69	0-6	6-24	10	27	37	4	240	78	4400
6			33	0-6	6-24	12	23	35	3	200	74	2900

	Macron	utrients			Cation I	Exchange a	nd Base Sa	turation		Texture
Zone	Ca	Mg	Na	CEC	Base Sat.	Ca	Na	K	Mg	Texture
	ppm	ppm	ppm	meq/100g	%	%	%	%	%	
1	4800	640	40	30.0	100.0	79.2	0.6	2.7	17.5	
2	5800	1100	110	39.1	100.0	74.1	1.3	2.3	22.3	
3	4800	690	36	30.8	100.0	78.6	0.5	2.3	18.6	
4	5700	650	38	34.9	100.0	81.7	0.5	2.5	15.3	
5	4800	600	31	29.7	100.0	80.8	0.4	2.1	16.7	
6	4600	500	29	27.8	100.0	82.9	0.4	1.8	14.9	

			Microni	utrients				Soil Quality					
Zone	Cu	Fe	Mn	Zn	В	C	:I	pH(1:2)		EC(Sat. Paste Equiv.)		ОМ	
	ppm	ppm	ppm	ppm	ppm	lb/Ac Surface	lb/Ac Sub	Surface	Sub Surface	dS/m Surf	dS/m Sub	%	
1	0.9	14.4	1.8	0.6	0.6	23	38	8.0	8.2	0.96	0.72	4.5	
2	0.7	7.1	1.7	0.7	0.8	32	84	8.1	8.3	1.90	1.54	6.0	
3	0.8	13.6	2.3	0.9	0.8	28	63	7.9	8.0	1.18	1.28	4.8	
4	0.7	8.6	2.0	1.3	0.4	11	85	8.4	8.5	0.38	1.50	4.3	
5	0.7	12.4	3.0	0.5	0.6	33	240	7.9	8.3	0.70	1.74	4.2	
6	0.6	16.4	4.6	0.5	0.6	14	75	7.9	8.2	0.54	1.56	4.3	



Farm: PERKIN LAND & CATTLE CO.

Subfield: E 32-4-20 W1

		Sample De	escription					M	acronutrien	ts		
Zone	Lab ID	Lab ID	Zone	Sample	Sample		NO ₃ -N		P - Olsen	K	so	₄ -S
	Surface	Sub Surface	Acres	Depth	Depth	Ib/Ac Surf Ib/Ac Sub Total Ib/Ac			ppm	ppm	lb/Ac Surface	Ib/Ac Sub
2			40	0-6	6-24	8	28	36	22	420	1600	3900
3			52	0-6	6-24	9	29	38	4	310	78	6800
4	181011_006	181011_006	103	0-6	6-24	14	34	48	7	270	180	2000
5			44	0-6	6-24	3	35	39	6	240	63	1800
6			30	0-6	6-24	7	33	41	11	440	460	980

	Macron	utrients			Cation I	Exchange a	nd Base Sa	turation		Texture
Zone	Ca	Mg	Na	CEC	Base Sat.	Ca	Na	К	Mg	Texture
	ppm	ppm	ppm	meq/100g	%	%	%	%	%	
2	5200	1100	85	36.4	100.0	71.6	1.0	3.0	24.4	
3	4900	640	35	30.5	100.0	79.7	0.5	2.6	17.2	
4	5400	670	47	33.3	100.0	80.8	0.6	2.1	16.5	
5	4600	650	51	29.3	100.0	79.0	0.8	2.1	18.1	
6	4800	770	69	31.7	100.0	75.3	0.9	3.6	20.1	

			Micron	utrients						Soil Quality		
Zone	Cu	Fe	Mn	Zn	В	C	CI		(1:2)	EC(Sat. Pa	ste Equiv.)	ОМ
	ppm	ppm	ppm	ppm	ppm	b/Ac Surface Ib/Ac Sub		Surface	Sub Surface	dS/m Surf	dS/m Sub	%
2	1.0	27.9	2.8	1.2	0.9	19	100	7.8	8.2	2.50	1.76	5.9
3	0.6	7.5	2.4	0.5	0.5	8	56	8.3	8.3	0.50	3.00	4.6
4	1.3	16.1	3.2	1.4	0.7	2	40	8.1	8.4	0.64	1.72	5.3
5	0.5	16.0	3.5	0.5	0.4	6	51	8.1	8.6	0.42	1.02	5.0
6	0.6	30.3	2.6	1.5	0.7	7	47	7.8	8.6	1.08	1.30	5.9



Farm: PERKIN LAND & CATTLE CO.

Subfield: N 34-4-20 W1

		Sample D	escription					M	acronutrien	ts		
Zone	Lab ID	Lab ID	Zone	Sample	Sample		NO ₃ -N		P - Olsen	K	so	₄ -S
	Surface	Sub Surface	Acres	Depth	Depth	lb/Ac Surf	lb/Ac Sub	Total lb/Ac	ppm	ppm	lb/Ac Surface	lb/Ac Sub
1	181115_165	181115_165	21	0-6	6-24	12	9	21	11	420	670	1900
2	181115_165	181115_165	37	0-6	6-24	11	3	15	11	270	450	1200
3	181115_165	181115_165	81	0-6	6-24	7	4	12	4	260	720	6000
4	181115_165	181115_165	123	0-6	6-24	9	4	14	2	270	110	2000
5	181115_165	181115_165	41	0-6	6-24	10	6	17	5	410	33	500
6	181115_165	181115_165	12	0-6	6-24	33	96	130	28	620	250	2300

	Macron	utrients			Cation E	Exchange a	nd Base Sat	turation		Texture
Zone	Ca	Mg	Na	CEC	Base Sat.	Ca	Na	К	Mg	Texture
	ppm	ppm	ppm	meq/100g	%	%	%	%	%	
1	5500	860	64	35.6	100.0	76.3	0.8	3.0	19.9	
2	5000	870	80	33.4	100.0	75.3	1.0	2.1	21.5	
3	5100	950	100	34.2	100.0	73.9	1.3	1.9	22.9	
4	4900	710	47	31.0	100.0	78.2	0.7	2.2	18.9	
5	3400	590	33	22.9	100.0	73.5	0.6	4.6	21.3	
6	3600	610	39	24.9	100.0	72.8	0.7	6.4	20.1	

			Micron	utrients						Soil Quality	•	
Zone	Cu	Fe	Mn	Zn	В	С	CI		(1:2)	EC(Sat. Pa	ste Equiv.)	ОМ
	ppm	ppm	ppm	ppm	ppm	lb/Ac Surface	lb/Ac Sub	Surface	Sub Surface	dS/m Surf	dS/m Sub	%
1	0.7	9.1	2.0	1.0	0.6	73	71	8.1	8.3	1.62	1.66	5.6
2	0.8	12.4	1.9	0.8	0.6	64	52	8.0	8.2	1.32	1.36	5.4
3	0.5	6.4	1.8	0.6	0.6	72	250	8.0	8.4	2.16	3.14	4.9
4	0.6	11.0	2.2	1.0	0.5	42	97	8.1	8.6	0.80	1.06	4.4
5	0.5	17.8	4.5	1.0	0.5	41	75	7.9	8.4	0.46	0.62	5.2
6	0.6	24.6	3.7	4.3	0.9	76	130	7.8	8.0	1.18	1.80	6.9



Farm: PERKIN LAND & CATTLE CO.

Subfield: NW 26-4-20 W1

		Sample De	escription					M	acronutrien	ts		
Zone	Lab ID	Lab ID	Zone	Sample	Sample		NO ₃ -N		P - Olsen	K	so	₄ -S
	Surface	Sub Surface	Acres	Depth	Depth	Ib/Ac Surf Ib/Ac Sub Total Ib/Ac			ppm	ppm	lb/Ac Surface	lb/Ac Sub
2			20	0-6	6-24	17	17	35	17	310	1400	5000
3			37	0-6	6-24	13	24	37	4	260	240	5100
4	181012_087	181012_087	64	0-6	6-24	11	15	26	3	300	450	7400
5			23	0-6	6-24	11	32	43	11	390	200	2000

	Macron	utrients			Cation I	Exchange a	nd Base Sa	turation		Texture
Zone	Ca	Mg	Na	CEC	Base Sat.	Ca	Na	К	Mg	Texture
	ppm	ppm	ppm	meq/100g	%	%	%	%	%	
2	5500	960	160	37.1	100.0	74.6	1.9	2.2	21.3	
3	5100	790	87	33.0	100.0	77.2	1.1	2.0	19.6	
4	5300	780	62	33.8	100.0	77.8	0.8	2.3	19.1	
5	5000	860	55	33.3	100.0	75.1	0.7	3.0	21.2	

			Micron	utrients						Soil Quality	,	
Zone	Cu	Fe	Mn	Zn	В	CI		pH((1:2)	EC(Sat. Pa	ste Equiv.)	ОМ
	ppm	ppm	ppm	ppm	ppm	lb/Ac Surface lb/Ac Sub		Surface	Sub Surface	dS/m Surf	dS/m Sub	%
2	0.8	14.6	3.4	0.9	1.2	18	41	7.7	7.8	2.88	3.30	4.9
3	0.6	10.1	2.9	0.4	1.2	14	40	8.0	8.4	0.94	2.30	3.9
4	1.1	10.3	2.4	0.4	0.9	16	92	7.9	8.1	1.20	3.26	4.7
5	0.8	31.8	10.5	0.7	1.0	13	82	7.6	8.1	1.10	2.06	4.5



Farm: PERKIN LAND & CATTLE CO.

Subfield: SE 34-4-20 W1

		Sample De	escription					M	acronutrien	ts		
Zone	Lab ID	Lab ID	Zone	Sample	Sample		NO ₃ -N		P - Olsen	K	so	₄ -S
	Surface	Sub Surface	Acres	Depth	Depth	Ib/Ac Surf Ib/Ac Sub Total Ib/Ac			ppm	ppm	lb/Ac Surface	lb/Ac Sub
2			21	0-6	6-24	14	17	32	23	400	2500	8200
3			30	0-6	6-24	9	15	24	6	250	740	5200
4			57	0-6	6-24	9	15	25	4	300	67	2300
5	181115_163	181115_163	27	0-6	6-24	8	5	14	3	230	28	1100

	Macron	utrients			Cation I	Exchange a	nd Base Sa	turation		Texture
Zone	Ca	Mg	Na	CEC	Base Sat.	Ca	Na	К	Mg	Texture
	ppm	ppm	ppm	meq/100g	%	%	%	%	%	
2	5300	1500	350	41.1	100.0	64.7	3.7	2.5	29.2	
3	5300	930	110	35.3	100.0	75.2	1.3	1.8	21.7	
4	5100	540	28	30.9	100.0	82.9	0.4	2.5	14.3	
5	4100	720	25	27.1	100.0	75.6	0.4	2.2	21.8	

			Micron	utrients					,	Soil Quality	,	
Zone	Cu	Fe	Mn	Zn	В	CI		pH(1:2)	EC(Sat. Pa	ste Equiv.)	ОМ
	ppm	ppm	ppm	ppm	ppm	lb/Ac Surface lb/Ac Sub		Surface	Sub Surface	dS/m Surf	dS/m Sub	%
2	1.3	21.9	4.5	1.8	1.3	38	73	7.7	7.8	5.24	4.14	6.5
3	1.0	15.1	3.5	0.6	0.9	25	120	7.8	8.1	1.60	3.00	4.9
4	0.7	13.0	3.7	0.5	0.7	12	32	8.0	8.1	0.54	1.54	4.5
5	0.7	16.5	2.7	0.4	0.4	13	88	7.9	8.7	0.58	1.36	4.0



Farm: PERKIN LAND & CATTLE CO.

Subfield: SW 35-4-20 W1

		Sample De	escription			Macronutrients						
Zone	Lab ID	Lab ID	Zone	Sample	Sample		NO ₃ -N P - Olsen K		K	SO ₄ -S		
	Surface	Sub Surface	Acres	Depth	Depth	Ib/Ac Surf	lb/Ac Sub	Total lb/Ac	ppm	ppm	lb/Ac Surface	lb/Ac Sub
1			14	0-6	6-24	10	25	36	10	230	2700	7200
2	181012_085	181012_085	19	0-6	6-24	8	12	21	6	410	930	8100
3			37	0-6	6-24	8	27	36	4	230	89	6500
4	181012_085	181012_085	47	0-6	6-24	11	23	34	4	310	59	1100
5			29	0-6	6-24	10	32	41	10	480	240	450

Macronutrients				Cation Exchange and Base Saturation						Texture
Zone	Ca	Mg	Na	CEC	Base Sat.	Ca	Na	К	Mg	Texture
	ppm	ppm	ppm	meq/100g	%	%	%	%	%	
1	5200	1700	270	41.7	100.0	62.4	2.8	1.4	33.4	
2	5600	920	100	37.3	100.0	75.6	1.2	2.8	20.4	
3	5100	660	31	31.5	100.0	80.5	0.4	1.9	17.2	
4	5000	820	39	32.5	100.0	76.2	0.5	2.5	20.9	
5	5000	570	28	31.0	100.0	80.5	0.4	4.0	15.1	

	Micronutrients									Soil Quality		
Zone	Cu	Fe	Mn	Zn	В	C	:I	pH((1:2)	EC(Sat. Pa	ste Equiv.)	ОМ
	ppm	ppm	ppm	ppm	ppm	lb/Ac Surface	lb/Ac Sub	Surface	Sub Surface	dS/m Surf	dS/m Sub	%
1	0.7	8.9	2.1	0.2	0.8	22	57	8.0	8.1	3.98	3.22	4.3
2	1.1	10.1	2.9	0.8	1.2	17	91	7.8	8.2	1.68	3.28	5.3
3	0.5	6.7	1.4	0.1	0.4	4	22	8.3	8.2	0.62	2.66	4.3
4	1.2	11.0	3.0	0.6	0.5	17	100	8.4	8.4	0.38	1.02	4.7
5	0.7	11.3	2.4	0.5	0.6	9	37	8.0	8.4	0.66	0.70	5.1

CROP ROTATION TABLE



А	В	С	D	E
Expected Crops in the Rotation	Acreage	Historical Yield	Units	Source of Yield Information
Total Net Acreage for Manure Application				

- 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.

1a - Pigs						
Operation Name:	Proposed Site SE-34-04-20W					
Operation Type	Storage Type	Volatilization	Animal Numbers	Average Animal Wt	N Excreted Per Herd Adjusted for Storage N Loss	P2O5 Excreted Per Herd Per Year
			(Places)	(lb)	(lb/yr/herd)	(lb/yr/herd)
Boars (Purchased)	Liquid Uncovered Earthen	30%		465	0	0
Weanlings	Liquid Uncovered Earthen	30%	24000	38	137946	76979
Growers/Finishers	Liquid Uncovered Earthen	30%		171	0	0
Sows, farrow to 6.2 kg	Liquid Uncovered Earthen	30%		n/a	0	0
Sows, farrow to 28 kg	Liquid Uncovered Earthen	30%		n/a	0	0
Sows, farrow to finish	Liquid Uncovered Earthen	30%		n/a	0	0

Last Revised April 26, 2018

	Remo	val	Uptake					Ren	noval	Uptake
Crop	P2O5	N	N	Units	Yield	Units	Acreage	P2O5	N	N
								(lb)	(lb)	(lb)
Alfalfa	13.8	58	58	lb/ton		ton/ac		-	-	-
Barley Grain	0.42	0.97	1.39	lb/bu		bu/ac		-	-	-
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-
Canola	1.04	1.93	3.19	lb/bu	40.2	bu/ac	735	30729	57026	94255
Corn Grain	0.44	0.97	1.53	lb/bu		bu/ac		-	-	-
Corn Silage	12.7	31.2	31.2	lb/ton		tons/ac		-	-	-
Dry Edible Beans	1.39	4.17		lb/cwt		cwt/ac		-	-	-
Fababeans	1.79	5.02	8.4	lb/cwt		cwt/ac		-	-	-
Flax	0.65	2.13	2.88	lb/bu		bu/ac		-	-	-
Grass Hay	10	34.2	34.2	lb/ton		tons/ac		-	-	-
Lentils	1.03	3.39	5.08	lb/cwt		cwt/ac		-	-	-
Oats	0.26	0.62	1.07	lb/bu		bu/ac		-	-	-
Pasture (grazed)	10	34.2	34.2	lb/ton	0.5	ton/ac		-	-	-
Peas	0.69	2.34	3.06	lb/bu		bu/ac		-	-	-
Potatoes	0.09	0.32	0.57	lb/cwt		cwt/ac		-	-	-
Rye	0.45	1.06	1.67	lb/bu		bu/ac		-	-	-
Soybeans	0.84	3.87	5.2	lb/bu	39	bu/ac	286	9369	43166	58001
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu	52.6	bu/ac	404	12538	31876	44838
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-
						Total Acres	1425	52636	132067	197094
			Estimate	d Average R	emoval/Up	otake (lb/ac)		36.9	92.7	138.3
				Acres in Har	over and I	La Broquerie	9			
			Pro	portion in Ha	anover or l	La Broquerie	0%			
					Addi	itional Acres	5			
				Crop Plann	ed on Addi	itional Acres	s			
					To	otal Acreage	1425			
*Notes:	Enter the nun	nber of acre	es that are i	n the RM's c	f Hanover	or La Broque	erie in cell H2	26.		
Notes:	Additional acr	es include	acres for w	hich crop rei	moval or so	oil data is lim	nited or unav	ailable		

Last revised December 18, 2017

3 - Farm Excretion

Operation Name:	Proposed Site SE-34-04-20W

Species	Animal Category/Operation type	N	P2O5
		(lb/year)	(lb/year)
	Boars	0	0
	Weanlings	137946	76979
Pigs	Growers/finishers	0	0
rigs	Sows, farrow to 5 kg	0	0
	Sows, farrow to 23 kg	0	0
	Sows, farrow to finish	0	0
	Mature Cows and Bred Heifers, plus associated livestock	0	0
	Feedlot Cattle - long keep	0	0
Beef	Feedlot Cattle - short keep	0	0
	Backgrounders - pasture	0	0
	Backgrounders - confined	0	0
Dairy	Mature Cows, plus assoc livestock	0	0
	Ewes	0	0
	Replacement Ewes	0	0
Sheep	Rams	0	0
эпеер	Lambs	0	0
	Ewes, plus assoc livestock	0	0
	Feeder	0	0
	Broilers	0	0
Chickens	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
	Layer Pullets	0	0
Layers	Layer Hens	0	0
Layers	Breeder Pullets	0	0
	Breeder Hens	0	0
	Broiler Hens (0-9 wks)	0	0
	Hens (0-11 wks)	0	0
	Heavy Hens (0-14 wks)	0	0
	Light Toms (0-12 wks)	0	0
	Toms (0-13 wks)	0	0
Turkeys	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	137946	76979

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:	Proposed Site SE-34-04-20W
Nutrients Excreted	lbs
Nitrogen	137946
Phosphorus (P2O5)	76979
Cuan Nutriant Has	Us /a a
Crop Nutrient Use	lb/ac
Crop N Uptake	138.3
Crop Phosphorus (P2O5) Removal	36.9
Operation-specific Phosphorus (P2O5) Credit	73.9
Land Available	1425
Land Base Required	acres
Acres for Nitrogen	997
Acres for Phosphorus (P2O5)	1042
Phosphorus Balance	acres
Acres for Phosphorus Balance (1X)	2084

Last revised October 16, 2018

Hi Carlie

Thank you for your information request. I completed a search of the Manitoba Conservation Data Centre's (CDC) rare species database for your areas of interest. This includes the primary locations: SE-34-004-20W1; and a two kilometre radius buffer from the edge of each quarter section.

The search resulted in the following occurrences:

SE-34-004-20W1 (Primary):

No listed or tracked species occurrences at this time.

Within 2km of SE-34-004-20W1:

Vertebrate Animal, Podiceps auritus, (Horned Grebe), MBCDC SRank: S4B, Provincial ESEA: NA, SARA:

Special Concern, COSEWIC: Special Concern.

Vertebrate Animal, Dolichonyx oryzivorus, (Bobolink), MBCDC SRank: S4B, Provincial ESEA: NA, SARA:

Threatened, COSEWIC: Threatened.

General area records low locational accuracy around SE-34-004-20W1:

No listed or tracked species occurrences at this time.

Found in broader area and similar habitat to SE-34-004-20W1:

Vertebrate Animal, Hirundo rustica, (Barn Swallow), MBCDC SRank: S4B, Provincial ESEA: NA, SARA:

Threatened, COSEWIC: Threatened.

Further information on this ranking system can be found on our website at:

http://www.gov.mb.ca/sd/cdc/consranks.html.

These designations can be found at:

http://web2.gov.mb.ca/laws/statutes/ccsm/e111e.php,

https://www.canada.ca/en/environment-climate-change/services/committee-status-endangered-

wildlife.html and

http://www.sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1.

Manitoba's recommended setback distances can be found at: http://www.gov.mb.ca/sd/cdc/pubs.html.

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

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

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

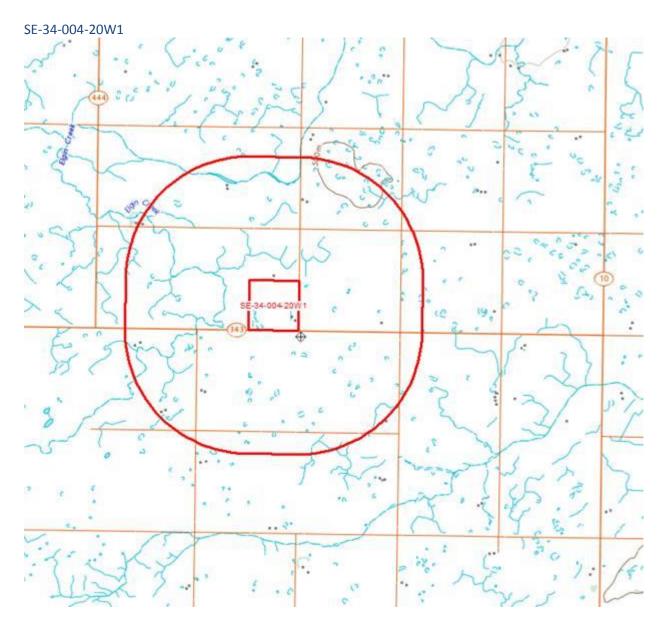
This letter is for information purposes only - it does not constitute consent or approval of the proposed project or activity, nor does it negate the need for any permits or approvals required by the Province of Manitoba.

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 contact me directly at (204) 945-7760.

Colin

Reference screen clip:



SE-18-006-15W1

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

200 Saulteaux Crescent Winnipeg, Manitoba, R3J3W3 204-945-7760 colin.Murray@qov.mb.ca http://www.gov.mb.ca/sd/cdc/index.html



ADDITIONAL INFORMATION

Additional Notes to Section 7.5 Groundwater Protection

- We safeguard ground water quality and supply by carefully managing all our operation in manner that meets strict environmental requirements.
- Barns are <u>not</u> located in groundwater pollution hazard areas identified by government and background studies to the local development plan.
- Manure nutrient is stored in an engineer designed and certified earthen storage and is approved by Manitoba Sustainable Development before use.
- HyLife will comply fully within the approved annual groundwater withdrawal limit set by Manitoba Sustainable Development's Water Licensing Branch.

Addition Notes to Section 8.4 Odour Control Measures

- Odour is best managed through barn cleanliness and hygiene which is accomplished through barn design (pen configurations), the barn environment (temperature and air flow) in the barns and management
- We have incorporated current technology for ventilation and climate control in the barns for the comfort of pigs and ensuring a clean environment.
- The equipment is being used in other HyLife barns and has a proven track record of success.

Additional Notes to Section 8.5 Manure Treatment

 Previous criteria and Confirmation Letter from Manitoba Pork Council relating to the Hog Production Pilot Protocol is no longer applicable.

Additional Notes to Section 10 Project Site Description: Land Use Planning Considerations

- We have carefully explored potential development sites in the area. HyLife chose this proposed site because it is firstly on open, designated agricultural crop land that is being actively farmed. Thus neighboring farmers will be able to sustainably utilize the manure as a fertilizer for crop production. In turn, area farmers will be able to reduce their crop fertilizer input costs.
- This site also has good road access, hydro, good drainage, good topography, and groundwater supply. This site also allows us to exceed all government siting and setback requirements from residences and designated land uses and designated crown land.
- We also meet and indeed for the most part, exceed all provincial manure storage separation distances from property boundaries set by Manitoba regulations.

Additional Notes to Section 11.0 Truck Haul Routes and Access Points

- For this 24,000 operation, there will typically be 3 to 4 feed trucks and 6 to 8 livestock trucks per week.
- The Municipality already maintains an existing network of municipal roads in the rural area and will determine which route we will use.

Additional Notes:

HyLife Community Consultation on Development Site & Proposal

- We have reached out to inform the community about our prospective plans in the area. In mid-December and early January we met and talked to as many area farmers and residents around the proposed site while we were conducting alternative site investigations and geo-technical soil and ground water testing.
- HyLife also held an informal Public Open House on our development proposals on January 24th, 2019, to further inform residents and stakeholders in the community. While it was not requirements to consult early with neighbours in the site area nor to hold a Public Open House, we felt it was important to inform the community and to obtain their feedback.
- HyLife will continue to use our "best efforts to be a good neighbor" and good corporate citizen in the Boissevain-Morton community.