Part 2 — Technical Requirements

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area and/or manure storage facility(ies)

NRCB USE ONLY	Application number	Legal land description
☐ Approval ☒ Registration ☐ Authorization ☐ Amendment	LA20014	SE 25-11-28 W4

APPLICATION DISCLOSURE

This information is collected under the authority of the *Agricultural Operation Practices Act* (AOPA), and is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This information is public unless the NRCB grants a written request that certain sections remain private.

Any construction prior to obtaining an NRCB permit is an offence and is subject to enforcement action, including prosecution.

I, the applicant, or applicant's agent, have read and understand the statements above, and I acknowledge that the information provided in this application is true to the best of my knowledge.

June 12, 2020
Date of signing

D S Hofer
Signature

Hutterian Brethren Church of Granum
Corporate name (if applicable)

Dan Hofer
Print name

GENERAL INFORMATION REQUIREMENTS

Proposed facilities. List all proposed confined feeding operation facilities and their measurements, including if it is an addition to a an existing facility (attach additional pages if needed)

Proposed manure collection areas & manure storage facilities	Dimensions (m)
Poultry Barn	78.5 m x 16.2m
Manure Storage Area	18.3m x 14.9m
	(AO comment: attached to barn, under roof)

Existing facilities. List **ALL** existing confined feeding operation facilities and their measurements (use additional pages if needed)

Existing barns, manure collection areas & manure storage facility	Dimensions (m)	NRCB USE ONLY

NRCB USE ONLY

Part 2 — Technical Requirements

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area and/or manure storage facility(ies)

If a new facility is replacing an old facility, what will be done with the old facility and when? ☐ **N/A**

Proposed construction completion date: unknown.

Additional information:

Constuction will start on the barn within one year of approval from the NRCB but completion date is unknown.

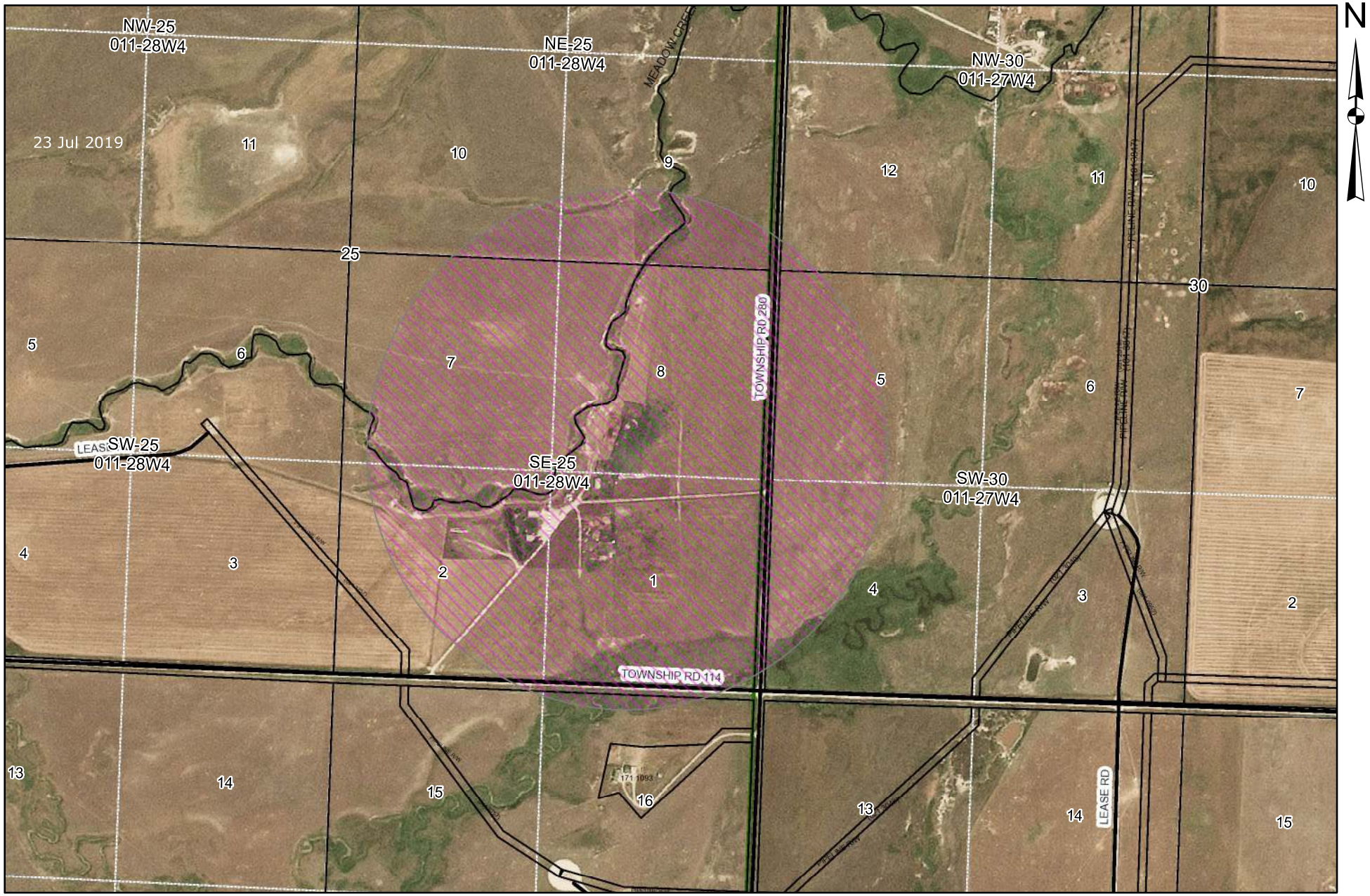
AO comment: The typical time given to construct a facility is three years to account for unforeseeable events.

Livestock Numbers: (include all livestock)
Note: Livestock numbers in this table will be used when processing the application)

Livestock type/ category	Existing number	Change in number (if applicable)	Total
chicken (layers)	20,000		20,000

AO comment:
This is a new CFO. No existing livestock on site.
No pullets included.
~~The pullets for this layer barn will be imported from a~~ different CFO

500m offset



Wells

- Abandoned Wellhead
- Suspended Gas Wellhead
- Suspended Oil Wellhead
- Flowing Gas Wellhead
- Location Wellhead
- Flowing Oil Wellhead
- Miscellaneous Wellhead
- Water Wellhead
- Well Downhole Location
- Newly Licenced Well
- Newly Spudded Well
- AB Environment Water Well
- User Water Well
- Monitor Well

Pipelines

- Gas Pipeline
- Oil Pipeline
- Water Pipeline
- LVP/HVP Pipeline
- Foreign Pipeline (When Filtering by Company)
- Gas Co-op Pipeline (Low Pressure)

0 80 160 320 480 640 m

MUNICIPAL DISTRICT OF WILLOW CREEK

Meadow Creek

SW25-11-28-4

SE25-11-28-4

WELL SITE

15m PIPELINE R/W

LEASE ROAD

PROPOSED NEW COLONY

PROPOSED CHICKEN BARN

136.60

113.35

335.46

Antcipate part (WB processing and storage)

AO comment: this is the abstract manure storage

ACCESS ROAD

RESIDENCE

AO comment: these are cow calf facilities

296m MDS offset for 20,000 layers

LANDOWNER: Allen Minor

RANGE ROAD 28-0

ATCO NATURAL GAS LINE

ACCESS ROAD

TOWNSHIP ROAD 11-4

RANGE ROAD 28-1

RESIDENCE

LEGEND

WATER WELL

GAS LINE

SCALE

Meters

75 0 75 150

1:2500

This document may have been reduced. Do not scale this document. All measurements must be obtained from stated dimensions.

PROFESSIONAL AUTHENTICATION

A	00	00	00	ISSUED FOR				
I/R	YY	MM	DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	RVW

wood.

CLIENT

GRANUM COLONY

PROJECT NAME

PROPOSED NEW COLONY

SHEET TITLE

GENERAL SITE PLAN

Page 4 of 14

PROJECT NUMBER

BX10684

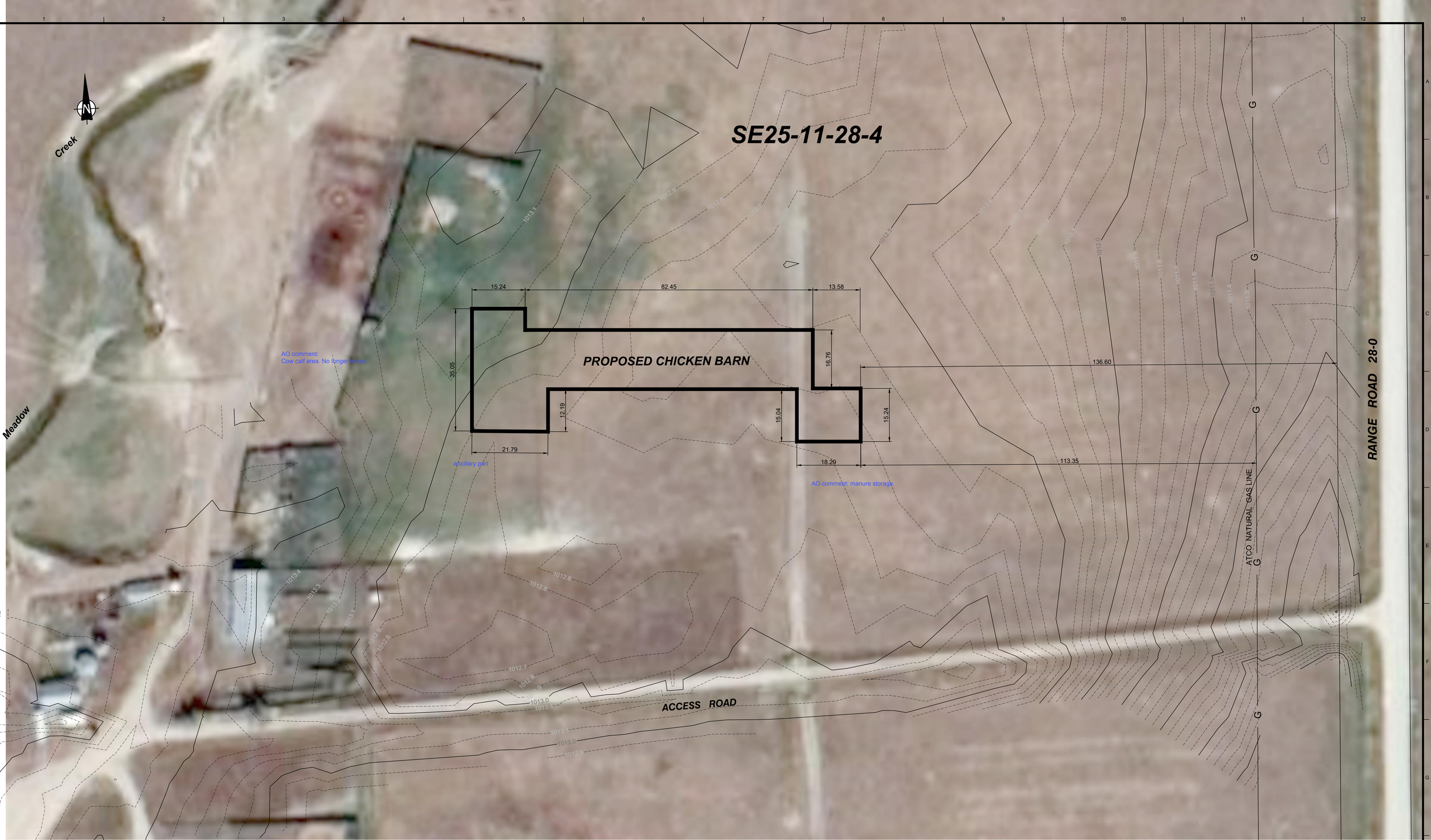
DRAWING NUMBER

C-001

ISSUE/REVISION

A

File Name: T:\Drafting\Brent\BX10684 - Granum New Colony\DRAWING\SBX10684_DWG_C-002.dwg Saved By: Johnson, Brent Plot Date: 200619 11:30 AM



SCALE

Meters

20 0 20 40

1:500

This document may have been reduced. Do not scale this document. All measurements must be obtained from stated dimensions.

PROFESSIONAL AUTHENTICATION

A	00	00	00	ISSUED FOR				
I/R	YY	MM	DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	RVW

wood.

CLIENT

GRANUM COLONY

PROJECT NAME

PROPOSED NEW COLONY

SHEET TITLE

CHICKEN BARN
SITE PLAN

Page 5 of 14

PROJECT NUMBER

BX10684

DRAWING NUMBER

C-002

ISSUE/REVISION

A

DECLARATION AND ACKNOWLEDGMENT OF APPLICANT CONCERNING *WATER ACT* LICENCE

issued by Alberta Environment and Parks (AEP) for a confined feeding operation (CFO)

Date and sign (or check) one of the following four options

OPTION 1: Applying through the NRCB for both the AOPA permit and the *Water Act* licence

☐ I **DO** want my water licence application coupled to my AOPA permit application.

Signed this ____day of _____, 20____. _____

Signature of Applicant or Agent

OPTION 2: Processing the AOPA permit and *Water Act* licence separately

1. I (we) acknowledge that the CFO will need a new water licence from AEP under the *Water Act* for the development or activity proposed in this AOPA application.
2. I (we) request that the NRCB process the AOPA application **independently of** AEP's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by AEP as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to AEP's consideration of whether to grant the *Water Act* licence application.
5. I (we) acknowledge that any such construction or livestock populating will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to de-populate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **CHECK IF RELEVANT** ☐ I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.

Signed this ____ day of _____, 20____. _____

Signature of Applicant or Agent

OPTION 3: Additional water licence not required

1. I (we) declare that the CFO will not need a new licence from AEP under the *Water Act* for the development or activity proposed in this AOPA application.

Signed this 25 day of March, 20 20. D S Hofer AO comment on next page

Signature of Applicant or Agent

OPTION 4: Uncertain if *Water Act* licence is needed; acknowledgement of risk (for existing CFOs only)

1. At this time, I (we) do not know whether a new water licence is needed from AEP under the *Water Act* for the development or activity proposed in this AOPA application.
2. If a new *Water Act* licence is needed, I (we) request that the NRCB process the AOPA application **independently of** AEP's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by AEP as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with additional livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to AEP's consideration of whether to grant my *Water Act* licence application, if a new water licence is needed.
5. I (we) acknowledge that any such construction or livestock increase will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to de-populate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **CHECK IF RELEVANT** ☐ I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.

Signed this ____ day of _____, 20____. _____

Signature of Applicant or Agent

Part 2 — Technical Requirements

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area and/or manure storage facility(ies)

GENERAL WATER INFORMATION – PROPOSED **Use the proposed manure storage facility that is closest to a common body of water or water well**			**NRCB USE ONLY** **Comments**	**Meets regulations**
Proposed facility name Poultry Barn			**AO analysis and comments are in blue.**	
Flood plain information What is the elevation of the floor of the lowest **proposed** manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?	5 (m)	☑ Estimated ☐ From records	highest flood level unknown. (see comment page 13)	☒ YES ☐ NO ☐ YES with exemption
Springs, wells, and surface water information a. How many springs are within 100 m of **proposed** manure storage facilities or manure collection areas?		0	Confirmed	☒ YES ☐ NO ☐ YES with exemption
b. How many water wells are within 100 m of **proposed** manure storage facilities or manure collection areas?		0	Confirmed, none observed or in AEP data base	☒ YES ☐ NO ☐ YES with exemption
c. What is the shortest distance from a **proposed** manure collection or storage facility to a surface water body? (ie, lake, creek, slough, seasonal, etc.)		100m	86 m to creek	☒ YES ☐ NO ☐ YES with exemption
Groundwater information a. What is the depth to bedrock?	29.9 (m)	☐ Estimated ☐ Measured ☑ Drilling reports	N/A	
b. What is the depth to the water table?	6.4 (m)	☐ Estimated ☐ Measured ☑ Drilling reports	>1 m	☒ YES ☐ NO ☐ YES with exemption
c. What is the shallowest depth to the uppermost groundwater resource?	(m)	☐ Estimated ☐ Measured ☐ Drilling reports	24.38 m well 292547	☒ YES ☐ NO ☐ YES with exemption

Additional information: (attach borehole logs and records, as required)

Salient water well record GCI Well ID 292547 attached. Other well records in the area do not have static water level.

When the Wetlands Assemsent was completed for this site, aerial photographs were pulled back to 1961. The former landonwer indicated that is 60 years the water has never flooded over the creek into the yardsite. The aerial photographs confirmed this inforamtion. The bank has flooded 700m north of the site, this elevation is 5m lower than proposed chicken barn locaiton.

AO comment to page 6: AEP has not yet received an application for a water license. The applicant is reminded that it is their resonsibility to aquire all applicable permits and licences.

Photo of Meadow Creek Adjacent to Proposed Chicken Barn

Looking North

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 292547
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1999/11/02

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WARNER, DON	GEN DEL, CLARESHOLM				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	15	24	11	28	4				

Measured from Boundary of
87.48 m from North
67.36 m from West

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 49.930922 Longitude -113.696974
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.71		Clay & Rocks
7.92		Sand
10.36		Clay
29.87		Shale & Sandstone
31.39		Shattered Sandstone
42.67		Shale & Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 9.09 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1999/09/17	12.50	6.40

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
42.67 m		1999/09/14	1999/09/16

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	42.67

Surface Casing (if applicable)
Steel
Size OD : 16.81 cm
Wall Thickness : 0.478 cm
Bottom at : 11.89 m

Well Casing/Liner
Plastic
Size OD : 12.70 cm
Wall Thickness : 0.635 cm
Top at : 6.10 m
Bottom at : 42.67 m

Perforations

From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
24.38	42.67	0.051		7.62

Perforated by Machine

Annular Seal Driven
Placed from 10.97 m to 11.89 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Gravel
Grain Size .125
Amount 400.00 Pounds

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
TRANS PROVINCIAL DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 292547
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1999/11/02

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WARNER, DON	GEN DEL, CLARESHOLM				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	15	24	11	28	4				

Measured from Boundary of
87.48 m from North
67.36 m from West

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 49.930922 Longitude -113.696974
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 9.09 L/min
Recommended Pump Intake Depth (From TOC) 39.62 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 18".

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1999/09/17	12:00 AM	6.40 m

Method of Water Removal

Type Pump
Removal Rate 12.50 L/min
Depth Withdrawn From 39.62 m

If water removal period was < 2 hours, explain why

Depth to water level

Pumping (m)	Elapsed Time Minutes:Sec	Recovery (m)
6.40	0:00	28.35
6.86	1:00	27.86
7.21	2:00	27.36
7.92	3:00	26.67
8.53	4:00	26.21
9.98	5:00	25.73
11.31	6:00	25.30
14.20	7:00	24.77
18.34	9:00	24.08
16.46	10:00	23.67
17.68	12:00	22.96
18.80	14:00	22.38
19.51	16:00	21.77
20.32	20:00	21.21
21.03	25:00	20.65
21.95	30:00	18.92
22.86	35:00	17.43
23.52	40:00	16.00
24.48	50:00	15.01
25.45	60:00	14.15
26.52	75:00	12.98
27.26	90:00	11.13
27.81	105:00	9.24
28.35	120:00	7.47

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
TRANS PROVINCIAL DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 224326
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1981/08/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
AQUITAINE/GARNETT 9					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	6	25	11	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 49.937323 Longitude -113.700694
How Location Obtained
Not Verified

Elevation 1013.46 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Industrial

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
4.27		Overburden
5.18		Gravel
15.24		Sandy Clay
21.34		Sandstone
23.77		Shale
27.43		Sandstone
28.35		Shale
37.80		Sandstone
50.29		Sandstone
53.95		Sandstone
54.86		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 136.38 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1981/06/19	136.38	0.00

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
54.86 m		1981/06/18	1981/06/19

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	54.86

Surface Casing (if applicable)
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner
Steel
Size OD : 11.68 cm
Wall Thickness : 0.478 cm
Top at : 0.00 m
Bottom at : 54.86 m

Perforations

From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
36.58	48.77	0.635		0.64

Perforated by Torch

Annular Seal Cement/Grout
Placed from 0.00 m to 30.48 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALL RITE DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 224326
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1981/08/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
AQUITAINE/GARNETT 9					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	6	25	11	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 49.937323 Longitude -113.700694
How Location Obtained: Not Verified

Elevation 1013.46 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow Yes
Rate 22.73 L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 136.38 L/min
Recommended Pump Intake Depth (From TOC) 32.00 m
Pump Installed Yes Depth m
Type SUB 220V Make GOULD 25 GPM H.P. 3
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS) Depth m
Gas Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1981/06/19	12:00 AM	0.00 m

Depth to water level

Pumping (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Pump
Removal Rate 136.38 L/min
Depth Withdrawn From 32.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALL RITE DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 224327
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1981/08/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
AQUITAINE/GARNETT 9					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	6	25	11	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 49.937323 Longitude -113.700694
How Location Obtained
Not Verified

Elevation 1013.46 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Industrial

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.52		Topsoil
10.67		Clay
10.97		Gravel
21.34		Sandy Clay
24.08		Sandstone
25.91		Shale
28.35		Sandstone
30.18		Shale
33.53		Sandstone
35.05		Shale
38.10		Sandstone
39.62		Shale
42.67		Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 90.92 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1981/06/19	90.92	0.00

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
42.67 m		1981/06/19	1981/06/19

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	42.67

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.478 cm
Bottom at : 24.08 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 23.77 m to 24.08 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALL RITE DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 224327
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1981/08/27

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
AQUITAINE/GARNETT 9					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	6	25	11	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 49.937323 Longitude -113.700694
How Location Obtained: Not Verified

Elevation 1013.46 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow: Yes
Rate: 22.73 L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 90.92 L/min
Recommended Pump Intake Depth (From TOC): 19.20 m
Pump Installed: Yes
Depth: m
Type: SUB
Make: GOULD 12 GPM
H.P.: 1.5
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:
Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well

FLOW RATE NOT REPORTED FOR THIS WELL. ADJACENT WELL FLOWS 5 GPM.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1981/06/19	12:00 AM	0.00 m

Depth to water level

Pumping (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type: Pump
Removal Rate: 90.92 L/min
Depth Withdrawn From: 19.81 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALL RITE DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

NRCB Natural Resources Conservation Board

WELL INFORMATION:

Well IDs: water wells 224326, 224327, 292547

Surface water related concerns from directly affected parties or referral agencies: ☒ YES ☐ NO

Ground water related concerns from directly affected parties or referral agencies: ☒ YES ☐ NO

Concerns addressed in Decision Summary LA20014

Water Wells

If applicable, exemption for 100 m distance requirements applied: NA ☐ YES ☒ NO Condition required: ☐ YES ☒ NO

Surface Water

If applicable, exemption for 30 m distance requirements applied: NA ☐ YES ☒ NO Condition required: ☐ YES ☒ NO

ERST for **proposed** facilities

Facility	Groundwater score	Surface water score	File Number
chicken barn with attached storage	low	low	LA20014

ERST for **existing** facilities

Facility	Groundwater score	Surface water score	File Number
New CFO			

Groundwater or surface water related comments, see next page

Groundwater or surface water related comments:

Based on an analysis received from AEP, the proposed area of the chicken barn has the potential to be affected by flood waters from Meadow Creek. Due to the bridge crossing, there is a possibility of ice blockages at the culvert, causing flooding from Meadow Creek in this quarter section. This is consistent with the Environmental Significant Areas report referenced in the MDP of the MD of Willow Creek.
The surface water vulnerability is assessed to be moderate according to the AEP website (Geocortex).
The elevation difference between natural water flow and the bank is approximately 4 m.
Based on the information provided, my own observation, and albeit of the absence of absolute evidence that the proposed site is >1 m above the 1:25 year flood level, I am on the opinion that the proposed site is not in an immediate flood plain and can meet the requirements in section 8 of the Standards and Administration Regulation.

Part 2 — Technical Requirements

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area and/or manure storage facility(ies)

DISTANCE OF ANY MANURE STORAGE FACILITY (EXISTING OR PROPOSED) TO NEIGHBOURING RESIDENCES

Name	Legal Land Description	Distance (m)	Zoning (LUB) Category	MDS Cat (1-4)	Distance (m)	Meets Regulations
Byron Westwall	NE24-011-28 W4M	600	RG	1	623 m	yes
Don Lene	NE30-011-27 W4M	1,457	RG	1	1370 m	yes
Al Minor	NW30-011-27 W4M	1,117	RG	1	923 m	yes
			Rural general			

Methods used/margins of error to determine distance:

Additional information:

Please see attached abacus drawing for 500m buffer to residents

NRCB USE ONLY

Methods used to determine distance (if applicable): aerial pictures (google earth)

Margin of error (if applicable): +/- 3 m

Requirements: Category 1: 296 m Category 2: 394 m Category 3: 493 m Category 4: 789 m

Technology factor: ☐ YES ☒ NO

Expansion factor: ☐ YES ☒ NO

Waivers required: ☐ YES ☒ NO # _____

Waivers attached: ☐ Waivers in file: ☐

MDS related concerns from directly affected parties or referral agencies: ☒ YES ☐ NO

Comments: This concern is addressed in Decision Summary LA20014

Part 2 — Technical Requirements

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area and/or manure storage facility(ies)

LAND BASE FOR MANURE AND COMPOST APPLICATION (for approvals and registrations only)

Name of landowner(s)*	Legal Land Description	Area ** (usable hectares)	Soil Zone	NRCB USE ONLY Area unsuitable:
Granum Colony	SE32-11-27 W4M	160	Irrigated	
	TOTAL	160		

*If you are **not** the registered land owner, please attach copies of land use agreements signed by all landowners.

** Available manure spreading area (do not include required setback areas from residences, common bodies of water, water wells, etc.) (to convert from acres to hectares divide acres by 2.47)

Additional information: (attach copies of all signed land use agreements)

NRCB USE ONLY

Land base required: 138.4 acres irrigated

Land base listed: 160 acres irrigated

Area not suitable: _____

AO comment:
30 acres dry land equals approximately 15 acres irrigated land.

Available area: a minimum of 130 acres irrigated plus 30 acres dry at this quarter section

Requirement Met: ☒ YES ☐ NO

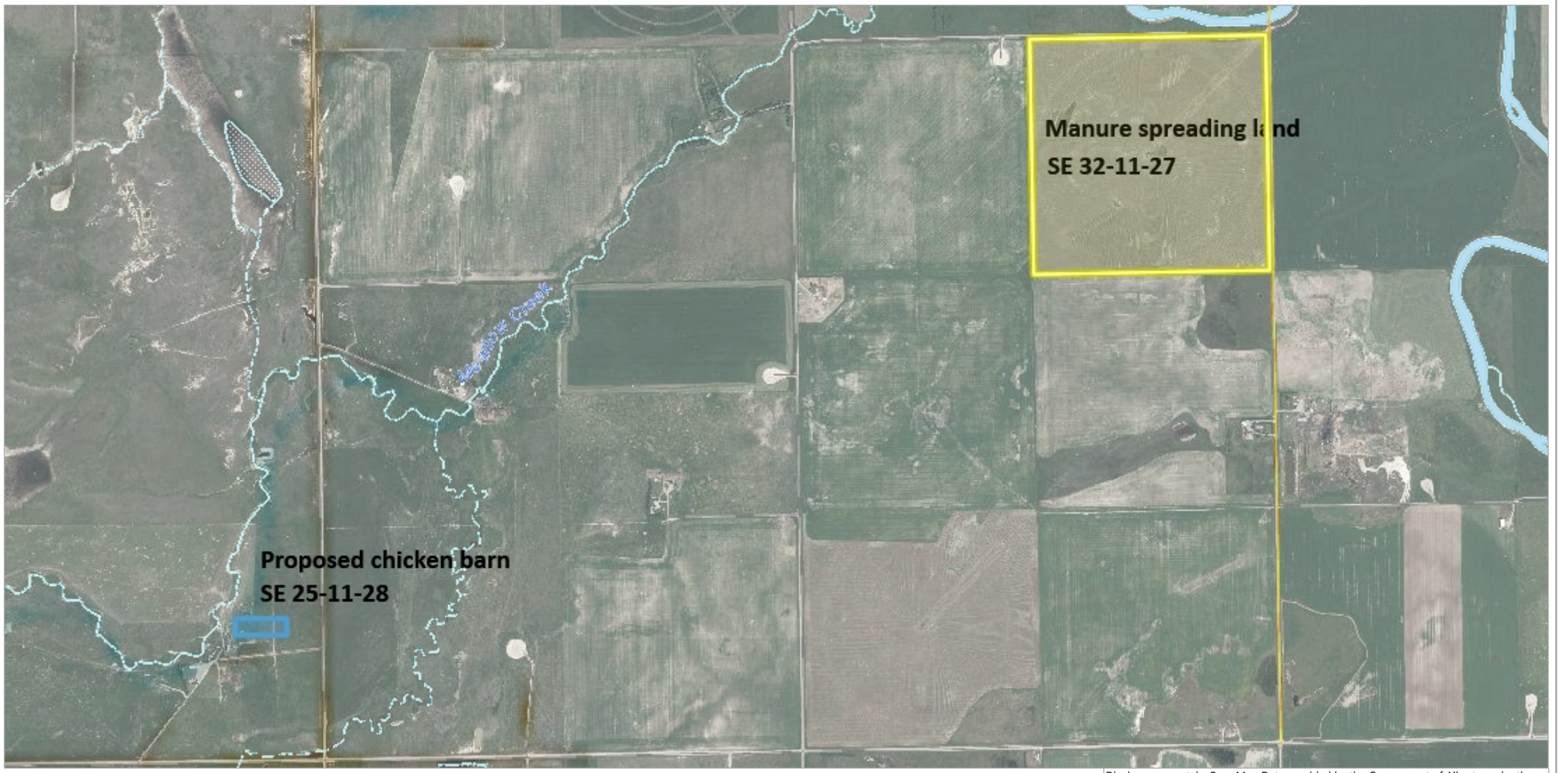
Land spreading agreements required: ☐ YES ☒ NO If yes, Agreements in file: ☐ Agreements attached: ☐

Manure Management Plan: ☐ YES ☒ NO Plan attached: ☐ Plan in file: ☐

An aerial picture (google earth), taken in 2015 indicates, that a larger area of the quarter section was impacted by flood waters from Willow Creek. In order to avoid manure contaminated runoff from entering Willow Creek, a condition will be added stating that manure shall only be spread in the fall and has to be incorporated.

Natural Resource Conservation Board

Added by AO



0.3 0 0.14 0.3 Kilometers

Projection: NAD_1983_10TM_AEP_Forest

Map Scale: 18,056

Printed on: August 13, 2020 14:33:50 -06:00

Alberta Environment and Parks

Name
Address
Legal Land
Location

MDS Spreadsheet based on 2006 AOPA Regulations

Category of Livestock	Type of Livestock	Factor A	Technology Factor	MU	LSU Factor		Number of Animals	LSU
Beef	Cows/Finishers (900+ lbs)	0.700	0.700	0.910	0.446			-
	Feeders (450 - 900 lbs)	0.700	0.700	0.500	0.245			-
	Feeder Calves (<550 lbs)	0.700	0.700	0.275	0.135			-
	Other							-
Dairy (*count lactating cows only)	*Free Stall – Lactating Cows with all associated dries, heifers, and calves	0.800	1.100	2.000	1.760			-
	*Free Stall – Lactating cows with Dry Cows only	0.800	1.100	1.640	1.443			-
	Free Stall – Lactating Cows only	0.800	1.100	1.400	1.232			-
	Tie Stall – Lactating cows only	0.800	1.000	1.400	1.120			-
	Loose Housing – Lactating cows only	0.800	1.000	1.400	1.120			-
	Dry Cow (Solid manure)	0.800	0.700	1.000	0.560			-
	Dry Cow (Liquid manure)							
	Replacements – Bred Heifers (Breeding to Calving)	0.800	0.700	0.875	0.490			-
	Replacements - Growing Heifers (350 lbs to breeding)	0.800	0.700	0.525	0.294			-
	Calves (< 350 lbs)	0.800	0.700	0.200	0.112			-
	Other						-	-
Swine Liquid (*count sows only)	Farrow to finish *	2.000	1.100	1.780	3.916			-
	Farrow to wean *	2.000	1.100	0.670	1.474			-
	Farrow only *	2.000	1.100	0.530	1.166			-
	Feeders/Boars	2.000	1.100	0.200	0.440			-
	Growers/Roasters	2.000	1.100	0.118	0.260			-
	Weaners	2.000	1.100	0.055	0.121			-
	Other						-	-
Swine Solid (*Count sows only)	Farrow to finish *	2.000	0.800	1.780	2.848			-
	Farrow to wean *	2.000	0.800	0.670	1.072			-
	Farrow only *	2.000	0.800	0.530	0.848			-
	Feeders/Boars	2.000	0.800	0.200	0.320			-
	Growers/Roasters	2.000	0.800	0.118	0.189			-
	Weaners	2.000	0.800	0.055	0.088			-
								-
Poultry	Chicken - Breeders - Solid	1.000	0.700	0.010	0.007			-
	Chicken - Layers - Liquid (includes associated pullets)	2.000	1.100	0.008	0.018		-	-
	Chicken - Layers - (Belt Cage)	2.000	0.700	0.008	0.011		20,000	224.0
	Chicken - Layers - (Deep Pit)	2.000	0.700	0.008	0.011			-
	Chicken - Pullets/Broilers	1.000	0.700	0.002	0.001			-
	Turkey - Toms/Breeders	1.000	0.700	0.020	0.014			-
	Turkey - Hens (light)	1.000	0.700	0.013	0.009			-
	Turkey - Broilers	1.000	0.700	0.010	0.007			-
	Ducks	1.000	0.700	0.010	0.007			-
	Geese	1.000	0.700	0.020	0.014			-
	Other							-
Horses	PMU	0.650	0.700	1.000	0.455			-
	Feeders > 750 lbs	0.650	0.700	1.000	0.455			-
	Foals < 750 lbs	0.650	0.700	0.300	0.137			-
	Mules	0.600	0.700	1.000	0.420			-
	Donkeys	0.600	0.700	0.670	0.281			-
	Other							-
Sheep	Ewes/Rams	0.600	0.700	0.200	0.084			-
	Ewes with lambs	0.600	0.700	0.250	0.105			-
	Lambs	0.600	0.700	0.050	0.021			-
	Feeders	0.600	0.700	0.100	0.042			-
	Other							-
Goats	Meat/Milk (per Ewe)	0.700	0.700	0.170	0.083			-
	Nannies/Billies	0.700	0.700	0.140	0.069			-
	Feeders	0.700	0.700	0.077	0.038			-
	Other							-
Bison	Bison	0.600	0.700	1.000	0.420			-
	Other							-
Cervid	Elk	0.600	0.700	0.600	0.252			-
	Deer	0.600	0.700	0.200	0.084			-
	Other							-
Wild Boar	Feeders	2.000	0.800	0.140	0.224			-
	Sow (farrowing)	2.000	0.800	0.371	0.594			-
	Other							-

Total 224.0

For New Operations

Dispersion Factor 1

Category	Odour Objective	Distance	
		Feet	Metres
1	41.04	971	296
2	54.72	1,294	394
3	68.4	1,618	493
4	109.44	2,588	789

For Expanding Operations

Dispersion Factor 1
Expansion Factor 0.77

Category	Odour Objective	Distance	
		Feet	Metres
1	41.04	747	228
2	54.72	996	304
3	68.40	1,246	380
4	109.44	1,993	607

Name	0
Address	0
Legal Land Location	0

Landbase Requirements (hectares) based on 2006 AOPA requirements

Category of Livestock	Type of Livestock	Number of Animals	Dark Brown & Brown (ha)	Grey Wooded (ha)	Black (ha)	Irrigated (ha)
Beef	Cows/Finishers (900+ lbs)	0	0	0	0	0
	Feeders (450 - 900 lbs)	0	0	0	0	0
	Feeder Calves (<550 lbs)	0	-	-	-	-
	Other	0				
Dairy (*count lactating cows only)	*Free Stall – Lactating Cows with all associated dries, heifers, and calves	0	0	0	0	0
	*Free Stall – Lactating cows with Dry Cows only	0	-	-	-	-
	Free Stall – Lactating Cows only	0	-	-	-	-
	Tie Stall – Lactating cows only	0	-	-	0	0
	Loose Housing – Lactating cows only	0	-	-	-	-
	Dry Cow (Solid manure)	0	-	-	-	-
	Dry Cow (Liquid manure)	0	-	-	-	-
	Replacements – Bred Heifers (Breeding to Calving)	0	-	-	-	-
	Replacements - Growing Heifers (350 lbs to breeding)	0	-	-	-	-
	Calves (< 350 lbs)	0	-	-	-	-
	Other	0				
Swine Liquid (*count sows only)	Farrow to finish *	0	-	0	-	-
	Farrow to wean *	0	-	-	-	-
	Farrow only *	0	-	-	-	-
	Feeders/Boars	0	-	0	0	0
	Growers/Roasters	0	-	-	-	-
	Weaners	0	-	-	-	-
	Other	0				
Swine Solid (*Count sows only)	Farrow to finish *	0	-	-	-	-
	Farrow to wean *	0	-	-	-	-
	Farrow only *	0	-	-	-	-
	Feeders/Boars	0	-	-	-	-
	Growers/Roasters	0	-	-	-	-
	Weaners	0	-	-	-	-
		0				
Poultry	Chicken - Breeders - Solid	0	-	-	-	-
	Chicken - Layers - Liquid (includes associated pullets)	0	-	0	0	0
	Chicken - Layers - (Belt Cage)	20000	110.0000	92.0000	68.0000	56.0000
	Chicken - Layers - (Deep Pit)	0	-	-	-	-
	Chicken - Pullets/Broilers	0	-	0	0	0
	Turkey - Toms/Breeders	0	0	0	0	0
	Turkey - Hens (light)	0	-	-	-	-
	Turkey - Broilers	0	-	-	-	-
	Ducks	0	0	0	0	0
	Geese	0	0	0	0	0
	Other	0				
Horses	PMU	0	0	0	0	0
	Feeders > 750 lbs	0	-	0	-	-
	Foals < 750 lbs	0	-	-	-	-
	Mules	0	-	-	-	-
	Donkeys	0	-	-	-	-
	Other	0				
Sheep	Ewes/Rams	0	-	0	0	0
	Ewes with lambs	0	-	-	-	-
	Lambs	0	-	-	-	-
	Feeders	0	-	-	-	-
	Other	0				
Goats	Meat/Milk (per Ewe)	0	0	0	0	0
	Nannies/Billies	0	-	-	-	-
	Feeders	0	-	-	-	-
	Other	0				
Bison	Bison	0	0	0	0	0
	Other	0				
Cervid	Elk	0	0	0	0	0
	Deer	0	0	0	0	0
	Other	0				
Wild Boar	Feeders	0	-	0	0	0
	Sow (farrowing)	0	-	-	-	-
	Other	0				

Total Hectares	110.0	92.0	68.0	56.0

Total Acres	271.8	227.3	168.0	138.4

Name	0
Address	0
Legal Land Location	0

Animal Units to Determine Affected Party Radius

Category of Livestock	Type of Livestock	Number of Animals	Animal Unit Factor	Animal Units
Beef	Cows/Finishers (900+ lbs)	-	1.1	0.0
	Feeders (450 - 900 lbs)	-	2	0.0
	Feeder Calves (<550 lbs)	-	3.6	0.0
	Other	-		0.0
Dairy (*count lactating cows only)	*Free Stall – Lactating Cows with all associated dries, heifers, and calves	-	0.5	0.0
	*Free Stall – Lactating cows with Dry Cows only	-	0.6	0.0
	Free Stall – Lactating Cows only	-	0.7	0.0
	Tie Stall – Lactating cows only	-	0.5	0.0
	Loose Housing – Lactating cows only	-	0.5	0.0
	Dry Cow (Solid manure)	-	1	0.0
	Dry Cow (Liquid manure)	-	1	0.0
	Replacements – Bred Heifers (Breeding to Calving)	-	1.15	0.0
	Replacements - Growing Heifers (350 lbs to breeding)	-	1.9	0.0
	Calves (< 350 lbs)	-	5	0.0
	Other	-		0.0
Swine Liquid (*count sows only)	Farrow to finish *	-	0.56	0.0
	Farrow to wean *	-	1.5	0.0
	Farrow only *	-	1.9	0.0
	Feeders/Boars	-	5	0.0
	Growers/Roasters	-	8.5	0.0
	Weaners	-	18.2	0.0
	Other	-		0.0
Swine Solid (*Count sows only)	Farrow to finish *	-	0.56	0.0
	Farrow to wean *	-	1.5	0.0
	Farrow only *	-	1.9	0.0
	Feeders/Boars	-	5	0.0
	Growers/Roasters	-	8.5	0.0
	Weaners	-	18.2	0.0
	Other	-		0.0
Poultry	Chicken - Breeders - Solid	-	100	0.0
	Chicken - Layers - Liquid (includes associated pullets)	-	125	0.0
	Chicken - Layers - (Belt Cage)	20,000	150	133.3
	Chicken - Layers - (Deep Pit)	-	150	0.0
	Chicken - Pullets/Broilers	-	500	0.0
	Turkey - Toms/Breeders	-	50	0.0
	Turkey - Hens (light)	-	75	0.0
	Turkey - Broilers	-	100	0.0
	Ducks	-	100	0.0
	Geese	-	50	0.0
	Other	-		0.0
Horses	PMU	-	1	0.0
	Feeders > 750 lbs	-	1	0.0
	Foals < 750 lbs	-	3.3	0.0
	Mules	-	1	0.0
	Donkeys	-	1.5	0.0
	Other	-		0.0
Sheep	Ewes/Rams	-	5	0.0
	Ewes with lambs	-	4	0.0
	Lambs	-	21	0.0
	Feeders	-	10	0.0
	Other	-		0.0
Goats	Meat/Milk (per Ewe)	-	6	0.0
	Nannies/Billies	-	10	0.0
	Feeders	-	13	0.0
	Other	-		0.0
Bison	Bison	-	1	0.0
	Other	-		0.0
Cervid	Elk	-	1.7	0.0
	Deer	-	5	0.0
	Other	-		0.0
Wild Boar	Feeders	-	6	0.0
	Sow (farrowing)	-	1.25	0.0
	Other	-		0.0
	Total Animal Units			133.3
	Affected Party Radius			0.5 miles

Affected Party radius is measured from the boundary of the parcel of land where the cfo is located to land that is within the affected party radius.

Manure Spreading

Wells
- Abandoned Wellhead
- Suspended Gas Wellhead
- Suspended Oil Wellhead
- Flowing Gas Wellhead
- Location Wellhead
- Flowing Oil Wellhead
- Miscellaneous Wellhead
- Water Wellhead
- Well Downhole Location
- Newly Licenced Well
- Newly Spudded Well
- AB Environment Water Well
- User Water Well
- Monitor Well

Pipelines
- Gas Pipeline
- Oil Pipeline
- Water Pipeline
- LVP/HVP Pipeline
- Foreign Pipeline (When Filtering by Company)
- Gas Co-op Pipeline (Low Pressure)

0 130 260 520 780 1,040 m

ALL SIGNATURES IN FILE: ☒ Yes ☐ No

DATES OF APPROVAL OFFICER SITE VISITS:

June 9, 2020	
July 27, 2020	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES:

Date deeming letters sent June 30, 2020

Municipality: MD of Willow Creek

☒ Letter sent ☒ Response received ☒ written/email ☐ verbal ☐ no comments received

Alberta Health Services:

☒ Letter sent ☒ Response received ☒ written/email ☐ verbal ☐ no comments received

Alberta Environment and Parks: ☐ N/A

☒ Letter sent ☒ Response received ☒ written/email ☐ verbal ☐ no comments received

Alberta Transportation: ☐ N/A

☒ Letter sent ☒ Response received ☒ written/email ☐ verbal ☐ no comments received

Alberta Regulatory Services: ☒ N/A

☐ Letter sent ☐ Response received ☐ written/email ☐ verbal ☐ no comments received

Other: _____

☐ Letter sent ☐ Response received ☐ written/email ☐ verbal ☐ no comments received

Other: _____

☐ Letter sent ☐ Response received ☐ written/email ☐ verbal ☐ no comments received

SOLID MANURE, COMPOST & COMPOSTING MATERIALS: Barns, feedlots & storage facilities - Concrete liner

*(complete a copy of this section for **EACH** barn, feedlot and storage facility for solid manure, composting materials or compost with a concrete liner)*

Facility description / name *(as indicated on site plan)*

1. Manure Storage Area **2.** Barn

Manure storage capacity

	Length (m)	Width (m)	Estimated storage capacity (m^3)	Depth below grade to the bottom of the liner (m)
1.	18.3	14.9		0
2.	78.5	16.2		0

NRCB USE ONLY

Depth to water table: > 3 m Requirements met: ☒ YES ☐ NO

Depth to UGR: > 20 m Requirements met: ☒ YES ☐ NO

ERST completed: ☒ YES ☐ NO

Groundwater risk level: low Surface Water risk level: low

UGR: Uppermost Groundwater Resource as defined under AOPA's *Standards and Administration Regulation*.

Surface water control systems

☑ Under roof: Surface water will be controlled by the walls and roof of the building and by the finished landscaping.

☐ Outdoor: Describe the run-on and runoff control system proposed for feedlots and outdoor manure storage facilities

NRCB USE ONLY

Requirements met: ☒ YES ☐ NO Details/comments:

SOLID MANURE, COMPOST & COMPOSTING MATERIALS: Barns, feedlots & storage facilities - Concrete liner (cont.)

Concrete liner details

Concrete thickness 125 mm	Provide details:
Concrete strength 25 Mpa @ 28 days	Provide details:
Method of sulphate protection Type HS Cement	Provide details:
Concrete reinforcement size and spacing 10M rebar	Provide details: 10M reinforcing steel at 400mm o.c. both ways

Additional information:

NRCB USE ONLY

Technical guideline requirements met: ☒ YES ☐ NO

Construction plans approved by professional engineer: ☐ YES ☒ NO Condition required: ☒ YES ☐ NO

Comments: Proof that concrete specs have been met must be provided