

## **NATURAL RESOURCES CONSERVATION BOARD**

### **How to complete the AOPA application form:**

#### **Part 2—Technical Requirements, General Information**

**February 2018**

This guide is intended to help applicants complete the Part 2—Technical Requirements, General Information form. This form is required for all applications under the *Agricultural Operation Practices Act* for an approval, registration or authorization to expand or construct a confined feeding operation, manure collection area or manure storage facility.

## Table of Contents

How to complete Part 2—Technical Requirements, General Information.....	1
Filling out the form .....	1
Application disclosure .....	2
General information requirements .....	2
Proposed facilities.....	2
Existing facilities.....	3
New facility replacing an old facility.....	3
Construction completion date.....	3
Other Information .....	4
Livestock Numbers .....	4
Declaration and acknowledgement of applicant concerning <i>Water Act</i> licence .....	5
Area plan (aerial picture) .....	7
Detailed site layout plan .....	8
General water information.....	9
General water information – existing.....	9
General Water – Proposed #1 .....	11
General Water – Proposed #2 .....	13
Distance to neighbouring residences .....	14
Land base for manure and compost application (for approvals and registrations only) .....	15
Appendix 1: NRCB field office service areas.....	17
Appendix 2: Glossary of terms.....	18

## How to complete Part 2—Technical Requirements, General Information

Applicants who wish to construct or expand a confined feeding operation, manure collection area, or manure storage facility must complete the required Part 2 application forms. Part 2—Technical Requirements, General Information is required for all applications. Part 2—Liquid Manure, Part 2—Solid Manure, and Part 2—Runoff must be completed as relevant to the proposed expansion or new construction being applied for.

This guide is intended to help producers fill out Part 2—Technical Requirements, General Information. This form gathers technical information about a proposed development. Not all sections of the form need to be completed for every application.

To determine which Part 2 forms and which sections of Part 2—Technical Requirements, General Information must be completed for your proposed development, please contact a Natural Resources Conservation Board (NRCB) approval officer in your region (see Appendix 1). The approval officer will confirm which forms and sections must be completed, and if there are other information requirements for your application.



In order to complete the Part 2—Technical Requirements, General Information form, you must provide the information, measurements, calculations, plans, and reports as indicated. The NRCB approval officer can identify where you may wish or be required to hire a third party consultant or professional, at your expense, to assist with technical information.

An NRCB approval officer can also help you determine the permit implications of the options you are considering. NRCB approval officers will not carry out any design work or conduct any testing or sampling on behalf of an applicant.

Once you have finalized your plan, are satisfied with your proposal, and have provided the Part 2 application forms and supporting information to the NRCB approval officer, the approval officer will review the information to see if all of the requirements pertinent to the application are met. If information is missing, the approval officer will contact you regarding the deficiencies and may return the incomplete forms to you.

If all of the application requirements are met, the approval officer will accept the application and determine the application to be complete. Public notice regarding the application will be issued as required, and further processing of the application will take place. The approval officer's decision on the application will only be made when all statements of concern and comments from municipalities, referral agencies, and affected parties, if any, have been received and considered.



**Note: A delay by the applicant, the agent or their consultants in providing the required information will result in a delay in processing the application.**

## Filling out the form

If the space provided is not sufficient to enter all of your information, please use a separate sheet to provide any additional information.

Shaded portions of the form are marked "NRCB USE ONLY". Please do not write in these sections. These sections will be completed by the NRCB approval officer during the technical review of the application.



Sections of the form are provided below with examples to illustrate the information applicants should provide.

## Application disclosure

APPLICATION DISCLOSURE	
This information is collected under the authority of the <i>Agricultural Operation Practices Act (AOPA)</i> , and is subject to the provisions of the <i>Freedom of Information and Protection of Privacy Act</i> . This information is public unless the NRCB grants a written request that certain sections remain private.	
<b>Any construction prior to obtaining an NRCB permit is an offence and is subject to enforcement action, including prosecution.</b>	
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.	
<div> <div>October 15, 2017</div> <div>1</div> </div> <div> <div>Date of signing</div> <div>ABC Farms Ltd.</div> <div>3</div> </div> <div> <div>Corporate name (if applicable)</div> </div>	<div> <div>Joe Applicant</div> <div>2</div> </div> <div> <div>Signature</div> <div>Joe Applicant</div> <div>4</div> </div> <div> <div>Print name</div> </div>

- 1 Enter the date you are signing the document.
- 2 Signature of the applicant or the applicant's agent.
- 3 If the application is for an entity with a registered corporate name, print the corporate name.  
If an agent is signing the application on behalf of an applicant, the agent must be listed on the Part 1 application or a letter of permission to the agent from the applicant, allowing them to act on their behalf, must be provided.
- 4 Print the name of the person who signed the document.

## General information requirements

### Proposed facilities

GENERAL INFORMATION REQUIREMENTS	
<b>Proposed facilities.</b> List all proposed confined feeding operation facilities and their measurements, including if it is an addition to an existing facility (attach additional pages if needed)	
Proposed manure collection areas & manure storage facilities	Dimensions (m)
Feeder hog barn	101.6 m x 36.6 m
Liquid earthen manure storage	60m x 60m x 3m deep

- 5 List separately each **proposed** barn, feed pen area (not individual pens), liquid manure storage facility, manure storage pad, and catch basin.
- 6 Provide the length and width (and depth, if applicable) of each proposed facility in metres.

**Note:** 1 metre = 3.2808 feet      1 foot = 0.3048 metres  
 1 m<sup>3</sup> = 35.315 ft<sup>3</sup>      1 ft<sup>3</sup> = 0.0283 m<sup>3</sup>

## Existing facilities

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 <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">7</span>	Dimensions (m) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">8</span>	NRCB USE ONLY
Hog barn.	10.6 m x 36.6 m	
NRCB USE ONLY		

- 7** List separately each **existing** barn, feed pen area (not individual pens), liquid manure storage facility, manure storage pad and catch basin.
- 8** Provide the length and width (and depth, if applicable) of each existing facility in metres.

**Note:** 1 metre = 3.2808 feet      1 foot = 0.3048 metres  
 1 m<sup>3</sup> = 35.315 ft<sup>3</sup>      1 ft<sup>3</sup> = 0.0283 m<sup>3</sup>

## New facility replacing an old facility

If a new facility is replacing an old facility, what will be done with the old facility and when? <input type="checkbox"/> N/A <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">9</span>
--

- 9** If an old facility is to be replaced, provide details of the plans and timelines for the old facility. Please explain whether the old facility will still be used for livestock housing as part of the confined feeding operation, and if so, which livestock it will be used for; whether it would be used for a non-manure use, such as hay, straw or machinery storage; or whether the facility would be permanently removed.

If you plan to permanently remove the facility, contact the NRCB approval officer you are dealing with on your application for information about the requirements for permanent removal of a manure collection facility. Technical guidelines for the closure of manure storage facilities and collection areas are available on the NRCB website, at [www.nrcb.ca](http://www.nrcb.ca).

## Construction completion date

Applicants should indicate the date by which they plan to complete construction of their proposed facilities. This date needs to be provided only for construction of the manure storage and collection components of their proposed facilities. The date should be as realistic as possible and reflect factors such as weather, contractor availability, and material supply that may influence how soon construction can be completed.

The NRCB typically expects construction to be completed within three years. If an applicant expects to take longer than three years, the applicant should discuss their plans with the NRCB approval officer to determine whether a longer period is needed.

Proposed construction completion date: <u>December 31, 2019</u> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">10</span>
--

- 10** Enter the projected month, day and year that construction will be completed for the parts of the proposed facility that will be used to collect or store manure.

## Other Information

Use the space provided for additional information to describe any other information that could be helpful for processing your application, for example, the plans for old facilities on the confined feeding operation.

<b>Additional information:</b>
<div>11</div>

**11** If there is additional information you would like to provide, enter it in this space.

## Livestock Numbers

<b>Livestock Numbers:</b> (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
Swine feeders <div>12</div>	1000 <div>13</div>	500 <div>14</div>	1500 <div>15</div>


- 12** Provide the category and type of each livestock species that currently exists or is proposed for this confined feeding operation.
- 13** Enter the existing number of animals for each category/type listed. If you are introducing a new category/type to this confined feeding operation, enter a zero (0) for the current existing number.
- 14** Enter the additional livestock numbers for each category/type listed. If you are not increasing the number for a category/type existing at the confined feeding operation, enter a zero (0) in this space. If you are decreasing or eliminating a category/type on this confined feeding operation, enter the number as a negative.
- 15** Enter the total number of each livestock category/type listed.

## Declaration and acknowledgement of applicant concerning *Water Act* licence

New or expanding confined feeding operations are responsible for ensuring that they have sufficient water to meet their needs. Obtaining access to a sufficient water supply may require a new provincial water licence, if the existing licensed usage is insufficient. Water licences are issued by Alberta Environment and Parks (AEP) under the *Water Act*.

If a new water licence is needed, AOPA permit applicants may request that their water licence application be linked to their AOPA permit application. When this request for linkage is made, a single public notice is issued for both applications (when notice is required). All public responses to both applications are sent to the NRCB, which forwards relevant responses to AEP. The NRCB will not make a final permit decision on a linked application until AEP issues a water licence or states that there are no obstacles to its future issuance of a licence. If AEP denies the water licence, the NRCB will not issue the AOPA permit unless the applicant demonstrates that an alternative water supply is available or is no longer needed, and the application otherwise meets AOPA requirements.

For further information, contact the NRCB approval officer in your region.

 **Note: One of the four declarations must be signed. If none of these steps are taken, your AOPA permit application will be deemed incomplete. Applicants should carefully read and understand the declarations before signing one of them.**



## 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\_\_\_\_.

16

\_\_\_\_\_  
*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\_\_\_\_.

17

\_\_\_\_\_  
*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 15 day of October, 2017.

18

Joe Applicant  
*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\_\_\_\_.

19

\_\_\_\_\_  
*Signature of Applicant or Agent*

- 16 If you know that the CFO will need a new or additional water licence from AEP under the *Water Act*, and you want your AOPA application and your *Water Act* application linked together, then date and sign the first declaration (option 1).
- 17 If you know that the CFO will need a new or additional water licence from AEP under the *Water Act*, but you want your AOPA application processed separately from your AEP application, then date and sign the second declaration (option 2).
- 18 If you know that the CFO will *not* need a new or additional water licence from AEP under the *Water Act*, then date and sign the third declaration (option 3).
- 19 Some CFO operators of existing CFOs do not know if they need a new or an additional water licence from AEP under the *Water Act* for their AOPA application. This can be due to the status of Traditional Water Registrations, older licences, replacement water wells that have been drilled but not added to water licences, etc. In this case, these CFO operators may sign and date the fourth declaration (option 4).



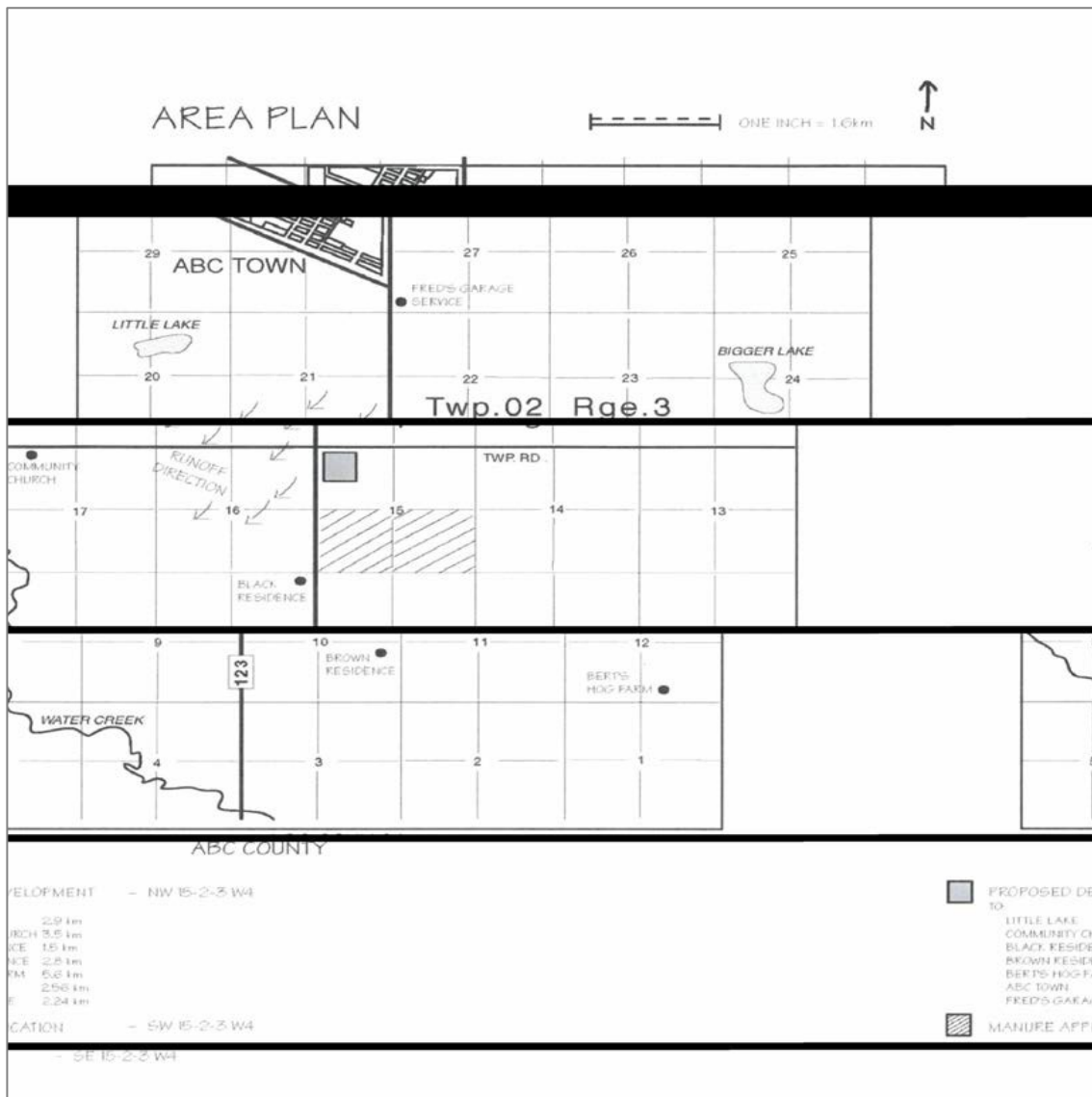
## Area plan (aerial picture)



The application must include an area plan, unless otherwise directed by the approval officer. An area plan should include:

- Standard map features (north arrow, scale and legend)
- Municipal district/county name
- Legal land location(s)
- Lands proposed to be used for manure application in the first year of operation
- Neighbouring residences
- Distances between the confined feeding operation (proposed and/or existing) and neighbouring residences
- Water courses and common bodies of water
- Springs
- Runoff patterns
- Roadways

A sample area plan is provided below.



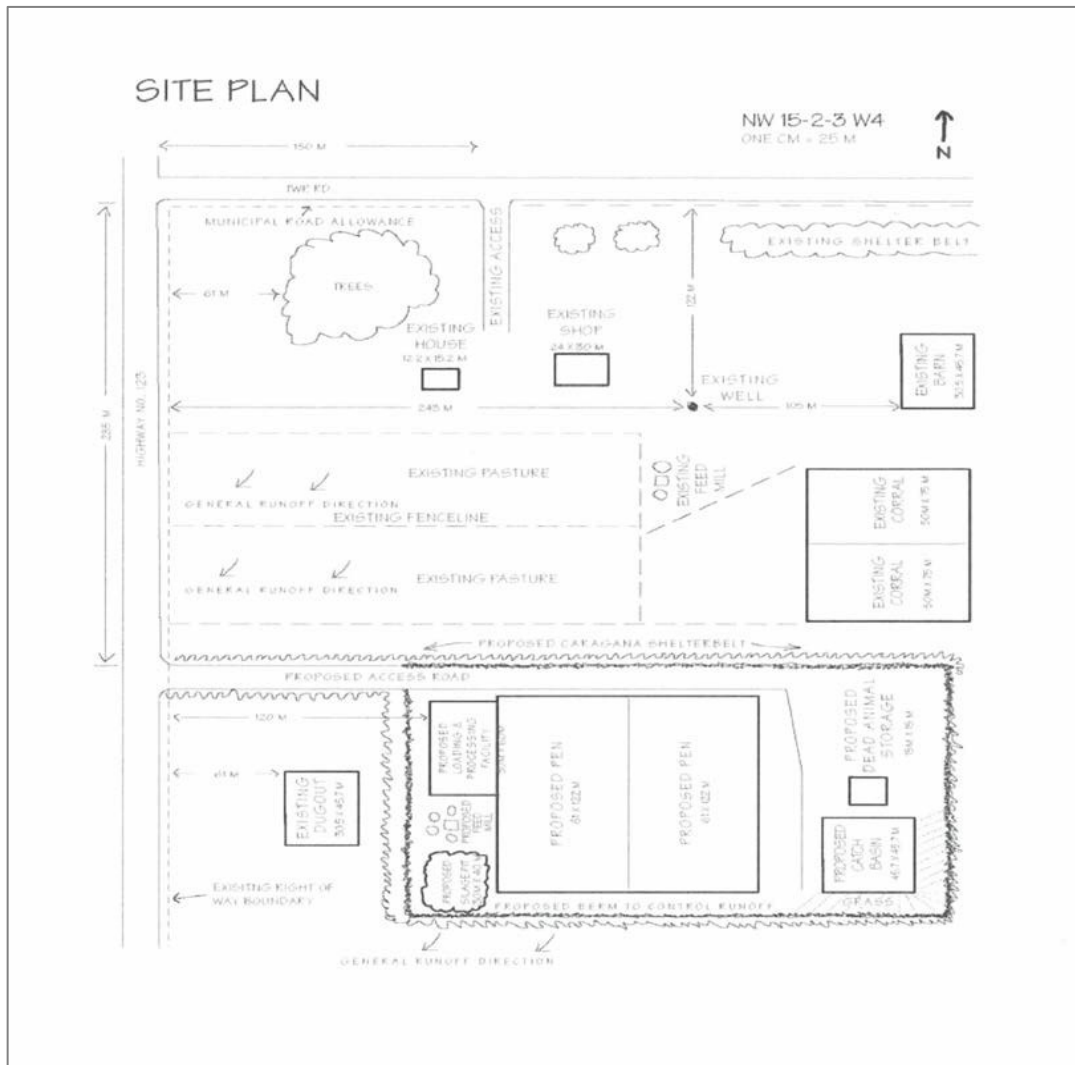
## Detailed site layout plan



The application must include a detailed site layout plan unless otherwise directed by the approval officer. As a minimum, the site plan should show the following:

- Standard map features (north arrow, scale and legend)
- Legal land description(s)
- Location and dimensions of existing and proposed manure storage facilities, ancillary structures, residences, and barns
- Wells and springs
- Common bodies of water
- Runoff patterns and natural drainage flow
- Run-on and runoff controls
- Proposed works in relation to the boundaries of the quarter section in which the works are located
- Right-of-ways
- Roadways, including access roads
- Air photo (optional)
- Any other pertinent information related to the confined feeding operation

A sample site plan is provided below.



## General water information

The information in the "General Water Information" section of the form must be filled out. Indicate whether the measurements were measured or estimated. Technical guidelines that may be of assistance are available on the NRCB website, at [www.nrcb.ca](http://www.nrcb.ca).

- A flood plain is the area covered by water from a common body of water during a flood event.
- A "common" body of water refers to a body of water that crosses a property line. AOPA defines common bodies of water as "the beds and shores of irrigation canals, drainage canals, reservoirs, rivers, streams, creeks, lakes, marshes, sloughs or other exposed bodies of water. Private dugouts and roadside ditches are **not** common bodies of water.
- Sandstone, siltstone, shale and mudstone, whether fractured or unfractured, are examples of bedrock.
- In most instances, construction into a water table is undesirable as the water table can cause problems and delays during construction. The water table must be one metre **below** the deepest excavation at the time of construction. The depth to water table may vary across the site, and will vary from year-to-year and season-to-season.
- The uppermost groundwater resource is the underground source of water closest to the surface that is of a quality and quantity appropriate for domestic use. The depth to an uppermost groundwater resource is one factor in determining the risk of contaminating that groundwater resource. The depth to an uppermost groundwater resource may or may not be the same as the resting water level in a water well.

## General water information – existing

GENERAL WATER INFORMATION – EXISTING Use the existing manure storage facility that is closest to a common body of water or water well			NRCB USE ONLY	
			Comments	Meets regulations
<b>Flood plain information</b> What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?	20 8 (m)	<input checked="" type="checkbox"/> Estimated <input type="checkbox"/> From records		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
<b>Springs, wells, and surface water information</b>				
a. How many springs are within 100 m of manure storage facilities or manure collection areas?	None 21			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
b. How many water wells are within 100 m of the manure storage facilities or manure collection areas?	1 22			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
c. What is the shortest distance from an manure collection or storage facility to a surface water body? (ie, lake, creek, slough, seasonal, etc.)	1000 23			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
<b>Groundwater information</b>				
a. What is the depth to bedrock?	24 30 (m)	<input type="checkbox"/> Estimated <input checked="" type="checkbox"/> Measured <input type="checkbox"/> Drilling reports	N/A	
c. What is the shallowest depth to the uppermost groundwater resource?	25 15 (m)	<input type="checkbox"/> Estimated <input checked="" type="checkbox"/> Measured <input type="checkbox"/> Drilling reports		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption

- 20** Enter the vertical distance the confined feeding operation is above the flood plain. Select the appropriate check box to indicate if the distance was estimated or was derived from flood plain records. Alberta Environment and Parks (AEP) has 1:25 year flood plain mapping; however, the mapping does not cover the entire province. It can be obtained by contacting the nearest office of AEP or online through the ministry's website, at <http://maps.srd.alberta.ca/floodhazard/>. If the proposed area for development is not covered by this mapping, information on the highest known flood level should be used in place of the 1:25 year flood plain.

- 21 Enter the number of springs within 100 metres of all barns, feedlot pen areas, liquid manure storage facilities, manure storage pads, and catch basins at the confined feeding operation.



If there are any springs within this distance, ensure that the site of each spring is shown on the detailed site plan.

- 22 Provide the number of water wells within 100 metres of all barns, feedlot pen areas, liquid manure storage facilities, manure storage pads, and catch basins at the confined feeding operation.



If there are any wells within this distance, their identification numbers and any drilling reports must be attached to your application. The site of each well must be shown on the detailed site plan.

- 23 Enter the shortest distance in metres to a common body of water. AOPA requires a 30-metre separation between a manure storage or collection area and a common body of water, unless drainage is away from the common body of water or secondary protection is provided.

- 24 Provide the depth to bedrock in metres and select the appropriate check box to indicate whether the measurement was estimated, derived from borehole logs, or derived from water well drilling reports.

- 25 Provide the depth to the uppermost identified groundwater resource and select the appropriate check box to indicate whether the measurement was estimated, derived from borehole logs, or derived from water well drilling reports. A groundwater resource is defined by AOPA as:

- (i) an aquifer below the site of a confined feeding operation or manure storage facility that is being used as a water supply for the purposes of domestic use; or
- (ii) where no aquifer referred to in clause (i) exists, an aquifer below the site of a confined feeding operation or manure storage facility that has a sustained yield of 0.76 litres per minute or more, and a total dissolved solids concentration of 4,000 milligrams per litre or less, as determined by well records, well drilling logs, hydro geological maps, hydrogeological reports or other evidence satisfactory to an approval officer or the board.

The bottom of a liner (or naturally occurring protective layer used instead of a liner) must be at least 1 metre above a groundwater resource.

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

Copy of borehole logs attached

26



- 26 If there is additional information you would like to provide, enter it in this space. Attach borehole logs and records, as required.

**Note:** 1 foot = 0.3048 metres      1 metre = 3.2808 feet



## General Water – Proposed #1

GENERAL WATER INFORMATION – PROPOSED			NRCB USE ONLY	
Use the proposed manure storage facility that is closest to a common body of water or water well			Comments	Meets regulations
Proposed facility name <u>Feeder barn.</u>				
<b>Flood plain information</b> What is the elevation of the floor of the lowest <b>proposed</b> manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?	27 <u>8</u> (m)	<input checked="" type="checkbox"/> Estimated <input type="checkbox"/> From records		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
<b>Springs, wells, and surface water information</b> a. How many springs are within 100 m of <b>proposed</b> manure storage facilities or manure collection areas?			<u>None</u> 28	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
b. How many water wells are within 100 m of <b>proposed</b> manure storage facilities or manure collection areas?			<u>1</u> 29	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
c. What is the shortest distance from a <b>proposed</b> manure collection or storage facility to a surface water body? (ie, lake, creek, slough, seasonal, etc.)			<u>1000</u> 30	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
<b>Groundwater information</b> a. What is the depth to bedrock?	31 <u>30</u> (m)	<input type="checkbox"/> Estimated <input checked="" type="checkbox"/> Measured <input type="checkbox"/> Drilling reports	N/A	
b. What is the depth to the water table?	32 <u>5</u> (m)	<input type="checkbox"/> Estimated <input checked="" type="checkbox"/> Measured <input type="checkbox"/> Drilling reports		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
c. What is the shallowest depth to the uppermost groundwater resource?	33 <u>15</u> (m)	<input type="checkbox"/> Estimated <input checked="" type="checkbox"/> Measured <input type="checkbox"/> Drilling reports		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
<b>Additional information:</b> (attach borehole logs and records, as required)				
<u>Borehole logs attached.</u>			34	

**27** Enter the vertical distance the lowest proposed manure storage or collection facility is above the flood plain. Select the appropriate check box to indicate if the distance was estimated or was derived from flood plain records. Alberta Environment and Parks (AEP) has 1:25 year flood plain mapping; however, the mapping does not cover the entire province. It can be obtained by contacting the nearest office of AEP or online through the ministry's website, at <http://maps.srd.alberta.ca/floodhazard/>. If the proposed area for development is not covered by this mapping, information on the highest known flood level should be used in place of the 1:25 year flood plain.

**28** Enter the number of springs within 100 metres of proposed liquid manure storage facilities, manure storage pads and catch basins at the confined feeding operation.

If there are any springs within this distance, ensure that the site of each spring is shown on the detailed site plan.

**29** Provide the number of water wells within 100 metres of proposed liquid manure storage facilities, manure storage pads and catch basins at the confined feeding operation.

If there are any wells within this distance, their identification numbers and any drilling reports must be attached to your application. The site of each well must be shown on the detailed site plan.

- 30** Enter the shortest distance in metres to a common body of water. AOPA requires a 30-metre separation between a manure storage or collection area and a common body of water, unless drainage is away from the common body of water or secondary protection is provided.
- 31** Provide the depth to bedrock in metres and select the appropriate check box to indicate whether the measurement was estimated, derived from borehole logs, or derived from water well drilling reports.
- 32** Enter the depth to the water table and select the appropriate check box to indicate whether the measurement was estimated via test pits (or other means) or measured in a piezometer. The bottom of a liner or the top of a naturally occurring protective layer must be one metre above the water table at the time of construction.
- 33** Provide the depth to the uppermost identified groundwater resource and select the appropriate check box to indicate whether the measurement was estimated, derived from borehole logs, or derived from water well drilling reports. A groundwater resource is defined by AOPA as:
- (i) an aquifer below the site of a confined feeding operation or manure storage facility that is being used as a water supply for the purposes of domestic use; or
  - (ii) where no aquifer referred to in clause (i) exists, an aquifer below the site of a confined feeding operation or manure storage facility that has a sustained yield of 0.76 litres per minute or more, and a total dissolved solids concentration of 4,000 milligrams per litre or less, as determined by well records, well drilling logs, hydro geological maps, hydrogeological reports or other evidence satisfactory to an approval officer or the board.

The bottom of a liner (or naturally occurring protective layer used instead of a liner) must be at least 1 metre above a groundwater resource.



- 34** If there is additional information you would like to provide, enter it in this space. Attach borehole logs and records, as required.

**Note:** 1 foot = 0.3048 metres      1 metre = 3.2808 feet



## General Water – Proposed #2

For each proposed facility, complete individual forms with the above instructions.

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 <u>liquid Manure Storage</u>				
<b>Flood plain information</b> What is the elevation of the floor of the lowest <b>proposed</b> manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?			27 <u>8</u> (m) <input checked="" type="checkbox"/> Estimated <input type="checkbox"/> From records	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
<b>Springs, wells, and surface water information</b> a. How many springs are within 100 m of <b>proposed</b> manure storage facilities or manure collection areas?			None 28	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
b. How many water wells are within 100 m of <b>proposed</b> manure storage facilities or manure collection areas?			1 29	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
c. What is the shortest distance from a <b>proposed</b> manure collection or storage facility to a surface water body? (ie, lake, creek, slough, seasonal, etc.)			1000 30	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
<b>Groundwater information</b> a. What is the depth to bedrock? 31			<u>30</u> (m) <input type="checkbox"/> Estimated <input checked="" type="checkbox"/> Measured <input type="checkbox"/> Drilling reports	N/A
b. What is the depth to the water table? 32			<u>5</u> (m) <input type="checkbox"/> Estimated <input checked="" type="checkbox"/> Measured <input type="checkbox"/> Drilling reports	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
c. What is the shallowest depth to the uppermost groundwater resource? 33			<u>15</u> (m) <input type="checkbox"/> Estimated <input checked="" type="checkbox"/> Measured <input type="checkbox"/> Drilling reports	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
<b>Additional information:</b> (attach borehole logs and records, as required) 34				

See numbers 27 to 34 above.

## Distance to neighbouring residences

Applicants must provide the names of owners of all neighbouring residences closest to the confined feeding operation in all directions. If you have questions about which neighbours should be listed, contact your NRCB approval officer for assistance.

When measuring the distance from the confined feeding operation to the neighbour's residence, you should consider the minimum distance separation (MDS) required for the confined feeding operation. The closer the actual distance the confined feeding operation is to the neighbour's residence, and the closer the neighbour's residence is to the MDS required for the confined feeding operation, the more accurately you will have to make the measurement. If you have any questions about your MDS, contact your approval officer. An accurate measurement would include having the distance surveyed by a professional land surveyor. A less accurate measurement would be to estimate the distance by scaling off of an air or satellite photo.

The method used to measure this distance should, in any event, be reasonably accurate. If the required distance is substantially less than the actual distance to the neighbour's residence, an estimated distance may be acceptable.

**Note:** 1 metre = 3.2808 feet

1 foot = 0.3048 metres

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	
Jane Smith	NW1-2-3-W4	500					
Jim James	SW1-2-3-W4	2000					

Methods used/margins of error to determine distance: Air photo

Additional information:  
Jane Smith has provided a signed waiver (att'd)

- 35** Provide the names of the neighbours with residences nearest your confined feeding operation.
- 36** Enter the complete legal land description of each neighbour's residence in the appropriate box by quarter, section, township, range, and meridian.
- 37** Enter the distance in metres from the nearest point of the proposed manure storage or manure collection facility to the closest wall of each neighbour's residence.
- 38** Provide the method used to determine the distance from the confined feeding operation to the neighbour's residence.
- 39** If there is additional information you would like to provide relating to the minimum distance separation, enter it in this space.



If you are applying for **expansion factors**, **dispersion factors**, **alternate technology factors** or **any other MDS factor**, including an **MDS waiver**, enter your information in this space **or** reference and provide attachments with the appropriate information and details.

## Land base for manure and compost application (for approvals and registrations only)

Not all cultivated acres are useable for manure and compost application, due to setbacks required by the regulations and unsuitable features such as sloughs or treed areas.

The level of accuracy required for the land parcel area depends on how the required area compares to the proposed area. If the required area is very similar in size to the proposed area, the applicant is required to show that allowance has been made for setbacks and land that is not suitable for manure spreading. If the available area for spreading manure is significantly greater than the required area, the area need not be calculated as accurately.



Land base requirements for all livestock types can be found in the *Agricultural Operation Practices Act* (AOPA) Manure Characteristics and Land Base Code (Agdex 096-8).

Manure must be incorporated within 48 hours of land application unless it is spread on forage or direct seeded land. In this case, additional setback requirements from common bodies of water and neighbouring residences must be adhered to.

**Note:** 1 acre = 0.405 hectares

**160 acres = 64.75 hectares**



If you have manure spreading agreements with other land owners, a copy of each agreement, with the landowners' signature, must be attached to your application. Please note that these agreements may be separate from a land rental agreement.



If you are proposing to use manure application methods or timing for manure incorporation that exceed the requirements of the regulations, indicate the methods and timing in the additional information section. **Please note that methods that exceed the requirements of AOPA and are accepted by the NRCB will be made a condition of the permit.** Methods that address AOPA requirements will not be added as conditions to the permit, however, operators must ensure that manure is managed and records are maintained in accordance with AOPA requirements.

If you are proposing a manure handling plan as an alternative to land spreading and incorporation of manure, describe your proposal in the additional information section. Manure handling plans should provide details of how manure produced at the facility is being handled, transferred, or used other than by land application and incorporation.

If you are proposing a nutrient management plan, describe it in the additional information section. Having sufficient land for manure application and following the rules for nitrate and salinity levels is acceptable to the NRCB. No additional nutrient management plan is required.

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

Name of landowner(s)* 40	Legal Land Description	Area ** (usable hectares)	Soil Zone	NRCB USE ONLY Area unsuitable:
Jane Smith	NW 1-2-3-4	64 ha.	Dark Brown.	
Jim James	SW 1-2-3-4	45 ha.	Irrigated	
	41	42	43	
TOTAL		109 ha. 44		

\*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) 45

Agreements with landowners for manure spreading attached

- 40 Enter the name of the landowner on whose property the confined feeding operation will be applying manure, composting materials, or compost.
- 41 Provide the legal land description of the land on which manure will be applied by entering the quarter, section, township, range, and meridian.
- 42 Enter the area of this land parcel, in hectares, that is suitable for manure spreading (the total area of the parcel minus areas required for setbacks, building sites, trees, etc.).
- 43 Provide the soil zone for each parcel of land. Options are **dark brown (DB)**, **brown (B)**, **black (Bk)**, **grey wooded (GW)**, and **irrigated (I)**.
- 44 Provide a total of all useable hectares for all parcels of land in the space provided.
- 45 Use this space for additional information you would like to provide regarding the land available for manure spreading, a manure handling plan, alternative manure incorporation times or methods, or nutrient management plans, etc.

**Note: 1 acre = 0.405 hectares**

**160 acres = 64.75 hectares**





## Appendix 2: Glossary of terms

These definitions are based on existing definitions in AOPA and its associated regulations.

<b>Affected party</b>	A person or municipality determined in accordance with the regulations to be an affected person.
<b>Agent</b>	A party that is authorized in writing to act on behalf of the applicant.
<b>AOPA</b>	Alberta provincial legislation consisting of the <a href="#">Agricultural Operation Practices Act</a> (AOPA) and its associated regulations.
<b>Applicant</b>	The person or company that is applying to the NRCB for a permit, or an amendment to an existing permit, for a new or expanded confined feeding operation, manure collection area, or manure storage facility.
<b>Application</b>	A two-part application for an approval, registration, or authorization to construct a new or expanded CFO, manure collection area, or manure storage facility, or an application for an amendment to an existing permit issued by the NRCB, municipal district, or health authority.
<b>Approval</b>	The permit type required to construct or expand a confined feeding operation in accordance with the number of animals and livestock type set out in Column 3, Schedule 2 of the Part 2 Matters Regulation.
<b>Authorization</b>	The permit type required to construct or to expand a manure storage facility that is for containment of 500 tonnes or more of manure for seven months or more in any calendar year.
<b>Compost</b>	A solid mature product resulting from composting. Does not include compost to which the <a href="#">Fertilizer Act</a> (Canada) applies.
<b>Composting</b>	A managed process of bio-oxidation of composting materials, including a thermophilic phase.
<b>Composting materials</b>	Organic material generated by an agricultural operation described in clause (b)(ii), (iv), (v), or (vi) of AOPA, other than carcasses or parts of carcasses. Includes other substances permitted by the regulations.
<b>Construct</b>	Includes reconstructing, renovating, altering, or expanding a structure, operation or facility, but does not include general maintenance of a structure, operation or facility, or the clearing and levelling of land.
<b>Confined feeding operation (CFO)</b>	Fenced or enclosed land or buildings where livestock are confined for the purpose of growing, sustaining, finishing, or breeding by means other than grazing, and any other building or structure directly related to that purpose. Does not include residences, livestock seasonal feeding and bedding sites, equestrian stables, auction markets, racetracks, or exhibition grounds.
<b>Development permit</b>	A permit issued under a land use bylaw, pursuant to the <a href="#">Municipal Government Act</a> .
<b>Expansion</b>	The construction of additional facilities to store more manure, composting materials, or compost, or to accommodate more livestock.
<b>Freeboard</b>	The vertical distance between the full storage level of a structure and the upper edge of the structure.
<b>Liner</b>	A layer constructed out of natural or manufactured materials that restricts the migration of the contents of the manure storage facility or manure collection area.



<b>Liquid manure</b>	Manure that is in a predominantly liquid state or manure to which water has been added.
<b>Manure</b>	Livestock excreta, associated feed losses, bedding, litter, soil and wash water. Does not include manure to which the <a href="#">Fertilizers Act</a> (Canada) applies.
<b>Manure collection area</b>	The floor of a barn, the under-floor pits of a barn, the floor of a feedlot pen or a catch basin where manure collects. Does not include the floor of a livestock corral.
<b>Manure storage facility</b>	A facility for storing manure, composting materials or compost, or a composting facility. Does not include such a facility at an equestrian stable, an auction market, a racetrack or exhibition grounds.
<b>Minimum distance separation</b>	Under AOPA, the minimum distance required between a manure storage operation or facility and the nearest residence that is not owned or controlled by the facility's operator.
<b>Municipal development plan</b>	A municipal land use plan adopted by bylaw, under the <a href="#">Municipal Government Act</a> .
<b>Operator</b>	The operator of a confined feeding operation, manure collection area, or manure storage facility.
<b>Permit</b>	An approval, registration, or authorization that is issued by the NRCB or grandfathered under AOPA.
<b>Registration</b>	The permit type required to construct or expand a confined feeding operation in accordance with the number of animals and livestock type set out in Column 2, Schedule 2 of the Part 2 Matters Regulation.
<b>Referral agency</b>	Government of Alberta authorities with responsibility for agriculture, health, the environment, and transportation that are provided by the NRCB with a copy of applications to expand or construct a confined feeding operation, for their information, review and response.
<b>Runoff</b>	Liquid (including rainwater and meltwater) that drains as surface flow out of an agricultural operation or part of an agricultural operation.
<b>Run-on</b>	Liquid (including rainwater and meltwater) that drains as surface flow onto an agricultural operation or part of an agricultural operation.
<b>Solid manure</b>	Manure that is 20% or more solid matter, and that does not flow when piled.