

Decision Summary LA22045

This document summarizes my reasons for issuing Approval LA22045 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document LA22045. All decision documents and the full application are available on the Natural Resources Conservation Board (NRCB) website at www.nrcb.ca under Confined Feeding Operations (CFO)/CFO Search. My decision is based on the act and its regulations, the policies of the NRCB, the information contained in the application, and all other materials in the application file.

Under AOPA this type of application requires an approval. For additional information on NRCB permits please refer to www.nrcb.ca.

1. Background

On October 18, 2022, Beyer Feeders Ltd. (Beyer Feeders), submitted a Part 1 application to the NRCB to construct a new beef CFO.

The proposed CFO construction involves:

- a new CFO with 1,200 beef feeder calves
- constructing a pen area (six feedlot pens made of portable fences) with dimensions of 27 m x 33 m each.
- constructing a new catch basin 40 m x 20 m x 1.5 m deep

The applicant also requested a variance under section 17 of AOPA of the prohibition against manure storage facilities (MSF) and manure collection areas (MCA) less than 100 metres away from water wells. Due to this being a new operation, not a grandfathering determination or unauthorized construction, a request for an exemption would be more suitable. Therefore, the request for an exemption is discussed in Appendix C and section 9, below.

The Part 2 application was submitted on February 27, 2023. On March 8, 2023, I deemed the application complete.

a. Location

The proposed CFO is located in the portion of pt. NW 16-009-25 W4M in the Municipal District (MD) of Willow Creek, roughly 1.7 km east of the Town of Fort Macleod. The Crowsnest Highway (Alberta Provincial Highway No. 3) and the Canadian Pacific Railway alignment run parallel along the southern property line of this parcel.

The terrain is relatively flat, with an overall slope to the north and west. The closest body of water is a seasonal wetland complex, approximately 195 m southwest of the proposed CFO. The Old Man River is more than 1.0 km northwest from the proposed CFO.

The location of the proposed CFO has had no previous permits with the NRCB.

2. Notices to affected parties

Under section 19 of AOPA, the NRCB notifies (or directs the applicant to notify) all parties that are “affected” by an approval application. Section 5 of AOPA’s Part 2 Matters Regulation defines “affected parties” as:

- In the case where part of a CFO is located, or is to be located, within 100 m of a bank of a river, stream or canal, a person or municipality entitled to divert water from that body within 10 miles downstream
- the municipality where the CFO is located or is to be located
- any other municipality whose boundary is within a specified distance from the CFO, depending on the size of the CFO
- all persons who own or reside on land within a specified distance from the CFO, depending on the size of the CFO

For the size of this CFO the specified distance is 0.5 miles (The NRCB refers to this distance as the “affected party radius.”)

A copy of the application was sent to the MD of Willow Creek, which is the municipality where the CFO is to be located. I also forwarded a copy to the Town of Fort Macleod as the proposed CFO is within the Intermunicipal Development Plan (IDP) between town and the county.

There are no parts of the CFO that are located within 100 m of a bank of a river, stream, or canal and there are no other municipalities within the affected party radius.

The NRCB gave notice of the application by public advertisement in a weekly newspaper in circulation in the community affected by the application. In this case, public advertisement was in the Macleod Gazette on March 8, 2023. The full application was made available for viewing during regular business hours and was posted on the NRCB website for public viewing. As a courtesy, seven letters were sent to people identified by the MD of Willow Creek as owning or residing on land within the affected party radius.

3. Notice to other persons or organizations

Under section 19 of AOPA, the NRCB may also notify persons and organizations the approval officer considers appropriate. This includes sending applications to referral agencies which have a potential regulatory interest under their respective legislation.

Referral letters and a copy of the complete application were emailed to Alberta Health Services (AHS), Alberta Environment and Protected Areas (EPA), and Alberta Transportation & Economic Corridors (TRAN).

A copy of the application was also sent to the land administrator with ATCO Ltd., and land services for Fortis Alberta Inc. as their respected right-of-ways (ROW) were within the proposed CFO boundary. A copy of the application was also sent to the Town of Fort Macleod, because the proposed CFO was located within the Intermunicipal Development Plan (IDP) between the Town of Fort Macleod and the MD of Willow Creek.

The NRCB received responses from Jeff Gutsell, hydrogeologist with EPA, and Evan Neilsen, a planning technologist with TRAN.

Mr. Gutsell (EPA) stated in his response that there are two water well logs on this land location but there are no existing groundwater licenses. He continued to state that Beyer Feeders is not within an irrigation district, therefore they could not legally obtain water through the irrigation district. The existence of the water well applicable to this application is discussed in Technical Document LA22038 and a copy was forwarded to Beyer Feeders for their information and action. The applicant is responsible to ensure the CFO has sufficient, licenced water prior to populating their CFO.

Mr. Neilsen (TRAN) stated in his response that a Roadside Development Application from Alberta Transportation will be required for the proposed development. A copy of Mr. Neilsen's response was forwarded to Beyer Feeders for their information and action.

Ms. Sandford, a planning and development officer with the Town of Fort Macleod, had no concerns about the proposed development.

No other responses were received.

4. Alberta Land Stewardship Act (ALSA) regional plan

Section 20(10) of AOPA requires that an approval officer must ensure the application complies with any applicable ALSA regional plan.

As required by section 4(1) of the South Saskatchewan Regional Plan (SSRP) I considered that document's Strategic Plan and Implementation Plan and determined that the application is consistent with those plans. In addition, there are no notices or orders under the Regulatory Details portion of the SSRP that apply to this application.

5. Municipal Development Plan (MDP) consistency

I have determined that the proposed CFO construction is consistent with the land use provisions of the MD of Willow Creek's municipal development plan. (See Appendix A for a more detailed discussion of the county's planning requirements.)

6. AOPA requirements

With respect to the technical requirements set out in the regulations, the proposed CFO:

- Meets the required AOPA setbacks from all nearby residences (AOPA setbacks are known as the "minimum distance separation" requirements, or MDS)
- Meets the required AOPA setbacks from springs, and common bodies of water
- Has sufficient means to control surface runoff of manure
- Meets AOPA's nutrient management requirements regarding the land application of manure
- Meets AOPA groundwater protection requirements for the design of floors and protective layers of manure storage facilities and manure collection areas

With the terms and conditions summarized in part 11, the application meets all relevant AOPA requirements. The exemptions and conditions that are required to address the AOPA requirements around groundwater protection and being within 100 metres of a water well are discussed in the following parts of this decision summary.

7. Responses from municipality

Directly affected parties are entitled to a reasonable opportunity to provide evidence and written submissions relevant to the application and are entitled to request an NRCB Board review of the approval officer's decision. Not all affected parties are "directly affected" under AOPA.

Municipalities that are affected parties are identified by the act as "directly affected." The MD of Willow Creek is an affected party (and directly affected) because the proposed CFO is located within the MD of Willow Creek's boundaries.

Ms. Cindy Chisholm, director of planning and development with the MD of Willow Creek, provided a written response on behalf of the MD of Willow Creek. Ms. Chisholm stated that the application is consistent with the MD of Willow Creek's land use provisions of their municipal development plan. The application's consistency with the MD of Willow Creek's municipal development plan is addressed in Appendix A, attached. The MD of Willow Creek's concerns from their response are addressed in Appendix B.

Apart from municipalities, any member of the public may request to be considered "directly affected." No responses were received from any other person, organization, or member of the public.

8. Environmental risk of CFO facilities

New CFO facilities which clearly meet or exceed AOPA requirements are automatically assumed to pose a low risk to surface and groundwater. However, there may be circumstances where, because of the proximity of a shallow aquifer, or porous subsurface materials, an approval officer may require groundwater/surface water/soil/construction supervision or an exemption. In this case a determination was made, groundwater monitoring and construction specifications, and a water well exemption is required.

As part of my review of this application, I assessed the risk to the environment posed by the CFO's proposed manure storage facilities and manure collection areas. I used the NRCB's environmental risk screening tool (ERST) to assist in my assessment of risk to surface water and groundwater (see NRCB Operational Policy 2016-7: Approvals, part 8.13). The tool provides for a numeric scoring of risks, which can fall within a low, moderate, or high risk range. (A complete description of this tool is available under CFO/Groundwater and Surface Water Protection on the NRCB website at www.nrcb.ca.)

I assessed the proposed facilities (pen area and catch basin) using the ERST due to concerns of water well setbacks, and surface water distances. The assessment found that these facilities pose a low potential risk to groundwater and surface water. From a review of other information gathered in the course of this application, I am satisfied that the screening provided by the ERST is adequate and that the presumption is not rebutted. The results of the risk assessment are documented in Technical Document LA22045.

9. Exemptions

Under section 7(b) of AOPA, approval officers may grant an exemption from the 100 metre water well setback.

I have determined that the proposed pen area and catch basin are located within the required AOPA setback from a water well. In my review, I have decided that an exemption to the facilities

is warranted due to the naturally occurring protected layer, construction conditions, and operating conditions included in Approval LA22045. The water well is approximately four feet above the surrounding area and drainage immediately surrounding the well is sloped away from the well head. This topography and slope will be required to be maintained as per a condition in Approval LA22045. More information regarding the exemption can be found in Appendix C of this document.

Under section 7(2)(b) of the regulation, I am requiring a water well monitoring condition to be included in Approval LA22045 to address the results of a water well exemption screening completed (see Appendix C, below).

10. Other factors

Because the approval application is consistent with the MDP land use provisions, and meets the requirements of AOPA and its regulations, I also considered other factors.

AOPA requires me to consider matters that would normally be considered if a development permit were being issued. The NRCB interprets this to include aspects such as property line and road setbacks related to the site of the CFO. (Grow North, RFR 2011-01 at page 2). Approval officers are limited to what matters they can consider though as their regulatory authority is limited.

Ms. Chisholm also listed the setbacks required by the MD of Willow Creek's land use bylaw (LUB) and noted that the applicant submitted a site plan with setback distances for the proposed facilities and shall meet these setback requirements.

On that basis, I am including a condition in Approval LA22045 that a survey by a qualified surveyor will be required to verify that the required municipal setbacks to roads and property lines is met as outlined in Municipal Land Use Bylaw No. 1826.

Additionally, the applicant will need to have the outermost corners of the CFO's permitted footprint indicated with permanent markers to ensure the portable pen area is not expanded outside of its permitted footprint. The distance from the closest manure collection or storage facility to the nearest residence (MDS setbacks) must also be surveyed to confirm that the required MDS has been met. (Approvals Policy 8.4).

Finally, I considered the effects of the proposed CFO on the environment, the economy, and the community, and the appropriate use of land.

Consistent with NRCB policy (Approvals Policy 8.7.3), I presumed that the effects on the environment are acceptable because the application meets all of AOPA's technical requirements. In my view, this presumption is not rebutted and the responses and concerns from referral agencies/municipalities have been addressed in Appendix B.

Consistent with NRCB policy (Approvals Policy 8.7.3), if the application is consistent with the MDP then the proposed development is presumed to have an acceptable effect on the economy and community. In my view, this presumption is not rebutted.

I also presumed that the proposed CFO is an appropriate use of land because the application is consistent with the land use provisions of the municipal development plan (See NRCB Operational Policy 2016-7: Approvals, part 8.7.3.). In my view, this presumption is not rebutted.

11. Terms and conditions

Approval LA22045 specifies the cumulative permitted livestock capacity as 1,200 beef feeder calves and permits the construction of the catch basin and pen area (constructed with portable pens).

Approval LA22045 contains terms that the NRCB generally includes in all AOPA approvals, including terms stating that the applicant must follow AOPA requirements and must adhere to the project descriptions in their application and accompanying materials.

In addition to the terms described above, Approval LA22045 includes conditions that generally address construction deadline(s), monitoring, construction inspection, and construction/operating requirements. For an explanation of the reasons for these conditions, see Appendix D.

12. Conclusion

Approval LA22045 is issued for the reasons provided above, in the attached appendices, and in Technical Document LA22045.

May 25, 2023

(Original signed)
Cailyn Wilson, PAg
Approval Officer

Appendices:

- A. Consistency with the municipal development plan
- B. Responses and concerns from referral agencies and municipalities
- C. Exemptions from water well setbacks
- D. Explanation of conditions in Approval LA22045

APPENDIX A: Consistency with the municipal development plan

Under section 20 of AOPA, an approval officer may only approve an application for an approval or amendment of an approval if the approval officer holds the opinion that the application is consistent with the “land use provisions” of the applicable municipal development plan (MDP).

This does not mean consistency with the entire MDP. In general, “land use provisions” cover MDP policies that provide generic directions about the acceptability of various land uses in specific areas.

Conversely, “land use provisions” do not call for discretionary judgements relating to the acceptability of a given confined feeding operation (CFO) development. Similarly, section 20(1.1) of the act precludes approval officers from considering MDP provisions “respecting tests or conditions related to the construction of or the site” of a CFO or manure storage facility, or regarding the land application of manure. (These types of MDP provisions are commonly referred to as MDP “tests or conditions.”) “Land use provisions” also do not impose procedural requirements on the NRCB. (See NRCB Operational Policy 2016-7: Approvals, part 8.2.5.)

Beyer Feeder’s CFO is located in the MD of Willow Creek and is therefore subject to that municipality’s MDP. The MD of Willow Creek adopted the latest revision to this plan on August 2019, under Bylaw #1841. The parts and policies of the MDP relevant to this application are discussed below.

Part 2 states that agriculture is a predominant land use in the MD though it also notes that it is important to balance other interests. One of the objectives in Section 2 states that one of the main objectives of the MDP is to mitigate the siting of a CFO to minimize conflicts with adjacent land uses. Policy 2.3 states that the MD shall establish guidelines with regards to the NRCB for the regulation and approval of CFOs within the MD. These guidelines are found in section 9.

Policy 9.1. states that the applicable setbacks from new development to roadways that are governed by the municipality can be found in the municipal Land Use Bylaw and need to be met. All other road setbacks are as required by Alberta Transportation.

The proposed development meets all of these setbacks.

Policy 9.2 of the MDP directs the NRCB to consider six matters. These are quoted below (*in italics*); each one is followed by my discussion of how the provision relates to this application. The requested matters to consider are:

(a) *The cumulative effect of a new approval on any area near other existing CFO’s/ILO’s*

This policy is likely not a “land use provision,” as it calls for project-specific, discretionary judgements about the types of cumulative effects that should be considered and the acceptable maximum levels of each of those effects.

In a 2011 decision, the Board stated that consideration of cumulative effects is “not within the Board’s regulatory mandate. As a statutory decision maker, the Board takes its direction from the authorizing legislation. AOPA does not provide for cumulative effects assessment.” (Zealand Farms, RFR 2011-02 at 5.)

For these reasons, I do not consider this MDP provision to be relevant to my MDP consistency determination.

(b) Environmentally significant areas contained in the Municipal District of Willow Creek: Environmentally Significant Areas in the Oldman River Region report [the report]

Beyer Feeder's CFO is not within any of the areas designated as of regional, provincial or national significance in the referenced report (Map 1 of the report). However, areas of local significance are not presented in the report.

The report also assessed the planning area for major physical constraints such as flood plains, unstable slope potential, and areas of artesian flow. The map shows that the CFO is not located in any of these areas. I am of the opinion that the application is consistent with this provision; I have not been privy to information which refutes this.

(c) Providing notice to adjacent landowners including applications for registration or authorization

This is likely not a "land use provision" because of its procedural focus and thus I do not consider it to be relevant to my MDP consistency determination. Regardless, this application is for an approval, not a registration or authorization. At any rate, as explained above, the NRCB sent out courtesy letters to people identified by the MD of Willow Creek as owning or residing on land within the affected party radius of 0.5 miles and gave public notice in the Macleod Gazette on March 8, 2023. The application therefore met the notification requirements of AOPA. (See also Operational Policy 2016-7: *Approvals*, part 7.5).

(d) Applying minimum distance separation calculations to all country residential development

I interpret "minimum distance separation" as referring to the minimum distance separation (MDS) requirements in section 3 and Schedule 1 of the Standards and Administration Regulation under AOPA. There is no country residential development located within the category 2 MDS for Beyer Feeder's CFO and the application meets AOPA's MDS requirements.

(e) Restricting development in the flood plain, floodway, the flood way fringe and flood prone, or hazard lands within or adjacent to any watercourse within the MD; and

As discussed in Technical Document LA22045, Beyer Feeder's CFO meets the AOPA setbacks to common bodies of water and is not located within a known flood plain as identified on the Alberta Environment and Parks flood hazard website. Based on this information, the application is consistent with this aspect of the provision.

(f) Restricting development in any wetland or riparian area

The proposed CFO facilities are not located in a wetland or riparian area, it meets the AOPA setbacks to common bodies of water also. This provision is therefore met by the application.

For these reasons, I conclude that the application is consistent with the land use provisions of the MD of Willow Creek's MDP.

In my view, the Land Use Bylaw is clearly incorporated in the MDP in several sections throughout the MDP, especially in Policy 15.5 which states:

The Development Authority shall require the NRCB to take into consideration the policies adopted in this plan and the Land Use Bylaw, when issuing an approval.

Therefore, I also considered the application's consistency with this document. Under the MD of Willow Creek's Land Use Bylaw (#1826 consolidated to Bylaw No. 383/2020), the subject land is currently zoned as Rural General. CFOs are not listed as prohibited, permitted, or discretionary land use under this zoning. Ordinarily, a land use bylaw intends to preclude land uses that are not listed as permitted or discretionary (and that do not meet any other relevant criteria). However, the land use bylaw lists "intensive livestock operations" (ILOs), defined essentially as CFOs below AOPA's permit thresholds, as a discretionary use within areas zoned Rural General. Therefore, I interpret the omission of CFOs from the lists of permitted and discretionary land uses as simply the municipality's recognition that, since AOPA came into effect in 2002, the NRCB is responsible for permitting CFOs above AOPA thresholds.

As for the lot size restriction in section 2(4) of the Rural General part of the bylaw, which states that the "parcel size shall remain the same size for which the development approval was originally issued." Since CFOs are not listed in the LUB, it is my interpretation that the lot restrictions are intended to apply to ILOs that are permitted by the municipality and are not intended to apply to CFOs above AOPA's permit thresholds. Regardless, this application is for a new CFO and does not include a proposal to subdivide an existing land parcel.

Section 3 of the Rural General part of the bylaw lists several setbacks. The facilities meet the 22.9 m road and 6.1 m other adjacent property line setback requirements.

For these reasons, I conclude that the proposed facilities are consistent with the land use bylaw.

Because the CFO is located within the intermunicipal planning area of the MD of Willow Creek and the Town of Fort Macleod, the Intermunicipal Development Plan (Town of Fort Macleod Bylaw No.1949 and, MD of Willow Creek Bylaw 1922, March 2022) also applies.

Section 3 of the planning document apply to CFOs:

Section 3.1 states that new confined feeding operations (CFOs) and expansions to existing permits which would increase livestock numbers are not permitted within the Intermunicipal Development Plan Confined Feeding Operation Policy Area (CFO Exclusion Area) as illustrated on Map 3 – CFO Policy Area.

Although this CFO has no existing permits prior to this approval, it does not reside within the IDP's CFO Exclusion Area. Hence this section has been met.

Section 3.2 states that in regard to manure application on lands within the Plan Area or the lands adjacent to the Town boundary, the standards and procedures as outlined in the Agricultural Operation Practices Act, Standards and Administration Regulation shall be applied.

Manure application is addressed in sections 24(1), and 24(5) of the Standards and Administration Regulation. The regulations provide rules for manure application as an ongoing operating matter, rather than a permitting matter. Regardless, the land base provided by the applicant does not fall within the IDP's Plan Area.

Section 3.3 states *both municipalities request the NRCB to circulate all applications for CFO registrations or approvals within the Plan Area to each respective municipality.*

Although this section is not a land use provision and regulates the notification process between the Town of Fort Macleod and MD of Willow Creek, both municipalities were given notice of this application.

Section 3.4 states *both municipalities recognize and acknowledge that existing CFOs located within the CFO Exclusion Area will be allowed to continue to operate under acceptable operating practices and within the requirements of the Agricultural Operation Practices Act and Regulations. Consistent with Policy 3.1 of the IDP, existing CFOs in the CFO Policy Area may continue to operate only within the scope of their existing permit.*

This CFO is not in an area identified as exclusion or restricted areas and is therefore consistent with this section.

Section 3.5 states *the municipalities agree that they will notify and consult with the other municipality prior to engaging the NRCB or other provincial authorities, should a problem or complaints arise regarding a CFO operator's practices.*

This section is not a land use provision and speaks on the corporation between the two municipalities. This section does therefore not apply to my MDP/IDP consistency determination.

Section 3.6 states *consistent with the MD's Land Use Bylaw and Municipal Development Plan, all applications regarding intensive livestock operation (ILO) and CFOs within the Plan Area shall be forwarded to the Town for review and comment.*

Although this section is not a land use provision and regulates the notification process between the Town of Fort Macleod and MD of Willow Creek, both municipalities were given notice of this application.

Sections 3.7 and 3.8 discuss Land Use Bylaw amendments affecting the policy and planning between the two municipalities.

These sections are not land use provisions and speaks on the corporation between the two counties. This section does therefore not apply to my MDP/IDP consistency determination.

For these reasons, I conclude that the proposed facilities are consistent with the IDP between the Town of Fort Macleod and the MD of Willow Creek.

APPENDIX B: Responses and concerns from referral agencies municipality

a. Alberta Environment and Protected Areas (EPA)

In their response, an EPA hydrogeologist stated that there are 2 well logs on the NW 16-9-25 W4M including 1 chemistry and 1 new well. Furthermore, it was communicated that neither of the wells appear to be licensed to legally divert water under the *Water Act*, and there is no potential option for legally obtaining water for the proposed feedlot operation from an Irrigation District.

EPA expressed that prior to feedlot construction and population with animals, Beyer Feeders must assess their annual water requirements for the proposed CFO, and determine if they have sufficient water allocations, and have it confirmed by EPA. Additionally, Beyer Feeders should apply for a water licence under the *Water Act* to meet these requirements.

Beyer Feeders chose the declaration indicating that they will be applying for water licensing separately from the AOPA process. The response from EPA has been forwarded to Beyer Feeders and explained that they must obtain water legally for their operation. Beyer Feeders have been advised that they are responsible for obtaining sufficient licensed water prior to populating their CFO.

b. Alberta Transportation & Economic Corridors (TRAN)

In their response, a TRAN planning technologist stated that a Roadside Development Application from Alberta Transportation will be required for the proposed development.

Beyer Feeders has been forwarded this response and instructed to contact TRAN to obtain a permit for their operation prior to the development of the proposed CFO.

c. Municipal District (MD) of Willow Creek (a directly affected party)

The MD Municipal Planning Commission (of Willow Creek) and Ms. Chisholm raised the following concerns and requested additional information be provided regarding:

1.) Concerns on the environment:

- *“The water source being provided for the livestock while waiting for a water licence approval from Alberta Environment and Protected Areas”.*

Beyer Feeders is currently operating an AOPA under-threshold (less than 360 beef feeder calves) operation on the NW 16-009-25 W4M without a water licence. In the MD of Willow Creek’s response, a concern was raised as to where Beyer Feeders was obtaining the water for their operation. The NRCB only permits CFOs that are within the AOPA threshold, which in this case would be 360+ beef feeder calves.

Alberta Environment and Protected Areas (EPA) is responsible for licencing the use of groundwater and surface water in the province. Therefore, for efficiency, and to avoid inconsistent regulation, NRCB approval officers generally do not consider water supply concerns when reviewing AOPA permit applications, other than ensuring that applicants sign one of the water licencing declarations listed in the Part 2 application form.

Beyer Feeders chose the declaration indicating that they will be applying for water licensing separately from the AOPA process. EPA has confirmed that the applicant does not have sufficient licensed water for their proposed CFO and must contact them to apply for water licensing. The applicant has been forwarded the responses from all affected parties and referral agencies for their information and action. Additionally, EPA stated in their response that the applicant is required to legally attain water for their operation.

- *“... that if the NRCB application is approved, that the proposed catch basin (27m x 20m x 3m) construction includes a liner. The proposed CFO may be within the vicinity of the Orton aquifer.”*

Several AOPA technical requirements (e.g. sections 7 and 9 of the Standards and Administration Regulation) are designed to prevent or minimize manure leakage from the CFO facilities and thus, prevent CFO manure from reaching and contaminating groundwater. As noted in Technical Document LA22045, the location of the proposed facilities are within an area with a naturally occurring protective layer. Additional precautions to minimize the risk of groundwater contamination have been addressed with the alteration of the catch basin’s dimensions and conditions regarding the construction of the CFO (see Appendix D for conditions of Approval LA22045).

2.) Manure application concerns

- *“...how long the Land Base for Manure Agreement is valid, and does the NRCB monitor when and where the manure spreading occurs yearly?”*

Manure application is addressed in sections 24(1), and 24(5) of the Standards and Administration Regulation. Manure application on land is not a permitting consideration, except that the applicants are required to demonstrate that they have enough cultivated land available to apply manure for the first year of operation. The regulations provide rules for manure application as an ongoing operating matter, rather than a permitting matter.

AOPA has requirements to protect the soil, groundwater, and surface water from excessive application of manure nutrients (Section 25 Standards and Administration Regulation). These include soil testing requirements, soil salinity limits, nitrate-nitrogen limits, and setbacks from water bodies, water wells, and residences. Operators are required to keep manure spreading and soil sampling records and must provide them to the NRCB upon request.

APPENDIX C: Exemptions from water well setbacks

Water Well Considerations

The proposed pen area and catch basin (facilities) are to be located less than 100 m from a water well. I have confirmed that 1 water well is located approximately 40 m from the facilities during a site visit and by Alberta Water Well search. This is in conflict with the section 7(1)(b) of the *Standards and Administration Regulation (SAR)* under AOPA.

Section 7(2), however, allows for exemptions if, before construction, the applicant can demonstrate that the aquifer into which the water well is drilled is not likely to be contaminated by the manure collection area (MCA), and, if required, a groundwater monitoring program is implemented.

The potential risks of direct aquifer contamination from the MCA are presumed to be low if the applicant's proposed MCA meets AOPA's technical requirements to control runoff and leakage. Approval officers also assess whether the water well itself could act as a conduit for aquifer contamination.

In this case, I felt the following factors were relevant to determine the risk of aquifer contamination via the water well:

- a. How the well was constructed
- b. Whether the well is being properly maintained
- c. Whether the well is up- or down-gradient from the MCA and whether this gradient is a reasonable indication of the direction of surface and groundwater flow between the two structures

These presumptions and considerations are based on NRCB Operational Policy 2016-7: Approvals, part 8.7.1.

Water well ID #256433

Based on information provided by the applicant and from the Alberta Environment and Protected Areas (EPA) water well database, the water well located approximately 40 m west of the facilities is likely EPA water well ID #256433. This well is reported to have been installed in 1982 and has no information whether there is a perforated or screened zone below ground level across stratigraphy. This well is pit-less and is used for domestic purposes.

I note that in my conversations with the applicant, the water well is only used presently for drinking water for the residence. The well's log identifies protective layers from ground surface to 32 m below ground level. The well does not have a seal. The well appeared to be in good condition at the time of my site inspection and its casing was protected by a welded steel cage. The well is up-gradient of the CFO and MCA.

The NRCB has developed a "water well exemption screening tool," based on the factors listed above, to help approval officers assess the groundwater risks associated with a nearby water well.¹

¹ A complete description of this tool is available under CFO/Groundwater and Surface Water Protection on the NRCB website at www.nrcb.ca.

In this case, the results of the water well exemption screening tool suggest that an exemption is likely as seen in Technical Document LA22045.

Under the regulation, an approval officer may require a groundwater monitoring program of the water well in question. Despite the above, I am of the opinion that a condition should be included in the approval due to the well's proximity to the facilities.

In my view, a monitoring program is required due to the combination of moderate-high Water Well Exemption Screening Tool scores, groundwater flow path, distances from sources to well site, and domestic use of the water well. Therefore, a condition will be included in Approval LA22045 that well 256433 will be sampled on an annual basis for nitrates, and chlorides in accordance with water Monitoring Statement LA22045.

APPENDIX D: Explanation of conditions in Approval LA22045

1. New conditions in Approval LA22045

a. Catch basin construction requirements

Beyer Feeders measured the hydraulic conductivity of the protective layer by installing a monitoring well (or water table well) at the time of borehole drilling. This approach provides an adequate representation of the protective layers proposed to be used to protect the groundwater resource.

The Standard and Administration Regulation provide that the actual hydraulic conductivity of a 5-metre thick naturally occurring protective layer must not be more than 1×10^{-6} cm/sec (section 9.5(b)).

In this case, the in-situ measurement was 1.0×10^{-7} cm/sec. This value is below the maximum value in the regulations. Therefore, the proposed naturally occurring protective layer meets the hydraulic conductivity requirement in the regulations.

A report prepared by a qualified third-party that the catch basin is constructed to the proposed dimensions with the same material as tested from Borehole EB3-23, and that any sand lenses are over-excavated and backfilled with clay material where encountered. The report must also set out how surface runoff is diverted away from water well 256433.

To address the MD of Willow Creek's concerns regarding the setbacks outlined in Municipal Land Use Bylaw No. 1826, Schedule 2 Rural General, Section 3, the report shall also include verification that the catch basin meets the municipal setback requirements.

b. Pen area construction requirements

Beyer Feeders measured the hydraulic conductivity of the protective layer by installing a monitoring well (or water table well) at the time of borehole drilling. This approach provides an adequate representation of the protective layers proposed to be used to protect the groundwater resource.

The regulations provide that the actual hydraulic conductivity of a 2-metre thick naturally occurring protective layer must not be more than 1×10^{-6} cm/sec (section 9.5(c)).

In this case, the in-situ measurement was 3.3×10^{-7} cm/sec. This value is below the maximum value in the regulations. Therefore, the proposed naturally occurring protective layer meets the hydraulic conductivity requirement in the regulations.

c. Post construction survey

As described in Decision Summary LA22045 and Technical Document LA22045, the proposed pen area, consisting of six pens constructed with portable fences, is located within 7 metres of the minimum distance separation (MDS) from the neighbouring residence south of the proposed CFO. Due to the proximity of the nearby residence, and the impermanence of the proposed pen area, a condition will be included in Approval LA22045 requiring the permit holder to provide a post construction survey, and have the outermost corners of the CFO's permitted footprint marked with permanent location markers.

The post construction survey condition requires Beyer Feeders to provide a report from a professional surveyor verifying the distance from the closest manure collection or storage facility to the nearest residence, the nearest property boundary and roads according to the MD of Willow Creek's Municipal Land Use Bylaw No. 1826, Schedule 2 Rural General, Section 3 minimum setback requirements.

d. Water Well monitoring and protection

As noted in Decision Summary LA22045 and Technical Document LA22045, the proposed CFO facilities Water Well Exemption Screening Tool scores indicated an exemption is likely. However, the preliminary scores were 2 points short of an exemption less likely, action required category. The groundwater flow path, distance from sources to well site, and domestic use of the water well, were the contributing factors to the scores. In addition to these scores, the municipality has concerns that the Orton aquifer may be located in the vicinity of the proposed CFO.

Therefore, a condition will be included in Approval LA0045 requiring that the permit holder shall sample and test raw groundwater from water well #256433, according to water well monitoring requirements prescribed by the NRCB in writing. The NRCB may, based on the monitoring results and at its discretion, revise those requirements from time to time, in writing.

e. Construction Deadline

Beyer Feeders proposes to complete construction of the proposed new catch basin and pen area by June 15, 2023. Based on my experience, a construction deadline of October 31, 2024, is a more realistic timeframe to consider any delays that may be incurred during construction. The deadline of October 31, 2024 is included as a condition in Approval LA22045.

f. Post construction inspection

The NRCB's general practice is to include conditions in new or amended permits to ensure that the new or expanded facilities are constructed according to the required design specifications. Prior to the post construction inspection, Beyer Feeders shall provide the post construction survey report to the NRCB.

The NRCB routinely inspects newly constructed facilities to assess whether the facilities were constructed according to their required design specifications. To be effective, these inspections must occur before livestock or manure are placed in the newly constructed facilities. Approval LA22045 includes a condition stating that Beyer Feeders shall not place livestock or manure in the manure storage or collection portions of the new pen area and catch basin until NRCB personnel have inspected the facilities and confirmed in writing that it meets the approval requirements.