

Decision Summary BA20011

This document summarizes my reasons for issuing Approval BA20011 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document BA20011. 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 July 28, 2020, Kalinsky Farms Ltd. (Kalinsky Farms) submitted a Part 1 application to the NRCB to construct a new beef CFO. Kalinsky Farms asked for, and received, an extension until July 28, 2021 to file the Part 2 application.

The Part 2 application was submitted on July 13, 2021. On July 20, 2021, I deemed the application complete. The applicant requested the application be put on hold (See NRCB Operational Policy 2016-7: Approvals, part 7.1.1) in August 2021 to further explore his options. In December 2021, he requested the application to proceed as is. After snowmelt, I completed a follow up site visit on May 12, 2022, to assess the site more closely in terms of setbacks and slopes to the wetland located south of the proposed CFO.

The proposed CFO involves:

- Permitting the CFO for a capacity of 1,700 beef finishers
- Constructing feedlot pens #1-6 (each pen 76 m x 76 m) – totaling 234 m x 164 m
- Constructing feedlot pen #7 – 76 m x 76 m
- Constructing a catch basin – 61 m x 37 m x 3 m deep

a. Location

The proposed CFO is located at NW 20-63-6 W4M in the Municipal District (M.D.) of Bonnyville, roughly 2.8 km northeast of the Hamlet of Iron River, Alberta. The terrain is relatively flat sloping south towards a wetland located approximately 112 m south of the proposed CFO. The wetland also connects to Manatokan Lake which is located approximately 2.1 km southwest of the site.

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

The CFO is not located within 100 m of a bank of a river, stream or canal, and therefore no additional municipalities are notified as part of this application.

For the size of this CFO the specified distance is 1.5 miles. (The NRCB refers to this distance as the “affected party radius.”)

A copy of the application was sent to the Municipal District (M.D.) of Bonnyville, which is the municipality where the CFO is to be located.

The NRCB gave notice of the application by public advertisement in the Lakeland This Week on July 20, 2021. The full application was posted on the NRCB website for public viewing. As a courtesy, 46 letters were sent to people identified by the M.D. of Bonnyville 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) and Alberta Environment and Parks (AEP).

I received responses from both AHS and AEP.

Ms. Norma Bruins, public health inspector / executive officer, responded on behalf of AHS. Ms. Bruins stated AHS has no objections to the application and provided some general comments reminding the applicant to follow the Animal Health Act, Disposal of Dead Animals Regulation and the Alberta Public Health Act, Nuisance and General Sanitation Regulation. She also provided additional comments regarding the applicant to follow any construction recommendations provided by the engineer and if any complaints are received by AHS in regards to the construction or the operation, AHS will work with the NRCB to determine mitigation strategies. Ms. Bruins did note that the application did not directly address noise, odour, dust and pest controls. As explained in section 6, below, the application meets the AOPA technical requirements. With regards to the above mentioned nuisances, AOPA setbacks are designed to mitigate some of these issues for neighboring residences.

AEP sent a generic response to the application that addresses water regulations in general and that the applicant should contact AEP if they require additional approvals under the *Water Act*.

Further comments were provided by AEP and AHS in response to concerns as seen in Appendix C, attached.

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.

There is no ALSA regional plan for the area where the proposed CFO is to be located.

5. Municipal Development Plan (MDP) consistency

I have determined that the proposed CFO is consistent with the land use provisions of the M.D. of Bonnyville's municipal development plan. (See Appendix A for a more detailed discussion of the M.D.'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 water wells, 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 liners/protective layers of manure storage facilities and manure collection areas

With the terms and conditions summarized in part 10, the application meets all relevant AOPA requirements.

7. Responses from municipality and other directly affected parties

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 M.D. of Bonnyville is an affected party (and directly affected) because the proposed CFO is located within its boundaries.

Ms. Kristy Poirier, a development officer with the M.D. of Bonnyville, provided a written response on behalf of the M.D. As noted in section 2, the M.D. is a directly affected party.

Ms. Poirier stated that the application is consistent with the M.D. of Bonnyville's municipal development plan. The application's consistency with the municipal development plan, is addressed in Appendix A, attached.

Apart from municipalities, any member of the public may request to be considered "directly affected." The NRCB received responses from 21 individuals of which 1 individual responded on behalf of the Iron River Open Bible Fellowship Church.

Of the 21 people who submitted responses, 16 own or reside on land within the 1.5 mile

notification radius for affected persons. Because of their location within this radius, and because they submitted a response, they qualify for directly affected party status. (See NRCB Operational Policy 2016-7: Approvals, part 6.2)

5 of the respondents do not own or reside on land within the 1.5 mile radius for affected persons. Appendix B sets out my reasons for determining which respondents are directly affected.

The directly affected parties raised concerns regarding:

- Nuisance impacts (noise, odour (prevailing winds), flies and pests),
- Health and air quality, and quality of life,
- Road use (safety, maintenance) and increase in traffic,
- Groundwater - quality and usage,
- Surface water - contamination and proximity to CFO,
- Catch basin overflow,
- Depreciation in property values,
- Setback to neighbours,
- Notification radius – courtesy letters and public notice,
- Increase in manure and urine contaminated lands,
- Manure management,
- Grandfathered status,
- And impact to neighboring animals.

These concerns are addressed in Appendix C, attached.

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 monitoring for the facility. In this case a determination was made, and groundwater monitoring is not required. However, a condition will be included that the operator must determine the depth of the water table approximately one week before commencing construction of the catch basin.

9. 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. Poirier also listed the setbacks required by the M.D. of Bonnyville's land use bylaw (LUB). The application appears to meet these setbacks.

I have considered the effects the proposed CFO may have on natural resources administered

by provincial departments. AEP has not made me aware of statements of concern submitted under section 73 of the Environmental Protection and Enhancement Act / section 109 of the Water Act in respect of the subject of this application. I received a generic response that address water regulations in general from AEP in regards to the application, furthermore the application meets AOPAs technical requirements.

I am not aware of any written decision of the Environmental Appeals Board for this location (<http://www.eab.gov.ab.ca/status.htm>, accessed May 31, 2022).

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 in the environment are acceptable because the application meets all of AOPA's technical requirements. In my view, this presumption is not rebutted and the directly affected parties' concerns have been addressed.

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 (Approvals Policy 8.7.3.). In my view, this presumption is not rebutted and I note that the M.D. of Bonnyville's response states that the application is consistent with their MDP.

10. Terms and conditions

Approval BA20011 specifies the permitted livestock capacity as 1,700 beef finishers, and permits the construction of feedlot pens #1-7 and the catch basin.

Approval BA20011 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 BA20011 includes conditions that generally address construction deadlines, document submission and construction inspection. For an explanation of the reasons for these conditions, see Appendix D.

11. Conclusion

Approval BA20011 is issued for the reasons provided above, in the attached appendices, and in Technical Document BA20011.

June 8, 2022

(Original signed)

Julie Wright
Approval Officer

Appendices:

- A. Consistency with the municipal development plan
- B. Determining directly affected party status
- C. Concerns raised by directly affected parties
- D. Explanation of conditions in Approval BA20011

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.)

Kalinsky Farms’ CFO is located in the M.D. of Bonnyville and is therefore subject to that Municipal District’s MDP. The Municipal District adopted the latest revision to this plan on September 13, 2007, under Bylaw #1367 (with amendments under bylaw #1539).

The MDP has no direct requirements, nor does it mention any planning guidance related to CFOs with the exception of country residential communities and their establishment in proximity to existing CFOs.

For these reasons, I conclude that the application is consistent with the land use provisions of the M.D. of Bonnyville’s MDP.

In my view, the text in 4.1 and 4.2 of M.D. of Bonnyville’s MDP also provides an intent to adopt provisions from the land use bylaw (LUB). Following the NRCB Operational Policy 2016-7: *Approvals*, part 8.2.3, I also consider M.D. of Bonnyville’s LUB #1667 (with its last amendment on April 13, 2022 under Amendment LU #573). Under that bylaw, the subject land is currently zoned as Agriculture District. Confined feeding operations are not listed as a permitted, discretionary or prohibited use. However, intensive livestock is listed as discretionary use. Approval officers will deem an application to be consistent with a LUB if the bylaw lists the proposed development as either a permitted or discretionary use (See NRCB Operational Policy 2016-7: *Approvals*, part 8.3.)

Section 48 of the LUB contains several provisions referring to intensive livestock operations (which include confined feeding operations).

Subsection 48.1 states development permit applications for the establishment or expansion of intensive livestock operations will be screened for environmental sensitivity using the Code of Practice and if necessary, will be referred to Alberta Agriculture. As AOPA has replaced the Code of Practice, I interpret this as the M.D.’s acknowledgment that there are provincial requirements in place for the siting and construction of CFOs. The application meets all AOPA requirements.

Subsections 48.2 and 48.3 of the LUB allow the development authority to vary the MDS under specific circumstances. This part is likely not considered a “land use provisions,” as it is likely a

CFO-related “test” under section 20(1.1) of AOPA. At any rate, the application meets all MDS requirements as defined in AOPA therefore this provision is considered met.

Subsection 48.4 requires the application for a CFO to submit a manure management plan which demonstrates:

- a) Secured sufficient land, as specified in the Code of Practice, to accommodate the safe and proper disposal of manure;
- b) Made provisions for proper manure storage and application; and
- c) Demonstrated odour control methods.

This part is likely not considered a “land use provision,” as it is likely a CFO-related “test or condition” under section 20(1.1) of AOPA. At any rate, the applicant has shown that they have access to adequate spreading lands for manure management as required under AOPA. The applicant must also adhere to all AOPA manure spreading and storage requirements which are designed to effectively mitigate nutrient overloading and nuisance issues associated with the storage and spreading of manure.

Subsection 48.5 requires the applicant to provide adequate waste management in accordance with applicable standards by approving authorities. As stated above, the application meets all AOPA requirements. Therefore, this subsection is considered met.

For these reasons, I conclude that the application is consistent with the M.D. of Bonnyville’s LUB.

APPENDIX B: Determining directly affected party status

The following individuals qualify for directly affected party status because they submitted a response to the application and they own or reside on land within the “affected party radius,” as specified in section 5(c) of the Agricultural Operation, Part 2 Matters Regulation (See NRCB Operational Policy 2016:7 – Approvals, part 6.2.):

Name	Concerns/ Support
Joseph Koziol SE 25-63-7 W4M	<ul style="list-style-type: none"> • No concerns • In support of application
Samuel Doonanco NE 20-63-6 W4M	<ul style="list-style-type: none"> • Distance of the feedlot to his home • Feces, urine, and run off from the CFO impacting well water, property and home • Increase in odour, noise, pests and bugs • Impacts to neighbouring animals such as illness, crossbreeding, escape, intermingling, and potential disease • Impact to property value • Increase in road use and maintenance
Andrew and Sandi Koshykar NE 17-63-6 W4M	<ul style="list-style-type: none"> • Surface water contamination • Manatoka Lake flood plain • Air quality impacting human health • Odours - yard in the direct path of prevailing winds from the CFO • Adverse effects on property value • Grandfathered status
Arthur Tapscott NW 29-63-6 W4M	<ul style="list-style-type: none"> • Urine and feces impacting groundwater • Flies • Odours and prevailing winds • Surface water controls • Flooding • Property devaluation • Notification radius • Negative impact on the community financially, physically and emotionally
Kevin and Lillian Wakulchuk NW 16-63-6 W4M	<ul style="list-style-type: none"> • Odours – prevailing winds • Additional flies • Additional contamination to groundwater • Integrity of catchment facilities • Water quantity • Impact to property value

Frederick and Kathleen Benio SE 30-63-6 W4M and NE 20-63-6 W4M	<ul style="list-style-type: none"> • Close proximity to their home • Noise from cattle • Odours • Increase traffic • Negative impact to quality of life • Reduced property values in the area • Proximity of drainage to Manatokan Lake • With gradual rise of land, water can cause the wetland to increase in size by 2-3 times
John Benio SE 29-63-6 W4M and NE 20-63-6 W4M	<ul style="list-style-type: none"> • Close proximity • Noise • Odours • Increase traffic • Negative impact to quality of life • Reduced property values in the area • Proximity of drainage to Manatokan Lake • With gradual rise of land, water can cause the wetland to increase in size by 2-3 times
Nick Kalinski NE 19-63-6 W4M and NW 14-63-6 W4M (Home)	<ul style="list-style-type: none"> • Reduced property values in the area • Excessive smell, flies, noise, manure, transport and activity in the area • Groundwater contamination • Manure contaminated lands
Trina Tapscott NW 29-63-6 W4M and SW 27-63-6 W4M	<ul style="list-style-type: none"> • Odours from manure and urine – located downwind • Excessive noise • Flies • Groundwater contamination • Impact to the environment • Negative impact on property values
Rogera Lapointe W½ 29-63-6 W4M, NE 29-63-6 W4M, and SW 27-63-6 W4M	<ul style="list-style-type: none"> • Odours, noise, insects, urine and feces contaminated lands • Loss of property value and quality of life
Keith and Cindy Hornseth S½ 28-63-6 W4M, NW 29-63-6 W4M, SW 27-63-6 W4M	<ul style="list-style-type: none"> • Odours and noise • Potential loss of renters on their land

A person who is not specified in section 5 of the Part 2 Matters Regulation as an affected party can also qualify for directly affected party status. However, they have the burden to demonstrate they are directly affected by the application. The following individuals that submitted a response to the application may fall under this category:

- Regan and Ruth Racha (~3,500 m)
SW 25-63-7 W4M
- Iron River Open Bible Fellowship Church (Justyn Snyder) – no residence
SW 16-63-6 W4M
- Jens and Ulla Hansen (~4,000 m)
NE 33-63-6 W4M (home residence), NW 33-63-6 W4M, NW 25-63-7 W4M, SW 36-63-7 W4M, NW 3-64-6 W4M
- James Hansen (~3,400 m)
NW 33-63-6 W4M (home residence)

Under NRCB policy, a person has the burden of demonstrating that they are directly affected by an application. In order to meet their burden of proof, the person has to demonstrate all the following five elements (see NRCB Operational Policy 2016:7 – Approvals, part 6.3):

1. A plausible chain of causality exists between the proposed project and the effect asserted;
2. The effect would probably occur;
3. The effect could reasonably be expected to impact the party;
4. The effect would not be trivial; and
5. The effect falls within the NRCB regulatory mandate under AOPA.

The individuals raised concerns regarding the proposed CFO's proximity to homes and facilities (Manatokan Lake and campgrounds), notification by other landowners, nuisances (odours, flies, and noise), loss of quality of life and property values, negative impacts to groundwater and surface water, water quantity, increase in traffic and impacts to road quality, transient workers (safety and crime), industrial farming, economic destruction of community, health concerns, manure spreading, and impacts to waterfowl and fish.

Using the above mentioned factors, I concluded that all of these individuals are located outside of the affected party radius and did not establish a sufficient chain of causality between the effects they asserted and the proposed CFO. This is partly due to distance from the proposed CFO, which also lessens the probability of the effects occurring and the reasonable expectation of impact upon these individuals (and church). As such, they will not be considered directly affected parties in my review of this application.

I did note that the above mentioned individuals reside approximately 3,400 – 4,000 m away from the proposed CFO which is about 7 to 9 times the minimum distance separation (462 m) required for residences located on land zoned for agricultural purposes and are also located outside the 1.5 mile (2,414 m) notification radius. I would like to note that the majority of the concerns raised by these individuals are the same as the concerns raised by the directly affected parties. Those concerns are discussed in Appendix C, below.

APPENDIX C: Concerns raised by directly affected parties

The directly affected parties raised the following concerns:

Nuisance impacts (noise, odour (prevailing winds), flies, and pests)

AOPA's minimum distance separation (MDS) requirements are a proxy for minimizing odours, flies and other nuisance effects from CFOs. The proposed CFO meets the MDS to neighbouring residences. It is presumed that nuisance effects from the CFO facilities are acceptable if the MDS has been met, regardless of prevailing wind direction.

Nuisance and other impacts outside of the MDS for a CFO are typically not considered when making a decision, unless there is a direct and adverse impact greater than what may be normally expected, which can be directly linked to the CFO. These effects would be considered in the analysis on 'effects on the community' in an approval officer's decision. In this case, the land zoning within several miles of the operation is majority 'Agriculture' with a fairly low residential density and little urban development. Although I do not consider nuisance concerns as 'trivial' in nature, I presume the impacts of the proposed CFO as acceptable, because of the land zoning (CFOs are a discretionary use) and MDS requirements as laid out in AOPA have been met. Having said that, the public is encouraged to report incidences of non-compliance and any other concerns in respect to a CFO to the NRCB's 24 hour reporting line (1-866-383-6722).

Fly infestations were also a concern by several respondents. Incidences of inappropriate disturbance from fly infestations can be reported to the NRCB's 24 hour a day reporting line (1-866-383-6722) and an inspector will follow up on the matter.

Health and air quality, and quality of life

As mentioned above, the proposed CFO meets the MDS which is a proxy for nuisance impacts from CFOs. AOPA does not expressly require approval officers to consider nuisance or health effects when deciding whether to issue an approval of a proposed CFO. Having said that, I forwarded all written responses that mention concerns about negative impact on health to AHS for their comments and further consideration. I did receive follow up comments from AHS. Similar to the first set of comments from AHS mentioned in part 3, the second response reiterated mitigation strategies for nuisances which I have addressed above. With regards to nuisances, AOPA setbacks are designed to mitigate some of these issues for neighboring residences which the application meets.

It is true that there will be odours resulting from the land application of manure. These odours are normally of short duration and typically occur once or twice per year. In order to limit the nuisance impact of manure application on direct seeded or tame forage land, section 24 of the Standards and Administration Regulation precludes manure spreading without incorporation within 150 m of residences. Manure that is spread on conventionally tilled land must be incorporated within 48 hours of being applied. Setbacks and incorporation can help to minimize normal odours from manure spreading. Incidences of non-compliance can be reported to the NRCB's 24 hour a day reporting line (1-866-383-6722 or 310-0000 toll free line) and an inspector will follow up on the matter.

AHS also included additional comments in regards to drinking water and mentioned that there is inadequate water well sampling history in the area to review baseline water quality. AHS also

conducted a Vulnerability Risk Assessment for Wells based on lithology of wells located on neighbouring lands. The risk assessment determined that there was low risk to groundwater contamination. They also mentioned that if residents in the area wish to sample their water more often for bacteria and chemical/trace metal, they can contact their local health inspector.

In terms of air quality concerns, AHS stated that there's *"no current legislative support or the evidence to suggest that there is high risk of negative exposure to air contaminants with current location of residences and public facilities in the area."*

Road use (safety, maintenance) and increase in traffic

Concerns raised by several directly affected parties include the general safety of county roads, increase in traffic, and deterioration of roads.

The NRCB does not have direct responsibility for regulating road use. Section 18 of the *Municipal Government Act* gives counties "direction, control and management" of all roads within their borders. Because of this it would be impractical and inefficient for the NRCB to attempt to manage road use through AOPA permits (see Operational Policy 2016-7 Approvals, part 8.9). In addition, municipalities own the roads within their jurisdiction, have the knowledge and expertise to determine what is required in road use agreements and have the jurisdiction to implement and enforce road use restrictions and road use agreements.

Groundwater - quality and usage

As noted in the decision summary above, and documented in Technical Document BA20011, the proposed CFO facilities meet AOPA technical requirements related to groundwater protection. The liner requirements as laid out in AOPA are considered to offer an acceptable level of protection to groundwater. The applicant has demonstrated that the soils proposed to be used to construct the compacted soil liner can meet the requirements. The conditions mentioned below will also ensure that the liner will meet the requirements.

As mentioned above and in Appendix D, the proposed catch basin may not meet the one metre requirement of section 9(3) of the Standards and Administration Regulation. Since the height of the water table can vary over time, the lack of adequate depth to the water table indicated in Kalinsky's report does not mean that there will be an inadequate depth at the time of construction. At the time the drilling program was conducted, the engineer mentioned that there were multiple days prior to drilling where temperatures were above 10 degrees Celsius. This likely caused a lot of snow melt during the time of monitoring which supports the variable water table. To meet AOPA requirements, I added a condition to the permit requiring the applicant to determine the depth of the water table approximately one week before commencing construction of the catch basin and to cease construction and notify the NRCB immediately if the water table is encountered during construction.

Section 24 and Schedule 3, Table 3 of Standards and Administration Regulation set nutrient application limits to prevent nitrogen from leaching into the deeper soil horizons and reaching a groundwater resource. For this reason, AOPA and its regulations requires operators to test soils on farmland to which manure is applied for salts and nitrogen at least every three years, and to make these records available for inspection by the NRCB.

Alberta Environment and Parks (AEP) is responsible for licensing and monitoring the supply of groundwater in the province. The water licensing process includes an opportunity for neighbours

to provide input. 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 licensing declarations listed in the Part 2 application form. (This declaration is on page 4 of Technical Document BA20011.).

Kalinsky's application included a signed declaration indicating that they are processing the AOPA permit and *Water Act* license separately. I forwarded the application to AEP for their information and response. As discussed in part 3 of this decision summary, AEP provided a generic response which was forwarded to the applicant for their information. The applicant is reminded to contact AEP to obtain the appropriate licensing prior to populating livestock.

Surface water - contamination and proximity to CFO

As noted in part 8 of this decision summary and in Technical Document BA20011 (page 6), the proposed CFO poses a low potential risk to surface water. AOPA's Standards and Administration Regulation addresses the protection of surface water by stipulating requirements for manure spreading and the construction of manure storage facilities. As explained below and in Technical Document BA20011, this application meets all of those requirements.

Manure spreading - facilities

Sections 24, 25, and 27 of the Standards and Administration Regulation (SAR) lay out the requirements for the land application of manure. In very general terms, a person must not cause a risk to the environment by land applying manure, including to surface water and groundwater. The regulations establish required setbacks for manure spreading near water bodies, water wells, springs, and related features. These setbacks are dependent on slopes and if the land is tilled, and must be assessed on a field by field basis. The regulations also include nutrient loading limits to ensure that the soil is not overloaded with nutrients.

Manure storage facilities (MSF) and manure collection areas (MCA) have requirements to protect groundwater and surface water. 7(1) of the Standards and Administration Regulation, sets out the setback requirements from springs, water wells, and common bodies of water. The 100 m setback from a spring or water well and the less than 30 m setback from a common body of water (CBW) - as defined in the legislation - are to protect groundwater resources and CBWs. During my site visits, I did not see any common bodies of water within 30 m nor any springs or water wells within 100 m of the proposed CFO facilities. I also verified this distance by reviewing available air photos.

If a person or party has concerns regarding manure storages, manure spreading or other CFO-related issues, those concerns can be reported to the NRCB's 24 hour reporting line (1-866-383-6722 or 310-0000). The call will be followed up on by an NRCB inspector. Neighbours and concerned parties can also call any NRCB office during regular business hours if they have questions about permit conditions or ongoing AOPA operational requirements.

Floodplain

I also forwarded all written responses that mention concerns about flooding potential, and impacts to the wetland and Manatokan Lake to AEP for their comments and further consideration. I did receive follow up comments from AEP in regards to potential impacts to the wetland, floodplain, groundwater/water table, and hydrological connection to Manatokan Lake.

Section 8 of the Standards and Administration Regulation states a MSF or MCA must be 1 m above the 1:25 year maximum flood level.

In regards to the maximum flood level (floodplain), I completed a follow up site visit on May 12, 2022 to determine slopes, soils and vegetation changes. A floodplain is defined by Encyclopaedia Britannica as a “flat land area adjacent to a stream...Floodplains are produced by lateral movement of a stream or by overbank deposition” and by Merriam-Webster Dictionary as “1) level land that may be submerged by flood waters 2) a plain built up by a stream deposition”.

According to these definitions, I presume the wetland acts as a floodplain to Manatokan Lake but the wetland itself would presumably not have an additional floodplain. However, I assessed the wetland as a floodplain as a worse case scenario and determine the proposed CFO sits approximately 4-7 m above the wetland based on distance and slope measurements taken with my rangefinder which is greater than 1 m above the 1 and 25 year maximum flood level as required under AOPA.

Based on my analysis, the proposed CFO meets the greater than 1 m above the 1 and 25 year maximum flood level requirements and the risk to surface water is determined to be low.

Common body of water – distances

The proposed CFO is located approximately 112 m (very conservative value) north of the wetland. This waterbody is a “common body of water” as defined in the Standards and Administration Regulation section 1(1)(d). Section 7 of the Standards and Administration Regulation prohibits the construction of a manure storage facility or manure collection area within 30 metres of a common body of water. The proposed site, meets and exceeds this requirement by almost four times.

As explained above, the application meets the AOPA technical requirements. With regards to water tables varying over time, again as mentioned above, I added a condition to the permit requiring the applicant to determine the depth of the water table approximately one week before commencing construction of the catch basin and to cease construction and notify the NRCB immediately if the water table is encountered during construction.

Catch basin overflow

As for potential overflow of a catch basin, the applicant is required to provide run on and runoff controls for the feedlot pens (which is the catch basin), have storage capacity for a one day rainfall event that has a one in 30 year probability of occurring, and must have freeboard of not less than 0.5 m when the basin is full. As seen in Technical Document BA20011, the catch basin is designed to hold 3,472 m³ at freeboard level while the catchment area and average rainfall in the area only require 1,987 m³. When the producer empties and land applies manure contaminated runoff from the catch basin, they must adhere to sections 22 - 27 of the Standards and Administration Regulation that set out parameters in respect to nutrient management including nutrient limits, manure spreading setbacks, record keeping and reporting requirements.

Depreciation in property values

In previous board decisions, the NRCB's board members have consistently stated that concerns regarding effects on land or property values are "not a subject for [the board's] review under AOPA or for approval offers' consideration." According to the board, impacts on property values are a land use issue, which is a "planning matter dealt with by municipalities in municipal development plans and land use bylaws." (See Pigs R Us Inc. RFR 2017-11/BA17002 at 6). As explained in Appendix A above, Kalinsky's proposed CFO is consistent with the land use provisions of the M.D.'s MDP.

Setback to neighbours

The MDS setback and the land use zoning of the land on which a residence is located are important tools under AOPA for mitigating the nuisance impacts of CFOs on neighbours. This setback is based on various factors including the number and type of animals and the zoning of the land on which a residence is located. The MDS is measured on the date the NRCB receives the part 1 permit application. As seen in the introduction of this decision, the part 1 application was received on July 28, 2020. The application meets the MDS requirements to all neighbouring residences.

If an application is submitted to a municipality for the construction of a residence within the CFO's MDS after the date the part 1 application is received by the NRCB, the NRCB permit (if issued) takes precedence.

The lands in this area are zoned Agriculture and no other planning documents covering areas in proximity to the CFO are in effect, as confirmed in the response from MD of Bonnyville. In addition, the MD did not comment on any effects on the economy or community anticipated as a consequence of an approval of this application. As discussed in section 9 above, I concluded that the effects on the community are acceptable.

Notification radius - courtesy letters and public notice

Some individuals expressed concern about the fact that they learned about the proposed development from neighbours. As laid out in section 19(1) of AOPA and in further detail in the NRCB's Approval Policy section 7.5.2, where practical, the NRCB will send out courtesy letters using names and addresses provided by the local municipality. These letters are not the official notice for the application. As a courtesy they refer the recipient to where the official notice is published and include contact information for the NRCB. As mentioned in section 2 above, 46 courtesy letters were mailed out of which no letters were returned to the NRCB as undeliverable. At any rate, public notice was given in the Lakeland This Week on July 20, 2021 and a courtesy letter was emailed to one of the parties upon request. I would like to note that the determination of the directly affected party status does not depend on the party receiving a courtesy letter, nor does an approval officer solely rely on the list provided by the municipality when determining who is considered a directly affected party.

Increase in manure and urine contaminated lands

AOPA does not prescribe where a CFO should be located or how much land is required in order to build a CFO. AOPA stipulates only that the location must be consistent with the M.D.'s MDP (which is one of the M.D.'s higher-level planning documents), and that it must meet the required minimum distance separation from neighboring homes.

As explained previously, the CFO meets AOPA's MDS requirements. MDS is a means for mitigating nuisance impacts for neighbours to a CFO. Despite the MDS requirement being met, it is possible that neighbouring residences may experience odours and other potential airborne related nuisances from the CFO from time to time. If a person or party has concerns regarding manure storages, spreading or other CFO-related issues, those concerns can be reported to the NRCB's 24 hour reporting line (1-866-383-6722 or 310-0000). An NRCB inspector will follow up on the concern.

In terms of the manure production, the applicant provided proof that more than the required land base requirements is available for manure spreading for the livestock numbers as seen in Technical Document BA20011. Having said that, sections 24, 25, and 27 of the Standards and Administration Regulation (SAR) lay out the requirements for the land application of manure. In very general terms, a person must not cause a risk to the environment by land applying manure, including to surface water and groundwater. The regulations establish required setbacks for manure spreading near water bodies, water wells, springs, and related features. These setbacks are dependent on slopes and if the land is tilled, and must be assessed on a field by field basis. The regulations also include nutrient loading limits to ensure that the soil is not overloaded with nutrients. The proposed feedlot pens and catch basin meet the protective liner requirements under section 9(6) of SAR which provides protection to groundwater.

Manure management

The Manure Characteristics and Land Base Code, referenced in AOPA, lays out the required land base for manure application of all livestock types. The calculation considers several factors, including the amount and nutrient content of the type of manure, as well as the soil zone in which manure is proposed to be applied. I evaluated the manure spreading lands listed by Kalinsky and concluded that they meet the requirements of AOPA and its regulations. I would like to remind Kalinsky, that they have to adhere to sections 22 - 27 of the Standards and Administration Regulation that set out parameters in respect to nutrient management including nutrient limits, manure spreading setbacks, record keeping and reporting requirements.

Grandfathered status

This application is for a new CFO; therefore no grandfathering is part of this application.

Impact to neighbouring animals – diseases, illness, crossbreeding

Livestock management and disease controls are governed by the *Animal Health Act* and are monitored by Alberta Agriculture, Forestry and Rural Economic Development (AFRED). (See, e.g. *Brad Towle*, RFR 2017-09 page 3.)

The disposal of deceased livestock in Alberta is not within the regulatory mandate of AOPA. Rather, it is regulated by AFRED under the Disposal of Dead Animals Regulation. Given AFRED's regulatory role, concurrent oversight of dead animal disposal and associated concerns by the NRCB would be inefficient and might lead to inconsistency with AFRED requirements.

APPENDIX D: Explanation of conditions in Approval BA20011

Approval BA20011 includes several conditions, discussed below:

a. Construction above the water table

Section 9(3) of the *Standards and Administration Regulation* under the *Agricultural Operation Practices Act* (AOPA) requires the bottom of the liner of a manure storage facility or manure collection area to be not less than one metre above the water table of the site “at the time of construction.”

Based on this information, the proposed catch basin may not meet the one metre requirement of section 9(3). However, because the height of the water table can vary over time, the inadequate depth to water table indicated in Kalinsky’s report does not mean that there will be an inadequate depth at the time of construction. To address this variability and ensure that the depth requirement is met at the time of construction, conditions are included requiring Kalinsky to determine the depth of the water table approximately one week before commencing construction of the catch basin and to cease construction and notify the NRCB immediately if the water table is encountered during construction.

b. Groundwater protection requirements

Kalinsky proposes to construct the new catch basin and feedlot pens with a 0.5 metre thick compacted soil liner. Section 9 of AOPA’s *Standards and Administration Regulation* specifies a maximum hydraulic conductivity for this type of liner in order to minimize leakage.

To demonstrate compliance with this standard, Kalinsky provided lab measurements of the hydraulic conductivity of the materials that will be used to construct the compacted soil liner. Lab measurements of hydraulic conductivity are made in a precisely controlled setting and are typically based on a small soil sample. Therefore, the NRCB generally multiplies lab-measured hydraulic conductivity values by a factor of 10 to reflect the potential variability in actual liner materials and conditions that can reasonably be expected to be achieved in the field.

The regulations provide that the catch basin’s actual hydraulic conductivity of a one metre thick compacted soil liner must not be more than 5×10^{-7} cm/sec and feedlot pen’s actual hydraulic conductivity of a 0.5 metre thick compacted soil liner must not be more than 5×10^{-7} cm/sec.

In this case, the lab measurement was 1.3×10^{-8} cm/sec. With the required ten-fold modification, the expected field value is 1.3×10^{-7} cm/sec. This expected value is below (better than) the maximum value in the regulations. Therefore, the proposed liner meets the hydraulic conductivity requirement in the regulations.

The NRCB’s general practice is to include conditions in new permits to ensure that the new facilities are constructed according to the required design specifications. Accordingly, Approval BA20011 includes conditions requiring:

- a. Kalinsky to provide an engineer’s completion report, stamped by a qualified engineer, certifying that the feedlot pens and catch basin have been constructed in accordance with the proposed design. At a minimum the report must confirm that the facilities are constructed in the approved location; certify that the liner material used for the feedlot pens and catch basin are the same material that was submitted for hydraulic conductivity testing; provide in-situ density results of the feedlot pens and catch basin; and

constructed catch basin dimensions, including compacted soil liner thickness.

c. Construction Deadline

Kalinsky proposes to complete construction of the proposed new feedlot pens and catch basin by November 2023. This time-frame is not considered to be reasonable for the proposed scope of work. To allow for three full construction seasons, the deadline of November 1, 2025 is included as a condition in Approval BA20011.

d. Post-construction inspection

The NRCB routinely inspects newly constructed facilities to assess whether the facilities were constructed according to their required design specifications. To be effective, and to reduce risk to the operator, these inspections must occur before livestock or manure are placed in the newly constructed facilities. Approval BA20011 includes a condition stating that Kalinsky shall not place livestock or manure in the manure storage or collection portions of the new feedlot pens or manure contaminated runoff enter the catch basin until NRCB personnel have inspected the facilities and confirmed in writing that they meet the approval requirements.