

## Decision Summary BA19023

This document summarizes my reasons for issuing Authorization BA19023 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document BA19023. All decision documents and the full application are available on the Natural Resources Conservation Board (NRCB) website at [www.nrcb.ca](http://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.

### 1. Background

On December 4, 2019, Plain Lake Farming Co. Ltd. (Plain Lake) submitted a Part 1 application to the NRCB to construct a new dairy barn (122 m x 37 m) which will cover a portion of an existing dairy barn at an existing multi-species CFO. The Part 2 application was submitted on February 20, 2020. On February 21, 2020, I deemed the application complete.

The application also includes construction of a milk house (12 m x 12 m) attached to the new dairy barn. This facility is an “ancillary structure,” under sections 1(b.6) of AOPA and 1(1)(a.1) of the Agricultural Operations, Part 2 Matters Regulation, because it will not be used to store or collect manure or to confine livestock. Therefore, under section 4.1 of that regulation, this structure does not need to be permitted under the act.

There is no proposed change in livestock numbers.

Under AOPA, this type of application requires an authorization. (This is one of several types of “permits” issued under AOPA. For an explanation of the different types and when each one applies, see [www.nrcb.ca](http://www.nrcb.ca).)

#### a. Location

The existing CFO is located at W½ 35-53-12 W4M in the County of Two Hills, roughly 11 km southeast of the Town of Two Hills. The terrain is undulating to gently rolling. Plain Lake is approximately 1.2 km to the southwest.

#### b. Existing permitted facilities

The CFO is currently permitted under NRCB Approval BA18005. This approval allows the construction and operation of a multi-species CFO consisting of the following livestock numbers:

- 44,000 chicken broilers,
- 25,000 chicken layers (plus associated pullets),
- 100 milking cows (plus associated dries and replacements),
- 1,000 beef finishers,
- 500 ewes with lambs,
- 300 turkey toms,
- 600 geese,
- 1,200 ducks,
- 500 meat goat does, and
- 500 feeder goats.

The CFO's existing permitted facilities are listed in the appendix of Approval BA18005.

## **2. Notices to affected parties**

Under section 21 of AOPA, notice of an authorization application must be provided to municipalities that are "affected" by the application. Section 5 of AOPA's Part 2 Matters Regulation lists the categories of municipalities that are affected parties. These categories include the municipality where the existing CFO is located. Under section 21(2) of the act, all affected municipalities are automatically also "directly affected" parties. The NRCB interprets section 21(3) as allowing affected municipalities to provide written submissions regarding whether the application meets the requirements of the regulations under the act. (See NRCB Operational Policy 2016-7: *Approvals*, part 7.11.2.)

The County of Two Hills is both an affected and directly affected party because the proposed facility is located within its boundaries.

On February 21, 2020, the NRCB emailed referral letters and a copy of the application to the County of Two Hills, Alberta Health Services (AHS), Alberta Environment and Parks (AEP), and Alberta Agriculture and Forestry (AF).

## **3. Responses from the municipality and referral agencies**

I received responses from the County of Two Hills, AHS, AEP, and AF.

Mr. Gary Buchanan, planning and development director, provided a written response on behalf of the County of Two Hills. As noted in section 2, the County of Two Hills is a directly affected party.

Mr. Buchanan stated that the application is consistent with the County of Two Hills' municipal development plan (MDP) and meets the required setbacks in the county's land use bylaw (LUB). The application's consistency with the County of Two Hills' MDP is addressed in Appendix A, attached.

Mr. Gregory Ward, a public health inspector/environmental health officer with AHS recommended that the operators do water well testing on a regular basis for microbiological testing. Mr. Ward also provided some comments regarding the *Public Health Act* and associated regulations, specifically that the applicant be compliant with the *Nuisance and General Sanitation Regulation 2003*. This letter was forwarded to the applicant for their information.

Mr. Andrew Patton, water team lead with AEP, submitted 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*. This response was shared with the applicant for their information.

Mr. Jeff Presley, an inspector with AF, sent an email response stating that AF had no concerns with the application.

## **4. Environmental risk screening of existing and proposed facilities**

When reviewing a new authorization application for an existing CFO, NRCB approval officers normally assess the CFO's existing buildings, structures, and other facilities, using the NRCB's environmental risk screening tool to determine the level of risk they pose to surface water and

groundwater. This tool provides for a numeric scoring of risks, which can fall within either 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](http://www.nrcb.ca).) However, if those risks have previously been assessed, the approval officer will not conduct a new assessment unless site changes are identified that require a new assessment, or the assessment was done with a previous version of the risk screening tool and requires updating. See NRCB Operational Policy 2016-7: *Approvals*, part 8.13.

In this case, the risks posed by Plain Lake's existing CFO facilities were assessed in 2014 and 2018. According to those assessment, the facilities posed a low risk to surface water and groundwater.

The circumstances have not changed since that assessment was done. As a result, a new assessment of the risks posed by the CFO's existing facilities is not required.

I also assessed the proposed new dairy barn, using the NRCB's risk screening tool, and determined that it poses a low risk to groundwater and surface water.

## 5. Other factors considered

The application meets all relevant AOPA requirements, with the terms and conditions summarized in part 6.<sup>1</sup>

In addition, the proposed construction is consistent with the land use provisions of the County of Two Hill's municipal development plan and land use bylaw. (See Appendix A for a more detailed discussion of the county's planning requirements.)

With respect to the act's technical requirements, the proposed construction:

- 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 liners of manure storage facilities

I also determined that the proposed dairy barn is located within the required AOPA setback from an existing water well. However, as explained in Appendix B, this dairy barn warrants an exemption from the 100 metre water well setback.

## 6. Terms and conditions

Authorization BA19023 permits the construction of the new dairy barn (122 m x 37 m).

Authorization BA19023 also contains terms that the NRCB generally includes in all AOPA authorizations, including terms stating that the applicant must follow AOPA requirements and

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1. For a summary of these requirements, please see the [2008 AOPA Reference Guide](http://www.nrcb.ca/about/documents), available on the NRCB website at [www.nrcb.ca/about/documents](http://www.nrcb.ca/about/documents).

must adhere to the project descriptions in their application and accompanying materials. In addition to the terms described above, Authorization BA19023 includes conditions that:

- Set a deadline of December 1, 2022 for the approved construction to be completed
- Require the concrete used to construct the liner of the manure collection and storage portion of the dairy barn to meet the specification for category B (liquid manure shallow pits), category C (solid manure – wet), and category D (solid manure – dry) in Technical Guideline Agdex 096-93 “Non-Engineered Concrete Liners for Manure Collection and Storage Areas”
- Require written confirmation from a qualified third party that the concrete used for the manure collection and storage areas meets the required specifications
- Prohibit Plain Lake from placing manure or livestock in the new dairy barn until the facility has been inspected by the NRCB following its construction
- Require a portion of the old dairy barn to be decommissioned prior to construction of the new dairy barn

For an explanation of the reasons for these conditions, see Appendix C.

## 7. Conclusion

Authorization BA19023 is issued for the reasons provided above, in the attached appendices, and in Technical Document BA19023.

Authorization BA19023 should be read in conjunction with previously issued Approval BA18005, which remains in effect.

April 15, 2020

(Original signed)

Julie Wright  
Approval Officer

## Appendices:

- A. Consistency with the municipal development plan
- B. Exemptions from water well setbacks and monitoring requirements
- C. Explanation of conditions in Authorization BA19023

## APPENDIX A: Consistency with the municipal development plan

Under section 22 of AOPA, an approval officer may approve an application for an authorization only if the approval officer finds that the application is consistent with the “land use provisions” of the applicable municipal development plan (MDP).

The NRCB interprets the term “land use provisions” as covering MDP policies that provide generic directions about the acceptability of various land uses in specific areas and that do not call for discretionary judgements relating to the acceptability of a given confined feeding operation (CFO) development. (See NRCB Operational Policy 2016-7: *Approvals*, part 8.2.5.) Under this interpretation, the term “land use provisions” also excludes MDP policies that impose procedural requirements. In addition, section 22(2.1) 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.”)

Plain Lake’s CFO is located in the County of Two Hills and is therefore subject to that county’s MDP. The County of Two Hills adopted the latest revision to this plan on January 16, 2019, under Bylaw #3-2018.

Policy 5.1.1 of the MDP addresses agriculture, generally. The goal set out by the county is to “protect and allow for the enhancement of the valuable agricultural land resource, the agri-based economy...”. This is likely a general guiding principle and is not considered a land use provision. Therefore it’s not relevant to my decision.

Policy 5.3.1 states that “[m]ost” of the land within the county is designated as an “Agricultural Use Area” as shown on Map 2. Plain Lake’s CFO is within the Agricultural Land Use area designated on Map 2 of the MDP, and its proposed construction is fully consistent with the “agricultural and agriculture-related” land uses for that area.

Policy 5.3.2 states that this area is, “for the most part, conserved for agricultural and agriculture-related uses.”

Policy 5.3.3 clarifies that the “primary use” of this area is for both “extensive and intensive agricultural uses and confined feeding operations”. (Similarly, the introduction to part 5 states that “[f]arming includes ... the raising of livestock....”).

Policies 5.3.1 – 5.3.3 of the MDP are likely a general guiding principle and are not considered valid land use provisions, therefore is not relevant to my decision.

Policy 5.3.7 specifically deals with CFOs and manure storage facilities (MSFs) as defined by AOPA. Under this policy, all such facilities “must fully satisfy all the requirements and regulations adopted under ... [AOPA], specifically the minimum distance separation requirements and land base requirements.” The use of the term “minimum distance separation” in policy 5.3.7 appears to be a reference to the minimum distance separation (MDS) requirement in section 3 of the Standards and Administration Regulation under AOPA. This MDP policy is likely not relevant to my MDP consistency determination, because this policy is based on AOPA’s MDS requirements. (See also NRCB Operational Policy, *Approvals*, part 8.2.5). That said, the CFO meets the MDS requirements under AOPA (as shown in Technical Document BA19023) and meets all other AOPA technical requirements. Therefore, this application is consistent with this MDP policy.

Policy 5.3.8 states that the county will provide “input” to the NRCB on applications for new or expanded CFOs, based on the “technical and locational merits” of each application. This policy is likely not a land use provision because it requires site-specific, discretionary determinations (see NRCB Operational Policy 2016-7, *Approvals*, part 8.2.5). Therefore, this policy is not relevant to the MDP consistency determination required by section 22(1) of AOPA. At any rate, the application meets the “technical and locational” requirements of AOPA and the planning and development director stated in his response that the application is consistent with the county’s MDP.

For these reasons, it is my determination that the application is consistent with the land use provisions of the county’s MDP.

In my view, under policy 1.3.4, the MDP clearly intends to incorporate the County of Two Hills’ Land Use Bylaw #2-2018 (LUB). Following the NRCB Operational Policy 2016-7: *Approvals*, part 8.2.3, I also considered the County of Two Hills’ LUB. Under that bylaw, the subject land is currently zoned as Agricultural (A). The definition section of the LUB states that confined feeding operations are “as defined by Agricultural Operations Practices Act”. CFOs are not listed as either a permitted, discretionary or prohibited use under the Agricultural zone. Ordinarily, a LUB intends to preclude land uses that are not-listed as permitted or discretionary (and that do not meet any other relevant criteria). However, I interpret this LUB’s omission of CFOs as simply a reflection of the county’s recognition that, since AOPA came into effect in 2002, the NRCB is responsible for permitting CFOs.

For these reasons, I conclude that the application is consistent with the County of Two Hills’ LUB. The county’s non-objection to the proposed CFO construction supports this conclusion.

## APPENDIX B: Exemption from water well setback

According to the application, one water well is located 46 metres from the proposed dairy barn. I have confirmed this information by a site visit completed on February 18, 2020 and through a review of satellite imagery.

Because of this proximity, the applicant's proposed dairy barn conflicts with a regulation under AOPA, which prohibits the construction of manure storage facilities (MSFs) within 100 metres of water wells.<sup>2</sup> However, the regulation allows approval officers to grant an exemption from this prohibition. I must therefore consider whether an exemption is appropriate in this instance.

Under the regulation, the test for granting an exemption is whether the "aquifer into which the well is drilled is not likely to be contaminated" by the proposed MSF. (According to the regulation, when granting an exemption, an approval officer may require the applicant to implement a "groundwater monitoring program.")

The regulation also makes it clear that the applicant has the burden of proving that an exemption is warranted.

In considering whether an applicant has met that burden, approval officers presume that the risks of direct aquifer contamination from the MSF are low if the applicant's proposed MSF meets AOPA's technical requirements to control runoff and leakage. However, when determining whether an MSF that meets AOPA's technical requirements should be exempted from the 100 metre water well setback requirement, approval officers also assess whether water wells that are less than 100 metres from the MSF could act as conduits for aquifer contamination.

Approval officers assess the following factors to determine the risk of aquifer contamination via the water well:

- How the well was constructed
- Whether the well is being properly maintained
- The distance between the well and the proposed MSF
- The estimated water well pumping rate
- Whether the well is up- or down-gradient from the MSF 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.

1970s water well (near dairy barn) is cross-gradient from the proposed dairy barn. The well is drilled to a depth of 45.7 metres with an unknown protective layer and unknown seal and thickness.

In addition, 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 and to decide whether an exemption from the 100 metre setback to a well is

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<sup>2</sup> Standards and Administration Regulation, Alta. Reg. 267/2001, section 7(1)(b).

warranted.<sup>3</sup> This tool consists of a two-stage risk screening process; each stage provides a numeric risk “score” based on the information inputted into the tool. The first stage focuses on the well’s construction. If the well scores less than 10 at this stage, the tool suggests granting a setback exemption for the subject facility. If the well scores above 28, the tool recommends denying the exemption. Scores between 10 and 28 require applying the second stage of the screening process, which focuses on the gradient and other factors bearing on the risk of manure runoff or leachate reaching the water well. If the risk score at this stage is over 20, the tool suggests denying the setback exemption to the subject well.

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For the process described above, the 1970s water well (near dairy barn) scored 30 in the first risk screening stage and 18 in the second stage. Based on these risk scores, an exemption from the 100 metre setback to water well is warranted for the proposed dairy barn.

While an exemption from the 100 metre water well setback is warranted, to provide further protection for users, the water well monitoring condition from previously issued NRCB Approval BA18005 is still valid as this authorization is read in conjunction with the approval.

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<sup>3</sup> A complete description of this tool is available under CFO/Groundwater and Surface Water Protection on the NRCB website at [www.nrcb.ca](http://www.nrcb.ca).

## **APPENDIX C: Explanation of conditions in Authorization BA19023**

Authorization BA19023 includes several conditions, discussed below:

### **a. Construction Deadline**

Plain Lake proposes to complete construction of the proposed new dairy barn by December 31, 2022. This time-frame is considered to be reasonable for the proposed scope of work. The deadline of December 1, 2022 is included as a condition in Authorization BA19023.

### **b. Post-construction inspection and review**

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. Accordingly, Authorization BA19023 includes conditions requiring:

- the concrete used to construct the liner of the manure collection and storage portion of the dairy barn to meet the specification for category B (liquid manure shallow pits), category C (solid manure – wet), and category D (solid manure – dry) in Technical Guideline Agdex 096-93 “Non-Engineered Concrete Liners for Manure Collection and Storage Areas.”
- Plain Lake to provide a copy of the concrete supplier's record confirming the specifications of the concrete used to construct the manure collection and storage portion of the dairy barn.

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. Authorization BA19023 includes a condition stating that Plain Lake shall not place livestock or manure in the manure storage portions of the new dairy barn until NRCB personnel have inspected the dairy barn and confirmed in writing that it meets the authorization requirements.

### **c. Facility Decommissioning**

Plain Lake proposes to decommission a portion of the existing dairy barn located on part of the proposed footprint of the new dairy barn. A condition has been included in Authorization BA19023 requiring the facility to be decommissioned in accordance with Technical Guideline Agdex 096-90, “Closure of Manure Storage Facilities and Manure Collection Areas”. A worksheet documenting the decommissioning must be provided to the NRCB before construction on the new dairy barn begins.