

Decision Summary RA20020

This document summarizes my reasons for issuing Approval RA20020 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA20020. 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.

1. Background

On April 6, 2020, Ben Rodenburg, on behalf of J.W. & Jolanda Rodenburg, operating as East Valley Ranch Ltd. (East Valley Ranch) submitted a Part 1 application to the NRCB to expand an existing sheep breeding operation into a sheep confined feeding operation (CFO). The existing sheep breeding operation was built in 2016, under the jurisdiction of Ponoka County, below the AOPA permitting threshold. The Part 2 application was submitted on April 20, 2020. On April 29, 2020, I deemed the application complete.

The application proposes:

- Increasing livestock numbers to 3,500 ewes with lambs
- Expanding a lambing barn (91 metres x 24.4 metres) to a total of 91 metres x 48.8 metres
- Expanding a sheep shelter (78.1 metres x 12.3 metres) to a total of 91 metres x 24.6 metres
- Permitting the existing sheep breeding facilities to be used as a CFO facilities (lambing barn and shelter)
- Removing the existing pens (exercise area) and replacing them with the expanded lambing barn and shelter.

Since the existing sheep breeding operation was previously constructed below the AOPA's threshold, the application is treated as a new CFO; and therefore, the applicant is required to demonstrate that they can meet the AOPA requirements for all CFO facilities.

Under AOPA, this type of application requires an approval. (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.)

a. Location

The existing sheep breeding operation is located at NW 26-42-24 W4M in Ponoka County, roughly 13.5 km southeast of Ponoka, Alberta. The terrain is slightly undulating with a general slope to the northeast towards an unnamed lake located 1.5 km from the proposed CFO.

b. Existing permitted facilities

The sheep breeding operation was originally constructed in 2016 under the municipal jurisdiction of Ponoka County. The sheep breeding operation included a lambing barn (91 metres x 24.4 metres), a sheep shelter (91 metres x 12.3 metres), and pens – exercise area (91 metres x 17.7 metres) which is located in between the lambing barn and the shelter. As indicated in section 5,

all of the CFO's proposed facilities (which include the existing sheep breeding operation's facilities) pose a low potential risk to groundwater and surface water.

2. Notices to affected parties

Under section 19 of AOPA, the NRCB is required to notify (or direct 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:

- the municipality where the CFO is 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 individuals who own or reside on land within a specified distance from the CFO, depending on the size of the CFO

For this application, the distance is 1.0 miles. (The NRCB refers to this distance as the "affected party radius.")

Municipalities that are affected parties are defined by the act to be "directly affected" and are entitled to provide evidence and written submissions. Ponoka County is an affected party (and therefore also a directly affected party) because the proposed CFO is located within its boundaries.

All other parties who receive notice of the application may request to be considered "directly affected." Under NRCB policy, all individuals who own or reside on land within the affected party radius are presumed to be "directly affected" if they submit a written response to the notice within the prescribed timeline. See NRCB Operational Policy 2016-7: *Approvals*, part 6.2.

Under section 20 of the act, all directly affected parties are entitled to a reasonable opportunity to provide evidence and written submissions regarding the application.

All directly affected parties are also entitled to request an NRCB board review of the approval officer's decision on the approval application.

The NRCB published notice of the application in the Ponoka News on April 29, 2020 and posted the full application on the NRCB website for public viewing. The NRCB also emailed referral letters and a copy of the complete application to Ponoka County, Alberta Health Services (AHS), Alberta Environment and Parks (AEP), and Chain Lakes Gas Coop Ltd. Thirty courtesy letters were sent to people identified by Ponoka County as owning or residing on land within the affected party radius.

3. Responses from the municipality and referral agencies

I received responses from the county, AHS, and AEP. No response was received from Chain Lakes Gas Coop Ltd.

Mr. Tom Webber, the assistant chief administrative officer with Ponoka County, provided a verbal response on behalf of the county. As noted in section 2, Ponoka County is a directly affected party.

In his response, Mr. Webber indicated that there are no issues or concerns with the proposal. The application's consistency with the county's municipal development plan (MDP) is addressed

in Appendix A, attached.

Ms. Laura Partridge, a water administrator technologist at AEP sent an email, to the applicant and the NRCB. Ms. Partridge indicated that the operator needs to submit an application for water licence under the *Water Act*. The applicant is reminded that they need to obtain and maintain a water license in accordance with the *Water Act*.

The NRCB also received a response from Ms. Pamela Kutuadu, an AHS environmental health officer/executive officer indicating that AHS has no concerns with this application. Ms Kutuadu included in her response, that under the *Public Health Act*, it is recommended to test water wells that are used for human consumption twice a year for bacteria.

4. Responses from other directly affected parties

The NRCB received three responses from five individuals. One of the three responses was in support of the application.

On May 27, 2020, prior to the deadline to submit responses, one of the parties submitted an email to the NRCB stating that they wanted to retract the response they had sent. Because this response was retracted, this party and their concerns/objection will not be addressed further in this decision summary.

The three other people (two responses) who submitted responses own or reside on land within the 1.0 mile radius for affected persons. Because of their location within this radius and because they submitted timely responses, they are presumed to be directly affected by the application.

One of the directly affected parties raised concerns regarding:

- Manure storage and management, and available land
- Effect on long-time home owners, and the community
- Current complaints about the operation
- Removal of a ditch, which is part of an intermittent stream

These concerns are addressed in Appendix B.

5. Environmental risk screening of existing and proposed facilities

As part of my review of this application, I assessed the risk to surface water and groundwater posed by the CFO's existing and proposed manure storage facilities. I used the NRCB's environmental risk screening tool for this purpose (see NRCB Operational Policy 2016-7: *Approvals*, part 8.13). The 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.)

All of the CFO's proposed facilities (including the existing sheep breeding operation's facilities) were determined to pose a low risk to groundwater and surface water.

6. Other factors considered

The application meets all relevant AOPA requirements, with the terms and conditions summarized in part 7.

In addition, the proposed sheep breeding CFO is consistent with the land use provisions of

Ponoka County's municipal development plan and with its 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 expansion:

- Meets the required AOPA setbacks from all nearby residences, with one exception (AOPA setbacks are known as the "minimum distance separation" requirements, or MDS). The owner of that residence has provided a signed waiver of the MDS requirement to their residence
- 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 lambing barn and the shelter (existing and expansion parts) are located within the required AOPA setback from an existing water well. However, as explained in Appendix C, these facilities warrant a variance and an exemption from the 100 metre water well setback due to the well's construction and location from the lambing barn and shelter.

In addition, I assessed the effects of the proposed CFO (expansion of an existing sheep breeding operation) on the environment. Consistent with NRCB policy, I determined that these effects are acceptable because the application meets all of AOPA's technical requirements. I have carefully considered the concerns raised by the directly affected parties, and in my view, those concerns have been adequately addressed by the application, and mitigated by the application and conditions. I also determined that the application's effects on the economy and community are acceptable, and that the proposed CFO is an appropriate use of land. Under NRCB policy, these determinations are based on the application's consistency with the municipal development plan and land use bylaw. (See NRCB Operational Policy 2016-7: *Approvals*, part 8.7.3.) After considering the concerns from the directly affected parties, comments from the referral agencies, and the feedback from Ponoka County, I find these presumptions are not rebutted.

7. Terms and conditions

Approval RA20020 specifies the new permitted livestock capacity as 3,500 ewes with lambs, and permits:

- the existing parts and expansion of the lambing barn,
- the existing parts and expansion of the sheep shelter,

Approval RA20020 also 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 RA20020 includes conditions that:

- Set a deadline of November 30, 2022 for the approved construction to be completed
- Prohibit East Valley Ranch from placing manure or livestock in the expanded portions of

the lambing barn and the sheep shelter until the expanded portions of these facilities have been inspected by the NRCB following their construction

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

8. Conclusion

Approval RA20020 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA20020.

June 25, 2020

(Original Signed)
Francisco Echegaray, P.Ag.
Approval Officer

Appendices:

- A. Consistency with the municipal development plan
- B. Concerns raised by directly affected parties
- C. Exemptions from water well setbacks
- D. Explanation of conditions in Approval RA20020

APPENDIX A: Consistency with the municipal development plan

Under section 20 of AOPA, an approval officer may approve an application for an approval 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 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.”)

East Valley Ranch’s CFO will be located in Ponoka County and is therefore subject to that county’s MDP. Ponoka County adopted the latest revision to this plan in September 2012, under Bylaw #6-08 MDP.

Section 2 of the MDP contains eight numbered policies that relate to applications for new CFOs under AOPA. These eight policies are discussed below. (Three other MDP policies relate to CFOs below the AOPA permit threshold or to proposed residential developments near existing CFOs.)

Under policy 2.1, the county “encourages” the development of CFOs to add value to crop production and provide “more employment and income per acre of land.” However, policy 2.1 also states that the environment and neighbours’ rights “must be protected.” This policy likely isn’t a “land use provision,” but it provides a general context for interpreting and applying the other policies in section 2.

Policy 2.2 states the county’s “belie[f] that very large CFOs are inappropriate in this part of Alberta, and requests the NRCB not to allow them here.” This policy defines “very large” as “more than ten times” the threshold for approvals in the Part 2 Matters Regulation under AOPA. In this case, a “very large” dairy CFO would have over 20,000 ewes with lambs. East Valley Ranch’s proposed CFO is for only 3,500 ewes with lambs, so the proposed CFO is consistent with this policy.

Policy 2.3 has two parts. The first part lists three setbacks and two exclusion zones for new or expanded CFOs. East Valley Ranch’s CFO is not within any of these restricted areas.

The second part of policy 2.3 calls for “very strict conditions on manure handling and storage in the Chain Lakes and Maskwa Creek watersheds. This policy likely isn’t a “land use provision” because it calls for discretionary judgements about what conditions are “very strict.”

In addition, this policy may well be precluded from my consideration under section 20(1.1) of AOPA, which precludes an approval officer from considering MDP provisions “respecting tests or conditions related to the construction of or the site for a confined feeding operation or manure storage facility” and regarding the land application of manure. Regardless, the proposed CFO meets AOPA’s technical requirements for manure handling and storage and those requirements

are arguably “very strict.” In addition, the CFO is not within either of these watersheds. Therefore, the proposed CFO would be consistent with this section, if the section applied.

Policy 2.4 calls for the NRCB to “set strict rules for the timely incorporation of manure within a mile of any urban municipality or rural residence.” This is a “test or condition” under section 20(1.1) of AOPA, so I am precluded from considering this policy. At any rate, East Valley Ranch’s CFO will be subject to the Standards and Administration Regulation under AOPA. This regulation arguably provides rules for the land application of manure, including timely incorporation in specified circumstances. These rules are arguably “strict,” which is consistent with this MDP policy. Additionally, the applicant has committed to incorporate their manure into cultivated land within 48 hours of applying it to the land.

Policy 2.5 precludes the siting of CFOs within two miles of “any lake” unless the “regulators” are “convinced” that the CFO’s manure management system is “fail-safe” and the CFO poses “no reasonable risk of contamination of the lake.” The proposed CFO is roughly 2.5 km from Nelson Lake and 1.5 km from an unnamed lake, thus, is within the two mile radius covered by this policy.

Policy 2.5 is likely not a “land use provision” because its “fail-safe” and “reasonable risk” tests call for discretionary, CFO-specific judgements. The provision may also be a “test or condition,” which I am precluded from considering by AOPA section 20(1.1).

In a recent decision (see 500016 Alberta Ltd. RFR 2018-11/2018), the NRCB Board interpreted this provision to establish setback requirements only when the NRCB determines there is a reasonable risk of contamination to a lake. The Board also stated “When assessing MDP land use provisions that deal strictly with environmental protection related to CFOs, the Board will generally rely on AOPA standards as they provide the statutory tool to accomplish those objectives”. East Valley Ranch’s CFO meets all regulations under AOPA. Based on the evidence I have, in my opinion there is no reasonable risk of contamination to the lake.

Furthermore, the County did not raise any concerns regarding the setback to these lakes, which confirms my conclusion. In fact, to my knowledge, the County has never officially objected to, or requested that the NRCB deny an application, based on this policy, which supports my interpretation that the MDP policy was not intended to be rigidly applied.

Policy 2.6 precludes new or expanded CFOs where there is “any risk that runoff will contaminate domestic water supplies.” Policy 2.6 likely is not a “land use provision” because it calls for discretionary judgements about acceptable risks. (On its face, “any risk” is a low risk threshold, but the threshold is presumably more than “minor” or “insignificant.”). At any rate, the proposed CFO meets AOPA’s operational and construction requirements, which are designed to minimize the risks to surface and groundwater.

Policy 2.8 states that “where a *new* CFO is proposed, the minimum distance separation (MDS) should be contained entirely within land owned by the operator of the CFO.” Policy 2.8 goes on to state that this requirement may be waived if the other party (neighbour) agrees to the MDS encroachment in writing.

2.8 uses, but essentially modifies, AOPA’s MDS requirements by measuring the AOPA-derived minimum distance of separation to the edge of an adjacent landowner’s property. In AOPA, the MDS is measured to the residential building located on that property rather than to the property line.

The NRCB's board (see *Wyntjes*, Board Decision 2007-11 at 6 et seq.) and approvals policy (see NRCB Operational Policy 2016-7: *Approvals*, part 8.2.5) have made it clear that approval officers should not consider MDP provisions that are based on, but modify and render more stringent, AOPA's MDS requirements. Thus, this policy cannot be considered for purposes of my MDS consistency determination. Regardless, East Valley Ranch's application meets the AOPA MDS requirement, as noted in part six above.

Last, 2.11 states that the county "may develop policies to reduce the nuisance caused by the spreading of manure near residences," including ones that require the immediate incorporation of manure and limits on the timing or rate of manure application. I am unaware of any manure application policies that the county has developed under policy 2.11. At any rate, section 20(1.1) of AOPA precludes me from considering policy 2.11 because it relates to manure application.

For these reasons, I conclude that the application is consistent with the relevant land use provisions of Ponoka County's MDP. As noted above, Ponoka County's response did not raise any concerns with this application, which confirms my conclusion.

In my view, under sections 1.4, 1.6, 4.10, 17.5 and in Appendix A, the MDP clearly intends to incorporate Ponoka County's Land Use Bylaw (LUB) # 7-08. (see NRCB Operational Policy 2016-7: *Approvals*, part 8.2.3). Accordingly, I considered the LUB. Under that bylaw, the subject land is currently zoned as agricultural. CFOs are listed as a permitted land use within this land use zoning, provided that they hold the required authorization (or permit) under AOPA. As noted in part 1 of this decision summary, East Valley Ranch's CFO will be permitted by the NRCB under Approval RA20020.

APPENDIX B: Concerns raised by directly affected parties

The following individuals own or reside on land within the “affected party radius,” as specified in section 5(c) of the Agricultural Operation, Part 2 Matters Regulation:

Joyce Reeve
NW 23-42-24 W4M

Lyle and Pauline Wesner
Pt of the NW 23-42-24 W4M

Under NRCB policy, because these individuals have submitted a timely response, they are presumed to be “directly affected” by the application. See NRCB Operational Policy 2016:7 – *Approvals*, part 6.2.

In their response, Mr. and Ms. Wesner supported the application by indicating they have no concerns with it.

The other directly affected party (Ms. Joyce Reeve) raised a number of concerns which are listed and summarized below, together with my analysis and conclusions:

1. Manure storage and management, and land available

Approval officer’s conclusions

For this proposal, 90 hectares (222 acres) of land in the black soil zone are required for manure spreading. East Valley Ranch has secured 194.3 hectares (480 acres) of land for manure spreading. Signed manure spreading agreements were provided for the lands submitted in support of the application. These lands are also owned by the same individuals who own East Valley Ranch.

AOPA does not expressly require approval officers to consider the size of the parcel of land where the CFO will be constructed. However, section 24 of the Standards and Administration Regulation under AOPA, describes how an applicant must satisfy an approval officer that they have access to sufficient landbase to utilize their manure for the first year, following the granting of the application.

The applicant demonstrated at the time of application that these manure spreading lands are available. These manure spreading lands may change over time and the operator must keep records to show where their manure has been spread.

The requirement to demonstrate that access to a sufficient manure spreading land base for this CFO at the time of the application has been met.

AOPA has manure application regulations, and requirements that govern the storage of manure, including short term solid manure storage. This method of storing manure allows operator to stockpile the manure on the field for up to 7 months within a three years period.

Section 24(1) of AOPA’s Standards and Administration Regulation requires that, when manure is applied to cultivated land, the manure must be incorporated into the soil within 48 hours.

The applicants are aware of all regulations pertaining manure storage and application and has demonstrated in their application that they are able to meet them.

If a member of the public has concerns regarding a CFO's manure storage and/or manure application procedure, they are invited to phone the NRCB toll free response line 1-866-383-6722 and an NRCB inspector will respond to the complaint.

2. Effect on long-time home owners and community

Approval officer's conclusions

There are a number of residences and acreages in the area. All of these have been considered in terms of AOPA's required MDS setback to residences. In addition, as noted in Appendix A above, the proposed CFO is consistent with the land use provisions in the county's municipal development plan and the county's land use bylaw. This consistency implies that the proposed CFO is an acceptable land use for the area (see NRCB Operational Policy 2016-7: *Approvals*, part 8.7.3.)

Map 38 of the Ponoka County's land use bylaw indicates that the land where the proposed CFO will be located is zoned agricultural land. CFOs are listed as a permitted land use within this land use zoning.

Notwithstanding the CFO's distances to its nearest neighbours, on agricultural zoned lands, it is reasonable to expect that neighbours will experience some odours and other potential nuisances when the proposed CFO is operational.

3. Past non-compliance with regulations – In her response, Ms. Reeve included a complaint about the current sheep breeding operation

Approval officer's conclusions

The complaint mentioned a lack of timely incorporation of the CFO's manure in the past. She mentioned incidences of manure spread too close to ditches and/or water courses.

AOPA has very strict regulations with respect to setbacks to water bodies, water wells, and manure incorporation. The operator has to adhere to all applicable manure spreading requirements in AOPA and its regulations.

Regarding the AOPA requirement of manure incorporation within 48 hours, East Valley Ranch responded to the statement of concerns, indicating to fully commit to this requirement in the future. The applicant is reminded to follow AOPA's requirements regarding manure application (i.e. setbacks to water bodies, and manure incorporation within 48 hours)

Upon receiving Ms. Reeve letter on May 6, 2020, I forwarded these non-compliance complaints to an NRCB Inspector. The NRCB inspector responded to these complaints and informed me that they have been dealt with.

Incidences of non-compliance can be reported to the NRCB's 24 hour response line: 1-866-383-6722. NRCB inspectors follow up on all complaints.

- 4. Removal of a ditch that is part of an intermittent stream** – Ms. Reeve indicated that she lives south of some of the applicant's other lands. She indicated that on these other lands, the applicant modified (removed) a ditch that is part of an intermittent stream leaving Ms. Reeve's wetland.

Approval officer's conclusions

As indicated above in subsection 3, I forwarded these non-compliance concerns to an NRCB Inspector, upon receiving Ms. Reeve letter on May 6, 2020. The NRCB inspector responded to these complaints and they have all been dealt with.

I also phoned Ms. Laura Partridge at Alberta Environment and Parks (AEP) to report the complaint from Ms. Reeve. Ms. Partridge indicated that the proper process to log this complaint is for Ms. Reeve to phone directly the AEP complaint line at 1-800-222-6514, and an AEP inspector will follow up directly with her.

Applicant's response to the statement of concerns

In a letter dated June 8, 2020, Mr. J.W. Rodenburg, on behalf of East Valley Ranch Ltd. responded to one of the issues raised in the statement of concerns. The response from Mr. Rodenburg to the statement of concerns states in part that "... regarding the letter East Valley Ranch Ltd. received from Ms. Joyce Reeve, we would like to her know that in the near future, we will work our manure in within 48 hours..."

APPENDIX C: Exemptions and variance from water well setbacks

According to the application, one water well is located within 100 metres of the proposed expansion, and the existing portions, of the lambing barn and sheep shelter (both of these facilities were initially constructed under the municipality's jurisdiction). I have confirmed this information by a site visit.

Because of this proximity, the applicant's proposed expansion and the existing portions, of the lambing barn and sheep shelter conflict with a regulation under AOPA, which prohibits the construction of manure storage facilities (MSFs) within 100 metres of water wells.¹ However, the regulation allows approval officers to grant an exemption from this prohibition for proposed facilities before the facilities are built, not already constructed ones.

Assessment for the proposed expansion to the lambing barn and sheep shelter

The regulation allows approval officers to grant an exemption from the water well setback prohibition. I must 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.

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

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

nearby water well and to decide whether an exemption from the 100 metre setback to a well is warranted.² 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.

Assessment for the existing lambing barn and sheep shelter

The existing portion of the lambing barn and the sheep shelter were constructed under the municipality’s jurisdiction in 2016. As the regulation does not contemplate exemptions for already constructed facilities, I need to either deny the application or alternatively consider if a variance is warranted under AOPA’s section 17(1). It is my opinion that considering a variance is appropriate in this case.

On June 16, 2020 the applicant requested a variance to the water well setback requirement to the existing portion of the lambing barn and the sheep shelter on the grounds that they built them under the county’s jurisdiction, and they were not aware of this requirement.

Approval officers must not grant variances or exemptions lightly or in the absence of substantive evidence they will produce equivalent levels of protection (see Decision 03-04, *AAA Cattle Ltd.* p 24). In considering whether a variance is appropriate for the existing portion of the lambing barn and the sheep shelter, I have used the same tools that I would normally look at to determine if an exemption is warranted. I consider the water well exemption framework discussed above as useful for assessing the degree of protection for the water well in relation to these facilities. In this case, I note that the risks of direct aquifer contamination from the existing portion of the lambing barn and the sheep shelter are low if they meet AOPA’s technical requirements to control runoff and leakage. I also assess whether the water well that is located less than 100 metres from these two existing facilities could act as conduits for aquifer contamination. The results of that assessment are discussed below.

The water well

In this case, water well ID# 93873 is located 5 metres and 10 metres from the lambing barn and sheep shelter, respectively. The total depth of the well is 24.4 metres. The water well drilling report indicates that the well was drilled in 1979, has a driven seal from surface to a depth of 0.3 metres, and the depth to open interval starts at 13.7 metres. Information on the subsurface lithology of the well shows there is a 4.6 metres layer of clay covering a 9.1 metres layer of shale. The water well is located inside a shed, which includes a concrete floor.

I identified the uppermost groundwater resource to be at a depth of 13.7 metres.

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

Conclusions

For the risk screening process described above, the water well scored 18 in the first and second stages of the risk screening process describe above. I am of the opinion, based on these risk scores, that an exemption from the 100 metre setback to the well, under section 7 of the regulation, is warranted for the proposed expansion to the lambing barn and sheep shelter.

I am also of the opinion that the proximity of the existing portion of the lambing barn and sheep shelter to the water well warrants a variance under section 17(1) of AOPA to the setback requirement to them for the following reasons:

- The existing portion of the lambing barn and sheep shelter have a naturally occurring protective soil layer below them (in addition to concrete in certain portions of the lambing barn) that meets the AOPA hydraulic conductivity requirements.
- Both facilities are covered by roof and have walls.
- In the unlikely event that any manure did leave the existing portion of the lambing barn and sheep shelter, it is unlikely to migrate directly into the aquifer into which the water well is drilled because of how the well was constructed, and protected by the shed.

Based on the above considerations and risk screening tool results, a variance allowing the existing portion of the lambing barn and sheep shelter within 100 m of a water well is warranted. It is my opinion that the variance provides the same or greater degree of protection and safety as the regulations.

APPENDIX D: Explanation of conditions in Approval RA20020

Approval RA20020 includes several conditions, discussed below:

a. Groundwater protection requirements

East Valley Ranch proposes to construct the expansion of the lambing barn and sheep shelter with a 4.6 metre thick naturally occurring protective layer. Section 9 of AOPA's Standards and Administration Regulation specifies a maximum hydraulic conductivity for this type of protective layer in order to minimize leakage.

East Valley Ranch 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.

In this case, the in situ measurement was 9.08×10^{-7} cm/sec. This value is lower than the maximum value for hydraulic conductivity in the regulations. Therefore, the proposed naturally occurring protective layer provides equivalent or greater groundwater protection than the requirement in the regulations.

b. Construction Deadline

East Valley Ranch proposes to complete construction of the proposed expansion to the lambing barn and sheep shelter by November 2021. In my opinion, a construction schedule that allows at least three full construction seasons is more practical and realistic for the proposed development. Therefore, Approval RA20020 includes a condition stating a deadline of November 30, 2022.

c. Post-construction inspection and review

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 RA20020 includes conditions stating that East Valley Ranch shall not place livestock or manure in the manure storage portions of the expanded areas of the lambing barn and the sheep shelter until NRCB personnel have inspected them and confirmed in writing that they meet the approval requirements.