

**EXHIBIT LIST FOR CUP 2022-018/EA 2022-050  
Modification of Cattle Feedlot - Farmland Reserve**

**DATED**

<b>Hearings Examiner Exhibit List - February 17, 2023</b>			
<b>HEM 1</b> Includes:	HEM 1.1	Staff Report	February 6, 2023
	HEM 1.2	Vicinity Map	December 19, 2022
	HEM 1.3	Application Complete Letter	December 15, 2022
	HEM 1.4	Agency Review Letter	December 20, 2022
	HEM 1.5	Notice of Public Hearing	January 27, 2023
	<b>APPLICATION SUBMITTAL</b>		
	HEM 1.6	Conditional Use Permit Application	December 13, 2022
	HEM 1.7	Well Impairment Analysis Report	November 9, 2022
	HEM 1.8	Proposed Site Plan	December 13, 2022
	HEM 1.9	Existing Site Plan	November 4, 2022
	HEM 1.10	Manuare Mgt. Plan	February 25, 2022
	HEM 1.11	Dust Control Plan	December 13, 2022
	<b>SEPA INFORMATION</b>		
	HEM 1.12	Environmental Checklist EA 2022-050	December 13, 2022
	HEM 1.13	Notice of Application	December 15, 2022
	HEM 1.14	Mitigated Determination of Non Significance	January 6, 2023
	<b>COMMENTS</b>		
	HEM 1.15	Kennewick Irrigation District SEPA Comments	December 20, 2023
	HEM 1.16	Benton County Public Works SEPA Comments	December 20, 2023
	HEM 1.17	Dept. of Ecology SEPA Comments	January 3, 2023
HEM 1.18	Benton PUD CUP Comments	December 22, 2022	
HEM 1.19	Benton County Public Works CUP Comments	January 3, 2023	
<b>Hearings Examiner Hearing Exhibit List -February 17, 2023</b>			
<b>HEH 1</b> Includes:	HEH 1.1		
	HEH 1.2		
	HEH 1.3		



**STAFF REPORT TO THE BENTON COUNTY HEARINGS EXAMINER**  
**Farmland Reserve, Inc.**  
**Cattle Feedlot**

**HEM 1.1**

**FILE NO:** CUP 2022-018

**MEMO DATE:** February 6, 2023

**HEARING DATE:** February 17, 2023

**APPLICANT:** Jens Rasmussen, Agri Northwest  
PO Box 2308, Pasco, WA 99302

**OWNER:** Farmland Reserve Inc.  
79 S Main Street, Ste 1000, Salt Lake City, UT 84111

**LOCATION:** General Location:  
The property is located approximately 10 miles south of the City of Kennewick, approximately 3.5 miles north of the Columbia River, east of I-82, south of Coffin Road, near the south end of Nine Canyon Road.

Situs Address:  
152330 S Nine Mile Road, Plymouth, WA.

Abbreviated Legal:  
Township & Range: Section(s) 14, 13, 23 and 24, Township 6N, Range 29E  
Township & Range: Section(s) 18 and 19, Township 6N, Range 30E

Parcel Number(s):  
113690000000000, 146900000000000, 123691000000000, 124690000000000

**PROPERTY SIZE:** Approximately 2,516 acres

**AREA TO BE USED:** Approximately 402.90

**LAND USE:** Animal Feedlot and Agricultural Operations

**ZONING:** Growth Management Act Agricultural District (GMAAD)

**COMPREHENSIVE PLAN DESIGNATION:** Growth Management Act Agricultural

**RECOMMENDATION:**

The Planning Division recommends approval of the application request, subject to the suggested sixteen (16) Findings of Fact and eight (8) Conditions of Approval as outlined in this Staff Report.

## **APPLICATION DESCRIPTION:**

The applicants are requesting a Conditional Use Permit to operate and modify a cattle feedlot in the Growth Management Act Agricultural Zoning District.

This past year the applicant purchased a large farming and cattle operation from Easterday Farms, LLC. The purchase included an existing cattle feedlot which has operated at its current location for a number of years without an approved Conditional Use Permit.

After the purchase of the property, the applicant approached the County about obtaining a Conditional Use Permit for the operation, to include a proposal to modify the cattle facility, pen layout, and facility locations, improve the efficiency of the facility water and waste systems, and continue to operate an animal hospital area, scales, an office, and accessory structures.

The maximum headcount number of cattle at the facility is not proposed to change. It currently holds a headcount of approximately 35,000 animals.

The waste from the facility is collected in a lined lagoon and land applied at agronomic rates on property owned by the applicant. Water for the facility is currently drawn from an existing exempt stock watering well.

To assist the review of the Conditional Use Permit request and the SEPA Checklist evaluation, the applicant submitted a Manure Management Plan, Fugitive Dust Control Plan, Hydraulic Impairment Analysis (well) along with existing and proposed site plans.

The feedlot location is approximately 10 miles south of the City of Kennewick, approximately 3.5 miles north of the Columbia River, east of I-82, south of Coffin Road, near the south end of Nine Canyon Road at site address 152330 S Nine Mile Road, Plymouth, WA.

Application submittal and notification dates are described below:

1. The application for CUP 2022-018 (HEM 1.6) was submitted to the Benton County Planning Division on December 15, 2022.
2. The application for CUP 2022-018 was declared complete for processing on December 15, 2022. (HEM 1.3)
3. The Notice of Application (HEM 1.13) was published on December 21, 2022, and sent to agencies and surrounding property owners on December 20, 2022.
4. The application documents for CUP 2022-018 were distributed to reviewing agencies on December 20, 2022. (HEM 1.4)
5. The Mitigation of Non Significance was issued on January 6, 2023. (HEM 1.14)
6. The Benton County Hearings Examiner Notice of Open Record Hearing was published on February 1, 2023, in the Prosser Record Bulletin. (HEM 1.5)
7. The Notice of Hearing was mailed to property owners of record within 300 feet of the outer boundaries of the parcel on February 1, 2023.
8. The Open Record Hearing is scheduled for February 17, 2023.

## APPLICABLE STANDARDS/ORDINANCES:

1. *Benton County Comprehensive Plan*

3.3.2.4 Agricultural Lands

Agricultural land is defined as land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production (RCW 36.70A.030(2))

3.3.2.5 Agricultural Land Use Designation

GMA Agriculture (GMA AG) includes agricultural land (such as dryland and irrigated land) identified by the County based on the criteria established by the GMA. A GMA Agricultural District zone conserves agricultural lands by establishing a 20-acre minimum parcel size and (with exceptions e.g., resort destinations, wineries) limits the range of other land uses to those which are dependent upon, supportive of, ancillary to, or compatible with, agricultural production as the principal land use.

2. *Benton County Code (BCC)*

Title 11 Zoning

Chapter 11.03 Definitions

Section 11.03.010 (21): Animal Feedlot

"Animal Feedlot" refers to a lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate, or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. For purposes of Benton County, open lots used for feeding and rearing of poultry (poultry ranges) shall be considered to be animal feedlots. Pastures shall not be considered animal feedlots under these definitions. Seasonal use during the months of November through February is exempt from feedlot status.

3. *Benton County Code (BCC)*

Title 11 Zoning

Chapter 11.17.070 GMA Agricultural District (GMAAD)

Section 11.17.070 Uses Requiring a Conditional Use Permit

(a) Slaughterhouses, commercial meat-packing plants, animal feedlots; provided, that they are not located in the floodway and floodplain as shown on the FEMA maps, or within two hundred (200) feet of a naturally occurring body of water, or a well-used for domestic or municipal purposes and shall be designed to prevent infiltration or other movement of livestock wastes into the aquifer, or directly into surface waters.

4. *Benton County Code (BCC)*

Title 11 Zoning

Chapter 11.50 Variance and Conditional Use

Section 11.50.040 Conditional Use - General Standards

The conditional use permit application process allows the Hearings Examiner to review the location and design of certain proposed uses, the configuration of improvements, and the potential impacts on

the surrounding area. The application process also allows the Hearings Examiner to ensure that development in each zoning district protects the integrity of that district. The notice, hearing, decision, and enforcement procedures are as set forth herein and in BCC 11.50.050.

Certain uses are classified as conditional uses because of their unusual nature, infrequent occurrence, special requirements, or potentially significant impacts to the environment, public infrastructure, or adjacent properties, and/or possible safety hazards and other similar reasons.

Once granted, a conditional use permit may be transferred by a holder thereof after written notice to the Hearings Examiner; provided the use and location must remain the same and the transferee must continue to comply with the conditions of the permit and, if applicable, the requirements set forth in Chapter 11.51 BCC.

Section 11.50.040 (d) Conditional Use – Permit Granted or Denied

A conditional use permit shall be granted only if the Hearings Examiner can make findings of fact based on the evidence presented sufficient to allow the Hearings Examiner to conclude that, as conditioned, the proposed use:

- (1) Is compatible with other uses in the surrounding area or is no more incompatible than are any other outright permitted uses in the applicable zoning district;
- (2) Will not materially endanger the health, safety, and welfare of the surrounding community to an extent greater than that associated with any other permitted uses in the applicable zoning district;
- (3) Would not cause the pedestrian and vehicular traffic associated with the use to conflict with existing and anticipated traffic in the neighborhood to an extent greater than that associated with any other permitted uses in the applicable zoning district;
- (4) Will be supported by adequate service facilities and would not adversely affect public services to the surrounding area; and
- (5) Would not hinder or discourage the development of permitted uses on neighboring properties in the applicable zoning district as a result of the location, size or height of the buildings, structures, walls, or required fences or screening vegetation to a greater extent than other permitted uses in the applicable zoning district.

It is the applicant's burden to present sufficient evidence to allow the above conclusions to be made. If such evidence is not presented or all necessary reasonable conditions are not identified by the applicant to allow the Hearings Examiner to make the conclusions required above, the conditional use application shall be denied.

In addition to considering the impacts of the proposed use, the Hearings Examiner must also consider any evidence presented regarding any similar impacts of uses allowed outright in this zone, and if such evidence is received, compare those impacts to those of the proposed use.

If negative impacts are identified, the Hearings Examiner must try to identify reasonable conditions that would mitigate those impacts sufficiently to allow the Hearings Examiner to make the findings necessary to grant the permit. The applicants may be asked to identify reasonable conditions, but the Hearings Examiner may independently identify conditions. Further, an applicants' disagreement with a particular condition should not dissuade the Hearings Examiner from granting the permit with such condition(s), as opposed to outright denial, if the Hearings Examiner is able to conclude that the condition(s) is/are reasonable in their judgment.

**PUBLIC NOTICE:**

1. The public notice requirements for this application as per BCC 11.50.050(b) are as follows:
  - a. The Planning Division shall provide written notification for an open record hearing, subject to the rules and regulations set forth in RCW 36.70. Written notice shall be mailed at least twelve (12) days in advance of the open record hearing to the applicant and the owner of the parcel(s) to which the proposed variance or conditional use permit would apply, and to all owners of real property, as shown in the records of the Benton County Assessor, located within a distance of three hundred (300) feet of any portion of the applicable parcel, provided that if the owner of the parcel for which the proposed variance or conditional use permit is requested owns another parcel or parcels adjacent the parcel at issue, notification shall be mailed to owners of real property located within three hundred (300) feet of any portion of such adjacent parcels as well. Failure to receive the notice shall not invalidate any proceedings or decision in connection with the proposed variance or conditional use permit. Notices addressed to the last known owner of record as shown on the County Assessor's records shall be deemed proper notice to the owner of such property; and,
  - b. By publication of a legal notice in a newspaper of general circulation in the County at least ten (10) days prior to the open record hearing date.

**AGENCY COMMENTS:**

1. The application documents were distributed to the following reviewing agencies on December 20, 2022:
  - a. Benton Clean Air Agency
  - b. Benton Conservation District
  - c. Benton County Building Division
  - d. Benton County Code Enforcement
  - e. Benton County Fire District #1
  - f. Benton County Fire Marshal
  - g. Benton County Public Works Department
  - h. Benton Franklin Health District
  - i. Benton PUD
  - j. Bureau of Land Management
  - k. Confederated Tribes of the Umatilla Indian Reservation
  - l. Natural Resources Conservation Service
  - m. US Bureau of Reclamation
  - n. US Corps of Engineers
  - o. Washington State Department of Archeology and Historic Preservation
  - p. Washington State Department of Fish and Wildlife
  - q. Washington State Department of Natural Resources
  - r. Yakama Nation
2. The following comment was received from the Washington State Department of Ecology (**HEM 1.17**) on January 3, 2023:
  - a. In Washington State, prospective water users must obtain authorization from the Department of Ecology before diverting surface water or withdrawing ground water, with one exception. Ground water withdrawals of up to 5,000 gallons per day used for single or group domestic supply, up to 5,000 gallons per day used for industrial purposes, stock watering, and for the irrigation of up to one-half acre of non-commercial lawn and garden are exempt from the

permitting process. Water use under the RCW 90.44.050 exemption establishes a water right that is subject to the same privileges, restrictions, laws and regulations as a water right permit or certificate obtained directly from Ecology.

3. The following comment was received from the Kennewick Irrigation District on December 20, 2022: (HEM 1.15)
  - a. KID has no comments on this matter. It is located outside of the District Boundaries.
4. The following comment was received from the Benton County Public Works Department on December 20, 2022 for the CUP and January 6, 2023 for the SEPA: (HEM 1.16 andn HEM 1.19)
  - a. Public Works has no comments.
5. The following comment was received from the Benton PUD (HEM 1.18) on December 22, 2022:
  - a. No comments on the conditional use permit.

#### **FINDINGS OF FACT AND CONDITIONS OF APPROVAL:**

The following suggested Findings of Fact and Conditions of Approval are based on comments received up to the date of this staff memo. Any comments received after the completion of this staff memo or submitted during the public hearing for this application will need to be considered by the Hearings Examiner and may be added to the Findings of Fact and Conditions of Approval. The Hearings Examiner may decide to adopt these as their own or amend/add to these Findings of Fact and Conditions of Approval after holding the open public hearing.

Based on the information received to date, the Planning Staff recommends approval with the following Findings of Fact and Conditions of Approval:

#### **SUGGESTED FINDINGS OF FACT:**

1. The applicant is Farmland Reserve, Inc. c/o Jens Rasmussen, PO Box 2308, Pasco, WA 99302. The owner is Farmland Reserve, Inc., 79 S Main Street, Ste 1000, Salt Lake City, UT 84111.
2. The applicants are requesting a Conditional Use Permit to operate and modify a cattle feedlot in the Growth Management Act Agricultural Zoning District.
3. The feedlot is in unincorporated Benton County, approximately 10 miles south of the City of Kennewick, approximately 3.5 miles north of the Columbia River, east of I-82, south of Coffin Road, near the south end of Nine Canyon Road at site address 152330 S Nine Mile Road, Plymouth, WA.  
  
Parcel Number(s): 11369000000000, 14690000000000, 12369100000000, and 12469000000000  
Township & Range: Section(s) 14, 13, 23 and 24, Township 6N, Range 29E  
Township & Range: Section(s) 18 and 19, Township 6N, Range 30E
4. Surrounding land uses are similar in nature to the applicant's current primary agricultural use of the property: agricultural uses are the primary land use on all nearby parcels.
5. The property is located on lands designated GMA Agriculture in the Benton County Comprehensive Plan's Land Use Designations Map (Figure 5, Benton County Comprehensive Plan Appendix A).

6. The proposed use is located in an agricultural area in compliance with the Benton County Comprehensive Plan, Section 3.3.2.4 Agricultural Lands which states “Agricultural land is defined as land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production (RCW 36.70A.030(2))”
7. The application for CUP 2022-012 meets the intent and standards of the Benton County Comprehensive Plan.
8. The application for CUP 2022-018 meets the definition, requirements, and standards of the Benton County Code, Title 11 (Zoning):
  - a. BCC 11.17 Growth Management Act Agricultural District, Section 11.17.070 Uses Requiring a Conditional Use Permit- “(a) Slaughterhouses, commercial meat-packing plants, animal feedlots; provided, that they are not located in the floodway and floodplain as shown on the FEMA maps, or within two hundred (200) feet of a naturally occurring body of water, or a well-used for domestic or municipal purposes and shall be designed to prevent infiltration or other movement of livestock wastes into the aquifer, or directly into surface waters”.

*Finding(s)*

- (i) The feedlot is not proposed to occur in a floodway and floodplain as shown on the FEMA maps. All floodway or floodplains are 2 miles or greater from feedlot location.
  - (ii) The feedlot is not proposed to occur within two hundred (200) feet of a naturally occurring body of water. All drainages are 1 mile or greater from feedlot location.
  - (iii) The feedlot is not proposed to occur within two hundred (200) feet of a well-used for domestic or municipal purposes. All wells are 1 mile or greater from feedlot location.
  - (iv) The feedlot is designed to prevent infiltration or other movement of livestock wastes into the aquifer, or directly into surface waters. The feedlot’s Manure Management Plan includes pen best management practices which includes ensuring that feedlot runoff (high pollution potential) is directed to catch basins and a lined lagoon waste system/pond which is designed to hold 18.5 million gallons of runoff and is double lined to prevent seepage.
- b. BCC 11.03 Definitions, Section 11.03.010 (21): Animal Feedlot- "Animal Feedlot" refers to a lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate, or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. For purposes of Benton County, open lots used for feeding and rearing of poultry (poultry ranges) shall be considered to be animal feedlots. Pastures shall not be considered animal feedlots under these definitions. Seasonal use during the months of November through February is exempt from feedlot status.

*Finding(s):* The proposal meets the intent of the definition of an animal feedlot as described in BCC 11.03.010 (21).

- c. BCC 11.50.040 (d) Conditional Use – Permit Granted or Denied. A conditional use permit shall be granted only if the Hearings Examiner can make findings of fact based on the evidence presented sufficient to allow the Hearings Examiner to conclude that, as conditioned, the proposed use:

- (1) Is compatible with other uses in the surrounding area or is no more incompatible than are any other outright permitted uses in the applicable zoning district;
- (2) Will not materially endanger the health, safety, and welfare of the surrounding community to an extent greater than that associated with any other permitted uses in the applicable zoning district;
- (3) Would not cause the pedestrian and vehicular traffic associated with the use to conflict with existing and anticipated traffic in the neighborhood to an extent greater than that associated with any other permitted uses in the applicable zoning district;
- (4) Will be supported by adequate service facilities and would not adversely affect public services to the surrounding area; and
- (5) Would not hinder or discourage the development of permitted uses on neighboring properties in the applicable zoning district as a result of the location, size or height of the buildings, structures, walls, or required fences or screening vegetation to a greater extent than other permitted uses in the applicable zoning district.

*Finding(s):* The cattle operation has been operating in its current form for many years. Obtaining a conditional use permit and implementing the proposed improvements to the facility will continue to ensure the operation is compatible with the surrounding uses, the zoning district's outright permitted uses, and further the efforts to ensure the facility will not endanger the health, safety, and welfare of the surrounding community.

The continued operation of the cattle feedlot, as proposed, will not negatively impact traffic, public services, and will not discourage the development of permitted uses due the operations location, size, height or fencing.

9. The applicant submitted the following materials for the SEPA/CUP review process on December 12, 2022:
  - a. Benton County Conditional Use Permit Application
  - b. SEPA Checklist
  - c. Manure Management Plan
  - d. Fugitive Dust Control Plan
  - e. Hydraulic Impairment Analysis (well)
  - f. Existing and proposed site plans
10. A MDNS was issued by Benton County for this application on January 6, 2023.
11. The project is not located with a designated Benton County Critical Area.
12. Public notice requirements have been met for CUP 2022-018.
13. Agency comments were received from:
  - a. Washington State Department of Ecology
  - b. Kennewick Irrigation District
  - c. Benton County Public Works Department
  - d. Benton PUD

14. The *Hydraulic Impairment Analysis* (well) concludes the use of the Feedlot Well will have no drawdown interference, and only small effects, if they can be measured, from the most conservative pumping scenarios.
15. The feedlot is designed to prevent infiltration or other movement of livestock wastes into the aquifer, or directly into surface waters. The feedlot's *Manure Management Plan* includes pen best management practices which includes ensuring that feedlot runoff (high pollution potential) is directed to catch basins and a lined lagoon waste system/pond which is designed to hold 18.5 million gallons of runoff and is double lined to prevent seepage.
16. Using Best Management Practices and the implementation of a *fugitive dust management plan* at the site, the facility operators are proposing to substantially reduce the volume of dust emitted from the cattle feeding operation.

**SUGGESTED CONDITIONS OF APPROVAL:**

1. The ongoing activities on the site shall comply with the submitted site plan(s) and materials submitted for this application including but not limited to:
  - a. Benton County Conditional Use Permit Application
  - b. SEPA Checklist
  - c. Manure Management Plan
  - d. Fugitive Dust Control Plan
  - e. Hydraulic Impairment Analysis (well)
  - f. Existing and proposed site plans
2. A State of Washington Confined Animal Feeding Operation General Permit is required for the operation should discharge to surface or groundwater occur in the future.
3. The maximum headcount at the site shall not exceed 35,000 animals.
4. Compliance with the Mitigated Determination of Non-Significance (MDNS) issued by Benton County for this application on January 6, 2023.
5. Water users must obtain authorization from the Department of Ecology before diverting surface water or withdrawing ground water. Any additional stock wells for the operation will require approval of the Washington State Department of Ecology.
6. New construction at the site requires the review by the County Building Division and a determination if permits and/or engineered designs are required.
7. Future construction or activities associated with this business operation require review under the Benton County Zoning Ordinance. Applicants shall contact the Planning Division prior to any construction or changes in activities on site.
8. The project facility shall follow the rules and regulations of the Benton-Franklin Health District at all times, including standards for drinking water, on-site sewage systems, and BFHD standards for composting of mortalities.

**TIME TO COMPLETE CONDITIONS OF APPROVAL:**

The applicant shall have one year to meet the Conditions of Approval.

If the conditions of approval have not been met and the Planning Division does not issue the Conditional Use Permit within one (1) year from the date of this decision, the Hearings Examiner may declare it null and void. Prior to doing so, the applicant shall be notified in writing at the applicant's last known address at least twelve (12) days in advance of the upcoming Hearings Examiner meeting.

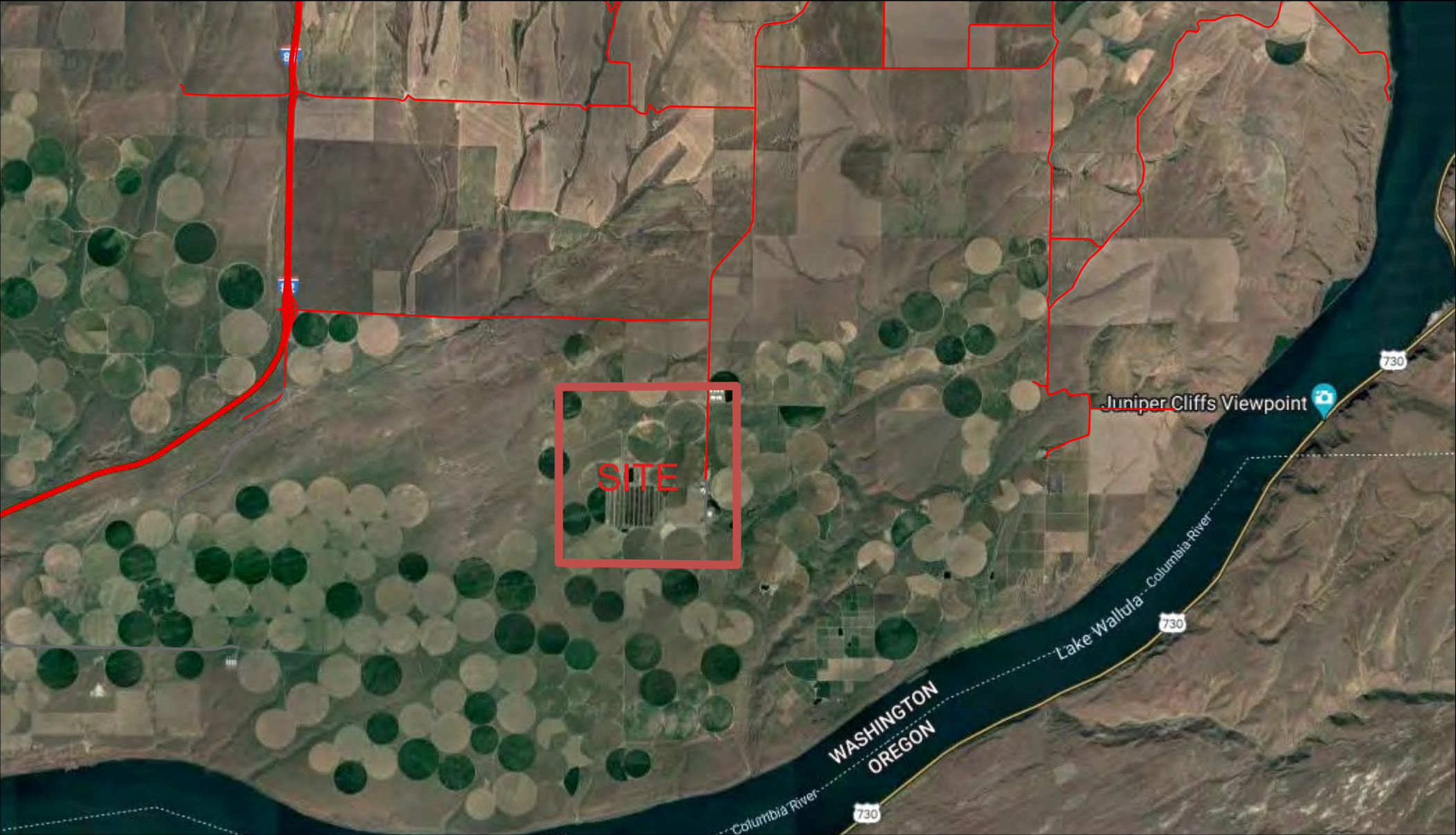
**TRANSFERABILITY:**

This Conditional Use Permit is transferrable by a holder. If a new property owner wishes to have an agricultural stand, the new owner must update the Conditional Use Permit application, accept the Conditions of Approval in writing, and be approved by the Planning Manager prior to transfer of the permit being allowed.

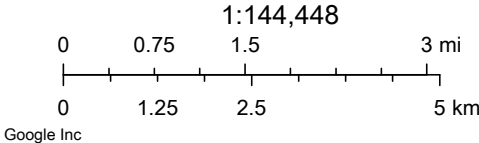
**VIOLATIONS OF CONDITIONS OF APPROVAL:**

The Applicant shall continue to meet all conditions of this Conditional Use Permit while CUP 2022-018 is in effect.

Any violation of the conditions of approval will be processed in accordance with BCC Title 11, Chapter 11.43 Administration and Disposition of Infractions. If the Conditional Use Permit has been issued and violations exist, the Hearings Examiner may revoke the permit after an open record hearing with notice as set forth in BCC 11.50.050(b), as amended. This condition does not foreclose the County's use of other enforcement mechanisms.



12/19/2022, 3:09:50 PM



**Community Development Department**

Prosser Office: 620 Market Street, 1<sup>st</sup> Floor  
Kennewick Office: 102206 East Wiser Parkway  
[www.co.benton.wa.us](http://www.co.benton.wa.us)



**Planning Division**

(509) 786-5612  
P.O. Box 910, Prosser, WA 99350  
[planning.department@co.benton.wa.us](mailto:planning.department@co.benton.wa.us)

**HEM 1.3**

December 15, 2022

Farmland Reserve Inc  
Jens Rasmussen, Agri Northwest  
PO Box 2308  
Pasco, WA 99302

RE: Written Determination of Completeness  
File Number(s): CUP 2022-018; EA 2022-050

Dear Jens,

This office is in receipt of your project permit application(s) for a Conditional Use Permit and Environmental Checklist for a feedlot operation in Benton County, WA. The Planning Division has determined that the required materials have been submitted and the applications are complete. File Numbers have been assigned (CUP 2022-018; EA 2022-050) and the review process will now begin.

During the review and comment period, more clarification or information may be needed from you. If additional information is required, it will need to be submitted to our office before we can make a final determination

If you have any questions regarding this matter, do not hesitate to contact this office.

Sincerely,

Donna Hutchinson  
Benton County Community Development Dept.  
Planning Division

**Donna Hutchinson**

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**From:** Planning Department  
**Sent:** Tuesday, December 20, 2022 4:59 PM  
**To:** Benton Clean Air - Noah Lee; seand@bfhd.wa.gov; Bureau of Land Management - Kevin Devitt District Manager (BLM\_OR\_SP\_Mail@blm.gov); sydney.hanson@dahp.wa.gov; Dept. of Fish and Wildlife-Mark Teske; Dept. of Fish and Wildlife, Eric Bertrand; Dept. of Fish and Wildlife, Michael W. Ritter; Dept. of Natural Resources-Shafer (ana.shafer@dnr.wa.gov); Dept. of Natural Resources, Surface Mining; Dept. of Transportation (scplanning@wsdot.wa.gov); Fire District #1-Billie ; Fire District #1-Staff; Natural Resources Conservation Service; Road Dept. - Cristina Woods (Cristina.Woods@co.benton.wa.us); US Corps of Engineers-David Moore; rodney.c.huffman@usace.army.mil; US Corps of Engineers-Tim Erkel; Yakima Indian Nation-John Marvin; Jessica\_Lally@Yakama.com; Benton Conservation District - Heather Wendt; Confederated Tribes of the Umatilla Indian Reservation - Ashley M. Morton (AshleyMorton@ctuir.org); Umatilla Indian Nation; Benton conservation District - Mark Nielson; Benton PUD-Chad Brooks; Benton PUD-Shanna Everson; Benton PUD-tina Glines (glinest@bentonpud.org); langn@bentonpud.org; Brad O'Brien; Clark Posey; Elizabeth Koerner; Jenelle Schadler; Michelle Johnson; Troy Taylor; Bureau of Reclamation - C. Garner (cgarner@usbr.gov); Bureau of Reclamation - L Hendrix - Bureau of Reclamation (lhendrix@usbr.gov); Bureau of Reclamation -McKinley (cmckinley@usbr.gov)  
**Subject:** Agency Review for CUP 2022-018  
**Attachments:** CUP 2022-018 Agency Review PKT 12-21-22.pdf

Good afternoon,

Attached are the application materials related to a Conditional Use Permit application File No. CUP 2022-018 from Farmland Reserve.

Please have any comments on the application to our office no later January 4, 2022. If you have any questions, or need more information, please feel free to reach out.

Thank you,



**Donna Hutchinson**  
 Office Assistant IV  
 Community Development Dept.  
 Planning Division  
 PO Box 910 Prosser WA 99350  
 (509) 786-5612

**NOTICE OF PUBLIC DISCLOSURE:** This e-mail account is public domain. Any correspondence from or to this email account may be a public record. Accordingly, this email, in whole or in part, may be subject to disclosure pursuant to RCW 42.56, regardless of any claim of confidentiality or privilege asserted by an external party.

**Prosser:** We are located within the Road Department/Public Works Office on the first floor of the Benton County Courthouse at 620 Market St, Prosser WA 99350.

**Kennewick:** Public Services Building at 102206 E Wiser Parkway, Kennewick, which houses the Planning, Building and Road Departments.

**Community Development Department**  
 Prosser Office: 620 Market Street, 1<sup>st</sup> Floor  
 Kennewick Office: 102206 East Wisner Parkway  
[www.co.benton.wa.us](http://www.co.benton.wa.us)



**Planning Division**  
 (509) 786-5612  
 P.O. Box 910, Prosser, WA 99350  
[planning.department@co.benton.wa.us](mailto:planning.department@co.benton.wa.us)

## NOTICE OF OPEN RECORD HEARINGS

NOTICE IS HEREBY GIVEN that the following applications have been proposed to the Benton County Hearings Examiner for Benton County, Washington.

NOTICE IS FURTHER GIVEN that said the Benton County Hearings Examiner will hold an open record public hearing for each of the below stated applications **on February 17, 2023** at 10 a.m. in the Planning Hearing Room, First Floor Courthouse, 620 Market Street, Prosser WA 99350. The hearings will be held in-person and virtually/telephonically via Webex. To find information on attendance & testimony options, directions to the meeting room and to review documentation for the application, please visit <https://tinyurl.com/BCpublicnotice>

CONDITIONAL USE PERMIT – CUP 2022-016, APPLICANTS: Dan/Sandy Bradford The applicants have applied for conditional use permit to have a 713 square foot detached accessory dwelling unit located inside of an existing shop building at 112215 N. Harrington PR NE, West Richland WA 99353. Parcel #: 1-0407-401-2384-001 on Lot 1 of Short Plat 2384.

CONDITIONAL USE PERMIT – CUP 2022-017 APPLICANT: Steven/Sheryl Cousineau The applicant is proposing to convert an existing shop building in to a 794 square foot detached accessory dwelling located at 50307 S. Sloan Ct., Kennewick WA 99337. Parcel #: 1-3580-200-0005-000

CONDITIONAL USE PERMIT – CUP 2022-018, APPLICANTS: Farmland Reserve, LLC The applicants are requesting a conditional use permit to operate and modify a cattle feedlot in the Growth Management Act Agricultural Zoning District. This proposal includes modifying the cattle facility, pen layout and facility locations, improve the efficiency of the facility water and waste systems and to continue to operate an animal hospital area, scales and office and accessory structures. Parcel #s 1-1369-000-0000-000, 1-0469-000-0000-000, 1-2369-100-0000-000, and 1-2469-000-0000-000.

NOTICE IS FURTHER GIVEN that said proposal has been reviewed under the requirements of the State Environmental Policy Act, as amended, along with the Environmental Checklist and other information. A determination has been made as to the environmental impacts of the proposal and a Mitigated Determination of Non-Significance has been issued. Accordingly, an Environmental Impact Statement is not required. This determination was made on January 6, 2023. Any comments regarding the determination and the environmental impacts of the proposal can be made at the hearing before the Hearings Examiner at the time and place indicated above or be made in writing to the Planning Department by 5 p.m. on February 16, 2023.

Anyone may participate in the hearings and present testimony or comments on an application. Persons may appear in person or virtually/telephonically during the hearing or provide written testimony to the Hearings Examiner (care of the Planning Division) on or

before the date of the hearing. Written comments can be emailed to [planning.department@co.benton.wa.us](mailto:planning.department@co.benton.wa.us) or dropped off at the Planning Division offices at the Public Services Building 102206 E. Wiser Parkway, Kennewick or mailed to: Benton County Community Development Department-Planning Division, ATTN: Hearings Examiner P.O. Box 910 Prosser, WA 99350. Any information submitted to Benton County is subject to the public records disclosure laws for the State of Washington (RCW Chapter 42.17) and all other laws that may require the release of the documents to the public.

If you wish to provide testimony during the hearing (in person or virtually), we ask that you inform the Planning Division before the meeting. You can do that by filling out a Request to Testify form at <https://tinyurl.com/testifyform> or by contacting our office to be added to the list. You must submit a request for each hearing in which you wish to participate. We ask that participants who will be attending virtually please limit background noise and/or mute their line to prevent interruptions of the meeting.

If you have questions regarding any of the actions before the Hearings Examiner or the hearing process, please contact the Planning Division at (509) 786-5612, [planning.department@co.benton.wa.us](mailto:planning.department@co.benton.wa.us), P.O. Box 910 Prosser, WA 99350, 102206 E. Wiser Parkway, Kennewick, WA 99338 or 620 Market Street, First Floor, Prosser, WA 99350.

Dated this 27th day of January 2023.

PUBLICATION DATE: February 1, 2023

SUSAN E. DRUMMOND  
Benton County Hearings Examiner

MICHELLE L. COOKE, Planning Manager  
Community Development Department



Tuesday, November 29, 2022

Farmland Reserve  
79 S. Main St., Ste 500  
Salt Lake City, UT 84111  
1. (801) 715-9100

Greg Wendt  
Director of Community Development  
Benton County Public Services Building  
102206 E Wisner Parkway  
Kennewick, WA 99336  
[Greg.Wendt@co.benton.wa.us](mailto:Greg.Wendt@co.benton.wa.us)

RE: Conditional Use Permitting for Cattle Feedlot at Nine Canyon Road

Dear Mr. Wendt,

Enclosed is a Conditional Use Permit application on behalf of Farmland Reserve, Inc. (FRI) for the continued operation and modification of an existing cattle feedlot. As you are aware, FRI acquired this feedlot via bankruptcy proceedings in the fall of 2021. The existing feedlot facility was built over several years by FRI's predecessors in interest. FRI currently leases the feedlot to a third-party cattle operator, Riverside Feeders SFL, LLC (Riverside).

The feedlot is built on portions of the following four parcels:

113690000000000  
114690000000000  
123691000000000  
124690000000000

Since the acquisition, FRI and its affiliates have worked to improve the operations and ensure compliance with local permitting and state laws. As part of that effort, Riverside acquired an air quality permit from the Benton County Clean Air Agency. FRI together with Riverside has also made plans to modify the current pen layouts for improved wastewater containment, ensuring that all wastewater is collected within an onsite reservoir and waste is applied at agronomic rates to surrounding cropland. The capacity of the feed yard will not be expanded. Rather, the redesign will provide upgrades to enhance animal welfare and environmental security.

The enclosed Conditional Use Permit application and accompanying SEPA covers both current operations and proposed modifications to the feedlot. We are also enclosing (1) a hydrogeological well impairment analysis for the current exempt stock-watering well which supplies stock water for the feedlot, (2) Riverside Feeder's Manure Management Plan, (3) fugitive dust control plan, and (4) maps of both current and proposed modified feedlot layout.

Best regards,

Jens Rasmussen  
Land & Government Affairs Manager  
AgriNorthwest on behalf of Farmland Reserve, Inc.



## CONDITIONAL USE PERMIT APPLICATION

File No. CUP 2022-018

### APPLICANT INFORMATION

Please check the box indicating primary contact person for this application

Applicant/Agent: Farmland Reserve, Inc. c/o Jens Rasmussen, AgriNorthwest

Mailing Address: P.O. Box 2308 City: Tri-Cities

State: WA ZIP: 99302 Phone: 509-222-8621 Work: 509-820-3234

Email Address: jasmussen@agrinw.com

Signature:  Date: 12/12/22

Property Owner(s) (if different): Farmland Reserve, Inc.

Mailing Address: 79 S. Main Street Ste 1000 City: Salt Lake City

State: UT ZIP: 84111 Phone: 801-715-9100 Work: \_\_\_\_\_

Email Address: sbaird@agreserves.com

Signature:  Date: Dec 7, 2022

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*\*If there are additional owners please copy this section, sign, and attach to the application*

*If the property is owned by a corporation, trust, partnership or LLC please complete the entity signature block below showing that the person signing has the authority to sign on behalf of the company.*

### ENTITY SIGNATURE BLOCK

*If the applicant or legal owner of the property is a corporation, partnership, trust or LLC use the following signature block.*

Applicant/Legal Owner: Farmland Reserve, Inc.

Officer name: Scott Baird

Title: Vice President

Signature:  Date: Dec 7, 2022

THE ABOVE SIGNED OFFICER OF Farmland Reserve, Inc. (name of entity)

WARRANTS AND REPRESENTS THAT ALL NECESSARY LEGAL AND CORPORATE ACTIONS HAVE BEEN DULY UNDERTAKEN TO PERMIT Farmland Reserve, Inc. c/o AgriNorthwest (name of applicant) TO SUBMIT THIS APPLICATION AND THAT THE ABOVE SIGNED OFFICER HAS BEEN DULY AUTHORIZED AND INSTRUCTED TO EXECUTE THIS APPLICATION.

PARCEL INFORMATION

1. Subject property address: 144503 South Nine Canyon Road

City: Kennewick State: WA ZIP: 99337

2. Parcel number: Multiple - See Additional Comments/Info 3. Acreage: 402.9

4. Access: [checked] County Road [ ] State Road/Highway [checked] Private Road

5. Utilities: Power: [checked] Benton PUD [ ] Benton REA

Sewer: [checked] Septic Tank [ ] City Sewer: (Provider)

Water: [checked] Individual Wells [ ] One well serving 2-4 lots [ ] One well serving 5+ lots

[ ] Private System (Provider & Address)

[ ] City System (Provider)

Gas: [ ] No [ ] Yes: (Provider)

Cable: [ ] No [ ] Yes: (Provider)

Phone: [ ] No [checked] Yes: (Provider)

Irrigation: [ ] No [checked] Private [ ] District: (Provider)

6. Present use of property: Cattle Feedlot and Row Crop Farm

7. What is the proposed use? Modification of Existing Cattle Feedlot and Row Crop Farm

8. Will only one detached building to be used for the proposed use? [ ] Yes [checked] No

9. Will the project be conducted entirely inside of a building? [ ] Yes [checked] No

If no, explain what outdoor activities would occur: Feeding cattle

10. What is the total area, including storage that will be used?

11. Does one of the business proprietors own/lease the property where the proposed business is located? [checked] Yes [ ] No

12. Is there a residence on site? [ ] Yes [checked] No

a) Does one of the proprietors live in the residence on site? [ ] Yes [checked] No

13. Total number of employees (who do not live on site)? approximately 20-25

# ConditionalUsePermit\_RiverbendFeedlot

Final Audit Report

2022-12-07

Created:	2022-12-07
By:	Abby Marchena (Amarchena@agreserves.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAakepRc-AWgpjXhm_dsaSOP8kZEzUNz12E

## "ConditionalUsePermit\_RiverbendFeedlot" History

-  Document created by Abby Marchena (Amarchena@agreserves.com)  
2022-12-07 - 7:22:14 PM GMT- IP address: 65.120.234.82
-  Document emailed to sbaird@farmlandreserve.org for signature  
2022-12-07 - 7:23:23 PM GMT
-  Email viewed by sbaird@farmlandreserve.org  
2022-12-07 - 7:34:05 PM GMT- IP address: 174.213.242.202
-  Signer sbaird@farmlandreserve.org entered name at signing as Scott Baird  
2022-12-07 - 7:34:46 PM GMT- IP address: 174.213.242.202
-  Document e-signed by Scott Baird (sbaird@farmlandreserve.org)  
Signature Date: 2022-12-07 - 7:34:48 PM GMT - Time Source: server- IP address: 174.213.242.202
-  Agreement completed.  
2022-12-07 - 7:34:48 PM GMT

  
RIVERSIDE FEEDERS  
**OFFICE / SCALE** 

  
RIVERSIDE FEEDERS  
**ALL VISITORS MUST  
CHECK IN AT OFFICE**

**RESTRICTED  
FEEDING AREA**





523 East Second Avenue  
Spokane, Washington 99202  
509.363.3125

November 9, 2022

AgReserves  
PO Box 2308  
Pasco (Tri-Cities), Washington 99302

Attention: Jens Rasmussen, Land and Government Affairs Manager

Subject: Technical Memorandum  
Hydraulic Impairment Analysis  
Farmland Reserve's Feedlot Well  
Benton County, Washington  
File No. 24072-002-00

## **1.0 INTRODUCTION**

This letter report presents the results of a hydraulic impairment analysis associated with the pumping of an existing stock water well located at the AgReserve feedlot, in Section 24, Township 6N, Range 28E. The well in question, hereafter referred to as the Feedlot Well, is reported to have a unique Ecology Tag number of APB448 and was drilled in 2009 by Lemco Drilling.

GeoEngineers conducted a distance-drawdown analysis based on the Cooper and Jacob (1946) modification of the Theis (1935) nonequilibrium equation that estimated the potential geometry of the cone of depression surrounding the Feedlot Well during specific pumping periods at a previously reported pumping rate of 300 gallons per minute (gpm). For this analysis we identified other groundwater wells within the predicted cone of depression and estimated potential drawdown at those wells resulting from the hypothetical pumping. The approximate locations of the Feedlot Well and the other identified area wells are shown on the Distance Drawdown Site Map, Figure 1.

## **2.0 SCOPE OF SERVICES**

Our hydrogeologic services were conducted in accordance with our proposal dated August 15, 2022, which was authorized by AgReserves on September 22, 2022. Specific services summarized in this letter report consist of the following:

1. Conducted a distance-drawdown analysis to estimate the potential extent of the cone of depression potentially associated with Feedlot Well pumping.

2. Identified any groundwater wells reported in the Washington State Department of Ecology (Ecology) online water well report database within the potential cone of depression that we interpret to be within the same aquifer as the Feedlot Well.
3. Used the analysis to estimate potential drawdown interference at those wells resulting from hypothetical Feedlot Well pumping.
4. Prepared this letter report describing our analysis and findings.

### **3.0 AQUIFER PARAMETER AND DISTANCE DRAWDOWN ESTIMATES**

#### **3.1. Well Construction and Performance**

The Feedlot Well is estimated to have a ground surface elevation of approximately 1,130 feet above mean sea level (ft amsl) and it is reported to be completed to a total depth of 1,093 feet below ground surface (ft bgs) or 37 ft amsl. The water well report, which is provided in Appendix A, does not describe the depth of the primary water-bearing intervals from which the Feedlot Well produces water. Based on the reported depth to water we infer that one or more of the reported “honeycomb” intervals, which we interpret to be vesicular basalt, reported in the lower few hundred feet of the Feedlot Well are the primary water-bearing intervals in the well. The water well report filed for the well describes the following:

- 10-inch-diameter casing to 93 ft bgs.
- Bentonite surface seal in the annular space surrounding the casing to 40 ft bgs.
- Open borehole from 93 to 1,093 ft bgs (1037 to 37 ft amsl).
- Static water level in April 2009 of 717 ft bgs (413 ft amsl).

The production capacity of the Feedlot Well is reported at 300 gpm in 2009 on the water well report provided in Appendix A. A pumping test conducted in 2021 reports a constant pumping rate of 280 gpm during a period of almost 4 hours. Drawdown was not recorded for either test; therefore, estimation of the historic specific capacity of the well is not possible.

In the absence of pumping drawdown data for the Feedlot Well, we reviewed area water well reports to identify a different well that reported pumping and associated drawdown which is relatively close to the Feedlot Well (less than 2 miles) and has generally similar construction. Such a well, the Hundred Circles Farm Irrigation Division Well (Hundred Circles Well) was identified. The well log (Appendix A) for the Hundred Circles Well includes a pumping test with reported drawdown.

The Hundred Circles Well sits at an estimated elevation of approximately 979 ft amsl. It is reported to be completed to a total depth of 814 ft bgs (165 ft amsl). The water well report further describes the following:

- 10-inch-diameter casing to 106 ft bgs, 8-inch-diameter casing to 108 ft bgs, and 6-inch-diameter casing to 814 ft bgs.
- Bentonite seal behind the casing to 75 ft bgs and cement from 75 to 105 ft bgs.
- Perforations from 714 to 734 and 774 to 814 ft bgs (265 to 245 and 205 to 165 ft amsl).
- Static water level of 634 ft bgs (345 ft amsl).

- A 4-hour, 100 gpm pumping test with corresponding stabilized drawdown of 7 feet.

Hundred Circles Well information was used to estimate aquifer parameters and the development of the distance drawdown/cone of depression potentially associated with the Feedlot Well.

### 3.2. Aquifer Parameter Estimates

Aquifer parameters are required to estimate the drawdown effects of a pumping well on other wells, e.g. impairment. As noted above, aquifer parameters were estimated for the Feedlot Well using pumping and drawdown data for the Hundred Circles Well because they have similar depths, static groundwater levels, and they are within approximately 1 mile of each other. For the Hundred Circles Well:

- It is reported have been pumped at 100 gpm and to have stabilized with 7 feet of drawdown after 4 hours. Dividing pumping rate by drawdown the specific capacity of the Hundred Circles Well had a 4-hour specific capacity of 14.3 feet per foot of drawdown (gpm/ft-dd).
- Transmissivity was estimated to be 3,820 square feet per day (ft<sup>2</sup>/day) using the methods described by Driscoll (1996) for constant-rate pumping tests in confined aquifers.
- Based on an aquifer thickness of 100 feet (derived from the potentially water-bearing bearing intervals described on the well log) and the above transmissivity estimate, the estimated hydraulic conductivity is 382 ft/day.
- We used a conservative basalt aquifer specific storage of  $1 \times 10^{-5}$  per foot (ft<sup>-1</sup>) and the storage coefficient for the aquifer was estimated to be  $1 \times 10^{-3}$  ft<sup>-1</sup>.

### 3.3. Draw Down Calculations

The aquifer parameters estimated for the Hundred Circles Well were used to develop a distance-drawdown analysis based on the Cooper and Jacob (1946) modification of the Theis (1935) nonequilibrium equation to estimate the cone of depression for the Feedlot Well under select pumping periods. For the analysis, the Feedlot Well was assumed to continuously pump at 300 gpm for 1 day, 14 days, 90 days, and 365 days. Table 1 presents the results of the estimated drawdown at selected radial distance from the Feedlot Well for the selected pumping periods. Figure 1 shows the approximate radial distances from the Feedlot Well.

Using approximately 1 foot of estimated drawdown as a surrogate for the observable effects of pumping the Feedlot Well on the surrounding aquifer:

- The predicted cone of depression after 1 day of pumping extends to approximately 2,000 radial feet from the Feedlot Well before predicted well drawdown is less than 1 foot.
- After 14 days of pumping the cone of depression extends to about 1.5 miles.
- For 90 days of continuous pumping, it extends to 3.6 miles.
- For 1 year (365 days) of continuous pumping estimated observable drawdown (1.0-foot) extends approximately 7 miles from the Feedlot Well.

With respect to these estimates:

- They are predicated on the accuracy of the pumping and drawdown data reported for the Hundred Circles Well and their applicability to the Feedlot Well, and as such they are subject to change if new, more applicable data is produced.
- The pumping rate for the Feedlot Well reported on the water well report and in the 2021 pumping test is assumed to be a maximum pumping rate for the well.
- If average long-term pumping rate is less than that assumed in the longer duration pumping scenarios (which seems likely as most wells are not operated at maximum rates continuously for extended periods of time) the estimated drawdown will be less than calculated.

**TABLE 1. FEEDLOT WELL THEIS DISTANCE DRAWDOWN ESTIMATES**

Radial Distance from the pumping well (ft)	Predicted Drawdown at Select Operational Intervals (ft)			
	1-day	14-days	90-days	365-days
100	7.3	10.1	12.1	13.6
1,000	2.4	5.2	7.2	8.7
2,000	0.9	3.8	5.7	7.2
3,000	0.1	2.9	4.9	6.4
4,000	–	2.3	4.3	5.7
5,280 (1-mile)	–	1.7	3.7	5.2
10,560 (2-miles)	–	0.2	2.2	3.7
15,840 (3-miles)	–	–	1.3	2.8
21,120 (4-miles)	–	–	0.7	2.2
26,400 (5-miles)	–	–	0.2	1.7
31,680 (6-miles)	–	–	–	1.3
36,960 (7-miles)	–	–	–	1.0

**4.0 EXISTING WELLS**

Using the 365-day pumping scenario as a conservative estimate of long-term hypothetical drawdown in the aquifer resulting from Feedlot Well pumping, we accessed the online Ecology well database and found 18 wells (including the Hundred Circles Well) within approximately seven miles of the Feedlot Well. They are listed in Table 2 and their approximate locations are shown on Figure 1. Associated well logs are provided in Appendix B. In Table 2, the wells are grouped by Township and Range.

TABLE 2. REPORTED WELL CONSTRUCTION SUMMARY

Ecology Well ID	Listed Owner	Lat	Long	Open Interval (ft bgs)	Total Depth (ft bgs)	Static WL (ft bgs)
<b>Township 06, Range 29E</b>						
APB448	AgReserves-Feedlot Well	45° 59'54.64"N	119° 8'25.97"W	93-1093	1093	717
	Coffin Sheep Co. Inc.	46° 1'12.11"N	119° 13'25.01"W	60-146	146	100
	Stanly H. Coffin, Coffin Sheep Co. In.	46° 0'36.33"N	119° 9'23.95"W	99-1110	1110	1070
	Tom Harris	46° 0'37.78"N	119° 13'30.21"W	175	175	105
	Otto Hellberg	45° 59'9.08"N	119° 9'4.47"W	65-330	330	309
APF750	Williams Pipeline	45° 57'53.61"N	119° 14'25.96"W	57-600	600	No Water
BCA498	Farmland Reserve Inc	45° 57'21.93"N	119° 14'45.99"W	507-602	602	301
<b>Township 06, Range 30E</b>						
	Hundred Circles Farm Irrigation Division	45° 59'35.15"N	119° 7'14.69"W	714-734, 774-794, 794-814	814	634
	IRRIGO	45° 58'56.06"N	119° 6'43.45"W	95-736	736	695
BAF582	Gilbert Orchards, Inc.	45° 58'9.50"N	119° 5'16.41"W	312-332	335	258
	Easterday Ranch	46° 1'0.68"N	119° 3'24.63"W	90-185	185	82
AFH001	Alan Denke	46° 0'59.77"N	119° 7'8.47"W	142-182	182	39
<b>Township 07, Range 29E</b>						
BAF451	Barnwell Properties	46° 4'22.40"N	119° 13'5.58"W	429-1506	1505	1075
BIW817	Carl Anderson Ranches	46° 3'59.64"N	119° 8'6.23"W	18-75	75	17
BBJ829	Marshall Anderson	46° 3'36.68"N	119° 8'20.21"W	80-120	120	6
<b>Township 07, Range 30E</b>						
BAS121	Dean Wake	46° 4'19.13"N	118° 59'42.69"W	65-565	565	444
	Yoclar	46° 3'8.66"N	119° 0'54.85"W	105	105	37
	Synthia Fallman	46° 4'36.03"N	119° 5'55.43"W	55	55	32
	Kieth Bartlet	46° 2'58.41"N	119° 2'6.52"W	105-222	222	50

As specified in Table 2, many of these 18 wells are significantly shallower than the Feedlot Well and also are reported to have much shallower groundwater levels. Such conditions suggest that these shallower wells are completed within a different aquifer than the Feedlot Well. These differing hydrostratigraphic conditions are further explored in the next section.

## 5.0 HYDROSTRATOGRAHIC SETTING

Comparing our interpretation of the depth of the primary water producing interval(s) in the Feedlot Well to area geologic maps on the online Washington Geologic Information Portal (<https://geologyportal.dnr.wa.gov/>) and subsurface information accessed in the U.S. Geological Survey online Three-Dimensional Hydrogeologic Framework of the Columbia River Plateau Aquifer System webtool ([https://or.water.usgs.gov/projs\\_dir/crpas/](https://or.water.usgs.gov/projs_dir/crpas/)), we interpret that primary groundwater production in the Feedlot Well is from the lower portion of the Frenchman Springs Member of the Wanapum Basalt and the uppermost Grande Ronde Basalt. These online resources indicate that within a 7-mile radius of the Feedlot Well:

- The Wanapum Basalt ranges from approximately 600 to 1,000 plus feet thick, and the Frenchman Springs Member may account for approximately half of that thickness.
- The top of the Wanapum Basalt also is generally shallow, lying less than 50 to around 200 ft bgs with the top of the Frenchman Springs lying several hundred feet deeper.
- Where the Wanapum is buried (not outcropping), it is overlain by the younger Saddle Mountains Basalt and/or sedimentary strata.
- In Switzler Canyon just to the east of the Feedlot and in Wallula Gap a few miles to the south and east, erosion has thinned the Wanapum Basalt and exposed the top of the Frenchman Spring Member 400 or more feet below the surface elevations in the vicinity of the Feedlot Well.

Based on this hydrostratigraphic summary, wells less than 400 feet deep are assumed to be within the Saddle Mountains Basalt and/or shallower Wanapum Basalt units and not intersect the deep Wanapum (Frenchman Springs intervals) that the Feedlot Well and the Hundred Circles Well are interpreted to be producing water from. Because the Feedlot Well is completed deep within the Wanapum Basalt, these shallow wells were removed from the evaluation because they are open to, and producing water, from a much shallower groundwater system than the Feedlot Well.

## 6.0 PREDICTED WELL INTERFERENCE

Applying a hydrostratigraphic filter based on Section 5.0 to the 18 wells identified in Section 4.0 we find that 4 of those wells are likely within the same aquifer as the Feedlot Well. Those wells are listed in Table 3. The Williams Pipeline well is not listed in Table 3 because it is reported to have been dry, and therefore, not in any aquifer. The remaining wells only penetrate a few hundred feet into the upper Wanapum and with water levels significantly higher than reported for the Feedlot Well they have essentially no hydraulic connection with the Feedlot Well.

**TABLE 3. REPORTED WELL CONSTRUCTION SUMMARY**

Ecology Well ID	Listed Owner	Distance from Feedlot Well (Miles)	Predicted Estimated Drawdown at 90 days (ft)	Predicted Estimated Drawdown at 365 days (ft)	Currently Owned by AgReserves
	Hundred Circles Farm Irrigation Division	0.9	3.9	5.4	Yes
	Stanly H. Coffin, Coffin Sheep Co. In.	1.1	3.5	5.0	Yes
	IRRIGRO	1.7	2.5	4.0	Yes
BAF451	Barnwell Properties	6.4	<1	1.2	No

## 7.0 CONCLUSIONS

Based on the assumptions described herein, the predicted drawdown evaluation suggests that the potential cone of depression surrounding the Feedlot Well may extend a radial distance of about 7 miles under a conservative pumping scenario (365 days of continuous pumping at 300 gpm). In this scenario predicted drawdown is approximately 1 foot, a drawdown that is very difficult to measure given normal well operations and water measurement devices, in particular air lines which is the most common water level instrumentation in typical Columbia Basin basalt wells.

Using the estimated cone of depression, we found 18 wells listed on the Washington Department of Ecology's database. The wells were located in Township 06, Range 29E, Township 06, Range 30E, Township 07, Range 29E, and Township 07, Range 30E. Of the 18 identified wells, we interpreted 4 to be completed in the deep Wanapum water bearing zones that the Feedlot Well is interpreted to be producing water from. Three of the four are owned and operated by AgReserves, with the exception of the Barnwell Properties Well. The Barnwell Properties well is 6.4 miles from the Feedlot Well and is predicted experience potential drawdown of 1.2 feet under the most conservative 365-day scenario. No drawdown interference is predicted in the other scenarios.

Pumping of the Feedlot Well is predicted to have little or no measurable effect on the few deep Wanapum wells within 7 miles of it. Of the wells it may potentially affect, 3 of the 4 are owned and operated by AgReserves and they will operate those wells as appropriate to minimize drawdown effects, if any are observed. The other well, Barnwell, is the most distal, and even under the most conservative pumping scenario, predicted effects on it are small, if they can even be measured.

## 8.0 LIMITATIONS

We prepared this report for use by AgReserves to assist in the evaluation of the potential drawdown interference associated with the Feedlot Well. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices in the field of hydrogeology in this area at the time this report was prepared. No warranty or other conditions, expressed or implied, should be understood.

Please refer to Appendix C, Report Limitations and Guidelines for Use for additional information pertaining to use of this report.

**9.0 References**

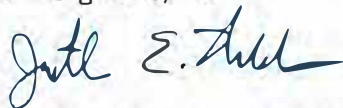
Cooper, H.H and Jacob, C.E. 1946, A generalized graphical method for evaluating formation constants and summarizing well field history. Trans. Amer. Geophys. Union., v. 27, p. 526-534.

Driscoll, F.G., 1986, Groundwater and Wells, 2nd edition. Johnson Screens.

Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage. Trans. Amer. Geophys. Union, Vol. 16, pp. 519-524.

Please contact us if you have any questions about the contents of this Letter Report.

Sincerely,  
GeoEngineers, Inc.



Jonathan E. Rudders, PG, CWRE  
Senior Hydrogeologist



Alicia Candelaria  
Project Scientist



Kevin A. Lindsey, PG, PhD  
Principal Hydrogeologist



KEVIN A. LINDSEY

*Kevin A. Lindsey*  
expires 9/4/2023

JER:JST:KAL:tlh

Attachments:

- Figure 1. Distance Drawdown Site Map
- Appendix A. Water Well Reports for AgReserves Feedlot Well and Hundred Circles Well
- Appendix B. Water Well Reports for Surrounding Wells
- Appendix C. Report Limitations and Guidelines for Use

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

**APPENDIX A**  
**Well Drillers Reports for AgReserves Feedlot Well and**  
**Hundred Circles Well**



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

### Construction/Decommission ("x" in circle)

- Construction
- Decommission ORIGINAL INSTALLATION

Notice of Intent Number \_\_\_\_\_

**PROPOSED USE:**  Domestic  Industrial  Municipal  LIVESTOCK  
 Do Water  Irrigation  Test Well  Other

**TYPE OF WORK:** Owner's number of well (if more than one) \_\_\_\_\_  
 New well  Reconditioned Method:  Dug  Bored  Driven  
 Deepened  Cable  Rotary  Jetted

**DIMENSIONS:** Diameter of well \_\_\_\_\_ inches, drilled \_\_\_\_\_ ft.  
 Depth of completed well \_\_\_\_\_ ft.

**CONSTRUCTION DETAILS**  
 Casing  Welded 10" Diam. from +1 ft. to 93 ft.  
 Installed:  Liner installed \_\_\_\_\_" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Threaded \_\_\_\_\_" Diam. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**Perforations:**  Yes  No  
 Type of perforator used \_\_\_\_\_  
 SIZE of perfs \_\_\_\_\_ in. by \_\_\_\_\_ in. and no. of perfs \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**Screens:**  Yes  No  K-Pac Location \_\_\_\_\_  
 Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**Gravel/Filter pack:**  Yes  No Size of gravel/sand \_\_\_\_\_  
 Materials placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**Surface Seal:**  Yes  No To what depth? 40 ft.  
 Material used in seal BENTONITE  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_

**PUMP:** Manufacturer's Name \_\_\_\_\_  
 Type: \_\_\_\_\_ H.P. \_\_\_\_\_

**WATER LEVELS:** Land-surface elevation above mean sea level \_\_\_\_\_ ft.  
 Static level 717 ft. below top of well Date 4/22/09  
 Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_  
 Artesian water is controlled by \_\_\_\_\_ (cap, valve, etc.)

**WELL TESTS:** Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No If yes, by whom? \_\_\_\_\_  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test \_\_\_\_\_  
 Bailor Test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Airstest 300+ gal./min. with stem set at \_\_\_\_\_ ft. for 4 hrs.  
 Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
 Temperature of water 82 Was a chemical analysis made?  Yes  No

### CURRENT

Notice of Intent No. WE09531 45D  
 Unique Ecology Well ID Tag No. APB448  
 Water Right Permit No. \_\_\_\_\_  
 Property Owner Name EASTERDAY RANCHES INC  
 Well Street Address NINE CANYON ROAD  
 City KENNEWICK County BENTON  
 Location SE 1/4-1/4 NW 1/4 Sec 24 Twp 6 R 29E  Check  
 (s, t, r Still REQUIRED)  Or  One

Lat/Long Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
 Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. (Required) 12469000000000

**CONSTRUCTION OR DECOMMISSION PROCEDURE**  
 Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
CLAY	0	4
ASH	4	36
SANDSTONE/BROKEN BASALT	36	88
BLACK BROWN BASALT	88	136
HARD GRAY	136	246
GRAY/GREEN FRACTURED	246	284
MED BROWN/SOME GRAY CLAY	284	310
HARD & MEDIUM GRAY/BROWN	310	320
MED GRAY/BROWN	320	328
HARD GRAY	328	346
MED BROWN	346	348
RED HONEYCOMB	348	355
HARD GRAY	355	360
MED BROWN/GRAY	360	372
HARD GRAY	372	394
SOFT BROWN CAVING	394	415
HARD GRAY	415	432
MED BROWN/GRAY	432	460
CEMENTED 4 YRDS NBET CEMENT @210'		
HARD GRAY	460	550
MED BROWN	550	560
HARD GRAY	560	568
MED/SOFT BROWN HONEYCOMB	568	580
CEMENT 2 YRDS NBET CEMENT @380'		
HARD GRAY	580	608
MED BROWN	608	628
HARD GRAY	628	645
MED BROWN/GRAY/BLACK	645	702
CEMENT 21/2YRDS CEMENT @500'		
HARD GRAY	702	726
MED BROWN	726	762

Start Date 2/2/09 Completed Date 4/17/09

**WELL CONSTRUCTION CERTIFICATION:** I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) LEONARD MARTEZ  
 Driller/Engineer/Trainee Signature *Leonard Martez*  
 Driller or trainee License No. 1907

IF TRAINEE: Driller's License No. \_\_\_\_\_  
 Driller's Signature: \_\_\_\_\_

Drilling Company LEMCO DRILLING INC  
 Address PO BOX 23  
 City, State, Zip LIND WA 99341  
 Contractor's Registration No. LEMCOD1101JJ Date 4/23/09

ECY 050-1-20 (Rev 06/08) If you need this document in an alternate format, please call the Water Resources Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Services. Persons with a speech disability can call 877-833-6341.



The Dep. The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

# WATER WELL REPORT

Application No. ....

STATE OF WASHINGTON

Permit No. ....

(1) OWNER: Name Hundred Circles Farm Address 5000 West Clearwater Kennewick, WA  
Name Irrigro Division

(2) LOCATION OF WELL: County Benton NW 1/4 NW 1/4 Sec. 19 T. 6 N., R. 30E W.M. D  
and distance from section or subdivision corner

(3) PROPOSED USE: Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

(4) TYPE OF WORK: Owner's number of well (if more than one) .....  
New well  Method: Dug  Bored   
Deepened  Cable  Driven   
Reconditioned  Rotary  Jetted

(5) DIMENSIONS: Diameter of well 8 inches.  
Drilled 814 ft. Depth of completed well 814 ft.

(6) CONSTRUCTION DETAILS:  
Casing installed: 10" Diam. from 0 ft. to 106 ft.  
Threaded  8" Diam. from 0 ft. to 108 ft.  
Welded  6" Diam. from 0 ft. to 814 ft.

Perforations: Yes  No   
Type of perforator used torch  
SIZE of perforations 1 in. by 12 in.  
27 perforations from 714 ft. to 734 ft.  
12 perforations from 774 ft. to 794 ft.  
27 perforations from 794 ft. to 814 ft.

Screens: Yes  No   
Manufacturer's Name .....  
Type ..... Model No. ....  
Diam. .... Slot size ..... from ..... ft. to ..... ft.  
Diam. .... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes  No  Size of gravel: .....  
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes  No  To what depth? cement 75-105 ft.  
Material used in seal benetomite & cuttings 0-75  
Did any strata contain unusable water? Yes  No   
Type of water? ..... Depth of strata .....  
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....  
Type: submersible HP 30

(8) WATER LEVELS: Land-surface elevation above mean sea level. ....  
Static level 634 ft. below top of well Date 6-26-74  
Artesian pressure ..... lbs. per square inch Date .....  
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level lowered below static level Hansen Drilling  
Was a pump test made? Yes  No  If yes, by whom? Hansen Drilling  
Yield: 100 gal./min. with 7 ft. drawdown after 4 hrs.  
" stabilize after 1 hour pumping "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)  
Time Water Level Time Water Level Time Water Level  
0 min. 641 1 min. 634  
[of test 6-26-74  
..... gal./min. with ..... ft. drawdown after ..... hrs.  
Artesian flow 74 g.p.m. Date .....  
Temperature of water 74 Was a chemical analysis made? Yes  No

## (10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
sandy top soil	0	4
sandy clay, layers sandstone	4	41
brown broken rock	41	56
brown & grey broken rock layers claystone	56	61
black grey rock broken	61	80
black basalt w/brown rock layers, green shale seams	80	190
broken grey green, br. rock	190	200
broken brown rock, little clay	200	213
broken grey, brown, green rock	213	220
broken grey basalt	220	256
broken brown, grey, green rock	256	265
grey broken basalt	265	275
broken brown, grey, green rock	275	304
broken brown, grey lava rock		
Some clay	304	318
broken grey basalt	318	335
broken brown, grey, green lava rock	335	357
broken grey basalt	357	495
broken brown, grey, red, lava r	495	500
broken grey basalt layers brown, grey, red, broken rock	500	648
broken grey, brown, red lava r.	648	670
broken grey basalt	670	710
broken grey, black rock w/br. red lava rock, broken grey basalt	710	800
RECEIVED	800	814

JUL 8 1974  
JUL 10 1974

DEPARTMENT OF ECOLOGY  
SPOKANE REGIONAL OFFICE  
Work started 5-7, 19 74 Completed 6-26, 19 74

## WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Hansen Drilling Co., Inc.  
(Person, firm, or corporation) (Type or print)  
Address 6711 NE 58th Ave. Vancouver  
0271 Jim Hansen  
[Signed] Jim Hansen  
(Well Driller) Km Hansen  
051  
License No. 223 02 1155 Date July 1, 19 74

**APPENDIX B**  
**Well Driller's Reports for Surrounding Wells**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original with  
Department of Ecology  
Second Copy - Owner's Copy  
Third Copy - Driller's Copy

# WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W104973  
UNIQUE WELL I.D.# AFH001  
Water Right Permit No. \_\_\_\_\_

(1) OWNER: Name Alan Denke Address 2016 So Oak Kenn WA

(2) LOCATION OF WELL: County Benton NE 1/4 NE 1/4 Sec 7 T 8 N.R. 30 EWM

(2a) STREET ADDRESS OF WELL: (or nearest address) 2016 So Oak Kenn WA 99337  
TAX PARCEL NO.: 1-0780-400-0003-001 A

(3) PROPOSED USE:  Domestic  Industrial  Municipal  
 Irrigation  Test Well  Other  
 DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) \_\_\_\_\_  
 New Well Method:  Dug  Bored  
 Deepened  Cable  Driven  
 Reconditioned  Rotary  Jetted  
 Decommission

(5) DIMENSIONS: Diameter of well 6 inches  
Drilled \_\_\_\_\_ feet. Depth of completed well \_\_\_\_\_ ft.

(6) CONSTRUCTION DETAILS  
Casing installed:  Welded  Liner installed  Threaded  
Diam. from 1 1/2 ft. to 20 5/8 ft.  
Diam. from 6 1/2 ft. to 19 1/2 ft.  
Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Perforations:  Yes  No  
Type of perforator used Saw  
SIZE of perforations 1/8 in. by 6 in.  
136 perforations from 142 ft. to 142 ft.

Screens:  Yes  No  K-Pac Location \_\_\_\_\_  
Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
Type \_\_\_\_\_ Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Gravel/Filter packed:  Yes  No  Size of gravel/sand \_\_\_\_\_  
Material placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Surface seal:  Yes  No To what depth? 18 ft.  
Material used in seal Ben-tonite  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_

(7) PUMP: Manufacturer's Name \_\_\_\_\_  
Type: \_\_\_\_\_ H.P. \_\_\_\_\_

(8) WATER LEVELS: Land-surface elevation above mean sea level \_\_\_\_\_ ft.  
Static level 39 ft. below top of well Date 11-2-99  
Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_  
Artesian water is controlled by \_\_\_\_\_ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom? \_\_\_\_\_  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)  
Time Water Level Time Water Level Time Water Level  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Date of test \_\_\_\_\_  
Bailey test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Airstest 20 gal./min. with 100 ft. drawdown after 2 hrs.  
Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water \_\_\_\_\_ Was a chemical analysis made?  Yes  No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION  
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Sand	0	2
Cobbles, gravel sand	2	15
Black		
Gravelly sand Black	15	44
Water @ 30'		
Gravelly sand Tan	44	
Water Bearly		60
Clay Tan	60	65
Black Black	65	148
Dark Blk Disicular	148	
Water Bearly		157
Platy Black	157	159
Black Black Disicular	159	
Dark Blue Lignite Water		164
Black Black	164	176
Black Black some	176	
Disicular		179
Black Gray	179	182

NOTICE OF INTENT  
NOV 1 1999

Work Started Nov 1 99 Completed Nov 2 99

**WELL CONSTRUCTION CERTIFICATION:**

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Jim Nelson License No. 361  
(Licensed Driller/Engineer)

Trainee Name \_\_\_\_\_ License No. \_\_\_\_\_  
Drilling Company NEKSON Well Drilling Inc  
(Signed) Jim Nelson License No. \_\_\_\_\_  
(Licensed Driller/Engineer)  
Address 200 W Argus Rexo  
Contractor's Registration No. NEKSD0194R Date Nov 2 99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6800. The TDD number is (360) 407-6006.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original with Department of Ecology  
Second Copy - Owner's Copy  
Third Copy - Driller's Copy

# WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W 241163  
UNIQUE WELL I.D.# BAF 451

Water Right Permit No. \_\_\_\_\_

318186

(1) OWNER: Name Barnwell Properties Address: 201 Mead Rd Victoria TX 77904

(2) LOCATION OF WELL: County Benton NE 1/4 5th 1/4 Sec 20 T 7N N.R. 28E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 92917 S Baker Canyon Rd, Kennewick, wa  
TAX PARCEL NO.: 1207910000000

(3) PROPOSED USE:  Domestic  Industrial  Municipal  
 Irrigation  Test Well  Other  
 DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) \_\_\_\_\_  
 New Well Method:  Dug  Bored  
 Deepened  Cable  Driven  
 Reconditioned  Rotary  Jetted  
 Decommission

(5) DIMENSIONS: Diameter of well 8 inches  
Drilled 306 feet. Depth of completed well 306 ft.

(6) CONSTRUCTION DETAILS  
Casing Installed: 88  
 Welded " \_\_\_\_\_" Diam. from 7.1 ft. to 5.9 ft.  
 Liner installed " \_\_\_\_\_" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Threaded " \_\_\_\_\_" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Perforations:  Yes  No  
Type of perforator used \_\_\_\_\_  
SIZE of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens:  Yes  No  K-Pac Location \_\_\_\_\_  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Gravel/Filter packed:  Yes  No  Size of gravel/sand \_\_\_\_\_  
Material placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Surface seal:  Yes  No To what depth? 60 ft.  
Material used in seal: Benarite to 18 cement to 60  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_

(7) PUMP: Manufacturer's Name \_\_\_\_\_  
Type: \_\_\_\_\_ H.P. \_\_\_\_\_

(8) WATER LEVELS: Land surface elevation above mean sea level \_\_\_\_\_ ft.  
Static level 228 ft. below top of well Date 9-19-08  
Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_  
Artesian water is controlled by \_\_\_\_\_ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom? \_\_\_\_\_  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)  
Time Water Level Time Water Level Time Water Level  
\_\_\_\_\_  
Date of test \_\_\_\_\_  
Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Airstest 20 gal./min. with \_\_\_\_\_ ft. drawdown after 4 hrs.  
Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water 59 Was a chemical analysis made?  Yes  No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION  
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Brown silt	0	41
silt & gravels	41	44
Black Basalt med	44	65
Brown Basalt med	65	105
Black Basalt med	105	210
Black Basalt / seams	210	
Blue Clay		217
Black Basalt med	217	254
Disicular Basalt /		
Blue Clay	254	270
Black & Brown	270	
Disicular Basalt		297
Black Basalt med	297	306

RECEIVED

SEP 23 2008

DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

Work Started 8-25 RECEIVED 9-19-08

WELL CONSTRUCTION CERTIFICATION: 9-7-2008

I constructed and/or ~~assume~~ responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Ed Brown License No. 1893  
(Licensed Driller/Engineer)

Trainee Name \_\_\_\_\_ License No. \_\_\_\_\_

Drilling Company Water well developing & survey  
(Signed) S.T. Brown License No. 1893  
(Licensed Driller/Engineer)

Address PO 156 Umatilla, OR 97882

Contractor's Registration No. Water 05100 MIB Date 9-27-08

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

## Construction/Decommission ("x" in circle)

- Construction 384977  
 Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

<b>PROPOSED USE:</b> <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> DeWater <input type="checkbox"/> Irrigation <input type="checkbox"/> Test Well <input type="checkbox"/> Other _____													
<b>TYPE OF WORK:</b> Owner's number of well (if more than one) _____ <input type="checkbox"/> New well <input type="checkbox"/> Reconditioned <input type="checkbox"/> Method: <input type="checkbox"/> Dug <input type="checkbox"/> Bored <input type="checkbox"/> Driven <input checked="" type="checkbox"/> Deepened <input type="checkbox"/> Cable <input type="checkbox"/> Rotary <input type="checkbox"/> Jetted													
<b>DIMENSIONS:</b> Diameter of well <u>7 1/2</u> inches, drilled <u>15.05</u> ft. Depth of completed well _____ ft.													
<b>CONSTRUCTION DETAILS</b> Casing <input type="checkbox"/> Welded _____" Diam. from _____ ft. to _____ ft. Installed; <input checked="" type="checkbox"/> Other installed <u>6</u> " Diam. from <u>4.8</u> ft. to <u>4.29</u> ft. <input type="checkbox"/> Threaded _____" Diam. from _____ ft. to _____ ft.													
Perforations: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Type of perforator used _____ SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.													
Screens: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> K-Pac Location _____ Manufacturer's Name _____ Type _____ Model No. _____ Diam. _____ Slot size _____ from _____ ft. to _____ ft. Diam. _____ Slot size _____ from _____ ft. to _____ ft.													
Gravel/Filter packed: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Size of gravel/sand _____ Materials placed from _____ ft. to _____ ft.													
Surface Seal: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No To what depth? _____ ft. Material used in seal _____ Did any strata contain unusable water? <input type="checkbox"/> Yes <input type="checkbox"/> No Type of water? _____ Depth of strata _____ Method of sealing strata off _____													
PUMP: Manufacturer's Name _____ Type: _____ H.P. _____													
<b>WATER LEVELS:</b> Land-surface elevation above mean sea level <u>150.0</u> ft. Static level <u>107.5</u> ft. below top of well Date <u>7-16-10</u> Artesian-pressure _____ lbs. per square inch Date _____ Artesian water is controlled by _____ (cap, valve, etc.)													
<b>WELL TESTS:</b> Drawdown is amount water level is lowered below static level Was a pump test made? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, by whom? _____ Yield _____ gal./min. with _____ ft. drawdown after _____ hrs. Yield _____ gal./min. with _____ ft. drawdown after _____ hrs. Yield _____ gal./min. with _____ ft. drawdown after _____ hrs. Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level) <table border="1"> <thead> <tr> <th>Time</th> <th>Water Level</th> <th>Time</th> <th>Water Level</th> <th>Time</th> <th>Water Level</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table> Date of test _____ Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs. Art test <u>50+</u> gal./min. with stem set at <u>1.505</u> ft. for <u>2</u> hrs Artesian flow _____ g.p.in. Date _____ Temperature of water <u>58</u> Was a chemical analysis made? <input type="checkbox"/> Yes <input type="checkbox"/> No		Time	Water Level	Time	Water Level	Time	Water Level	_____	_____	_____	_____	_____	_____
Time	Water Level	Time	Water Level	Time	Water Level								
_____	_____	_____	_____	_____	_____								

## CURRENT

Notice of Intent No. W 241174  
 Unique Ecology Well ID Tag No. BAF 451  
 Water Right Permit No. \_\_\_\_\_  
 Property Owner Name Barnwell Properties  
 Well Street Address 97912 Bofer Canyon  
 City Kennebec County Benton  
 Location N 1/4 1/4 Sec 20 Twn 7 R 22  EWM or WWM circle one  
 Lat/Long (s, t, r) \_\_\_\_\_ Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
 Still **REQUIRED** Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_  
 Tax Parcel No. 120791000000

## CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Black Basalt med	306	379
Red cinders	379	384
Brown Basalt soft	384	396
Brown visicular soft	396	426
Black Basalt med	426	580
Black Basalt soft	580	605
Black Basalt Hard	605	753
visicular Basalt soft	753	778
Black Basalt med	778	831
visicular Basalt soft	831	850
Black Basalt med	850	980
visicular Basalt soft	980	1018
Black Basalt med	1018	1090
visicular Basalt soft	1090	1115
Black Basalt med	1115	1170
Grey Basalt Hard	1170	1350
Soft Black visicular Basalt	1350	1428
Brown visicular soft	1428	1490
Black Basalt med	1490	1505

RECEIVED

SEP 16 2010

DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

Start Date 6-28-10 Completed Date 7-16-10

**WELL CONSTRUCTION CERTIFICATION:** I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Brandon Brown Drilling Company Water Well Developing Service  
 Driller/Engineer/Trainee Signature Brandon Brown Address 10 156  
 Driller or trainee License No. 2859 City, State, Zip Wenatchee, OR 97882  
 Contractor's Registration No. Water 0510008 Date 7-20-10  
 Ecology is an Equal Opportunity Employer.



The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

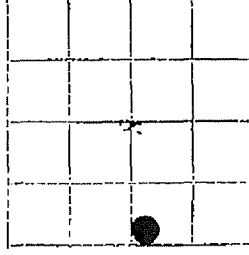
6,29E8M  
File number

STATE OF WASHINGTON  
DEPARTMENT OF CONSERVATION  
AND DEVELOPMENT

WELL LOG (Willmert) No. Appl. #5265

Date 8-4, 1959

Record by well driller  
driller's record



Location: State of WASHINGTON

County Benton

Area

Map NW 1/4 sec. 8 T.6 N., R. 29 E.

Drilling Co. Ben Dreyer Well Drilling

Address Stanfield, Oregon

Method of Drilling Date Nov., 1957

Owner Coffin Sheep Company, Inc.

Address Yakima, Wash.

Land surface, datum ft above  
"below

CORRE- LATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Sandy clay	50	50
	Rock white	11	61
	Rock gray hard	31	92
	Rock red soft (trace water)	12	104
	" " hard	5	109
	" " soft	22	131
	" black hard	3	134
	" black-soft	12	146
PUMP TEST:			
Dim. 8"x146'			
SWL: 100 ft.			
DD: 46 ft.			
CASING:			
8" diam. from 0 to 60 ft.			

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses, if material water-bearing, so strata and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology; 2<sup>nd</sup> copy - owner; 3<sup>rd</sup> copy - driller

Construction/Decommission ("x" in circle)  
 Construction 332579  
 Decommission ORIGINAL INSTALLATION Notice  
of Intent Number \_\_\_\_\_

**PROPOSED USE:**  Domestic  Industrial  Municipal  
 DeWater  Irrigation  Test Well  Other STOCK

**TYPE OF WORK:** Owner's number of well (if more than one) \_\_\_\_\_  
 New well  Reconditioned  Deepened Method:  Dug  Bored  Driven  
 Cable  Rotary  Jetted

**DIMENSIONS:** Diameter of well 6 inches, drilled. 365 ft.  
Depth of completed well 565 ft.

**CONSTRUCTION DETAILS**  
Casing  Welded 6" Diam. from 1 ft. to 65 ft.  
Installed:  Liner installed " Diam. from " ft. to " ft.  
 Threaded " Diam. from " ft. to " ft.

Perforations:  Yes  No  
Type of perforator used \_\_\_\_\_

SIZE of perfs \_\_\_\_\_ in. by \_\_\_\_\_ in. and no. of perfs \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens:  Yes  No  K-Pac Location \_\_\_\_\_  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Gravel/Filter packed:  Yes  No  Size of gravel/sand \_\_\_\_\_  
Materials placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Surface Seal:  Yes  No To what depth? 40 ft.  
Material used in seal BENTONITE  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_

**PUMP:** Manufacturer's Name \_\_\_\_\_  
Type: \_\_\_\_\_ H.P. \_\_\_\_\_

**WATER LEVELS:** Land-surface elevation above mean sea level 785 ft.  
Static level 444 ft. below top of well Date 12/4/08  
Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_  
Artesian water is controlled by \_\_\_\_\_ (cap, valve, etc.)

**WELL TESTS:** Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom? \_\_\_\_\_  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)  
Time Water Level Time Water Level Time Water Level  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Date of test \_\_\_\_\_  
Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Air test: 20 gal./min. with stem set at 560 ft. for 1 hrs.  
Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water 62.0 Was a chemical analysis made?  Yes  No

**CURRENT**  
Notice of Intent No. WE09454  
Unique Ecology Well ID Tag No. BAS121  
Water Right Permit No. \_\_\_\_\_  
Property Owner Name DEAN WAKE  
Well Street Address NKA MEALS RD  
City KENNEWICK County BENTON  
Location NE 1/4-1/4 SE 1/4 Sec 24 Twn 7N R 30 <sup>EWM</sup> or <sup>WWM</sup> circle one  
Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
Still **REQUIRED** Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_  
Tax Parcel No. 1247040000000000

**CONSTRUCTION OR DECOMMISSION PROCEDURE**

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
SOIL	0	17
SOIL + BROKEN BASALT	17	35
BROWN CALICHE CLAY	35	65
SOFT BROWN BASALT	65	128
MED GRAY	128	188
MED BROWN	188	207
HARD BLACK	207	260
MED GRAY	260	395
HARD BLACK	395	500
SOFT BLACK	500	558
HARD GRAY	558	565

**RECEIVED**  
DEC 18 2008  
DEPARTMENT OF ECOLOGY CENTRAL REGIONAL OFFICE

Start Date 12/1/08 Completed Date 12/4/08

**WELL CONSTRUCTION CERTIFICATION:** I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (PRINT) B. M. VOTH  
Driller/Engineer/Trainee Signature [Signature]  
Driller or trainee License No. 2094

IF TRAINEE,  
Driller's Licensed No. \_\_\_\_\_  
Driller's Signature \_\_\_\_\_

Drilling Company FIVE STAR DRILLING  
Address 36301 Hwy 12  
City, State, Zip DAYTON, WA 99328  
Contractor's  
Registration No. FIVE STAR 077MB Date 12/5/08  
Ecology is an Equal Opportunity Employer





The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

DEPARTMENT OF  
ECOLOGY  
State of Washington

## Construction/Decommission ("x" in circle)

Construction

Decommission ORIGINAL INSTALLATION

### Notice of Intent Number

**PROPOSED USE:**  Domestic  Industrial  Municipal  
 DeWater  Irrigation  Test Well  Other \_\_\_\_\_

**TYPE OF WORK:** Owner's number of well (if more than one) \_\_\_\_\_  
 New well  Reconditioned Method:  Dug  Bored  Driven  
 Deepened  Cable  Rotary  Jetted

**DIMENSIONS:** Diameter of well 8 inches, drilled 335 ft.  
 Depth of completed well 332 ft.

**CONSTRUCTION DETAILS**  
 Casing  Welded 8" Diam. from +1 ft. to 34 ft.  
 Installed:  Liner installed 4 1/2" Diam. from 12 ft. to 332 ft.  
 Threaded \_\_\_\_\_" Diam. From \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Perforations:  Yes  No  
 Type of perforator used Saw

SIZE of perfs 1/8 in. by 5 in. and no. of perfs 80 from 312 ft. to 332 ft.

Screens:  Yes  No  K-Pac Location \_\_\_\_\_

Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Gravel/Filter packed:  Yes  No Size of gravel/sand \_\_\_\_\_  
 Materials placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Surface Seal:  Yes  No To what depth? 18+ ft.  
 Material used in seal Bentonite  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_

**PUMP:** Manufacturer's Name \_\_\_\_\_  
 Type: \_\_\_\_\_ H.P. \_\_\_\_\_

**WATER LEVELS:** Land-surface elevation above mean sea level \_\_\_\_\_ ft.  
 Static level 258 ft. below top of well Date 08/19/2008  
 Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_  
 Artesian water is controlled by \_\_\_\_\_ (cap, valve, etc.)

**WELL TESTS:** Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No If yes, by whom? \_\_\_\_\_  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Date of test \_\_\_\_\_  
 Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Airstest 60 gal./min. with stem set at 332 ft. for 1 hrs.  
 Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
 Temperature of water \_\_\_\_\_ Was a chemical analysis made?  Yes  No

## CURRENT

Notice of Intent No. W254918  
 Unique Ecology Well ID Tag No. BAF582  
 Water Right Permit No. \_\_\_\_\_  
 Property Owner Name Gilbert Orchards, Inc.  
 Well Street Address 168697 S. Nine Canyon Rd  
 City Kennewick County Benton  
 Location 1/4-1/4 SE1/4 Sec 29 Twn 06 R 30 EWM   
 (s, t, r Still REQUIRED) Or WWM   
 Lat/Long Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_  
 Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_  
 Tax Parcel No. (Required) 1-2960-100-0002-000

CONSTRUCTION OR DECOMMISSION PROCEDURE		
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)		
MATERIAL	FROM	TO
Sand	0	5
Sand & Clay	5	30
Broken Basalt	30	33
Basalt (Black) soft	33	55
Basalt (Black) hard	55	147
Basalt (B&B) soft W.B.	147	150
Claystone (Brown) soft	150	160
Basalt (B&B) ves. soft	160	170
Basalt (Black w/Green)	170	180
Basalt (Black) hard	180	190
Basalt (Black w/Blue) med	190	200
Basalt (Black) hard	200	225
Basalt (B&B) ves. soft	225	229
Basalt (Brown) ves. soft	229	238
Basalt (Black w/Blue) ves.	238	242
Basalt (Black) hard	242	251
Basalt (Black) fractured	251	256
Basalt (Black w/Green) fract	256	261
Basalt (Black) hard w/fract	261	278
Basalt (Brown) ves W.B.	278	296
Basalt (Black) hard	296	300
Basalt (B&B w/Green) ves W.B.	300	308
Basalt (B&B) ves. fract W.B.	308	325
Basalt (Black) hard	325	335
Shale Trap set @	212	
Start Date <u>08/14/2008</u>	Completed Date <u>08/19/2008</u>	

### WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Michael Robinson  
 Driller/Engineer/Trainee Signature \_\_\_\_\_  
 Driller or trainee License No. 1544  
 IF TRAINEE: Driller's License No: \_\_\_\_\_  
 Driller's Signature: \_\_\_\_\_

Drilling Company Robinson Drilling & Development, Inc.  
 Address 4902 Viewland Drive  
 City, State, Zip Yakima, WA, 98908  
 Contractor's Registration No. ROBNDD938QE Date 08/20/2008





The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

Construction/Decommission ("x" in circle) 383967

Construction  
 Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

**PROPOSED USE:**  Domestic  Industrial  Municipal  
 DeWater  Irrigation  Test Well  Other \_\_\_\_\_

**TYPE OF WORK:** Owner's number of well (if more than one) \_\_\_\_\_  
 New well  Reconditioned  Deepened Method:  Dug  Bored  Driven  
 Cable  Rotary  Jetted

**DIMENSIONS:** Diameter of well 8" inches, drilled 120 ft.  
 Depth of completed well 120 ft.

**CONSTRUCTION DETAILS**  
 Casing  Welded 8 " Diam. from 42 ft. to 20 ft.  
 Installed:  Liner installed 4 " Diam. from 10 ft. to 120 ft.  
 Threaded " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Perforations:  Yes  No  
 Type of perforator used skill saw  
 SIZE of perfs 1/8 in. by 6 in. and no. of perfs 40 from 80 ft. to 120 ft.

Screens:  Yes  No  K-Pac Location \_\_\_\_\_  
 Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Gravel/Filter packed:  Yes  No  Size of gravel/sand \_\_\_\_\_ ft.  
 Materials placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Surface Seal:  Yes  No To what depth? 20 ft.  
 Material used in seal Ben-tonite  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
 Method of sealing strata off: \_\_\_\_\_

PUMP: Manufacturer's Name \_\_\_\_\_  
 Type: \_\_\_\_\_ H.P. \_\_\_\_\_

**WATER LEVELS:** Land-surface elevation above mean sea level \_\_\_\_\_ ft.  
 Static level 6 ft. below top of well Date 9-5-08  
 Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_  
 Artesian water is controlled by \_\_\_\_\_ (cap, valve, etc.)

**WELL TESTS:** Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No If yes, by whom? \_\_\_\_\_  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)  

Time	Water Level	Time	Water Level	Time	Water Level

 Date of test \_\_\_\_\_  
 Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Airtest 2 gal./min. with stem set at 100 ft. for 1 hrs.  
 Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
 Temperature of water 58 Was a chemical analysis made?  Yes  No

## CURRENT

Notice of Intent No. W 226834

Unique Ecology Well ID Tag No. BBT 829

Water Right Permit No. \_\_\_\_\_

Property Owner Name Marshall Anderson

Well Street Address Beck Rd. 3 mile out (hold-ess)

City Kenn County Benton

Location 6W 1/4-1/4 NW 1/4 Sec 25 Twn 7N R 29  WWM or circle one

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Still **REQUIRED** Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. 12579 000 0000 000

### CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Top Soil	0	3
Brown clay	3	18
Brown basalt	18	26
Broken basalt	26	71
Brown clay	71	96
Gray clay	96	120

RECEIVED

AUG 23 2010

DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

Start Date 9-3-08 Completed Date 9-5-08

**WELL CONSTRUCTION CERTIFICATION:** I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller  Engineer  Trainee Name (Print) Lyle O. Amos  
 Driller/Engineer/Trainee Signature Lyle O. Amos  
 Driller or trainee License No. 1224

Drilling Company TRIPLE A Drilling  
 Address P.O. Box 278 785 Tumblerock Lane  
 City, State, Zip Burbank WA 99323

IF TRAINEE,  
 Driller's Licensed No. \_\_\_\_\_  
 Driller's Signature \_\_\_\_\_

Contractor's  
 Registration No. TRIPLO1937BB Date 9-5-08

Ecology is an Equal Opportunity Employer.

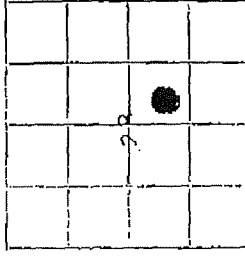
The Dep. The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

6 N 129 E 23 K  
File number

STATE OF WASHINGTON  
DEPARTMENT OF CONSERVATION  
AND DEVELOPMENT

No. Appl. 4819

WELL LOG  
Date Nov. 13, 1957  
Record by well driller  
Sourcedriller's record



Location: State of WASHINGTON  
County Benton  
Area  
Map  
SE 1/4 Sec 23 T. 6 N., R. 29 E. 20E  
Drilling Co. Ben Dreyer  
Address Stanfield, Oregon

Method of Drilling Date, 19  
Owner Otto J. Hellberg  
Address Lowden, Wash.  
Land surface, datum ft above below

CONSLATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
------------	----------	------------------	--------------

(Transcribe driller's terminology literally but paraphrase as necessary. In parentheses, if material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

	Sandy soil	20	20
	Sandy clay	44	64
	Rock gray hard	35	99
	Rock red soft	21	120
	Rock gray hard	28	148
	Rock red soft	14	162
	Rock black medium	31	193
	Rock gray medium	45	238
	Rock black medium	5	243
	Rock brown soft	3	246
	Rock gray hard	35	281
	Rock red soft	33	314
	Rock gray hard	16	330
	PUMP TEST:		
	Dim. 330"x8"		
	SWL: 309 ft.		
	DD:		
	Yield: 25 g.p.m. bailer test		



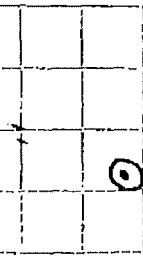
The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

6, 29E, 11P

STATE OF WASHINGTON  
DEPARTMENT OF CONSERVATION  
AND DEVELOPMENT

WELL LOG No. A-5259 C-4333

Date: November 13, 1958  
Record by: driller  
Source: driller's record

Location: State of WASHINGTON  
County: Benton  
Area:  
Map: 

1/4 sec. 11T 6N, R. 29 E  
Drilling Co.: Ben. Dreyer Drilling Contractor  
Address: Route 2, Box 73BB, Pendleton, Oregon  
Method of Drilling: cable Date: Aug. 20, 1958  
Owner: Stanley H. Coffin, Coffin Sheep Co., Inc.  
Address: Box 1437, Yakima, Wash.  
Land surface, datum: ft. above below

COM- LATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Sand	0	2
	Clay	2	13
	Sand	13	76
	Clay, brown	76	86
	Rock, red	86	96
	Broken rock, black	96	130
	Rock, black, medium	130	160
	Rock, grey, hard	160	188
	Clay, brown, red and green	188	216
	Rock, grey	216	269
	Clay, brown	269	275
	Rock, grey, hard	275	289
	Rock, black, medium	289	333
	Rock, grey, hard	333	340
	Clay	340	345
	Rock, black	345	358

(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses, if material water-bearing, no state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)

Turn up (over) Sheet of sheets

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WELL LOG.—Continued No. /

CONC- LATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Depth forward	—	
	Broken rock	358	377
	Clay brown	377	396
	Rock, red	396	400
	Rock, grey, hard	400	516
	Clay, brown	516	521
	Rock, black	521	535
	Rock grey	535	578
	Rock, black	578	589
	Rock, grey, medium	589	648
	Rock, grey, hard	648	667
	Rock, grey, medium	667	737
	Rock, grey, hard	737	795
	Rock, grey, medium	795	832
	Rock, grey, hard	832	847
	Rock, black, medium	847	856
	Rock, brown, soft	856	868
	Rock, grey, medium	868	878
	Clay, brown	878	882
	Rock, black, medium	882	911
	rock, grey, hard	911	1053
	Rock, black, soft	1053	1058
	Clay, grey, soft	1058	1085
	Rock, grey, soft	1085	1096
	Boulders and sand	1096	1100
	Rock, black, soft (water)	1100	1105
	Sand, brown	1105	1108
	Rock, black, hard	1108	1110
	Casing: 8 in diam from 0 to 99 ft.		
	Bailer test: 5gpm with no drawdown		
	SWL: 1070 ft (11-11-58)		
	Diam. 8 in - Depth 1110 ft.		









**APPENDIX C**  
**Report Limitations and Guidelines for Use**

## **APPENDIX C**

### **REPORT LIMITATIONS AND GUIDELINES FOR USE<sup>1</sup>**

This appendix provides information to help you manage your risks with respect to the use of this report.

#### **Hydrogeologic Services Are Performed For Specific Purposes, Persons And Projects**

This report has been prepared for use by AgriNorthwest. This report may be made available in its entirety to others for information only. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, a hydrogeologic study conducted for a civil engineer or architect may not fulfill the needs of a construction contractor or even another civil engineer or architect that are involved in the same project. Because each hydrogeologic study is unique, each hydrogeologic report is unique, prepared solely for the specific client and project site. No one except AgriNorthwest should rely on this report without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

#### **A Hydrogeologic Report Is Based On A Unique Set Of Project-Specific Factors**

This report has been prepared for the AgriNorthwest drawdown analysis. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- Not prepared for you,
- Not prepared for your project,
- Not prepared for the specific site explored, or
- Completed before important project changes were made.

If important changes are made after the date of this report, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

#### **Subsurface Conditions Can Change**

This hydrogeologic report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying a report to determine if it remains applicable.

#### **Most Hydrogeologic Findings Are Professional Opinions**

Our interpretations of subsurface conditions are based on field observations from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface

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<sup>1</sup> Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; [www.asfe.org](http://www.asfe.org).

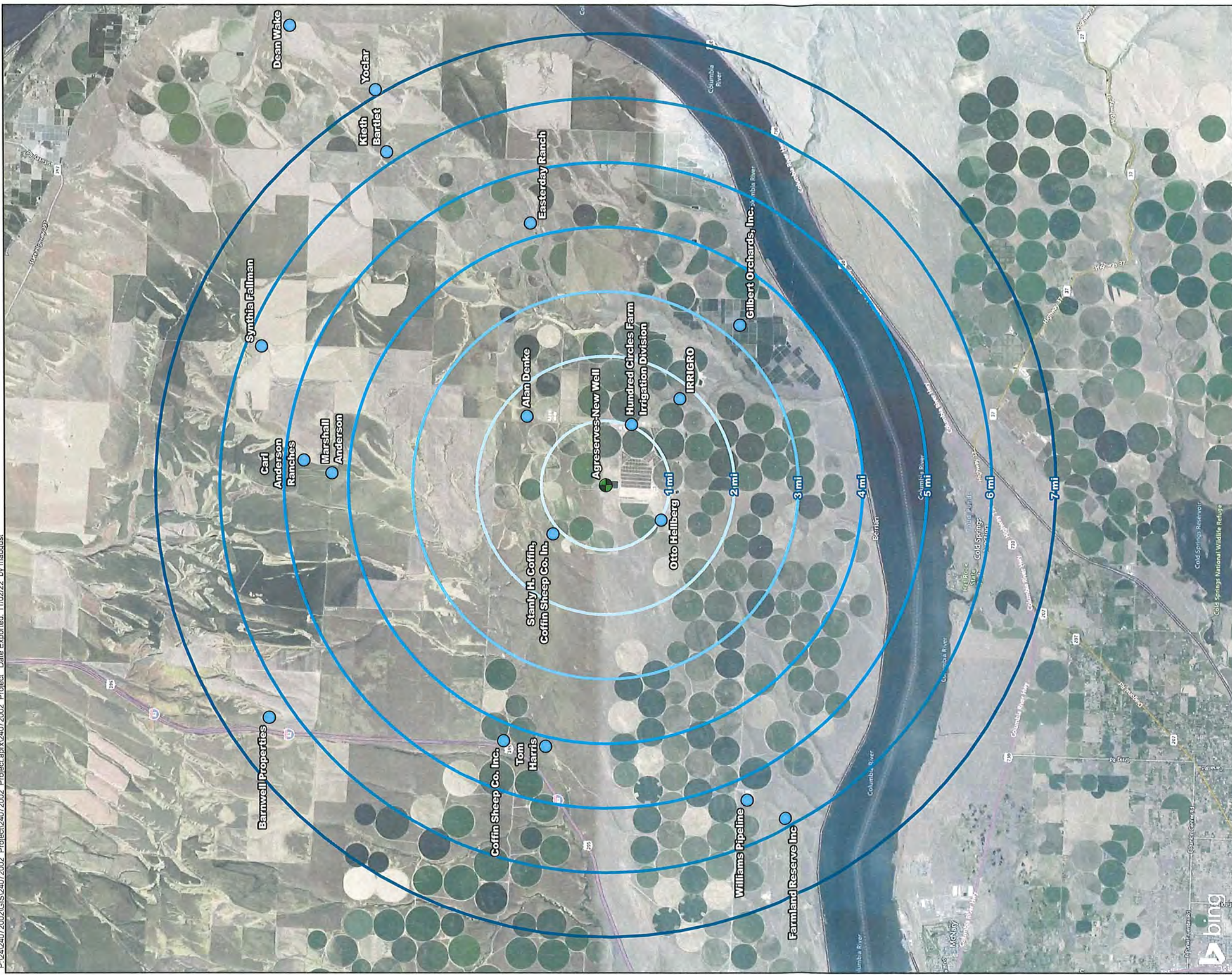
tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ, sometimes significantly, from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

#### **A Hydrogeologic Report Could Be Subject To Misinterpretation**

Misinterpretation of this report by other design team members can result in costly problems. You could lower that risk by having GeoEngineers confer with appropriate members of the design team after submitting the report. Also retain GeoEngineers to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a hydrogeologic report. Reduce that risk by having GeoEngineers participate in pre-bid and preconstruction conferences, and by providing construction observation.

#### **Read These Provisions Closely**

Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering or hydrogeology) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these "Report Limitations and Guidelines for Use" apply to your project or site.



- Legend**
- Water Well
  - Agreserve New Well



**Notes:**

1. Source(s):
  - Source 1
  - Source 2
  - Source 3

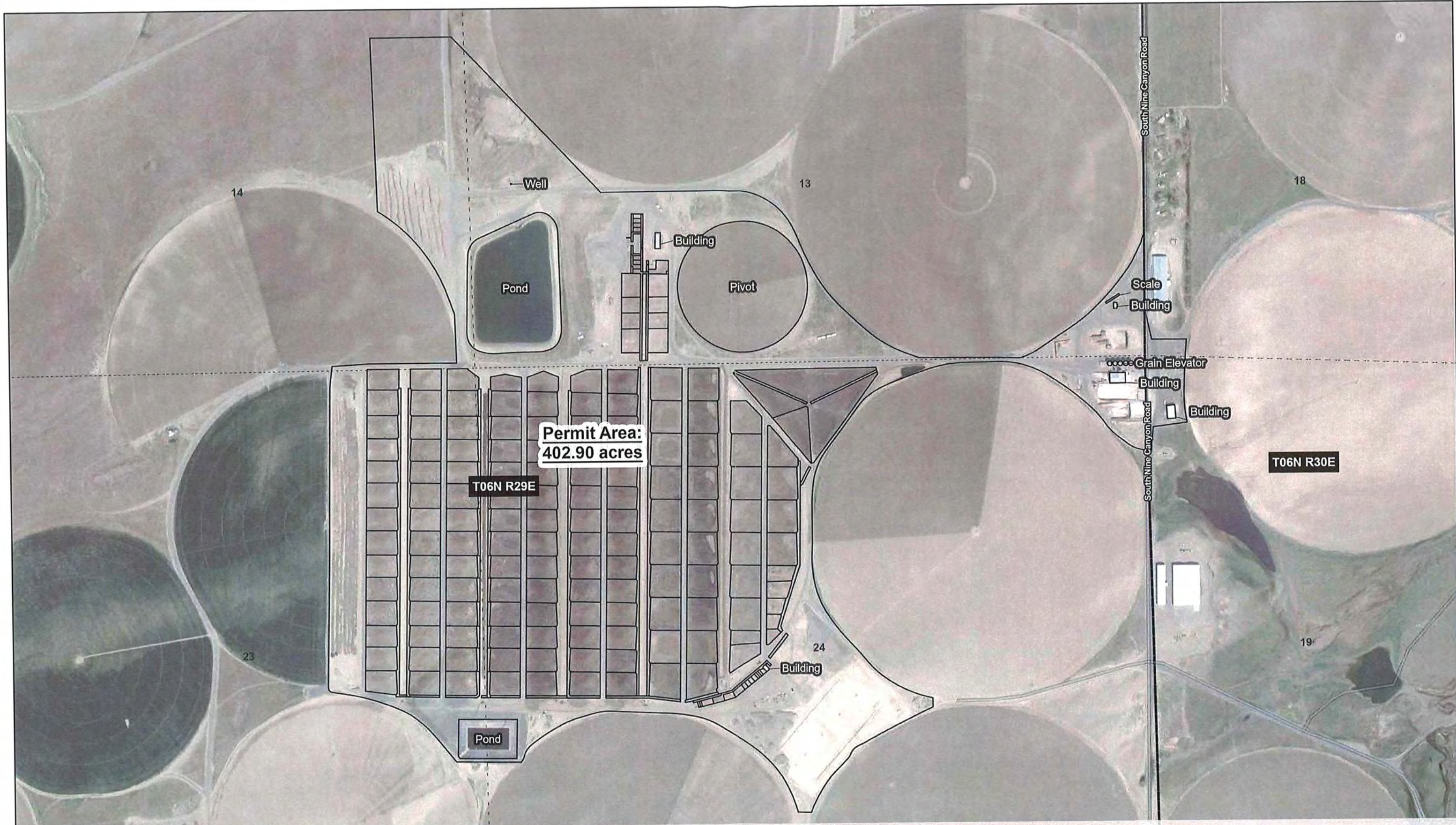
Coordinate System: NAD 1983 UTM Zone 11N  
 Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. This file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

**Distance Drawdown Site Map**

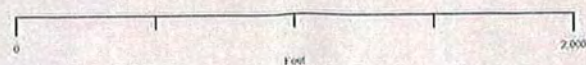
Agri Northwest Impairment Analysis  
 Umatilla County, Oregon

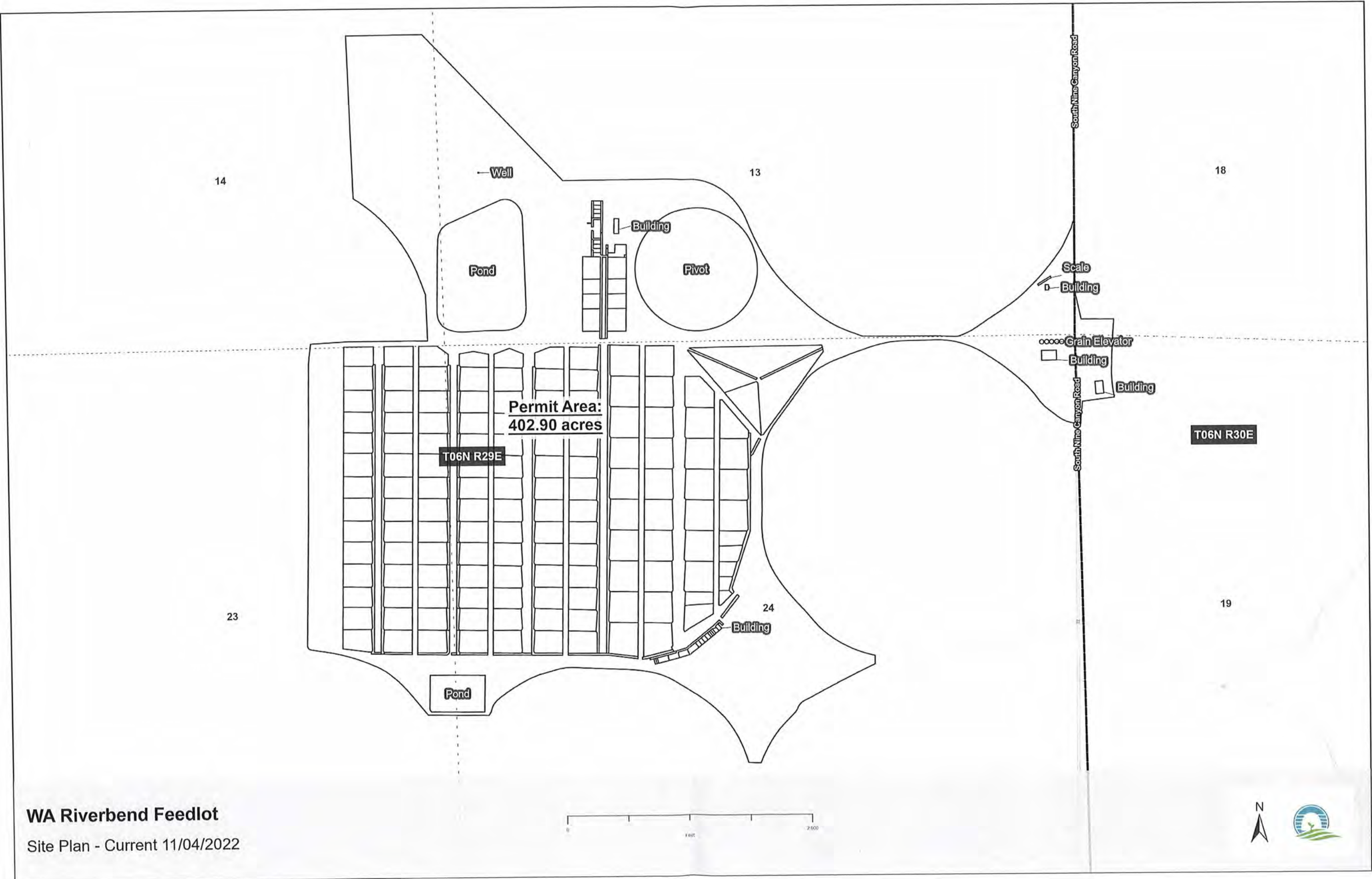


**Figure 1**



**WA Riverbend Feedlot**  
Site Plan - Current 11/04/2022

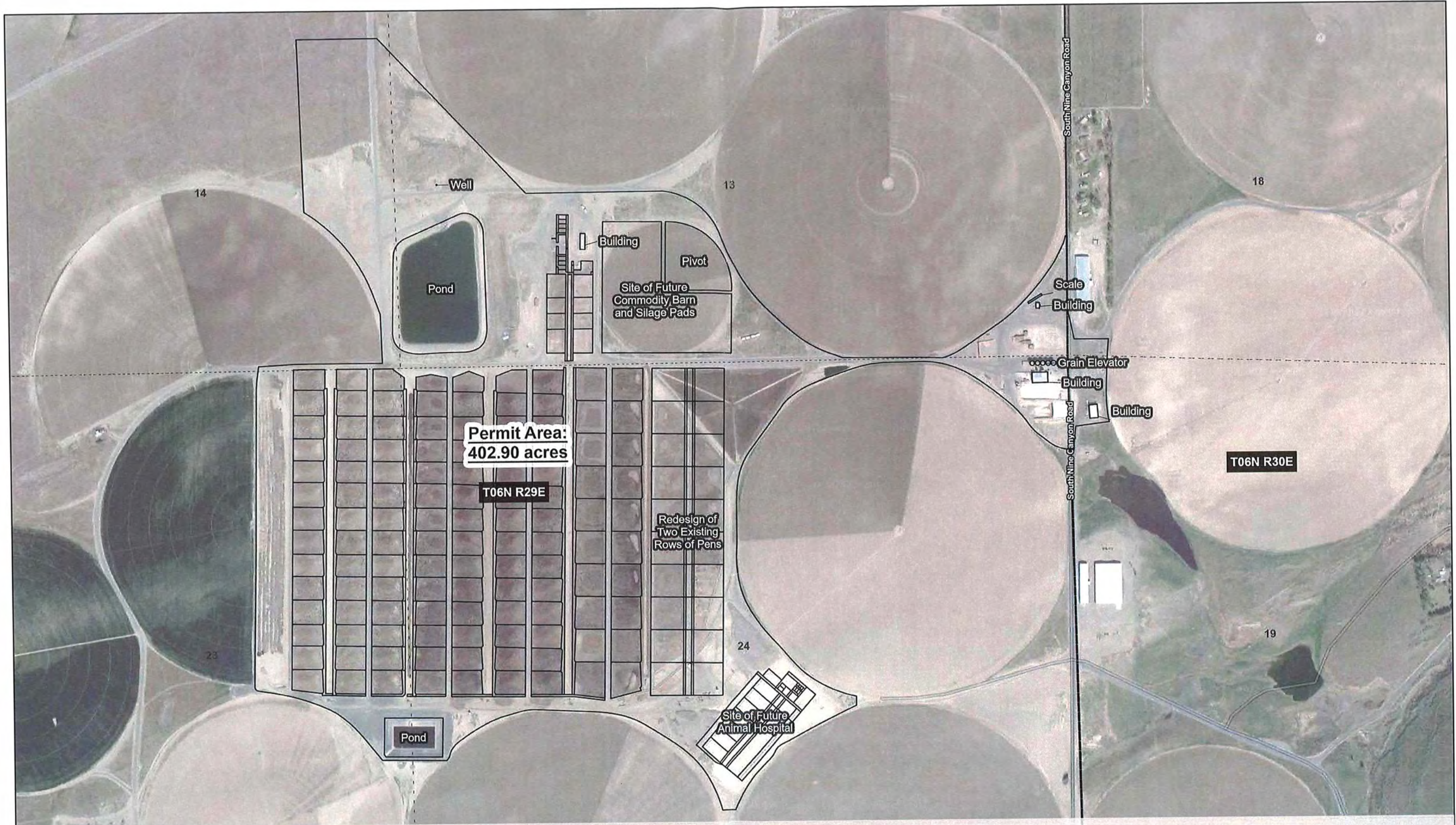




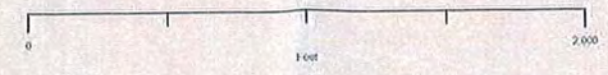
**WA Riverbend Feedlot**

Site Plan - Current 11/04/2022





**WA Riverbend Feedlot**  
 Site Plan - Future Construction

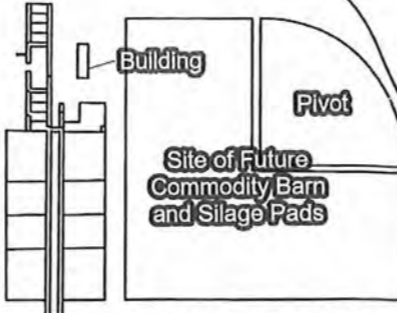
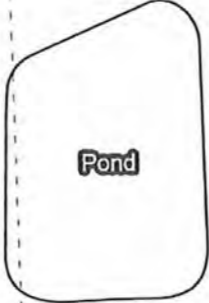


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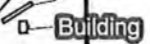
18

Well

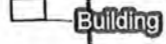


Site of Future  
Commodity Barn  
and Silage Pads

Scale



Grain Elevator



Building

Permit Area:  
402.90 acres

T06N R29E

Redesign of  
Two Existing  
Rows of Pens

T06N R30E

23

24

19

Pond



Site of Future  
Animal Hospital

South Nine Canyon Road

**WA Riverbend Feedlot**  
Site Plan - Future Construction





# Riverbend Feedlot

## MANURE MANAGEMENT PLAN

Riverside Feeders SFL, LLC | PO Box 395 Vale, OR 97918 | February 25, 2022

## Table of Contents

- Contact Information – 2
- Feedlot Description – 3
- Regional Geography – 4
- Site Climate Data - 5-7
- Wind Speed and Direction - 6-7
- Seasonal Variation – 8-9
- General Manure Management – 10-11
- Pen Area BMP's – 12-18
- Marshaling Area BMP's – 19
- Runoff Management and Lagoon Area BMP's – 20-21

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## FEEDLOT DESCRIPTION:

The feedlot is comprised of cattle pens, drovers alleys, feeding alleys, a manure marshaling area, and maintenance roads as described below:

### Cattle Pens:

- 7 rows of pens with 14 pens in each row that are approximately 235' long x 185' wide. These pens each have approximately 2,440 sq feet of concrete surface to provide access to the feed bunks and water tanks.
- 2 rows of pens with 10 pens in each row that are approximately 235' long x 250' wide. These pens each have approximately 2,930 sq feet of concrete surface to provide access to the feed bunks and water tanks.
- 20 smaller shipping/receiving pens measuring approximately 150' long x 60' wide. These pens each have approximately 660 sq ft of concrete surface to provide access to the feed bunk and water tank.
- 12 small hospital area pens have a total area of around 24,300 sq ft.
- Total dirt floor area in the feeding pens covers about 113.4 acres and the shipping receiving area covers about 4.6 acres

### Drovers Alleys:

- Drovers' alleys connect the shipping/receiving area and the hospital area with all feeding pens to allow for cattle movement when necessary
- Dirt floor surface in the drovers' alleys covers approximately 11.0 acres

### Feeding Alleys:

- Feeding alleys are crushed gravel surfaces, and account for approximately 15.4 acres of surface area

### Manure Marshaling Area:

- The marshaling area consists of 14.5 acres of compacted clay surface that lays on a graded slope west of the feeding pens so as to drain all runoff to the main storage pond

### Maintenance Roads:

- Maintenance Roads have dirt surface area of approximately 14.5 acres.

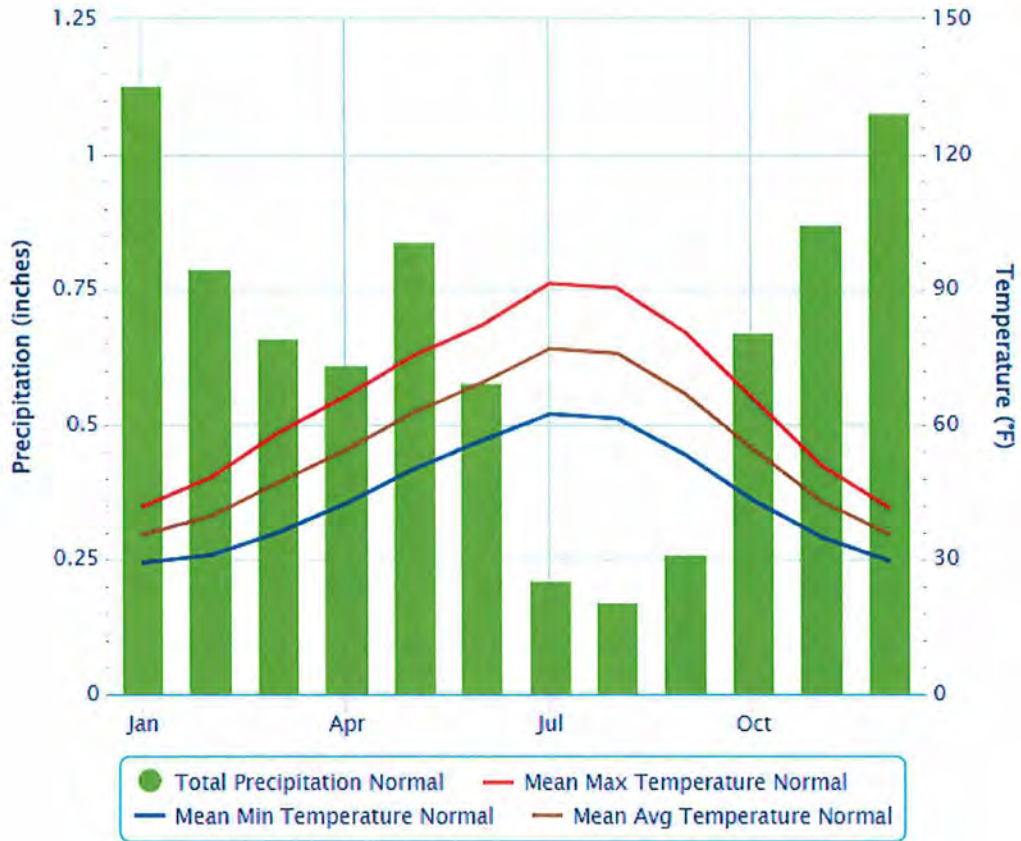
## REGIONAL GEOGRAPHY AND CLIMATE

The Columbia River Basin in the northwestern US consists of a large inland basin located between two large mountain ranges: 1) the Cascades to the West, and 2) the Rocky Mountains to the East. It is a transition type climate zone influenced by three main air masses: 1) moist, marine air from the west that moderates seasonal temperatures, 2) continental air from the east and south that is dry and cold in the winter and hot in the summer with convective precipitation and lightning; and 3) dry, arctic air from the north that brings cold air to the basin in winter and helps cool the basin in the summer. The timing and extent of competing air masses depends mainly on large scale weather patterns and local terrain features that vary considerably across the basin. Prolonged periods of drought can occur when pacific storms are deflected around the region by high pressure ridges. Damaging frosts and freezing conditions can occur when arctic air intrusions occur before winter hardening or after bud-break in the spring. In addition, the unique interplay between air mass types commonly results in dramatic changes during seasonal transitions, which are usually quite abrupt. Lightning and gusty winds can occur during these transitions between continental and marine air masses, mainly during the spring and summer (Ferguson, 1999; Littell et al., 2009).

During the coldest months, a loss of heat by radiation at night and moist air crossing the Cascades and mixing with colder air in the inland basin results in the formation of inversion layers, which trap cloudiness, fog, and occasional freezing drizzle in the lower elevations of the region. The region is also known for a phenomenon known as a Chinook wind (Ferguson, 1999). These winds produce a rapid rise in temperature due to compressional heating and typically occur a few times each winter. Frost penetration in the soil depends on vegetative cover, snow cover, and duration of low temperatures. In an average winter, frost in the soil can reach a depth of 10-20 inches. During colder winters with little or no snow covers frost has reached a depth of 25-35 inches.

# SITE CLIMATE DATA

## Monthly Climate Normals (1991-2020) – KENNEWICK, WA



Powered by ACIS

Month	Total Precipitation Normal (inches)	Mean Max Temperature Normal (°F)	Mean Min Temperature Normal (°F)	Mean Avg Temperature Normal (°F)
January	1.13	41.7	29.2	35.5
February	0.79	48.1	30.9	39.5
March	0.66	58.1	35.9	47.0
April	0.61	66.3	42.4	54.3
May	0.84	75.3	50.1	62.7
June	0.58	82.0	56.4	69.2
July	0.21	91.3	62.3	76.8
August	0.17	90.3	61.3	75.8
September	0.26	80.5	53.2	66.8
October	0.67	65.9	43.1	54.5
November	0.87	50.9	34.9	42.9
December	1.08	41.5	29.6	35.6
Annual	7.87	66.0	44.1	55.1

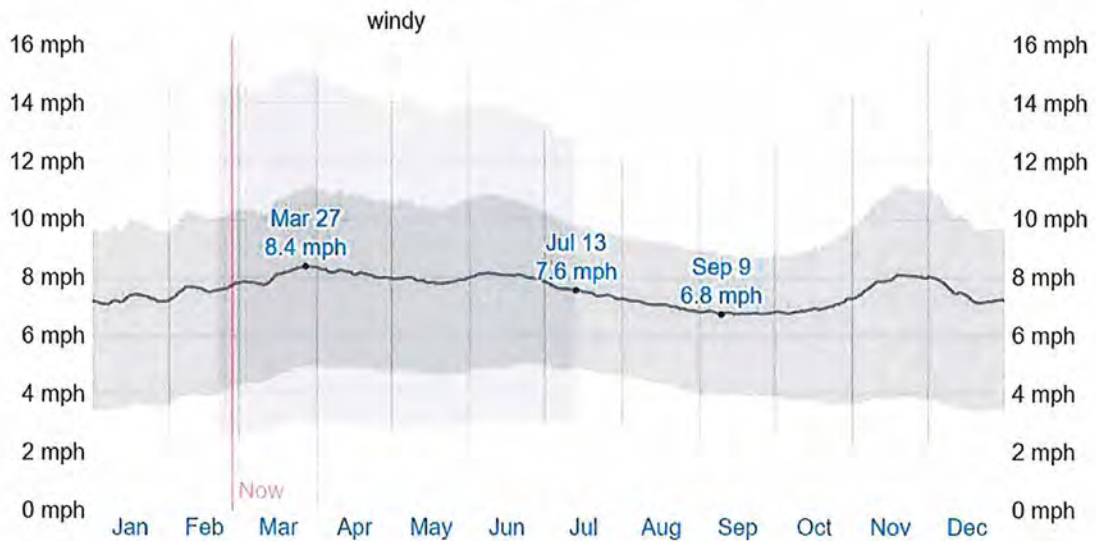
### Average Monthly Snowfall in Kennewick

[Link](#)
[Download](#)
[Compare](#)
[History: 2022 2021 2020 2019 2018 2017 2016 2015 2014](#)



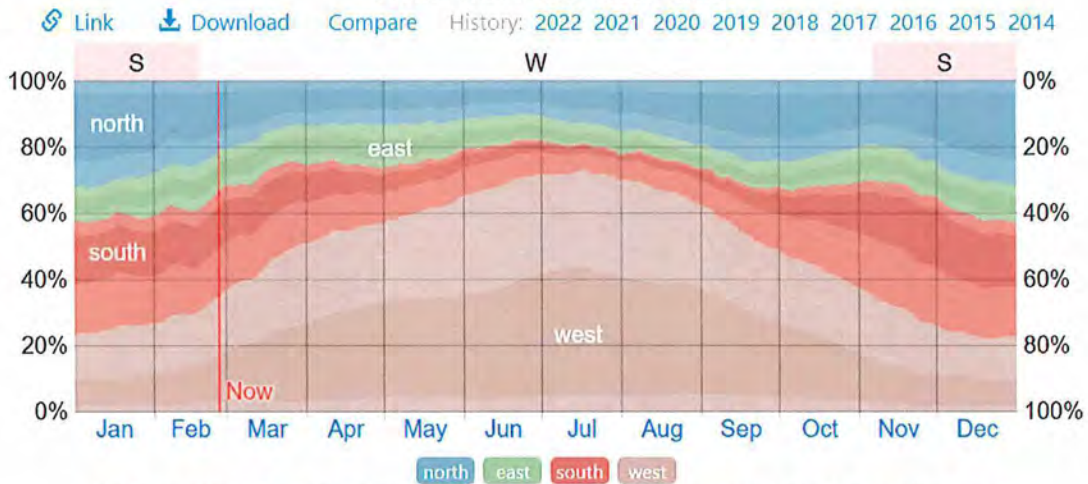
The average snowfall (solid line) accumulated over the course of a sliding 31-day period centered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average rainfall.

### Wind Speed in Kennewick



The average of mean hourly wind speeds (dark gray line), with 25th to 75th and 10th to 90th percentile bands.

### Wind Direction in Kennewick



*The percentage of hours in which the mean wind direction is from each of the four cardinal wind directions, excluding hours in which the mean wind speed is less than 1.0 mph. The lightly tinted areas at the boundaries are the percentage of hours spent in the implied intermediate directions (northeast, southeast, southwest, and northwest).*

## SEASONAL VARIATIONS

### **Spring Season (March, April, May)**

Spring is a transition season where temperatures begin to warm in the basin. Spring typically begins in late February or early March and generally lasts approximately two months. Spring weather can be highly variable with unsettled conditions, changing from cold and wet to dry and warm very quickly. Increased wind speeds dominate this season, with average wind speeds of typically 5-10 mph. However, due to the unsettled nature of the season, windstorms are common, with wind speeds exceeding 50 mph, and the wind direction is usually out of the Southwest. The last freezing temperature in the spring usually occurs in late April. In the transitional period between spring and summer a thermal trough migrates north from California. When combined with marine air, convective precipitation and thunderstorms can result. Pacific storms remain influential throughout the region during the spring.

### **Summer Season (June, July, August)**

The summer season is usually warm and dry and is the longest season, with a duration of four to six months. July and August are typically the hottest months, with average maximum temperatures above 90 degrees F. Maximum temperatures can exceed 105 degrees F on a few afternoons each summer. Winds are generally out of the Southwest at 5-10 mph, but during summer thunderstorms can exceed 50 mph. Nearly all summer precipitation is associated with thunderstorms. During July and August, it is common for four to six weeks to pass without measurable precipitation, but during extreme weather events, it is possible for rainfall rates to exceed two inches per hour in isolated locations.

### **Fall Season (September, October, November)**

The fall season is a transitional period between hot, dry conditions of summer, and cool, wet conditions of winter. Fall weather can be highly variable. On some years, warm, summer-like conditions can persist well into October, or even early November. On other years, freezing temperatures can arrive suddenly in late September. September can experience rainfall, but more commonly precipitation increases in October, with half the year's average precipitation occurring between mid-October and late November. Wind speeds are also higher during this time of year, with wind direction coming from the Northwest or Southwest. Storms from the Gulf of Alaska dominate the weather patterns in late fall.

### **Winter Season (December, January, February)**

Winters are generally cool to cold, and seasonal rainfall and snowfall are generally light, ranging from 6-20" of total snowfall. Total average precipitation as rainfall equivalent is less than 8 inches at the feedlot location. Snow can be expected after the first of December, and to remain on the ground for periods of time varying from a few days to two months. The central Columbia basin region is subject to chinook winds. These are caused when moist, Pacific air is forced to rise over

the Cascade Range. The moisture in the maritime air is condensed and forced to fall out as precipitation, while the air cools at a moist adiabatic rate of 3.5 degrees F/1000ft of elevation rise. The resulting dry air then descends on the leeward side of the mountains, warming at the dry adiabatic rate of 5.5 degrees F/1000ft of elevation loss. The turbulence of the high wind speed can also prevent normal nocturnal temperature inversions from forming allowing nighttime temperatures to remain elevated. Average temperatures at the feedlot location range from 25 to 45 degrees during the winter months but can drop to lows below zero degrees F for short periods of time. Winds can be highly variable during the winter months but typically blow from the West or Northwest.

### **Natural Climate Variability and Long-Term Climate Trends**

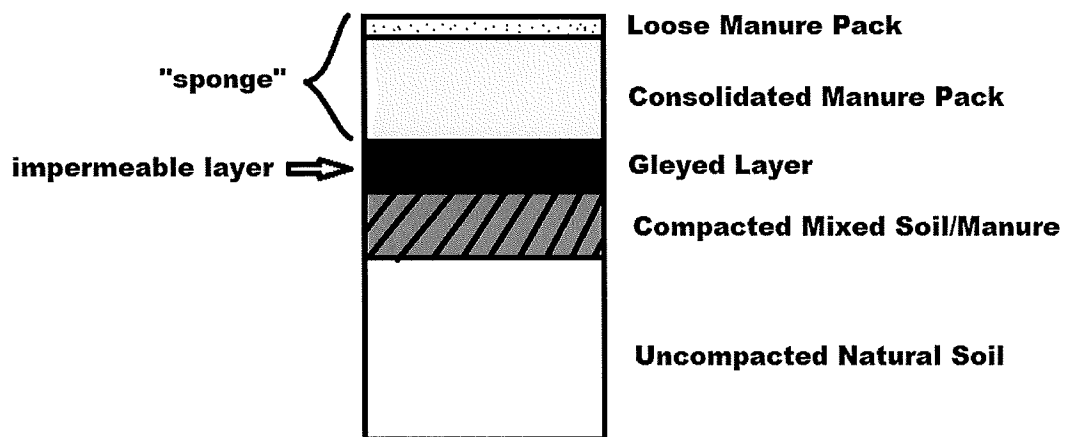
The Pacific Northwest experiences an array of natural and normal climate fluctuations, generally related to the El Nino/Southern Oscillation (ENSO) and Pacific Decadal Oscillation (PDO) phenomena. ENSO is the major source of multi-year climate variability in the PNW. The warm phases of ENSO (El Nino) and the PDO typically result in warmer than average winter and spring temperatures and drier than normal winters. The cool phases of ENSO (La Nina) and PDO typically result in cooler than average winter and spring temperatures and above normal precipitation.

Temperature records indicate that average temperatures in the PNW have increased by nearly two degrees F since the 1920's. That pattern is projected to continue, with climate models predicting another 1.2 degrees F rise by the 2040's, and a further 2.1-degree F rise by 2080. Models are currently projecting very moderate changes in total annual rainfall accumulation at +1% to +2%, but some models are predicting wetter autumns and winters, and drier summers. Increases in rain precipitation in eastern basins and reductions in mountain snowpack are key projections from high-resolution regional climate models (Littell et al., 2009).

The region appears to be experiencing warmer temperatures with an increased likelihood of more frequent, extreme weather events. As a consequence, the feedlot's manure management and odor control and management plan addresses how it will handle both normal, and extreme, weather conditions to ensure safe operations and continued environmental compliance regardless of weather conditions or climate change.

## GENERAL MANURE MANGEMENT

Proper Construction and maintenance of the feeding pen surface areas is important for animal health, welfare, and productivity. The pen areas will be groomed to maintain a smooth, firm surface (typically 2% - 6% slope) that will drain well. The trampling action of the cattle, and accumulation of manure and urine has caused 4 distinct layers to form in the pen areas as shown in the figure below.



*Feedlot Pen Surface Layers*

From the bottom, these four primary layers are; 1) the initial pen surface (natural soil); 2) a compacted manure/soil layer; 3) the gleyed or hardpan layer; 4) the sponge layer that consists of a consolidated manure level, and a loose manure level at the surface. Proper management of these layers help control run-off, prevents seepage of nutrients down into the ground, and provides a clean, comfortable bedding surface for the cattle. During the feeding cycle in the feedlot pen areas, cattle compact a layer of soil and manure. This layer of soil, mixed with organic matter forms quickly in new feed pens. At the first wet spell, the soil softens, and manure is worked deeper into the soil. The characteristics of this layer are somewhat independent of the native soil of the original pen surface. The depth of this mixed layer is typically 2"-6" thick.

One of the most important aspects of proper pen maintenance is to develop and maintain the gleyed layer. The gleyed layer develops between the mixed soil/manure layer, and the manure pack, and has a high resistance to water infiltration or penetration. When dry, this layer resembles charcoal in texture, strength, and the ability to stain. When wet, as in an active feedlot, the gleyed layer has a felt-like texture. The gleyed layer helps limit downward movement of moisture and air and maintains constant soil moisture and anaerobic conditions in the compacted soil/manure layer below, while also helping ensure that manure pack above remains aerobic. Under these conditions, nitrate turns to nitrogen gas, which is released into the atmosphere, thus preventing both the leaching of nitrates deeper into the ground water, and the production of excessive levels

of ammonia emissions. Typically, the gleyed layer is 2" to 4" thick, depending on the feedlot soils, climate, and stocking density.

The manure pack refers to the layer that contains accumulated manure and bedding from the livestock. It actually consists of two related zones. The upper-most zone consists of relatively loose, uncompacted manure, that is constantly being broken up and churned by the hoof action of the cattle. Beneath this zone is a layer of older manure material that has been lightly compacted by the hoof action of the cattle. Together, these two zones are referred to as the manure pack or sponge layer of the pen. The manure pack acts like a giant sponge, absorbing rainwater and snowmelt, and it works to protect the gleyed layer. The manure pack can absorb up to 1.5 inches of moisture before becoming saturated. It also acts as the wear layer of the pen surface, protecting the gleyed or hardpan layer from the continuous churning of the cattle hooves. Once the manure pack is completely saturated, runoff begins to occur, and water that has come into contact with manure in the pens drains into settling basins and eventually a main storage pond. Typically rainstorms can trigger anything from immediate runoff to a 24-hour delay before runoff begins, depending on the depth of manure pack, the degree of compaction, and the moisture content of the pen before it becomes saturated. There is additional minor storage of water created by depressions made by cattle hooves, as well as natural variability in pen slope.

As the cattle excrete manure and urine, it accumulates on top of the manure pack (the urine is generally absorbed into the manure pack). The method and timing of manure removal markedly influences odor production and dust emissions. To help minimize odors, Riverside Feeders SFL will frequently scrape loose manure off the manure pack and moves it to the back of the pen to allow it to dry more rapidly. At the same time, the movement of the manure helps groom the pens to maintain proper slope and drainage. This manure movement and dehydration process gives much better odor control than infrequent or no cleaning of pen manure. Dust and odor production are closely related to the pen surface moisture content. Excess loose manure can lead to dust production when allowed to become too dry, and it can result in the production of odorous gasses if allowed to retain too much moisture. Riverside Feeders SFL expends considerable effort to reduce this accumulation of loose manure and to monitor and control the moisture level at the pen surface to help mitigate the production of both odor and dust.

During pen maintenance activities, great care is taken to avoid damaging or removing the gleyed layer. By using box scrapers or blade scrapers and leaving approximately 1-2" of manure pack layer in each pen, Riverside Feeders can ensure the impermeable hard pan remains intact. Manure is moved within each pen several times per year to promote dehydration and to improve cattle bedding conditions but removing this material from the pen entirely only once per year reduces the opportunity for many odors to become aerosolized, thus reducing odor potential. Riverside Feeders SFL is continually evaluating new manure handling practices intended to enhance animal welfare while continually trying to reduce regulated odors and dust emissions.

## PEN AREA BMP'S

### **Aeration Control**

The production of hydrogen sulfide is an anaerobic (without oxygen) process. Therefore, maintaining proper aerobic conditions in the pen area surfaces is highly effective in preventing the formation and emission of hydrogen sulfide gas. To maintain aerobic conditions, it is necessary that the loose manure pack and even the consolidated manure pack remain aerated, and this can best be achieved by periodic loosening and scarifying(mixing) of the manure pack. Aeration in this manner reintroduces and replenishes oxygen that is otherwise consumed in the breakdown of organic matter in the manure. Normally, hoof action is enough to adequately maintain aerobic conditions in the loose manure pack, and proper slope and grading helps to ensure that the consolidated manure pack layer remains aerobic. Maintaining proper moisture levels is also paramount to maintaining good aerobic conditions in the manure pack. Excess moisture saturation can force air out of manure pack mixture, leading to less than ideal aeration.

### **pH Control**

In addition to requiring anaerobic conditions, the generation and emission of ammonia, hydrogen sulfide, and several other odorous compounds from cattle feedlots is closely linked to the pH of the manure pack. There is an equilibrium relationship between ammonia gas(NH<sub>3</sub>) and ammonium ions(NH<sub>4</sub><sup>+</sup>) as a function of pH. These two-nitrogen containing compound will be found at equal levels in water with a pH of 9.0. As pH increases above 9.0, the concentration of ammonia gas increases. As pH decreases, especially at levels less than 7.0(neutral to slightly acidic), ammonia concentration in water approaches zero. Feedlot conditions are more variable and complicated than this lab scenario, but it serves to illustrate that proper control of pH in the manure pack can significantly reduce ammonia odor issues. During normal operations, the pH in the pen area remains between 6.0-8.0, due to acidification that occurs with natural degradation of organic matter in the manure. Periodic aeration of the manure pack ensures continual breakdown of organic matter and continual production of the organic acids that maintain this optimal pH level.

### **Dietary Manipulation and Phase Feeding**

By definition, feed efficiency is a measure of how many nutrients are retained as growth in the cattle as compared to how many nutrients are being fed. Research has shown that ammonia losses from cattle, industry-wide, are equal to about half of the nitrogen consumed by cattle in the diet, and summer emission rates of NH<sub>3</sub> are about twice those found in the winter (Todd et al, 2006, Todd et al, 2009, Todd et al, 2010). Riverside Feeders SFL is committed to feeding cattle using the best management practices and tools available to achieve optimal feed efficiency. Better nutrient retention means fewer nutrient losses or emissions in the form of manure, urine, or gases. Incomplete digestion, and the resulting excretion of excess crude protein and carbohydrates are the primary constituents responsible for most malodors and emissions (Von Essen and Auverman, 2005). Riverside Feeders SFL analyzes the nutrient composition of all feed ingredients at a

certified feeds and forage lab (Dairyland Labs, Arcadia, WI), and uses carefully balanced rations by a professional ruminant nutritionist. This allows the feedlot to meet animal requirements for optimum growth and performance with minimal amount of excreted nitrogen and starch. Riverside Feeders SFL uses a software system to accurately phase feed cattle, which precisely matches the pounds of feed intake, and nutrient balance of the ration, to the requirements of the animals as they grow. Pens of cattle are each assigned a specific phase feeding program when they arrive at the feedlot, based on their incoming weight, sex, breed type, and desired marketing weight. Cattle at the riverbend feedlot will be limit-fed to a certain percentage of their body weight, with feed being delivered to the bunk 3 times per day. Limit feeding strategies have been shown to improve nutrient retention by 5-8% versus cattle fed on an ad libitum basis. Riverside Feeders SFL will utilize steam-flaked corn as a primary starch source in their finishing diets. Dr Richard Zinn at UC Davis has established improvements in feed efficiency in excess of 10% by processing corn with a steam flaker versus using dry rolled corn. Using highly digestible fiber and starch sources increases the energy density in the finishing diets. According to Dr. Evan Titgemeyer at Kansas State, increasing energy density in the ration increases nitrogen and amino acid uptake efficiency in growing cattle, allowing the feedlot to present rations to the cattle with lower crude protein content, resulting in less nitrogen emissions. Feed additives such as monensin (Rumensin, Elanco) and certain bacillus strain microbes (Bovamine, Chris Hansen Co) are also used in the diet to enhance feed efficiency and reduce excreted nutrients.

### **Stocking Density**

The proper stocking density in dry feedlot pens can help reduce cattle activity, leading to decreased dust production and odors carried downwind of the feedlot with the dust particles. Managing the stocking density may also require that Riverside Feeders SFL increase the pen surface scraping frequency to reduce the amount of loose manure buildup in the pens. Finally, the pens can be watered to add moisture when evaporation rates exceed optimal pen surface moisture retention. Using a spray bar on a water truck, pens can be watered with a truck even if there is an outage of the automated sprinkler system in the feedlot.

### **Enzymes and Microbial Additives for Stored Manure/Water**

There are commercially available products that use blends of microbes and derived enzymes that can reduce ammonia, hydrogen sulfide, and VOC emissions from storage ponds by more than 80%. These microbial additives are added to nutrient laden water in storage ponds, and if there is enough surface area to provide oxygenation at the surface with wind action, these bacteria quickly reduce volatile fatty acids, and other odorous compounds to non-volatile levels, essentially producing an aerobic, microbial, odor cap on the pond. This aerobic odor cap occurs naturally in properly designed storage ponds, but these microbial additives can be utilized to jump start the process if stagnation occurs, and an increase in odor is detected.

## Moisture Control

Emission of ammonia, hydrogen sulfide, and other odorous gases and compounds from cattle feedlots is closely associated with moisture content and ambient temperature of the manure pack. As a result, the emissions of regulated gases, odors, and dust vary considerably due to seasonal effects. Riverside Feeders SFL actively grooms pens to eliminate standing water and excessive moisture while maintaining aerobic conditions in the top layer of the pens. In addition, greater potential for odors occurs during warm weather due to greater microbial activity at higher temperatures. During those periods, particular care is given to maintaining proper moisture levels. When the loose manure layer in a feeding pen is maintained between 25 and 40% moisture content, particularly during the summer months, the combined problems of dust and odor can be minimized. Increasing or decreasing animal numbers in the pens can help to maintain this moisture level. In warm, dry periods, pen surfaces can support more head count due to higher rates of evaporation. The upper limits of pen capacity, however, are determined by feed bunk space, water space, and pen area per animal. When excessive drying occurs, moisture can be added back to the pens using the automated sprinkler system.

Scraping of feed pens is done with a box scraper pulled by a tractor or a wheel loader equipped to scrape and pile manure. Material is moved to designated areas near the back of the pens and mounded in piles. Cleaning pen surfaces in this manner (by moving and mounding) decreases the surface area of the exposed material as a dry crust forms and seals the pile. This is an effective strategy to reduce odor and insects. Overall, proper moisture control during the warm season can reduce ammonia and hydrogen sulfide production by 50-70%.

During winter, moisture reduction may become difficult due to low ambient and soil temperatures, and correspondingly low evaporative rates. This is less important for dust and odor control at this time of year, but becomes more of an issue with animal comfort and cleanliness. During this period, bedding in the form of straw may be added to pens to increase animal comfort and keep them free from tag (manure attached to the hair and hide of the animals). Maintaining clean, dry animals, is one of the keys to good health and productivity. Research has shown as much as a 7% improvement in cost of gain between clean and slightly muddy animals in the feedlot (Alberta Agriculture, 2004). During temporary, warm periods in the winter, Riverside personnel may employ more frequent scraping and mounding to promote better pen drainage and to initiate material decomposition and dehydration.

## Seasonal effects on BMP's

As noted previously, there are two primary regional seasons: 1) a warm, dry season (summer), and 2) a cold, wet season (winter). The spring and fall transition periods typically occur very quickly, usually within a window of 4-6 weeks. The two primary seasons as well as the transitional periods may cause changes to how BMPs are implemented.

### ***Summer Warm/Dry Season***

This season is typically the longest in duration, beginning as early as April, and extending as late as October or early November. Manure management at this time of year uses all previously outlined BMPs to maintain proper pen conditions to reduce both fugitive dust and odors from the manure pack. Moisture control is perhaps the most complex but is without a doubt, the most important during the warm season. Prolonged periods of warm dry conditions lead to high evaporation rates of moisture from the manure pack, and as previously discussed, moisture content < 25% can result in excessive dust production. Riverside Feeders SFL can actively control this dust production. Each pen has an overhead sprinkler that can be used to raise moisture levels when it is necessary. It is critical not to apply excess moisture, as this promotes saturation of the manure pack and anaerobic conditions, which favors the generation of odors. Care is taken to keep manure pack moisture above 25% but less than 40%.

Higher ambient and soil temperatures, and higher microbial activity tends to ensure stable pH level of the manure pack between 6.0-8.0. If conditions allow for an elevated pH above 8.0, it will be monitored, and a mild acidifier can be used to lower pH. It is important to note though, that typically, the natural buffering capacity of the pen surface material will return the pen surface to satisfactory pH within a few weeks without significant active management.

Proper pen maintenance during the summer includes regular grooming of the pen surface to remove and pile excess loose material. The grooming process helps to maintain the grading in the pen for proper drainage, and it allows the piled material to stabilize and dry down for easier removal once or twice per season. During the summer, pen floor maintenance may occur, where soil is added to low spots in the pen surface to prevent the ponding of water.

### ***Fall Transition Season***

During the Fall transition period, falling temperatures reduce evaporation rates, leading to less frequent use of the sprinkler system for dust control. Periodic rainfall is expected during this time of year, but intensity and duration is usually short and seldom requires significant activity other than regular grooming of the pens. Because of reduced temperatures and reduced microbial activity, there is less production of odorous compounds, and control becomes somewhat simpler.

During the fall transition, Riverside Feeders SFL will continue to groom and make adjustments to the manure pack in the pens in preparation for the wet winter season. Compaction equipment may be used to create a more durable wear surface to the consolidated manure pack, and to create a

deeper sponge layer, capable of absorbing more moisture in the wintertime. Excess manure that has been piled at the backs of the pens during the summer may be removed to the manure marshaling area or removed offsite for better re-use. Bedding mounds in each pen are carefully sculpted at this time to allow for the best possible drainage, providing a dry area for cattle to bed on during the winter season.

Shaping of pen mounds and other pen surfaces is typically done in the fall, but it has positive effects all year. Proper shaping in the pens reduces muddy conditions and places where excess moisture can collect. These wet spots are also primary area for insect production in the summer. Reducing flies can improve summer cattle comfort and gains. The following are points that bear consideration shaping pens for maximum cattle performance:

- 1) Mounds need to be more soil than old manure, and they can be built by hauling in 8-12" layers of material and compacting them. Mounds need to be of a large enough area to allow for the use of heavy equipment in the compaction process. Most mounds may need reshaping annually with additional soil added as needed to maintain shape and slopes.
- 2) The basic goal of mounds is to allow for rapid drainage of excess moisture from a large portion of the pen without excessive erosion of the manure pack. Short, steep slopes around the mound, with less slope to the valleys on either side reduces erosion potential but promotes rapid drying of the bedding surface on top of the mounds. Soil with high clay content is the preferred base material for the mounds as it tends to shed water, where aged manure pack material maintains its sponge-like qualities.
- 3) The mounds should be positioned in the center of the pen, with the beginning of the mound being near the top of the pen, adjacent to the concrete feed bunk apron, and the mound will be oriented perpendicular to the feed bunk. Both the pen floor and the top of the mound should slope towards the back of the pen.
- 4) Most of the area of each pen is used in either square footage for the mound or surrounding valleys. This results in a very small mound running under the fence line separating adjacent pens. Having the fence on the crest of this small mound allows manure to work away from the fence line, eliminating manure build-up, where it can become a fly breeding area.

### ***Winter Cold/Wet Season***

This season stretches from November through February and is the timeframe where the feedlot receives most of its annual precipitation. Average high temperatures are little more than 40 degrees F, and nighttime lows are quite often below freezing. Rainfall events are generally of higher intensity and longer duration than other times of the year, making pen maintenance and manure management very challenging. Controlling moisture content of the manure pack in the winter is difficult due to excess precipitation and very low evaporative rates. The manure pack tends to reach a saturation point and pen conditions can get very muddy.

Moisture control during this season is primarily achieved by moving and mounding saturated material to allow gravity to drain some of the water content away. If wet conditions persist, excessive wet material may be removed from the pens altogether and moved to the marshaling area to allow for further drying. During extended freezing conditions it may be neither feasible nor desirable to remove manure pack material until after the ground begins to thaw. At all times, manure crews are careful not to damage the gleyed layer

During the cold season, microbial activity slows down significantly, which reduces production of ammonia, hydrogen sulfide, phenolic compounds (VOC's). This greatly reduces real and perceived odor production from the feedlot pens. Regardless, however, Riverside personnel continue to actively manage the manure pack to minimize conditions that may generate odors or regulated emissions of ammonia or hydrogen sulfide gases through grooming and the addition of bedding materials. The primary difference during the winter is the need to adjust methods to account for muddy conditions and the high moisture content of the manure pack.

### ***Spring Transition Season***

During the spring transitional period, the temperatures begin to warm, increasing evaporation losses, and in some dry years, may require occasional use of the sprinkler system for dust control. During this season, rainfall events decline rapidly in intensity and duration. This warming and drying allows for a significant increase in grooming activities, returning pen surfaces to peak performance for animal comfort and drainage. Higher temperatures once again drive an increase in microbial activity that requires scarification and aeration of the manure pack to reduce odor production. At this time of year, any damaged spots to the gleyed layer will be patched and compacted, and pen surfaces will be graded and carefully returned to the proper contours. All excess manure material not used to re-contour the pen surface will be removed to the marshaling area or taken directly offsite to be beneficially reused as outlined in the Nutrient Management Plan.

### ***Extreme Weather Events***

Extreme weather events include cold snaps, winter snow and ice storms, windstorms, lightning, hail, excessive rainfall and flooding, and extreme heat waves. Natural systems are somewhat adapted to this climate variability, although recovery from some of these types of events can take a long time. Climate extremes, however, can have significant economic and operational effects on a feedlot. In particular, the extremes of hot and cold, and wet and dry pose the most common challenges to the feedlot.

Analysis of the historical record indicates an increasing trend in high intensity rainfall events greater than 2"/day in the Columbia River Basin area. Models suggest that the frequency of these high intensity rainfall will continue to increase in the region, especially during the summer months. Models are also predicting an increase in the frequency of high temperature and high heat stress events, and that both the intensity and frequency of such events are likely to continue to increase over time. (Littell, 2009)

To mitigate these concerns, Riverside Feeders SFL monitors both short and longer term weather forecasts and plans operations accordingly. The following is a list of some of the actions that may be taken in the event of extreme weather conditions.

- **Severe winter snow, ice storms, extreme cold:** 1) provide clean dry bedding for cattle, 2) have snow removal equipment ready and in good repair, 3) clean aprons around water tanks and feed bunks to avoid buildup of frozen manure and excess material.
- **Intense, heavy, rain:** 1) in advance of severe storm conditions, reduce storage pond elevations to allow for excess runoff from storm water, 2) Clean out storm drains, catch basins, and alleyways to remove debris and allow for adequate drainage
- **Heat waves:** 1) Prior to heat wave, make sure water levels are adequate in primary water source reservoir, 2) Cease any unnecessary cattle movements and handling, 3) judicious use of sprinklers (if humidity is low) to mitigate excess dust production and to provide heat abatement to the cattle.

## MANURE MARSHALING AREA BMP'S

Manure pack not needed for normal pen maintenance will be removed and taken away, either directly offsite for beneficial re-use, or it may be taken to the manure marshaling area to dry and await removal and transport offsite at a later date. Agri-Northwest may take possession of manure in the marshaling area, but Riverside Feeders SFL will continue to provide input on the best management of the material to reduce dust, odor, and insects around the feedlot. Much of the moisture-laden manure pack produced during the winter months will be hauled to the manure marshaling area during the spring to quickly reduce moisture levels in the pens as temperatures rise in the spring. 10,000-12,000 tons of manure at 60% moisture may be hauled to the marshaling area each month from February to May. In October, November, and December, additional wet manure may be hauled to the marshaling area to prepare feeding pens for the upcoming cold/wet winter season. The timing of this manure movement will be partially dictated by the availability of space in the marshaling area. Maintenance roads may also be used to stockpile manure temporarily until dried material can be hauled offsite to create room at the marshaling area.

### **Aeration**

Manure in the marshaling area will be aerated to promote aerobic conditions and drying of the organic material. This will drastically eliminate odor production in the form of hydrogen sulfide from the rows. Manure will be piled in long rows where it can be thoroughly aerated with a piece of equipment designed for the job. This turning process will reduce moisture and generate a certain amount of heat in the rows which has the added benefit of eliminating fly larvae.

### **Moisture Control**

Manure in the marshaling area will be dried to around 25% moisture before it is screened and transferred offsite. The aerator is equipped with water tanks and a spray bar to be able to apply a small quantity of water to the surface of the row to control dust after turning if that is required.

### **pH Control**

Thorough aeration of the rows of manure pack in the marshaling area encourages active degradation of the organic matter in the rows. This degradation process results in the production of weak organic acids such as fulvic acid and humic acid. This gradually reduces the pH of the manure and ensures that a pH between 6.0-8.0 is maintained. Ammonia production is effectively suppressed at these pH levels.

### **Manure Removal**

As crops are harvested, and field conditions allow, the turned and screened manure will be hauled off site to be applied as nutrients for subsequent crop rotation by Agri-Northwest. Records will be kept on moisture %, Nutrient levels, and the number of tons of material leaving the premises. These records will be kept for at least five years.

## RUNOFF MANAGEMENT AND LAGOON AREA BMP'S

Feedlot runoff can have a high organic matter content and therefore a high pollution potential. All runoff from the feedlot area is directed first, into catch basins made from reinforced concrete at the down slope end of the marshaling area as well as each row of feeding pens. These catch basins allow for the settling out of some suspended solids from the runoff water. This serves two purposes: 1) It reduces the amount of organic matter in the runoff water before it reaches the storage pond, and 2) It has the ability to prevent larger pieces of solid or frozen material from potentially causing an obstruction in any of the underground pipes that carry runoff water to the storage pond, ensuring that the pipes function properly.

The entirety of the area within the feedlot where water may come into contact with cattle manure or urine, including feeding pens, shipping/receiving area, hospital areas, alleyways, and the manure marshaling area, is contoured and graded to slope down to these catch basins, and then continue down to the main storage pond. The main storage pond at the Riverbend Feedlot was designed and installed by Northwest Linings & Geotextile Products, Inc. It is designed to hold 18.5 million gallons of runoff water and is double lined to prevent seepage with 127,155 SF of 40- mil smooth HDPE primary liner and 127,155 SF of 50-mil smooth HDPE secondary liner.

In some areas (along roadsides, etc), diversion banks or other structures have been incorporated to prevent runoff from areas outside the feedlot from entering controlled drainage areas, such as feeding pens or the manure marshaling area. This decreases the amount of liquid that needs to be handled by the main pond and the rest of the internal runoff control system. Diversions can include roadside berms and grading, or something as simple as making sure plow furrows in the fields near the feedlot are contoured to keep water from entering the feedlot. All controlled drainage areas are constructed, groomed, and maintained consistent with the following requirements:

- Feed bunks are located at the top of the pen slope and run parallel to the contour of the pen slope to minimize pen to pen drainage.
- Water trough aprons are located and shaped to shed rainfall and divert runoff around watering areas.
- Fence lines are built and maintained so that manure accumulating under the fence can easily be removed.
- Pens are constructed with a stable pen base to create a smooth, uniform surface.
- Pen slopes are carefully maintained at 2% - 6% (as appropriate for the area).
- Feedlot mounds are constructed for animal comfort, and generally lay parallel to drainage direction in the pen to avoid blocking the flow of drainage.
- All manure bearing areas are constructed to drain directly to concrete catch basins.
- Catch basins are constructed to allow for periodic removal of solids and sediment with a front-end loader.
- The main storage pond has been designed and sized to be able to hold the runoff from one entire wet season, plus a 24- hour, 25- year storm event.

- To ensure maximum safety, the main storage pond is located well over 1000 feet from the nearest well

## **Seasonal Variation of Lagoon Area BMP's**

### ***Summer Warm/Dry Season***

During the warm/dry season, the main focus will be to maintain the pond in a near odor free condition. Microbial growth combined with natural aeration at the surface of the pond serve to form and odor cap of microbial digestion that reduces most odor causing compounds. Commercially available microbial additives may be added to restart the natural process if stagnation occurs and an increase in odor is detected by feedlot management.

Pond levels may be reduced during the irrigation season as water retained in the pond is re-used in a beneficial manner on neighboring crop fields. Pond water will be tested in spring and summer to evaluate the nutrient and soluble salts content, and this information will be given to Agri-Northwest to incorporate into their crop nutrient plan.

### ***Fall Transition Season***

During the fall transition season, the chance of precipitation increases and continues into the winter. Before that demand is placed on the drainage control system, personnel for Riverside Feeders SFL will inspect feedlot areas, drains, manure stockpiling areas, and the pond area to ensure any debris has been removed, all grading problems have been identified and corrected, and any needed repairs to pipes, catch basins, or pond embankments have been made.



RIVERSIDE FEEDERS

# **Riverside Feeders**

## **2021 Fugitive Dust Control Plan**

**26949 Summit Prairie Rd.**

**Prairie City, Oregon 97869**

**541-620-1014**

## **INTRODUCTION**

Riverside Feeders realizes the importance of a fugitive dust control plan. Management practices involving dust control are significant to the management and general health of the cattle being fed at this feedlot. Furthermore, the control of fugitive dust benefits both neighbors and the environment from excess dust in the air.

In controlling fugitive dust, Riverside Feeders will comply with the Benton Clean Air Authority. The goal is to manage dust and stay in compliance through the use and evaluation of the best management practices (BMPs) described in this plan.

Despite this year being our first year to develop and implement a fugitive dust management for this particular feedlot, the management team we have in place, is largely comprised of previous employees at this same facility. They have been implementing a comprehensive dust control plan for more than a decade. Past experiences and management at this and other feeding facilities gives Riverside Feeders the knowledge and expertise to determine which dust management tools work best and if or how a tool should be implemented or removed from the plan.

## **DESCRIPTION OF OPERATION**

The feedlot is located at 157703 Nine Canyon Road in Benton County. The feedlot addressed in the plan is approximately 180 acres in size and has a maximum capacity of of 35,000 head of cattle. Feeder cattle are hauled from our Vale grow yard facility as well as from ranches throughout the Northwest to the lot to be fed to the desired weight and harvest periods. A large irrigation pond is available for an abundant water source. Waste is scraped from the pens, piled, and later distributed as compost for field application.

Site specific features that make dust control more difficult are primarily weather conditions. Natural weather conditions, including wind and rain events can alter the application of water for dust abatement. High winds can change the spray patterns from pen sprinklers, potentially resulting in some dry spots in the pens. Rain and snow events can increase pen moisture, meaning a temporary reduction or suspension in sprinkler water application may be implemented to maintain optimum pen conditions.



## **Pen Management Plan**

Riverside Feeders takes advantage of a fixed water application system on the entire pen capacity of the feedlot. The shipping/receiving, hospital, and feeding pens are all equipped with an extensive, high-pressure sprinkler system that is automated and time controlled. The number of applications and duration of each application are determined by weather and pen conditions to maintain optimum pen conditions for animal welfare, while minimizing the production of fugitive dust. Utilizing the sprinkler system provides uniform, complete, water coverage of the feed pens. The automation of this system assures consistent compliance when applications are necessary.

In addition to water application, pen maintenance is an important practice used to control dust. A tractor and box scraper are used to groom the surface area of the mounds and pens, collecting excess surface material, and stockpiling it in a designated area of the pen for later removal. Intermittent removal of this material ensures less dust is emitted into the air by hoof traffic.

## **Access Roads and Alleyways**

Recognizing the potential for dust production due to wheeled traffic on access roads and foot traffic in alleyways, there is also a plan in place to manage this fugitive dust. During periods of dry weather, roadways will be watered every morning with a water truck, prior to feed deliveries, to reduce the amount of dust produced by vehicle traffic, and the amount of dust ingested by the cattle. It is also the feedlot's policy to maintain slower speeds while driving, resulting in less dust production. During times of additional truck traffic, such as corn silage or high moisture corn harvest, additional watering of roadways will occur throughout the day.

Alleyways can also be watered with the water truck prior to movement of pen-lots of cattle throughout the feedlot. Concrete alleyways and a concrete floor around the squeeze chute were installed in the processing area to eliminate the dust potential of that high usage area as well.

## **Feed Batching**

We have plans, with the cooperation of the landlord, Farmland Reserve, to improve the feed batching area by putting it under roof and enclosing the walls around the loading area. This will help to reduce wind shrink of expensive feed, while reducing the dust that is allowed to escape

into the air from dry ingredients being poured from a front-end loader. We will also incorporate the use of some high moisture ingredients such as corn silage, triticale silage, and wet distillers' grains, that will greatly reduce the particulate matter emitted from the feed boxes during mixing.

## **Conclusion**

With this plan, Riverside Feeders can substantially reduce the volume of dust emitted from their cattle feeding facility. Riverside Feeders feels this is important not only for regulatory compliance, but to create a better working environment for our employees, and to promote a healthy facility for our cattle. Riverside Feeders will continue to monitor and evaluate the effectiveness of these strategies and retains the right to modify or change these strategies as new technology or ideas make themselves available.

Riverside Feeders will notify the Benton Clean Air Authority of any modifications to the plan, changes in application of the plan, or failures of equipment. The BCAA will notify Riverside Feeders if they have any concerns, issues, and/or modifications regarding this plan.

## **Contact Information:**

**Feedlot Manager: Enrique Castellanos (509)366-6435**

**Feedlot Advisor: Burke Neely (570)856-3792**



## BENTON CLEAN AIR AGENCY

526 S. Steptoe St.  
Kennewick, WA 99336  
Phone: 509-783-1304  
Website: [www.bentoncleanair.org](http://www.bentoncleanair.org)

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January 14, 2022

Mr. Justin Jacobs  
Riverside Feeders SFL, LLC  
PO Box 395  
Vale, Or 97918

Mr. Jacobs

The feedlot owned by Riverside Feeders in Benton County, Washington at 144503 Nine Canyon Road in Kennewick is currently in compliance with all requirements of the Benton Clean Air Agency.

We have on hand current ownership and management information and a current and appropriate Fugitive Dust Control Plan.

The facility is in compliance with all conditions in the existing NOC Permit 2007-0004.

Please don't hesitate to contact me if you need additional information.

Thank you.

Robin

Robin Bresley Priddy, PE  
Engineer  
Benton Clean Air Agency  
526 South Steptoe Street  
Kennewick, WA 99337



## SEPA ENVIRONMENTAL CHECKLIST

**HEM 1.12**

File No. EA 2020-050

### A. BACKGROUND

1. Name of proposed project, if applicable: Riverbend Feed Lot
2. Name of applicant: Farmland Reserve, Inc.
3. Address and phone number of applicant and contact person: Jens Rasmussen (509) 734-1195  
PO Box 2308, Pasco, WA 99302
4. Date checklist prepared: 10/20/2022
5. Agency requesting checklist: Benton County Planning Department
6. Proposed timing or schedule (including phasing, if applicable): As soon as possible
7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.  
yes, construction/modification of a cattle feed lot, cattle hospital area, feedlot solid and liquid waste handling facilities, scales, office, and accessory structures.
8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. Benton Clean Air Agency NOC 2007-0004, Riverside Feeders 2021 Fugitive Dust Control Plan  
Riverbend Feedlot Manure management plan prepared 2/25/22
9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. None
10. List any government approvals or permits that will be needed for your proposal, if known. Benton County  
Grading, Building, and Conditional Use Permits; Possible Water Rights Division Approval of Change/Transfer Application
11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.  
Approval of existing feed lot infrastructure with 35,000 head capacity and modifications of pens, facilities, and existing water and waste systems for more efficient management.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. 152330S Nine Canyon Road, Plymouth, WA

Sections 14, 13, 23, and 24 of Township 6N Range 29E

Sections 18 and 19 of Township 6N Range 30E

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

a. General description of the site (circle one):

Flat                      Rolling                      Hilly                      Steep Slopes                      Mountainous

Other Level to gently sloping to accommodate controlled drainage

b. What is the steepest slope on the site (approximate percent slope)? 3 %

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Silty sand with gravel

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. placement of approximately 15,000 cy. of fill which will be removed off surrounding areas

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Wind erosion

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? no additional impervious surfaces anticipated

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: Water for dust control

and hydroseeding after excavation.

### 2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. minimal dust from construction and dust and odor during operation. Benton Clean Air Agency has issued NOC 2007-0004 regarding furtive dust control plan.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. None

c. Proposed measures to reduce or control emissions or other impacts to air, if any: Other than on-farm residences  
the area is 1.5 miles from nearest residence not owned by Farmland Reserve and roughly 10 miles from any residential areas.

**3. Water**

**a. Surface Water:**

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. There is existing irrigation/stock watering reservoir on the site

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. Work may include modification of the existing reservoir

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. none

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. The project may require additional surface water withdrawals from an existing pump station on the Columbia River. Total water quantity will not exceed 1000 AF/Y. Water will come from excess irrigation water rights currently held in trust.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. No

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. No discharges to surface waters are anticipated.

**b. Ground Water:**

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. Water is currently drawn from an exempt stock-watering well with capacity of 300 gpm (~484 AF/Y). See enclosed impairment analysis for additional detail.

Plans may include the drilling of an additional back up well to reduce the risk of losses in event of a well failure. No water is anticipated to be discharged to groundwater.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. The existing feedlot waste is collected in a lined lagoon and land applied at agronomic rates on lands owned by the applicant.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. storm water, waste water and other run off will be collected in a waste water lagoon and land applied at agronomic rates to lands

owned by the applicant.

2) Could waste materials enter ground or surface waters? If so, generally describe. Absent catastrophic failures, no waste materials are anticipated to be discharged to ground or surface waters.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. The current feedlot and proposed modifications are designed to ensure all waste water is collected in a lined waste water lagoon located on the site.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: All surface water in the impacted area will be directed to the waste lagoon for land application.

4. **Plants**

a. Check the types of vegetation found on the site:

- Deciduous tree (*alder, maple, aspen, other*)
- Evergreen tree (*fir, cedar, pine, other*)
- Shrubs
- Grass
- Pasture
- Crop or grain

- Orchards, vineyards or other permanent crops
- Wet soil plants (*cattail, buttercup, bullrush, skunk cabbage, other*)
- Water plants (*water lily, eelgrass, milfoil, other*)
- Other types of vegetation

b. What kind and amount of vegetation will be removed or altered? None

c. List threatened and endangered species known to be on or near the site. None

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: none

e. List all noxious weeds and invasive species known to be on or near the site. none

**5. Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include: birds: hawk, heron, eagle, songbirds, other; mammals: deer, bear, elk, beaver, other; fish: bass, salmon, trout, herring, shellfish, other. hawks, eagles, deer

b. List any threatened and endangered species known to be on or near the site. None

c. Is the site part of a migration route? If so, explain. No

d. Proposed measures to preserve or enhance wildlife, if any: None

e. List any invasive animal species known to be on or near the site. None

**6. Energy and Natural Resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. Electrical energy for lighting.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: None

**7. Environmental Health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. No

1) Describe any known or possible contamination at the site from present or past uses. None known

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project

area and in the vicinity. None

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

None

4) Describe special emergency services that might be required. None

5) Proposed measures to reduce or control environmental health hazards, if any: None

**b. Noise**

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? Construction noise, animal noise during operation. Vehicle traffic making deliveries.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. construction noise between 6 am and 7 pm during construction, animal noise 24 x 7 when in the feed lot is in operation.

3) Proposed measures to reduce or control noise impacts, if any: None anticipated due to remote location of facility

**8. Land and Shoreline Use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. Site is currently used for farming and cattle operations. Applicants plans will not affect land uses on nearby or adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? This area has been a working farm for row crop production and cattle operations. The use of this land will not change from agricultural row crops and cattle operations.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: No. While the area is surrounded by working farm, the proposal is for continued use of the area consistent with agricultural operations.

c. Describe any structures on the site. cattle feedlot, hospital facility and ancillary facilities.

d. Will any structures be demolished? If so, what? no

e. What is the current zoning classification of the site? GMA Ag

f. What is the current comprehensive plan designation of the site? GMA Ag

g. If applicable, what is the current shoreline master program designation of the site? NA

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. No

i. Approximately how many people would reside or work in the completed project? 25+-

j. Approximately how many people would the completed project displace? None

k. Proposed measures to avoid or reduce displacement impacts, if any: None needed

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: The feedlot will be constructed on a working farm so no additional measures are anticipated

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any: None

## 9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low income housing. None

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low income housing. None

c. Proposed measures to reduce or control housing impacts, if any: None

**10. Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? Current feed mill facilities on site are roughly 90'.

b. What views in the immediate vicinity would be altered or obstructed? None anticipated

c. Proposed measures to reduce or control aesthetic impacts, if any: None

**11. Light and Glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The area is lighted at night.

b. Could light or glare from the finished project be a safety hazard or interfere with views? No interference anticipated due to remoteness of project location.

c. What existing off-site sources of light or glare may affect your proposal? None

d. Proposed measures to reduce or control light and glare impacts, if any: None

**12. Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity? None

b. Would the proposed project displace any existing recreational uses? If so, describe. No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: NA

**13. Historic and cultural preservation**

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe. No

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. No indication of past use, the area has been heavily farmed for at least the last 40 years

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c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. \_\_\_\_\_

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d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. Attention will be paid during excavation

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#### 14. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. Nine Canyon Road leads to the property

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b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? No, over 10 miles

---

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? There are existing graveled areas for employee and operational vehicles to park.

---

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). none anticipated

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e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. No

---

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as

commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? 10+- trucks per day delivering feed and transporting cattle in and out but will vary

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. No

h. Proposed measures to reduce or control transportation impacts, if any: None

**15. Public Services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. No

b. Proposed measures to reduce or control direct impacts on public services, if any. NA

**16. Utilities**

a. Circle utilities currently available at the site:

electricity      natural      gas water      refuse service      telephone      sanitary sewer system  
other \_\_\_\_\_

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Electricity needed for continued operation - utilities currently on-site are adequate.

**C. SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Jens Rasmussen

Name of Signee Jens Rasmussen

Position and Agency/Organization Land Manager, AgriNorthwest on behalf of

Date Submitted: 12 December 2022 Farmland Reserve, Inc

## D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(IT IS NOT NECESSARY to use this sheet for project actions)

- Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.
- When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise? The project would increase the air emission which have been addressed under Benton Clarn Air NOC2007-0004.

a. Proposed measures to avoid or reduce such increases are: Water will be used for dust control

2. How would the proposal be likely to affect plants, animals, fish, or marine life? NA

a. Proposed measures to protect or conserve plants, animals, fish, or marine life are: NA

3. How would the proposal be likely to deplete energy or natural resources? None

a. Proposed measures to protect or conserve energy and natural resources are: \_\_\_\_\_

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands? The project would not affect any of the listed areas with the exception of farmland.

a. Proposed measures to protect such resources or to avoid or reduce impacts are: \_\_\_\_\_

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans? NA

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a. Proposed measures to avoid or reduce shoreline and land use impacts are: \_\_\_\_\_

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6. How would the proposal be likely to increase demands on transportation or public services and utilities?

No impact anticipated since the area is not served by public transit or other service.

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a. Proposed measures to reduce or respond to such demand(s) are: \_\_\_\_\_

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7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment. \_\_\_\_\_

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**Community Development Department**

Prosser Office: 620 Market Street, 1<sup>st</sup> Floor  
Kennewick Office: 102206 East Wiser Parkway  
[www.co.benton.wa.us](http://www.co.benton.wa.us)



**Planning Division**

(509) 786-5612  
P.O. Box 910, Prosser, WA 99350  
[planning.department@co.benton.wa.us](mailto:planning.department@co.benton.wa.us)

**HEM 1.13**

**Notice of Application  
(Optional DNS Process)**

**Benton County has received a permit application for the following project:**

The continued operation of and modifications to an existing cattle feedlot to improve wastewater containment.

**Project Location:** The feedlot is in unincorporated Benton County, approximately 10 miles south of the City of Kennewick, approximately 3.5 miles north of the Columbia River, east of I-82, south of Coffin Road, near the south end of Nine Canyon Road at site address 152330 S Nine Mile Road, Plymouth, WA. Parcel Number(s) 11369000000000, 14690000000000, 123691000000000, and 124690000000000 Township & Range: Section(s) 14, 13, 23 and 24, Township 6N, Range 29E Township & Range: Section(s) 18 and 19, Township 6N, Range 30E

**Agency Contact:**

Michelle L. Cooke, Planning Manager, Benton County Planning Division  
[Planning.Department@co.benton.wa.us](mailto:Planning.Department@co.benton.wa.us)  
Phone Number: (509) 786-5612

**Project Applicant:**

Farmland Reserve Inc  
Jens Rasmussen, Agri Northwest  
PO Box 2308  
Pasco, WA 99302

**Agency File Number:**

EA 2022-050

<u>Date of permit application:</u>	December 13, 2022
<u>Date of determination of completeness:</u>	December 14, 2022
<u>Date of Notice of Application:</u>	December 15, 2022
<u>Notice of Application Publication Date:</u>	December 21, 2022
<u>Comment due date:</u>	14 days after date of publication

**SEPA Environmental Review:** The Benton County Planning Division has reviewed the proposed project for probable adverse environmental impacts and expects to issue a Determination of Non-Significance (DNS) or Mitigated Determination of Non-Significance (MDNS). The proposal may include mitigation measures under applicable codes, and the project review process may incorporate or require mitigation measures regardless of whether an EIS is prepared. The optional DNS process in WAC 197-11-355 is being used. This may be your only opportunity to comment on the environmental impacts of the proposed project.

Agencies, tribes, and the public are encouraged to review and comment on the proposed project and its probable environmental impacts. Comments must be submitted by the due date noted above (14 days from date of publication) to the Benton County Planning Division, P.O. Box 910 Prosser, WA 99350. Any information submitted to Benton County is subject to the public records disclosure law for the State of Washington (RCW Chapter 42.17) and all other applicable law that may require the release of the documents to the public.

This project does not require a public hearing. A copy of the subsequent threshold determination and any other information concerning this action may be obtained by contacting the Benton County Planning Division, P.O. Box 910, Prosser, WA (509) 786-5612.

**Preliminary Development Regulations and Existing Environmental Documents:** To evaluate the impacts of the proposed project, the following may be used for mitigation, consistency, and the development of findings and conclusions:

Regulations of Benton County including the Benton County Comprehensive Plan, BCC Title 3 Building, Fire, and Road Standards, BCC Title 6.35 SEPA, BCC Title 11 Zoning, and BCC Title 15 Critical Area Ordinance;

Regulations of the Washington State Department of Fish and Wildlife, Washington State Department of Ecology, and Washington State Department of Natural Resources;

Regulations of the Benton-Franklin Health District; and SEPA Environmental Checklist; and

Other required agency evaluations, approvals, permits, and mitigation as necessary.

**Required Permits:**

Benton County Conditional Use Permit, Building/Grading Permits. Other forms, reports, or approvals as necessary.

**Required Studies:**

Fugitive Dust Control Plan, Hydraulic Impairment Analysis, Manure Management Plan.

Dated at Kennewick, Washington on this 15<sup>th</sup> day of December 2022.



A handwritten signature in black ink, appearing to read "Michelle Cooke".

Michelle Cooke, Planning Manager  
Community Development Department

**Community Development Department**

Prosser Office: 620 Market Street, 1<sup>st</sup> Floor  
Kennewick Office: 102206 East Wiser Parkway  
[www.co.benton.wa.us](http://www.co.benton.wa.us)

**Planning Division**

(509) 786-5612  
P.O. Box 910, Prosser, WA 99350  
[planning.department@co.benton.wa.us](mailto:planning.department@co.benton.wa.us)

**MITIGATED DETERMINATION OF NON-SIGNIFICANCE****HEM 1.14****Proponent:**

Farmland Reserve Inc  
Jens Rasmussen, Agri Northwest  
PO Box 2308  
Pasco, WA 99302

**File No.** EA 2022-050

**Benton County has received a permit application for the following project:**

The continued operation of and modifications to an existing cattle feedlot to improve wastewater containment.

**Project Location:**

The site is located at 152330 S Nine Mile Road, Plymouth, WA.  
Parcel Number(s) 11369000000000, 14690000000000, 123691000000000, and 124690000000000  
Township & Range: Section(s) 14, 13, 23 and 24, Township 6N, Range 29E  
Township & Range: Section(s) 18 and 19, Township 6N, Range 30E

**Jurisdiction:** Benton County, Washington

**Lead Agency:** Benton County Planning Division

**Threshold Determination:** The lead agency for this proposal has determined that it will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c), provided that the following measures are taken to mitigate potential adverse impacts. Substantive authority to require mitigation is derived from WAC 197-11-660 and Benton County Code, Chapter 6.35.120. The decision was made after review of a completed environmental checklist, comments received from various agencies and other information on file with the lead agency. This information is available to the public on request.

**Conditions/Mitigating Measures:** See attached conditions. Benton County has received timely comments and determined that such conditions are necessary to mitigate specific adverse impacts.

**Appeals:** You may appeal this determination to the Benton County Planning Division at Post Office Box 910, Prosser, WA 99350, no later than Friday, January 20, 2023, by written notice. The fee for a threshold determination appeal is \$800.00. An appeal of the determination must be made in writing to the Benton County Planning Division and a public hearing will be scheduled and the appellant will be notified of the date, time, and place. You should be prepared to make specific factual objections. Contact the Planning Division to read or ask about the procedures for SEPA appeals.

**SEPA Responsible Official:** Michelle L. Cooke

**Position/Title:** Planning Manager

**Address:** P.O. Box 910, Prosser WA 99350

Date: January 6, 2023

A handwritten signature in black ink, appearing to read "Michelle Cooke", is written over a horizontal line.

Michelle L. Cooke, Planning Manager  
Benton County Community Development Department

## **Distribution List**

Benton County Building Division  
Department of Natural Resources  
Benton Clean Air Authority  
Benton County Engineer  
Benton-Franklin Dist. Health Department  
Department of Transportation  
Washington State Department of Health  
Department of Ecology  
Benton County Fire Marshal  
Dept. of Fish and Wildlife  
Dept. of Reclamation  
Bureau of Land Management  
Columbia Irrigation District  
Fire District # 6 and #1  
Futurewise  
Department of Archaeology/Historic Preservation  
Yakima Indian Nation  
Conf. Tribes of the Umatilla Nation  
Corp of Engineers  
Tom Price, Environmental Review Inc.

CONDITIONS/MITIGATION MEASURES  
File No.: EA 2022-050 (Cattle Feed Lot)  
Applicant: Jens Rasmussen, Agri Northwest  
**Farmland Reserve Inc**  
**PO Box 2308**  
**Pasco, WA 99302**

*Documents and Regulations:*

The environment threshold determination and conditions are based on an analysis of information contained in the following documents or the applicable regulations and restrictions of various agencies:

1. Benton County, BCC Title 6.35 Environmental Policy (SEPA);
2. Benton County, BCC Title 11, Zoning;
3. Benton County, BCC Title 9, Subdivisions;
4. Benton County Comprehensive Plan;
5. Benton County, BCC Title 15 Critical Area Ordinance;
6. Benton County, BCC Title 3 Building Code, Fire Code, and Road Standards;
7. Benton County Shoreline Master Program;
8. Regulations of the Benton Clean Air Agency;
9. Regulations of the Washington State Department of Fish and Wildlife, Department of Ecology, and Department of Natural Resources; and
10. Application materials submitted:
  - a. Benton County Conditional Use Permit Application
  - b. SEPA Checklist
  - c. Manure Management Plan
  - d. Fugitive Dust Control Plan
  - e. Hydraulic Impairment Analysis (well)
  - f. Existing and proposed site plans

*Findings:*

1. Location: The feedlot is in unincorporated Benton County, approximately 10 miles south of the City of Kennewick, approximately 3.5 miles north of the Columbia River, east of I-82, south of Coffin Road, near the south end of Nine Canyon Road at site address 152330 S Nine Mile Road, Plymouth, WA.  
  
Parcel Number(s) 113690000000000, 146900000000000, 123691000000000, and 124690000000000  
Township & Range: Section(s) 14, 13, 23 and 24, Township 6N, Range 29E  
Township & Range: Section(s) 18 and 19, Township 6N, Range 30E
2. Benton County, BCC Title 11, Zoning: The zoning designation for the project area Growth Management Act A. Proposal requires the approval of a conditional use permit in the GMA Agricultural District.
3. Benton County Comprehensive Plan: The Comprehensive Plan designation for the project area is Growth Management Agricultural.
4. Benton County, BCC Title 15 Critical Area Ordinance: The project area is not located within a designated critical area.
5. The applicant submitted the following materials for the SEPA review process on December 12, 2022:
  - a. Benton County Conditional Use Permit Application
  - b. SEPA Checklist
  - c. Manure Management Plan
  - d. Fugitive Dust Control Plan
  - e. Hydraulic Impairment Analysis (well)
  - f. Existing and proposed site plans

*Conditions:*

The applicant must complete and comply with the following mitigating conditions for this Mitigated Determination of Non-Significance (MDNS).

1. Comply with the Hydraulic Impairment Analysis (Geo Engineers), submitted to the Planning Division on December 13, 2022.
2. Comply with the Riverside Feeders, 2021 Fugitive Dust Control Plan submitted to the Planning Division on December 13, 2022.

3. Comply with the Riverbend Feedlot Manure Management Plan, submitted to the Planning Division on December 13, 2022.
4. Comply with the Department of Ecology standards for groundwater exempt uses as required in the January 3, 2023 SEPA comment letter.

**Donna Hutchinson**

---

**From:** Daniel Tissell <DTissell@kid.org>  
**Sent:** Tuesday, December 20, 2022 2:55 PM  
**To:** Donna Hutchinson  
**Subject:** [EXTERNAL] RE: EA 2022-050 Notice of Application

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

**EXTERNAL EMAIL WARNING!!!:** This email originated from outside of Benton County. **DO NOT** click links or open attachments unless you recognize the sender and know the content is safe.

Donna,

KID has no comments regarding this matter. It is located outside of the District Boundaries.

Thanks,

Daniel Tissell, P.E.  
 Assistant Engineering Manager  
 Kennewick Irrigation District  
 2015 S. Ely Street  
 Kennewick, WA 99337  
 (509) 586-6012 ext. 116




---

**From:** Donna Hutchinson <Donna.Hutchinson@co.benton.wa.us>  
**Sent:** Monday, December 19, 2022 8:36 AM  
**To:** Planning Department <Planning.Department@co.benton.wa.us>  
**Cc:** Benton Clean Air - Noah Lee <noah.lee@bentoncleanair.org>; seand@bfhd.wa.gov; Brad O'Brien <Brad.Obrien@co.benton.wa.us>; Michelle Johnson <Michelle.Johnson@co.benton.wa.us>; Troy Taylor <Troy.Taylor@co.benton.wa.us>; Brian Bell <Brian.Bell@co.benton.wa.us>; Bureau of Land Management - Kevin Devitt District Manager (BLM\_OR\_SP\_Mail@blm.gov) <BLM\_OR\_SP\_Mail@blm.gov>; Columbia Irrigation District (CID@columbiairrigation.com) <CID@columbiairrigation.com>; sydney.hanson@dahp.wa.gov; Dept. of Archaeology and Historic Preservation - SEPA Review (sepa@dahp.wa.gov) <sepa@dahp.wa.gov>; Dept. of Fish and Wildlife-SEPA Review <R3planning@dfw.wa.gov>; Dept. of Natural Resources (sepacenter@dnr.wa.gov) <sepacenter@dnr.wa.gov>; Dept. of Natural Resources <dnrmisepacenter@dnr.wa.gov>; Dept. of Transportation (scplanning@wsdot.wa.gov) <scplanning@wsdot.wa.gov>; alex@futurewise.org; Futurewise <tim@futurewise.org>; Development <development@kid.org>; Cristina Woods <Cristina.Woods@co.benton.wa.us>; Tom Price-Environmental Review Inc. (envreview@gmail.com) <envreview@gmail.com>; US Corps of Engineers <cenww-re@usace.army.mil>; US Corps of Engineers-David Moore <david.j.moore@usace.army.mil>; rodney.c.huffman@usace.army.mil; US Corps of Engineers-Tim Erkel <tim.r.erkel@usace.army.mil>; Yakama Indian Nation SEPA Review <enviroreview@yakama.com>; Yakima Indian Nation-John Marvin <john\_marvin@yakama.com>; Jessica\_Lally@Yakama.com; Confederated Tribes of the Umatilla Indian Reservation - Ashley M. Morton (AshleyMorton@ctuir.org) <AshleyMorton@ctuir.org>; Umatilla Indian Nation <EricQuaempts@ctuir.org>; Bureau of Reclamation - C. Garner (cgarner@usbr.gov) <cgarner@usbr.gov>; Bureau of Reclamation - L Hendrix - Bureau of Reclamation (lhendrix@usbr.gov) <lhendrix@usbr.gov>; Bureau of Reclamation -

McKinley (cmckinley@usbr.gov) <cmckinley@usbr.gov>; Fire District #1-Billie <billie@bentonone.org>; Fire District #1-Staff <staff@bentonone.org>; chiefwatt@bcfd6.com

**Subject:** RE: EA 2022-050 Notice of Application

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Sorry, the send button was hit before I attached the NOA Packet for your review. Please disregard the first email.

The Benton County Planning Department has prepared the attached Notice of Application (NOA) EA 2022-050 in accordance with the State Environmental Policy Act regulation. This NOA is being circulated for review by all agencies with jurisdiction. We are circulating it for comments on the **environmental impacts** of this action.

We appreciate your review of the proposal and return of comments no later than **January 4, 2023**. This proposal will not be acted upon before that time.



Donna Hutchinson  
Office Assistant IV  
Community Development Dept.  
Planning Division  
PO Box 910 Prosser WA 99350  
(509) 786-5612

**NOTICE OF PUBLIC DISCLOSURE:** This e-mail account is public domain. Any correspondence from or to this email account may be a public record. Accordingly, this email, in whole or in part, may be subject to disclosure pursuant to RCW 42.56, regardless of any claim of confidentiality or privilege asserted by an external party.

**Prosser:** We are located within the Road Department/Public Works Office on the first floor of the Benton County Courthouse at 620 Market St, Prosser WA 99350.

**Kennewick:** Public Services Building at 102206 E Wiser Parkway, Kennewick, which houses the Planning, Building and Road Departments.

**Donna Hutchinson**

---

**From:** Cristina Woods  
**Sent:** Tuesday, December 20, 2022 11:15 AM  
**To:** Donna Hutchinson  
**Subject:** RE: EA 2022-050 Notice of Application

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Good morning

Benton County has no comments.

Thank you



**Cristina Woods, MS** • *Engineering Associate III*  
 Benton County Public Works  
 102206 Wisner Parkway , Kennewick WA, 99338  
[cristina.woods@co.benton.wa.us](mailto:cristina.woods@co.benton.wa.us)  
 (509) 786-5611

---

**From:** Donna Hutchinson <Donna.Hutchinson@co.benton.wa.us>  
**Sent:** Monday, December 19, 2022 8:36 AM  
**To:** Planning Department <Planning.Department@co.benton.wa.us>  
**Cc:** Benton Clean Air - Noah Lee <noah.lee@bentoncleanair.org>; seand@bfhd.wa.gov; Brad O'Brien <Brad.Obrien@co.benton.wa.us>; Michelle Johnson <Michelle.Johnson@co.benton.wa.us>; Troy Taylor <Troy.Taylor@co.benton.wa.us>; Brian Bell <Brian.Bell@co.benton.wa.us>; Bureau of Land Management - Kevin Devitt District Manager (BLM\_OR\_SP\_Mail@blm.gov) <BLM\_OR\_SP\_Mail@blm.gov>; Columbia Irrigation District (CID@columbiairrigation.com) <CID@columbiairrigation.com>; sydney.hanson@dahp.wa.gov; Dept. of Archaeology and Historic Preservation - SEPA Review (sepa@dahp.wa.gov) <sepa@dahp.wa.gov>; Dept. of Fish and Wildlife-SEPA Review <R3planning@dfw.wa.gov>; Dept. of Natural Resources (sepacenter@dnr.wa.gov) <sepacenter@dnr.wa.gov>; Dept. of Natural Resources <dnrmisepacenter@dnr.wa.gov>; Dept. of Transportation (scplanning@wsdot.wa.gov) <scplanning@wsdot.wa.gov>; alex@futurewise.org; Futurewise <tim@futurewise.org>; Kennewick Irrigation District-Development (development@kid.org) <development@kid.org>; Cristina Woods <Cristina.Woods@co.benton.wa.us>; Tom Price-Environmental Review Inc. (envreview@gmail.com) <envreview@gmail.com>; US Corps of Engineers <cenww-re@usace.army.mil>; US Corps of Engineers-David Moore <david.j.moore@usace.army.mil>; rodney.c.huffman@usace.army.mil; US Corps of Engineers-Tim Erkel <tim.r.erkel@usace.army.mil>; Yakama Indian Nation SEPA Review <enviroreview@yakama.com>; Yakima Indian Nation-John Marvin <john\_marvin@yakama.com>; Jessica\_Lally@Yakama.com; Confederated Tribes of the Umatilla Indian Reservation - Ashley M. Morton (AshleyMorton@ctuir.org) <AshleyMorton@ctuir.org>; Umatilla Indian Nation <EricQuaempts@ctuir.org>; Bureau of Reclamation - C. Garner (cgarner@usbr.gov) <cgarner@usbr.gov>; Bureau of Reclamation - L Hendrix - Bureau of Reclamation (lhendrix@usbr.gov) <lhendrix@usbr.gov>; Bureau of Reclamation -McKinley (cmckinley@usbr.gov) <cmckinley@usbr.gov>; Fire District #1-Billie <billie@bentonone.org>; Fire District #1-Staff <staff@bentonone.org>; chiefwatt@bcfd6.com  
**Subject:** RE: EA 2022-050 Notice of Application

Sorry, the send button was hit before I attached the NOA Packet for your review. Please disregard the first email.

The Benton County Planning Department has prepared the attached Notice of Application (NOA) EA 2022-050 in accordance with the State Environmental Policy Act regulation. This NOA is being circulated for review by all agencies with jurisdiction. We are circulating it for comments on the **environmental impacts** of this action.

We appreciate your review of the proposal and return of comments no later than **January 4, 2023**. This proposal will not be acted upon before that time.



Donna Hutchinson  
Office Assistant IV  
Community Development Dept.  
Planning Division  
PO Box 910 Prosser WA 99350  
(509) 786-5612

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**Kennewick:** Public Services Building at 102206 E Wiser Parkway, Kennewick, which houses the Planning, Building and Road Departments.



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Central Region Office

1250 West Alder St., Union Gap, WA 98903-0009 • 509-575-2490

January 3, 2023

Donna Hutchinson  
Planning Division  
P.O. Box 910  
Prosser, WA 99350

RE: 202206224, EA 2022-050

Dear Donna Hutchinson,

Thank you for the opportunity to comment on the Notice of Application for the Cattle Feedlot improvements and modifications. We have reviewed the application and have the following comment.

**WATER RESOURCES**

Groundwater Exempt Uses

In Washington State, prospective water users must obtain authorization from the Department of Ecology before diverting surface water or withdrawing ground water, with one exception. Ground water withdrawals of up to 5,000 gallons per day used for single or group domestic supply, up to 5,000 gallons per day used for industrial purposes, stock watering, and for the irrigation of up to one-half acre of non-commercial lawn and garden are exempt from the permitting process. Water use under the RCW 90.44.050 exemption establishes a water right that is subject to the same privileges, restrictions, laws and regulations as a water right permit or certificate obtained directly from Ecology.

If you have any questions or would like to respond to these Water Resources comments, please contact Christopher Kossik at (509) 379-1826 or email at [christopher.kossik@ecy.wa.gov](mailto:christopher.kossik@ecy.wa.gov).

Sincerely,

*Lucila Cornejo*

Lucila Cornejo  
SEPA Coordinator  
Central Regional Office  
(509) 208-4590  
[crosepacoordinator@ecy.wa.gov](mailto:crosepacoordinator@ecy.wa.gov)

**Donna Hutchinson**

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**From:** Planning Department  
**Sent:** Thursday, December 22, 2022 8:10 AM  
**To:** Donna Hutchinson  
**Subject:** FW: [EXTERNAL] RE: [E] Agency Review for CUP 2022-018

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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**From:** Chad Brooks <brooksc@bentonpud.org>  
**Sent:** Wednesday, December 21, 2022 8:19 AM  
**To:** Planning Department <Planning.Department@co.benton.wa.us>  
**Subject:** [EXTERNAL] RE: [E] Agency Review for CUP 2022-018

**EXTERNAL EMAIL WARNING!!!:** This email originated from outside of Benton County. **DO NOT** click links or open attachments unless you recognize the sender and know the content is safe.

No comments on conditional use permit.

Chad Brooks  
 Distribution Design Tech II  
 Benton PUD  
 Email: [brooksc@bentonpud.org](mailto:brooksc@bentonpud.org)  
 Main # (509)582-2175  
 Direct # (509)582-1233




---

**From:** Planning Department <[Planning.Department@co.benton.wa.us](mailto:Planning.Department@co.benton.wa.us)>  
**Sent:** Tuesday, December 20, 2022 4:59 PM  
**To:** Benton Clean Air - Noah Lee <[noah.lee@bentoncleanair.org](mailto:noah.lee@bentoncleanair.org)>; [seand@bfhd.wa.gov](mailto:seand@bfhd.wa.gov); Bureau of Land Management - Kevin Devitt District Manager ([BLM\\_OR\\_SP\\_Mail@blm.gov](mailto:BLM_OR_SP_Mail@blm.gov)) <[BLM\\_OR\\_SP\\_Mail@blm.gov](mailto:BLM_OR_SP_Mail@blm.gov)>; [sydney.hanson@dahp.wa.gov](mailto:sydney.hanson@dahp.wa.gov); Dept. of Fish and Wildlife-Mark Teske <[Mark.Teske@dfw.wa.gov](mailto:Mark.Teske@dfw.wa.gov)>; Dept. of Fish and Wildlife, Eric Bartrand <[bartrelb@dfw.wa.gov](mailto:bartrelb@dfw.wa.gov)>; Dept. of Fish and Wildlife, Michael W. Ritter <[rittemwr@dfw.wa.gov](mailto:rittemwr@dfw.wa.gov)>; Dept. of Natural Resources-Shafer ([ana.shafer@dnr.wa.gov](mailto:ana.shafer@dnr.wa.gov)) <[ana.shafer@dnr.wa.gov](mailto:ana.shafer@dnr.wa.gov)>; Dept. of Natural Resources, Surface Mining <[tommy.duerr@dnr.wa.gov](mailto:tommy.duerr@dnr.wa.gov)>; Dept. of Transportation ([scplanning@wsdot.wa.gov](mailto:scplanning@wsdot.wa.gov)) <[scplanning@wsdot.wa.gov](mailto:scplanning@wsdot.wa.gov)>; Fire District #1-Billie <[billie@bentonone.org](mailto:billie@bentonone.org)>; Fire District #1-Staff <[staff@bentonone.org](mailto:staff@bentonone.org)>; Natural Resources Conservation Service <[ray.gekosky@wa.usda.gov](mailto:ray.gekosky@wa.usda.gov)>; Cristina Woods <[Cristina.Woods@co.benton.wa.us](mailto:Cristina.Woods@co.benton.wa.us)>; US Corps of Engineers-David Moore <[david.j.moore@usace.army.mil](mailto:david.j.moore@usace.army.mil)>; [rodney.c.huffman@usace.army.mil](mailto:rodney.c.huffman@usace.army.mil); US Corps of Engineers-Tim Erkel <[tim.r.erkel@usace.army.mil](mailto:tim.r.erkel@usace.army.mil)>; Yakima Indian Nation-John Marvin <[john\\_marvin@yakama.com](mailto:john_marvin@yakama.com)>; [Jessica\\_Lally@Yakama.com](mailto:Jessica_Lally@Yakama.com); Benton Conservation District - Heather Wendt <[heather-wendt@conserveva.net](mailto:heather-wendt@conserveva.net)>; Confederated Tribes of the Umatilla Indian Reservation - Ashley M. Morton ([AshleyMorton@ctuir.org](mailto:AshleyMorton@ctuir.org)) <[AshleyMorton@ctuir.org](mailto:AshleyMorton@ctuir.org)>; Umatilla Indian Nation <[EricQuaempts@ctuir.org](mailto:EricQuaempts@ctuir.org)>; Benton

conservation District - Mark Nielson <[mark-nielson@conservewa.net](mailto:mark-nielson@conservewa.net)>; Chad Brooks <[brooksc@bentonpud.org](mailto:brooksc@bentonpud.org)>; Shanna Everson <[eversons@bentonpud.org](mailto:eversons@bentonpud.org)>; Tina Glines <[glinest@bentonpud.org](mailto:glinest@bentonpud.org)>; Nancy Lang <[langn@bentonpud.org](mailto:langn@bentonpud.org)>; Brad O'Brien <[Brad.O'Brien@co.benton.wa.us](mailto:Brad.O'Brien@co.benton.wa.us)>; Clark Posey <[Clark.Posey@co.benton.wa.us](mailto:Clark.Posey@co.benton.wa.us)>; Elizabeth Koerner <[Liz.Koerner@co.benton.wa.us](mailto:Liz.Koerner@co.benton.wa.us)>; Jenelle Schadler <[Jenelle.Schadler@co.benton.wa.us](mailto:Jenelle.Schadler@co.benton.wa.us)>; Michelle Johnson <[Michelle.Johnson@co.benton.wa.us](mailto:Michelle.Johnson@co.benton.wa.us)>; Troy Taylor <[Troy.Taylor@co.benton.wa.us](mailto:Troy.Taylor@co.benton.wa.us)>; Bureau of Reclamation - C. Garner ([cgarner@usbr.gov](mailto:cgarner@usbr.gov)) <[cgarner@usbr.gov](mailto:cgarner@usbr.gov)>; Bureau of Reclamation - L Hendrix - Bureau of Reclamation ([lhendrix@usbr.gov](mailto:lhendrix@usbr.gov)) <[lhendrix@usbr.gov](mailto:lhendrix@usbr.gov)>; Bureau of Reclamation -McKinley ([cmckinley@usbr.gov](mailto:cmckinley@usbr.gov)) <[cmckinley@usbr.gov](mailto:cmckinley@usbr.gov)>

**Subject:** [E] Agency Review for CUP 2022-018

**[EXTERNAL EMAIL]**

Good afternoon,

Attached are the application materials related to a Conditional Use Permit application File No. CUP 2022-018 from Farmland Reserve.

Please have any comments on the application to our office no later January 4, 2022. If you have any questions, or need more information, please feel free to reach out.

Thank you,



Donna Hutchinson  
Office Assistant IV  
Community Development Dept.  
Planning Division  
PO Box 910 Prosser WA 99350  
(509) 786-5612

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**Kennewick:** Public Services Building at 102206 E Wiser Parkway, Kennewick, which houses the Planning, Building and Road Departments.

**Donna Hutchinson**

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**From:** Planning Department  
**Sent:** Tuesday, January 3, 2023 8:14 AM  
**To:** Donna Hutchinson  
**Subject:** FW: Agency Review for CUP 2022-018

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**From:** Cristina Woods <Cristina.Woods@co.benton.wa.us>  
**Sent:** Friday, December 30, 2022 3:15 PM  
**To:** Planning Department <Planning.Department@co.benton.wa.us>  
**Subject:** RE: Agency Review for CUP 2022-018

Good afternoon

Public Works has no comments.

Thank you



**Cristina Woods, MS** • *Engineering Associate III*  
 Benton County Public Works  
 102206 Wisner Parkway , Kennewick WA, 99338  
[cristina.woods@co.benton.wa.us](mailto:cristina.woods@co.benton.wa.us)  
 (509) 786-5611

---

**From:** Planning Department <[Planning.Department@co.benton.wa.us](mailto:Planning.Department@co.benton.wa.us)>  
**Sent:** Tuesday, December 20, 2022 4:59 PM  
**To:** Benton Clean Air - Noah Lee <[noah.lee@bentoncleanair.org](mailto:noah.lee@bentoncleanair.org)>; [seand@bfhd.wa.gov](mailto:seand@bfhd.wa.gov); Bureau of Land Management - Kevin Devitt District Manager ([BLM\\_OR\\_SP\\_Mail@blm.gov](mailto:BLM_OR_SP_Mail@blm.gov)) <[BLM\\_OR\\_SP\\_Mail@blm.gov](mailto:BLM_OR_SP_Mail@blm.gov)>; [sydney.hanson@dahp.wa.gov](mailto:sydney.hanson@dahp.wa.gov); Dept. of Fish and Wildlife-Mark Teske <[Mark.Teske@dfw.wa.gov](mailto:Mark.Teske@dfw.wa.gov)>; Dept. of Fish and Wildlife, Eric Bartrand <[bartrelb@dfw.wa.gov](mailto:bartrelb@dfw.wa.gov)>; Dept. of Fish and Wildlife, Michael W. Ritter <[rittemwr@dfw.wa.gov](mailto:rittemwr@dfw.wa.gov)>; Dept. of Natural Resources-Shafer ([ana.shafer@dnr.wa.gov](mailto:ana.shafer@dnr.wa.gov)) <[ana.shafer@dnr.wa.gov](mailto:ana.shafer@dnr.wa.gov)>; Dept. of Natural Resources, Surface Mining <[tommy.duerr@dnr.wa.gov](mailto:tommy.duerr@dnr.wa.gov)>; Dept. of Transportation ([scplanning@wsdot.wa.gov](mailto:scplanning@wsdot.wa.gov)) <[scplanning@wsdot.wa.gov](mailto:scplanning@wsdot.wa.gov)>; Fire District #1-Billie <[billie@bentonone.org](mailto:billie@bentonone.org)>; Fire District #1-Staff <[staff@bentonone.org](mailto:staff@bentonone.org)>; Natural Resources Conservation Service <[ray.gekosky@wa.usda.gov](mailto:ray.gekosky@wa.usda.gov)>; Cristina Woods <[Cristina.Woods@co.benton.wa.us](mailto:Cristina.Woods@co.benton.wa.us)>; US Corps of Engineers-David Moore <[david.j.moore@usace.army.mil](mailto:david.j.moore@usace.army.mil)>; [rodney.c.huffman@usace.army.mil](mailto:rodney.c.huffman@usace.army.mil); US Corps of Engineers-Tim Erkel <[tim.r.erkel@usace.army.mil](mailto:tim.r.erkel@usace.army.mil)>; Yakima Indian Nation-John Marvin <[john\\_marvin@yakama.com](mailto:john_marvin@yakama.com)>; [Jessica\\_Lally@Yakama.com](mailto:Jessica_Lally@Yakama.com); Benton Conservation District - Heather Wendt <[heather-wendt@conserveva.net](mailto:heather-wendt@conserveva.net)>; Confederated Tribes of the Umatilla Indian Reservation - Ashley M. Morton ([AshleyMorton@ctuir.org](mailto:AshleyMorton@ctuir.org)) <[AshleyMorton@ctuir.org](mailto:AshleyMorton@ctuir.org)>; Umatilla Indian Nation <[EricQuaempts@ctuir.org](mailto:EricQuaempts@ctuir.org)>; Benton conservation District - Mark Nielson <[mark-nielson@conserveva.net](mailto:mark-nielson@conserveva.net)>; Benton PUD-Chad Brooks <[Brooksc@bentonpud.org](mailto:Brooksc@bentonpud.org)>; Benton PUD-Shanna Everson <[eversons@bentonpud.org](mailto:eversons@bentonpud.org)>; Benton PUD-tina Glines ([glinest@bentonpud.org](mailto:glinest@bentonpud.org)) <[glinest@bentonpud.org](mailto:glinest@bentonpud.org)>; [langn@bentonpud.org](mailto:langn@bentonpud.org); Brad O'Brien <[Brad.Obrien@co.benton.wa.us](mailto:Brad.Obrien@co.benton.wa.us)>; Clark Posey <[Clark.Posey@co.benton.wa.us](mailto:Clark.Posey@co.benton.wa.us)>; Elizabeth Koerner

<[Liz.Koerner@co.benton.wa.us](mailto:Liz.Koerner@co.benton.wa.us)>; Jenelle Schadler <[Jenelle.Schadler@co.benton.wa.us](mailto:Jenelle.Schadler@co.benton.wa.us)>; Michelle Johnson <[Michelle.Johnson@co.benton.wa.us](mailto:Michelle.Johnson@co.benton.wa.us)>; Troy Taylor <[Troy.Taylor@co.benton.wa.us](mailto:Troy.Taylor@co.benton.wa.us)>; Bureau of Reclamation - C. Garner ([cgarner@usbr.gov](mailto:cgarner@usbr.gov)) <[cgarner@usbr.gov](mailto:cgarner@usbr.gov)>; Bureau of Reclamation - L Hendrix - Bureau of Reclamation ([lhendrix@usbr.gov](mailto:lhendrix@usbr.gov)) <[lhendrix@usbr.gov](mailto:lhendrix@usbr.gov)>; Bureau of Reclamation -McKinley ([cmckinley@usbr.gov](mailto:cmckinley@usbr.gov)) <[cmckinley@usbr.gov](mailto:cmckinley@usbr.gov)>

**Subject:** Agency Review for CUP 2022-018

Good afternoon,

Attached are the application materials related to a Conditional Use Permit application File No. CUP 2022-018 from Farmland Reserve.

Please have any comments on the application to our office no later January 4, 2022. If you have any questions, or need more information, please feel free to reach out.

Thank you,



Donna Hutchinson  
Office Assistant IV  
Community Development Dept.  
Planning Division  
PO Box 910 Prosser WA 99350  
(509) 786-5612

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