

## Permit Fact Sheet

### General Information

Permit Number:	WI-0066788-01-0
Permittee Name:	Roth Feeder Pig II
Address:	31961 Hummingbird Ln
City/State/Zip:	Wauzeka WI 53826
Discharge Location:	NW¼, SW¼, Section 20, T8N, R4W, Marietta Township, Crawford County
Receiving Water:	an unnamed tributary to the Kickapoo River within the Kickapoo River Watershed, and groundwater of the state

Animal Units					
Animal Type	Current AU		Proposed AU (Note: If all zeroes, expansions are not expected during permit term)		
	Mixed	Individual	Mixed	Individual	Date of Proposed Expansion
Pigs (55 lbs. to market)	0	0	803	803	10/01/2022
Sows (each)	0	0	2058	2058	10/01/2022
Boars (each)	0	0	24	19	10/01/2022
Pigs (up to 55 lbs.)	0	0	96	96	10/01/2022
Total	0	0	2981	2880	

### Facility Description

Roth Feeder Pig II is a proposed Concentrated Animal Feeding Operation (CAFO). Construction is planned for 2021. Roth Feeder Pig II is owned and operated by AV Roth. The site will house 2981 animal units and generate approximately 9.4 million gallons of manure and process wastewater. Roth Feeder Pig II has a total of 1455.3 acres available for land application of manure and process wastewater. Of this acreage, 67.4 acres are owned and 1387.9 acres are rented. The site will consist of three barns and a composting area. The gilt development unit barn and gestation barn each will contain underfloor waste storage facilities. The farrowing barn will have underfloor reception tanks that drain to the gestation barn waste storage facility. The gestation barn and farrowing barn will have 251 days of liquid storage capacity. The gilt development unit barn will have 299 days of liquid storage capacity.

## Environmental Analysis Summary

Pursuant to s. [NR 150.20\(2\)\(a\)3w](#), Wis. Adm. Code, the issuance of a WPDES permit for a new source CAFO is an integrated analysis action. An integrated analysis action is “a department action for which department programmatic procedures provide for public disclosure and include an environmental analysis that provides sufficient information to establish that an environmental impact statement [EIS] is not required” (NR 150.03(12m)). The department has determined that an environmental impact statement is not required for this permit action under s. 1.11(2)(c), Wis Stats.

The following is a list of information sources, reviews and analyses comprising the environmental analysis included within the department’s review of the WPDES permit application for the proposed Roth II CAFO. Where noted, analysis materials can be accessed via the Department’s [Roth II webpage](https://dnr.wisconsin.gov/topic/CAFO/RothII) (<https://dnr.wisconsin.gov/topic/CAFO/RothII>; see “WPDES Permit Application”).

- Departmental review of the WPDES Permit Issuance Application package, which was received on May 26, 2020. The application package can be accessed from the Department’s [Roth II webpage](#).
- Departmental review of the Environmental Analysis Questionnaire (EAQ) for Livestock Feeding Operations. The department received supplemental information to the EAQ on August 24, 2020. The EAQ and applicant’s responses can be accessed from the Department’s [Roth II webpage](#).
- Departmental review of the proposed facility’s Engineering Plans and Specifications, which were received on April 30, 2020 and approved on August 5, 2020. The Conditional Approval letters are attached to this Fact Sheet. The engineering plans and specifications can be accessed from the Department’s [Roth II webpage](#).
- Departmental review of the DNR Stormwater Construction Site Permit application, which was received on April 30, 2020. As part of this review, the project area was screened for threatened and endangered resources, archeological/historical features, and wetland/hydric soils. The stormwater permit coverage letter is attached to this Fact Sheet.
- Departmental review of the proposed facility’s Nutrient Management Plan (NMP), which was received on May 26, 2020 and approved on September 11, 2020. The Conditional NMP Approval letter is attached to this Fact Sheet. The NMP can be accessed from the Department’s [Roth II webpage](#).
- Departmental review and consideration of a letter and supporting materials from Midwest Environmental Advocates, Re “Request for Environmental Impact Statement... for Roth Feed Pigs Proposed Expansion” dated November 23, 2020. Supporting materials included a petition and 31 documents and information sources on the potential effects of the proposed CAFO. The letter and supporting materials can be accessed from the Department’s [Roth II webpage](#).
- Hydrogeologic review of the Roth Feeder Pig II production area was conducted by an advanced hydrogeologist. A memorandum summarizing the review and findings, dated March 29, 2021, is attached to this Fact Sheet.

Sample Point Number	Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)	
001	Sample Point 001 is for the concrete reception tanks beneath the Farrowing Barn. There are 68 shallow tanks that collect manure and process wastewater through the slatted floors of the Farrowing Barn. The 6'2" by 84' by 2' tanks are used for short term storage and each gravity drain to the concrete waste storage facility beneath the Gestation Barn. Plans and specifications for the site were approved in August 2020. Earthwork is planned for fall 2021 and construction is planned for May 2022.	
002	Sample Point 002 is for the liquid waste storage facility beneath the Gestation Barn. The storage is a 170' by 557' by 10' concrete under-barn waste storage facility with a capacity of 5.4 million gallons. The storage accepts manure and process wastewater from the slatted floors of the Gestation Barn and from the Farrowing Barn Reception Tanks. This provides the Gestation and Farrowing Barns with 251 days of liquid storage capacity. A perimeter drain system exists around the storage. The drain tile outlet will be monitored for potential leakage. Plans and specifications for the site were approved in August 2020. Earthwork is planned for fall 2021 and construction is planned for May 2022.	
003	Sample Point 003 is for the liquid waste storage facility beneath the GDU Barn. The storage is a 69' by 312' by 10' concrete under-barn waste storage facility with a capacity of 1.24 million gallons. The storage accepts manure and process wastewater from the slatted floors of the GDU Barn. This provides the GDU Barn with 299 days of liquid storage capacity. A perimeter drain system exists around the storage. The drain tile outlet will be monitored for potential leakage. Plans and specifications for the site were approved in August 2020. Earthwork is planned for fall 2021 and construction is planned for May 2022.	
004	Sample Point 004 is for the mortality composting facility located to the north of the production barns. The roofed facility will contain four cells and is 24' x 15'-4" with 8' walls. This material will be sampled and applied in accordance with the approved nutrient management plan.	

# 1 Livestock Operations - Proposed Operation and Management

## Production Area Discharge Limitations

Beginning on the effective date of the permit, the permittee may not discharge pollutants from the operation's production area (e.g., manure storage areas, outdoor animal lots, composting and leachate containment systems, milking center wastewater treatment/containment systems, raw material storage areas) to navigable waters.

## Runoff Control

The permit requires control of contaminated runoff from all elements of the production area to prevent a discharge of pollutants to navigable waters in accordance with the Production Area Discharge Limitations and to comply with surface water quality standards and groundwater standards. Beginning on the effective date of this permit, (if needed) interim measures shall be implemented to prevent discharges of pollutants to navigable waters. In addition, permanent runoff control system(s) shall be designed, operated and maintained in accordance with the requirements found in USDA Natural Resources Conservation Service standards and ch. NR 243, Wis. Adm. Code. If any upgrading or modifications to runoff controls are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

## Manure and Process Wastewater Storage

The permit requires the operation to have adequate storage for manure and process wastewater and that storage or containment facilities are designed, operated and maintained to prevent overflows and discharges to waters of the state. In order to prevent overflows, the permittee must maintain levels of materials in liquid storage or containment facilities at or below certain levels including a one-foot margin of safety that can never be exceeded. If any upgrading or modifications

to the storage facilities are necessary, formal engineering plans and specifications must be submitted to the Department for approval.

The permittee currently has approximately nine months of storage for liquid manure. The permittee will be required to design and construct 180 days of liquid manure storage. Once the permittee has 180 days of liquid manure storage, it must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

### **Ancillary Service and Storage Areas**

The permittee shall take preventative maintenance actions and conduct visual inspections to minimize pollutant discharges from areas of the operation that are not part of the production area or land application areas. These areas are called ancillary service and storage areas and include access roads, shipping and receiving areas, maintenance areas, refuse piles and CAFO outdoor vegetated areas.

### **Nutrient Management**

With 2981 swine animal units, it is estimated that approximately 9.4 million gallons of manure and process wastewater will be produced per year. The permittee owns *approximately* 67.4 acres of cropland and rents about 1387.9. The permit requires all landspreading of manure and process wastewater be completed in accordance with an approved nutrient management plan. The permit will require sampling and analysis of manure and process wastewater that will be landspread. Landspreading rates must be adjusted based on sample analysis. The permit requires the permittee to maintain a daily log that documents landspreading activities. The permit also requires the submittal of an annual report that summarizes all landspreading activities. Plans must be updated annually to reflect cropping plans and other operational changes. Among the requirements, the plans must include detailed landspreading information including field by field nutrient budgets.

The permittee is required to implement a number of practices to address potential water quality impacts associated with the land application of manure and process wastewater. Among the permit conditions are restrictions on manure ponding, restrictions on runoff of manure and process wastewater from cropped fields, and setbacks from wells and direct conduits to groundwater (e.g., sinkholes, fractured bedrock at the surface). In addition, the permittee must implement a phosphorus based nutrient management plan that addresses phosphorus delivery to surface waters by basing manure and process wastewater applications on soil test phosphorus levels or the Wisconsin Phosphorus index. Additional phosphorus application restrictions apply to fields that are high in soil test phosphorus (>100 ppm).

The permittee must also implement conservation practices when applying manure near navigable waters and their conduits, referred to as the Surface Water Quality Management Area (SWQMA). These practices include a 100-foot setback from navigable waters and their conduits, a 35-foot vegetated buffer adjacent to the navigable water or conduit, or a practice that provides equivalent pollutant reductions equivalent to or better than the 100-foot setback.

In addition, the permittee must comply with restrictions on land application of manure and process wastewater on frozen or snow-covered ground. Included in these restrictions is a prohibition on surface applications of solid manure ( $\geq 12\%$  solids) on frozen or snow-covered ground during February and March. Non-emergency surface applications of liquid manure ( $< 12\%$ ) on frozen or snow-covered ground are prohibited.

### **Monitoring and Sampling Requirements**

The permittee must submit a monitoring and inspection program that outlines how the permittee will conduct self-inspections to determine compliance with permit conditions. These self-inspections include visual inspections of water lines, diversion devices, storage and containment structures and other parts of the production area. The permit requires periodic inspections and calibrations of landspreading equipment. The permittee must take corrective actions to problems identified inspections or otherwise notify the Department. Samples of manure, process wastewater and soils receiving land applied materials from the operation must also be collected and analyzed.

## Sampling Points

The permit identifies the different sources of land applied materials (e.g., manure storage facilities, milking centers, egg-washing facilities) as “Sampling Points.” For these Sampling Points, the permittee is required to sample and analyze the different sources for nutrients and other parameters which serve as the basis for determining rates of application for these materials. Other areas are also identified as Sampling Points as a means of identifying them as areas requiring action by the permittee, such as an upgrade or evaluation of a certain system or structure (e.g., runoff control systems), even though sampling is not actually required.

### Sample Point Number: 001- Farrowing Barn Reception Tanks; 002- Gestation Barn WSF; 003- GDU Barn WSF

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lb/1000gal	2/Month	Grab	
Nitrogen, Available		lb/1000gal	2/Month	Calculated	
Phosphorus, Total		lb/1000gal	2/Month	Grab	
Phosphorus, Available		lb/1000gal	2/Month	Calculated	
Solids, Total		Percent	2/Month	Grab	

#### 1.1.1 Explanation of Operation and Management Requirements

These sample points are for the under-barn liquid manure and process wastewater storage facilities. Manure/process wastewater from these structures shall be analyzed for nutrient content twice per month that land application occurs. Manure/process wastewater is to be land applied in accordance with the operation’s approved nutrient management plan.

### Sample Point Number: 004- Compost Facility

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total		lbs/ton	Quarterly	Grab	
Nitrogen, Available		lbs/ton	Quarterly	Calculated	
Phosphorus, Total		lbs/ton	Quarterly	Grab	
Phosphorus, Available		lbs/ton	Quarterly	Calculated	
Solids, Total		Percent	Quarterly	Grab	

#### 1.1.2 Explanation of Operation and Management Requirements

This sample point is for the mortality composting facility. Solids from this facility shall be analyzed for nutrient content once per quarter that land application actually occurs. Land application of compost material shall be conducted in accordance with the operation's approved nutrient management plan.

## 2 Schedules

### 2.1 Emergency Response Plan

Required Action	Due Date
Develop Emergency Response Plan: Develop a written Emergency Response Plan within 30 days of permit coverage, available to the Department upon request.	07/01/2022

### 2.2 Monitoring & Inspection Program

Required Action	Due Date
Proposed Monitoring and Inspection Program: Consistent with the Monitoring and Sampling Requirements subsection, the permittee shall submit a proposed monitoring and inspection program within 90 days of the effective date of this permit.	09/01/2022

### 2.3 Annual Reports

Submit Annual Reports by January 31st of each year in accordance with the Annual Reports subsection in Standard Requirements.

Required Action	Due Date
Submit Annual Report #1:	01/31/2023
Submit Annual Report #2:	01/31/2024
Submit Annual Report #3:	01/31/2025
Submit Annual Report #4:	01/31/2026
Submit Annual Report #5:	01/31/2027
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

### 2.4 Nutrient Management Plan

Required Action	Due Date
Management Plan Annual Update #1: Submit an Annual Update to the Nutrient Management Plan by March 31st of each year. Note: In addition to Annual Updates, submit Management Plan Amendments to the Department for written approval prior to implementation of any changes to nutrient management practices, in accordance with the Nutrient Management requirements in the Livestock Operational and Sampling Requirements section.	03/31/2023

Management Plan Annual Update #2: Submit an Annual Update to the Nutrient Management Plan.	03/31/2024
Management Plan Annual Update #3: Submit an Annual Update to the Nutrient Management Plan.	03/31/2025
Management Plan Annual Update #4: Submit an Annual Update to the Nutrient Management Plan.	03/31/2026
Management Plan Annual Update #5: Submit an Annual Update to the Nutrient Management Plan.	03/31/2027
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

## 2.5 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	12/01/2026

## 2.6 Explanation of Schedules

These schedules are typical for CAFO permittees. Annual reports are submitted to ensure the permittee is following it's monitoring and inspection program. Nutrient management plan updates are submitted to ensure the permittee is following it's approved nutrient management plan.

## Attachments:

Nutrient Management Plan Conditional Approval Letter  
Design Plans and Specifications Conditional Approval Letter  
Storm Water Erosion Control General Permit Coverage Letter  
Hydrogeologic Review Memo

## Proposed Expiration Date:

May 31, 2027

## Prepared By:



**Tyler Dix**

**CAFO Permit Coordinator**

**Date:** April 28, 2022



September 11<sup>th</sup>, 2020

Crawford County  
Approval

Howard Roth  
Roth Feeder Pig II, Inc  
31961 Hummingbird Ln  
Wauzeka, WI 53826

SUBJECT: Conditional Approval of Roth Feeder Pig II, Inc Nutrient Management Plan, WPDES Permit No. 0063274-01-0

Dear Mr. Roth:

After completing a review of Roth Feeder Pig II, Inc 2020-2024 Nutrient Management Plan (NMP) the Wisconsin Department of Natural Resources (Department) is providing conditional approval that it is consistent with s. NR 243.14, Wis. Adm. Code. This part of your WPDES permit application is now ready for the public notice and comment process as required by Ch. 283 Stats.

Before applying manure onto approved fields each season, the Department recommends Roth Feeder Pig II, Inc review the NMP with those individuals involved with manure applications to ensure all remain familiar with the approved manure spreading protocol, spreading maps, field and map verification, record keeping requirements, and all the conditions of this approval. Specifically, some fields in Roth Feeder Pig II, Inc may have:

- Soils that may have bedrock or groundwater within 24 inches of surface,
- Multiple setback areas due to streams, conduits to streams, grassed waterways, wetlands or wells, and
- Evidence of possible soil erosion/flow channels. Note: road ditches or other man made channels may be considered flow channels or conduits to navigable water and may be subject to a SWQMA and setback.

Reviewing the NMP and checking fields for these features and soil conditions prior to manure applications will help Roth Feeder Pig II, Inc maintain compliance with their WPDES permit and Ch. NR 243 requirements.

### FINDINGS OF FACT

The Department confirms that:

1. A planned swine herd size of 2,981 animal units (5,144 sows, 2,008 pigs 55 lbs to market, 960 pigs up to 55 lbs, and 48 boars).
2. Manure generation and spreading records indicate your herd will annually generate approximately 9,427,053 gallons of manure and process wastewater and 0 tons of solid manure. It is noted this generation would not occur until 2022 once the farm is populated and running.
3. The use of application restriction options 2 and 5 within surface water quality management areas.
4. The use of phosphorus delivery method P Index.
5. That Roth Feeder Pig II, Inc currently has 1,455.30 acres (67.40 owned and 1,387.90 controlled through contracts, rental agreements or leases, or under manure agreements) of which 1,435.40 are spreadable acres.



6. That some fields included in the NMP are directly adjacent to or have high potential to deliver nutrients and sediment to Kickapoo River (listed 303(d) impaired water by 'total phosphorus').
7. That no fields are directly adjacent to or have high potential to deliver nutrients and sediment to outstanding/exceptional waters.
8. That Roth Feeder Pig II, Inc will have two waste storage facilities for the storage of liquid manure, process wastewater and rainfall. The Gestation Barn provides 251 days of storage, and the GDU Barn will provide 299 days of storage.

	<i>Maximum Operating Level (MOL) Volume</i>
Gestation Barn	5,441,171 gal
GDU Barn	1,240,008 gal

9. That no fields are tiled.
10. That all fields will be checked for the following features prior to/during manure or process wastewater applications: soil areas with possible shallow groundwater (i.e., within 24 inches of surface) at the time of manure application; required setbacks associated with wells, navigable waters, conduits to navigable waters, grassed waterways, wetlands, possible soil erosion/flow channels.
11. That surface applications of manure will not be completed when precipitation capable of producing runoff is forecasted within 24 hours of the time of planned application.

### **CONDITIONAL NUTRIENT MANAGEMENT PLAN APPROVAL**

The Department hereby approves the 2020-2024 Roth Feeder Pig II, Inc Nutrient Management Plan subject to the following conditions and the applicable requirements of Ch. NR 243, Wis. Adm. Code:

#### FIELD AND MANURE MANAGEMENT

1. Fields not included in the NMP and new fields shall not receive manure or process wastewater applications until they have been properly soil sampled, entered into Snap Plus, evaluated for their nutrient needs, and approved by the Department.
2. If existing fields yield a soil test results greater than 200 ppm P, those fields would be prohibited from receiving manure or process wastewater applications, unless you obtain Department approval in accordance with NR 243.14(5)(b)2., Wis. Adm. Code.
3. All liquid manure samples collected may be analyzed, at a minimum, for percent dry matter, total nitrogen, percent NH<sub>4</sub>-N, percent NO<sub>3</sub>-N, phosphorus, potassium, and sulfur.
4. If manure sample results have a dry matter (DM) content less than 2.0% and the percent ammonium (NH<sub>4</sub><sup>+</sup>) is greater than 75% of the total N, Roth Feeder Pig II, Inc may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

$$\text{First-Year Available N} = \text{NH}_4\text{-N} + [0.25 \times (\text{Total N} - \text{NH}_4\text{-N})]$$

5. Roth Feeder Pig II, Inc shall record daily manure applications by using the Snap Plus Daily Log template. These forms shall be retained at the farm and provided to the department upon request.
6. Roth Feeder Pig II, Inc shall annually submit a spreading report that summarizes the land application activities listed under NR 243.19(3)(c)5., Wis. Adm. Code by using form Snap Plus Annual Reports.

### WINTER SPREADING

7. Liquid manure applications during winter conditions, as defined by NR 243.14(7), Wis. Adm. Code, are prohibited with the exception of emergency applications.
8. As an emergency winter spreading strategy, the farm will utilize storage from an existing permitted operation named Roth Feeder Pig, Inc. Roth Feeder Pig, Inc and Roth Feeder Pig II, Inc will maintain at least 1,000,000 gallons of storage for a winter contingency plan, which equivalates out to 38 days of manure production. This will be evaluated on an annual basis by November 30<sup>th</sup> of each year, Roth Feeder Pig, Inc and Roth Feeder Pig II, Inc will document that there is 180 days of storage available and the additional minimum of 1,000,000 gallons of storage for an emergency winter plan. The department concurs with this plan and will review annually through the Annual Update provided from the farm.
9. Winter spreading of solid and liquid manure may not occur during the “high risk runoff period” pursuant to s. NR 243.14(6)(c) and NR 243.14(7)(c), respectively.
10. Winter applications of liquid manure shall only occur under emergency situations, after notifying the Department and receiving verbal approval.
11. Liquid applications shall be limited to 3,500 gallons per acre or 30 lbs. P per acre, whichever is less, on slopes 2-6% and 7,000 gallons per acre or 60 lbs. P per acre, whichever is less, on slopes 0-2%. Winter applications of solid manure shall be limited to 60 lbs. P per acre.

### HEADLAND STACKING

12. No headland stacking sites are approved.

### MANURE & PROCESS WASTEWATER IRRIGATION

13. Irrigation of manure or process wastewater is prohibited.

### SUBMITAL AND RECORDKEEPING REQUIREMENTS

14. A copy of this conditional approval shall be included in all future annual Nutrient Management Plan Updates in addition to the NR 243 and NRCS 590 checklists.

This conditional approval does not limit the Department’s regulatory authority to require NMP revisions (based upon new information or manure irrigation research findings) or request additional information in order to confirm or ensure your farm operation remains in compliance with NR 243 and your WPDES permit conditions. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the Department may ask you to provide further information relating to this activity.

Please keep in mind that approval by the Department of Natural Resources – Runoff Management Program does not relieve you of obligations to meet all other applicable federal, state or local permits, zoning and regulatory requirements.

If you have any questions regarding this approval I can be reached at 608-212-8460 or [Ashley.Scheel@Wisconsin.gov](mailto:Ashley.Scheel@Wisconsin.gov).

Sincerely,

A handwritten signature in black ink that reads "Ashley Scheel". The signature is written in a cursive, flowing style.

Ashley Scheel, CCA  
WDNR Nutrient Management Plan Reviewer  
Wisconsin Department of Natural Resources

cc: Claire O'Connell, WDNR Agricultural Runoff Specialist ([Claire.OConnell@Wisconsin.gov](mailto:Claire.OConnell@Wisconsin.gov))  
Laura Bub, WDNR Watershed Field Supervisor ([Laura.Bub@Wisconsin.gov](mailto:Laura.Bub@Wisconsin.gov))  
Tyler Dix, CAFO Program Coordinator ([Tyler.Dix@Wisconsin.gov](mailto:Tyler.Dix@Wisconsin.gov))  
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Aaron O'Rourke, WDNR Nutrient Management Program Coordinator ([Aaron.Orourke@Wisconsin.gov](mailto:Aaron.Orourke@Wisconsin.gov))  
Tony Salituro, WDNR Intake Specialist ([Anthony.Salituro@Wisconsin.gov](mailto:Anthony.Salituro@Wisconsin.gov))  
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Nikki Wagner, Insight FS ([Nwagner@Insightfs.com](mailto:Nwagner@Insightfs.com))  
File



August 5, 2020

FILE REF: R-2020-0089  
WPDES Permit #: WI-

Howard Roth  
Roth Feeder Pig II  
31961 Hummingbird Lane  
Wauzeka, WI 53826

Subject: Conditional Approval of Plans & Specifications for three under barn storages, waste transfer and a mortality compost building at SW¼, Sec 20, T8N, R4W, Marietta Township, Crawford County

Dear Mr. Rost:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has reviewed and conditionally approves the above referenced plans and specifications, submitted by Robert Pofahl, P.E., Resource Engineering Associates Inc. and received on April 30, 2020 with revisions received on July 27, Aug. 3, 4, and 5, 2020. A 7 day review period extension was requested on July 29, 2020. The review was conducted in accordance with s. 281.41 Wis. Stats., chs. NR 151 and NR 243, Wis. Adm. Code, and applicable NRCS Standards. The attached Engineering Report describes the project, lists standards that apply and provides compliance analysis. Questions may be directed to the regional office, or the review engineer Bernie Michaud, DNR Madison Office (contact information is at the end of this letter).

**Proposed Project:** The proposed project is a new swine farrowing facility. There will be underbarn storages below the farrowing barn, gestation barn and the gilt development unit (GDU) barn. There will be a waste transfer pipe between the farrowing barn and gestation barn storages. There will be a mortality composting building.

**Conditions of Approval:** The plans and specifications for project number R-2020-0089 are hereby approved and subject to chs. NR 151 and NR 243, Wis. Adm. Code, and the conditions listed below:

**Construction:**

1. **Farrowing Barn Construction:** The Farrowing Barn manure tanks should be constructed with embedded waterstop which meets the requirements of NRCS Specification 4-WS (5/2018).
2. **Revisions:** If revisions are made to the approved plans and specifications, revised plans and specifications shall be submitted for approval modification, in accordance with ss. NR 108.03 and NR 108.04, Wis. Adm. Code, and s. 281.41(1)(c), Wis. Stats. Submit revised plans and specifications via the Department's e-Permitting System. **Note:** This includes revisions for local permitting. If a formal approval modification may not be warranted, contact the review engineer to confirm.
3. **Approval Period:** In accordance with ss. NR 243.15(1)(a)1., and NR 108.04(2)d., Wis. Adm. Code, if construction is not commenced within 2 years from the approval date, the approval is void, and a new approval must be obtained prior to commencing construction.
4. **Notification:** Prior to construction and when construction is complete, notify the DNR regional contact and county contact provided a copy of the approval (contact information is at the end of this letter).
5. **Inspection:** During the construction of critical components, inspection shall be performed by a Wisconsin registered professional engineer or other qualified third party (excludes the owner and construction contractor and their employees).
6. **Post-Construction Documentation:** In accordance with the permit, a post-construction report must be submitted to the DNR's e-Permitting website (<http://dnr.wi.gov/permits/water>) within 60 days of

completing construction. The report must include documentation specified by s. NR 243.15(10), Wis. Adm. Code.

**Limitation of Approval:** The DNR reserves the right to order changes or additions should conditions arise making this necessary. This approval is not to be construed as a DNR determination on the issuance of a Wisconsin Pollutant Discharge Elimination System Permit or opinion as to the ability of the proposed system to comply with effluent limitations in such a permit, approval of an Environmental Impact Statement that may be prepared, or approval for any activities requiring a permit under chs. 30 or 31, Wis. Stats. Where necessary, plans and specifications should be submitted to the Department of Safety and Professional Services (formerly Department of Commerce) or other state or local agencies to ensure conformance with applicable codes or regulations of such agencies.

**Tax Treatment:** Tangible personal property, that becomes part of a waste treatment of pollution abatement plant or equipment, may be exempt from sales tax under s. 77.45(26), Wis. Stats. Similarly, property purchased or constructed as a waste treatment facility and used for industrial waste treatment may be exempt from general property taxes under s. 70.11(21), Wis. Stats. A prerequisite to exemption is filing a statement on prescribed forms. To obtain the forms, and information about this sales tax exemption, please contact the Department of Revenue, P.O. Box 8933, Madison, WI 53708, or check their website <http://www.revenue.wi.gov/>.

### NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to WIS. STAT. §§ 227.52 and 227.53, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to WIS. STAT. § 227.42, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with WIS. ADMIN. CODE § NR 2.05(5), and served on the Secretary in accordance with WIS. ADMIN. CODE § NR 2.03. The filing of a request for a contested case hearing does not extend the 30-day period for filing a petition for judicial review.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
For the Secretary



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Bernie Michaud, P.E.  
CAFO Engineer Supervisor  
Watershed Management Program

Enclosures: State of Wisconsin Engineering Report

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Howard Roth – Roth Feeder Pig II  
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Laura A Bub - DNR, South Central Region  
(608) 712-5249; Laura.Bub@wisconsin.gov

Aaron O'Rourke; DNR, Eau Claire  
(715) 839-3775; aaron.orourke@wisconsin.gov

**WISCONSIN DEPARTMENT OF NATURAL RESOURCES ENGINEERING REPORT****GENERAL INFORMATION****Farm Name:** Roth Feeder Pigs II**WPDES Permit#:** WI-**Location Address:** 31961 Hummingbird Ln, Wauzeka, WI  
53826**DNR Project #:** 2020-0089**Project Status:** Design and Planning – Proposed Construction in 2021**Engineering Plans Certified by:**

Robert Pofahl, P.E.

**Initial Submittal:**

April 30, 2020

**Revised Submittal(s):**July 27 and Aug. 3, 4 and, 5  
2020**Site Assessment:** The proposed production area is on top of a hill. There is an intermittent stream approximately 1500 ft. south of the southernmost building; this stream drains approximately 5,600 ft to Leggett Creek. The nearest wetland is approximately 3000 ft to the northwest adjacent to the Kickapoo River.

Karst features were screened for using a lidar hill shade relief map provided by the Wisconsin Geological and Natural History Survey. The only depression on this map is to the northwest of the project area and is a constructed pond adjacent to a residence. This map also shows a berm crossing the head of a gully on the southwest side of the production area. This berm has a pipe going through it and was likely constructed as an NRCS type grade control structure. Mapping of springs provided by Crawford County shows springs along the banks of the Kickapoo River, with the nearest one approximately 2500 ft to the northwest. No karst features were found within 1,000 ft of the proposed facilities or systems.

No ground water supply wells are located within 250 feet of the proposed facilities or system. Well construction reports for adjacent properties show the groundwater is at a depth of 215 ft and 346 ft deep.

The project site will have a clean storm water collection system which will pipe storm water to storm water basins on the east and west side of the project area. The pipes are sized to convey the 25-yr peak flow. The storm water basins are sized for the 100-yr storm.

Twenty three soil test pits were conducted in the project area. Soil observations in the area generally indicate the following soil profile: topsoil, silty clay, fat clay, some test pits had sand to silty gravel, and then bedrock. A soils analysis on three samples show the percent fines ranging from 69 to 91 and the plasticity index ranging from 7 to 31. Saturation was not found in the test pits.

The site is at the top of a hill and the bedrock depth in the test pits encountered bedrock at depths ranging from 5.5 ft to 18.5 ft. The bedrock was generally dolomite and two test pits indicated sandstone. The Bedrock Geologic Map of Wisconsin showed the project area to be in the Prairie du Chien Group bedrock unit. Excavation of bedrock will be required under the Farrowing Barn and GDU Barn in order to provide the required separation below the bottom of the liquid waste structures.

**Proposed Facilities:**

**GDU Barn Waste Storage** The proposed design was submitted to meet NRCS 313 (10/17R), NRCS 522, Table 2, Column A and Table 3, Column A(10/17R)). The design is in compliance with s. NR 243.15(3), Wis. Adm. Code. The GDU barn will be located on the east side of the production area. Below is a summary of what is proposed.

**Analysis:** The proposed vertical walled rectangular shaped waste storage under the GDU Barn will be 69 ft x 312 ft x 10 ft deep. The liner will be cast in place concrete with embedded waterstop in the wall to foundation joints and the wall control joints (which carry through the slab). The walls will be 10-inches thick and the floor will be 6-inches thick. A perimeter draitile will be installed along the base of the wall to remove excess site moisture. The draitile outlet will be monitored for potential leakage.

The floor slab is designed according to the NRCS 522, Table 3, Column A, which allows for a separation distance to bedrock of 1.5 ft. This table is for waste storage facilities in Sensitive Environmental Settings (SES), as defined in NRCS 313. The project area is considered an SES site in places because the typical bedrock separation requirments are not met. Soil test pits indicate that bedrock excavation will be required for this facility. The walls are designed according to NRCS 522, Table 2, Column A, which has a bedrock separation requirement of 2.5 ft. which is achieved.. Below the floor slab will be a soil liner layer 1 ft thick with a P200 > 20% and a PI >7.

The proposed storage will have a maximum operating level (MOL) volume of 1.24 MG and will provide the GDU Barn a total of 299 days of storage. The floor elevation will be 994.5 ft and the MOL elevation will be 1003.5 ft.

**Gestation Barn Waste Storage** The proposed design was submitted to meet NRCS 313 (10/17R), NRCS 522, Table 2, Column A and Table 3, Column A(10/17R)). The design is in compliance with s. NR 243.15(3), Wis. Adm. Code. The Gestation barn will be located on the south side of the production area. Below is a summary of what is proposed.

**Analysis:** The proposed vertical walled rectangular shaped waste storage under the Gestation Barn will be 170 ft x 557 ft x 10 ft deep. The liner will be cast in place concrete with embedded waterstop in the wall to foundation joints and the wall control joints (which carry through the slab). The walls will be 10-inches thick and the floor will be 6-inches thick. A perimeter draitile will be installed along the base of the wall to remove excess site moisture. The draitile outlet will be monitored for potential leakage.

The floor slab is designed according to the NRCS 522, Table 3, Column A, which allows for a separation distance to bedrock of 1.5 ft. This table is for waste storage facilities in Sensitive Environmental Settings (SES), as defined in NRCS 313. The project area is considered an SES site in places because the typical bedrock separation requirments are not met. Soil test pits indicate that bedrock excavation may not be necessary but this design criteria was applied to this slab anyway. The walls are designed according to NRCS 522, Table 2, Column A, which has a bedrock separation requirement of 2.5 ft. Below the floor slab will be a soil liner layer 1 ft thick with a P200 > 20% and a PI >7.

The proposed storage will have a maximum operating level (MOL) volume of 5.4 MG and will provide the Gestation and Farrowing Barns a total of 251 days of storage. The floor elevation will be 994.5 ft and the MOL elevation will be 1003.5 ft.

**Farrowing Barn Waste Storage** The proposed design was submitted to meet NRCS 313 (10/17R), NRCS 522, Table 2, Column A and Table 3, Column A(10/17R)). The design is in compliance with s. NR 243.15(3), Wis. Adm. Code. The Farrowing Barn will be located to the north of the Gestation Barn. Below is a summary of what is proposed.

**Analysis:** The Farrowing Barn Waste Storage consists of 64 narrow, shallow tanks covered with slatted floors. The tanks are 6-ft 2-inches wide, approximately 84 ft long and 2 ft deep. The tanks share a common 6-inch thick concrete slab with waterstop floor and are separated by elevated walkways constructed of concrete. The tanks are flushed frequently into their individual riser pipes which convey the manure to the Gestation Barn Waste Storage. The floor elevation will be 1004.5 ft and the top of the tank will be 1006.5 ft. These tanks are considered reception tanks, not liquid waste storage facilities



because they are not used for long term storage and waste will not accumulate more than 1 ft deep. Nevertheless, the tanks were designed according to the NRCS liquid waste storage design criteria.

The floor slab is designed according to the NRCS 522, Table 3, Column A, which allows for a separation distance to bedrock of 1.5 ft. This table is for waste storage facilities in Sensitive Environmental Settings (SES), as defined in NRCS 313. The project area is considered an SES site in places because the typical bedrock separation requirements are not met. Soil test pits indicate that bedrock excavation will be required for this facility. The walls are designed according to NRCS 522, Table 2, Column A, which has a bedrock separation requirement of 2.5 ft. which is achieved. Below the floor slab will be a soil liner layer 1 ft thick with a P200 > 20% and a PI > 7.

The structural design plans specified an older version of embedded waterstop which does not meet the current NRCS Specifications. To keep the design consistent with the NRCS 522 Standard, a condition of approval to require waterstop to meet current NRCS specifications is recommended.

### **Transfer Pipe**

**Standard:** Design is in compliance with NRCS Standard 634 (1/2014)

**Standard:** Design is in compliance with s. NR 243.15(4), Wis. Adm. Code

**Analysis:** The main transfer pipe is a 281 ft. long, 10-inch diam. PVC gravity flow pipe which runs from the north side of the Farrowing Barn and runs south under the barn to discharge into the Gestation Barn Storage. There are four lateral lines which run perpendicular to the main line collecting manure via riser pipes from each individual Farrowing Barn Waste Storage tank. These lateral lines are also 10-inch diam. PVC gravity flow pipe.

### **Composting Building(New)**

**Standard:** Design is in compliance with NRCS Standards 313 (10/2017R) and NRCS 522, Table 2, Column A (10/2017R).

**Standard:** Design is in compliance with s. NR 243.15(8) and NR 502.12, Wis. Adm. Code

**Analysis:** The Composting Building is for composting mortalities and is located southwest of the Gestation Barn. It has a 6-inch thick cast in place concrete floor. In-situ soils below the floor exceed the requirements of at least 2 ft of soil with at least 20% fines.

**DAYS OF AVAILABLE LIQUID WASTE STORAGE:** The submitted information states that Roth Feeder Pig II will have a proposed 251 days of liquid waste storage in the Gestation Barn Waste Storage Facility and 299 days of liquid waste storage in the GDU Barn Waste Storage Facility. This is based on the volumes listed in the table below with respect to s. NR 243.15(3)(i) to (k), Wis. Adm. Code. The manure from; 960 sows with litter, 960 nursery pigs, 4184 gestation pigs, 48 boars, and 328 gilts will enter the Gestation Barn waste storage. The manure from 1680 gilts will enter the GDU waste storage.

Gestation Barn Annual Manure Volume	7,913,430 gal.
Gestation Barn WSF MOL Vol.	5,441,171 gal.
GDU Barn Annual Manure Volume	1,513,623 gal.
GDU Barn WSF MOL Vol.	1,240,008 gal.

**PURPOSE OF THIS REPORT:** This report documents review of plans and specifications for each structure or practice indicated below, including findings regarding the structure or practice's compliance with applicable standards. The reviewer considered if management and site assessment were conducted, documented, and reflected in the final design, and if proper construction and related plans (operation and

maintenance, inspection, erosion control if applicable) were provided, and demonstrated compliance with applicable rules standards.

**DECISION RECOMMENDATION:** Based on my review completed on May 21, 2020, the proposed plans and specifications meet ch. NR 243, Wis. Adm. Code, and applicable NRCS Standards. Therefore, I recommend the plans and specifications be conditionally approved (justification provided). The plans for the Farrowing Barn manure tanks show an older version of embedded waterstop which no longer meets the NRCS criteria. It is recommended that the Farrowing Barn manure tanks be constructed with embedded waterstop which meets the requirements of NRCS Specification 4-WS (5/2018) so the structure will be compliant with NRCS 522.



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Bernie Michaud, P.E.

Water Resources Engineer



March 29, 2021

Howard (AV) Roth  
31961 Hummingbird Ln  
Wauzeka WI 53826  
Via email: avroth@aol.com

SUBJECT: Coverage Under WPDES General Permit No. WI-S067831-05: Construction Site Storm Water Runoff  
Permittee Name: Howard Roth  
Site Name: Roth Feeder Pig II  
FIN: 71655

Dear Permittee:

The Wisconsin Department of Natural Resources received your Notice of Intent, on April 30, 2020, for the Roth Feeder Pig II site and has evaluated the information provided regarding storm water discharges from your construction site. We have determined that your construction site activities will be regulated under ch. 283, Wis. Stats., ch. NR 216, Wis. Adm. Code, and in accordance with Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-S067831-05, Construction Site Storm Water Runoff. All erosion control and storm water management activities undertaken at the site must be done in accordance with the terms and conditions of the general permit.

The **Start Date** of permit coverage for this site is March 29, 2021. The maximum period of permit coverage for this site is limited to 3 years from the **Start Date**. Therefore, permit coverage automatically expires and terminates 3 years from the Start Date and storm water discharges are no longer authorized unless another Notice of Intent and application fee to retain coverage under this permit or a reissued version of this permit is submitted to the Department 14 working days prior to expiration.

A copy of the general permit along with extensive storm water information including technical standards, forms, guidance and other documents is accessible on the Department's storm water program Internet site. To obtain a copy of the general permit, please download it and the associated documents listed below from the following Department Internet site:

<http://dnr.wi.gov/topic/stormwater/construction/forms.html>

- Construction Site Storm Water Runoff WPDES general permit No. WI-S067831-05
- Construction site inspection report form
- Notice of Termination form

If, for any reason, you are unable to access these documents over the Internet, please contact me and I will send them to you.

To ensure compliance with the general permit, please read it carefully and be sure you understand its contents. Please take special note of the following requirements (This is not a complete list of the terms and conditions of the general permit.):

1. The Construction Site Erosion Control Plan and Storm Water Management Plan that you completed prior to submitting your permit application must be implemented and maintained throughout construction. Failure to do so may result in enforcement action by the Department.

2. The general permit requires that erosion and sediment controls be routinely inspected at least every 7 days, and within 24 hours after a rainfall event of 0.5 inches or greater. Weekly written reports of all inspections must be maintained. The reports must contain the following information:

- a. Date, time, and exact place of inspection;
- b. Name(s) of individual(s) performing inspection;
- c. An assessment of the condition of erosion and sediment controls;
- d. A description of any erosion and sediment control implementation and maintenance performed;
- e. A description of the site's present phase of construction.

3. A **Certificate of Permit Coverage** must be posted in a conspicuous place on the construction site. The Certificate of Permit Coverage (WDNR Publication # WT-813) is enclosed for your use.

4. When construction activities have ceased and the site has undergone final stabilization, a Notice of Termination (NOT) of coverage under the general permit must be submitted to the Department.

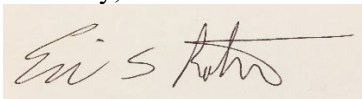
It is important that you read and understand the terms and conditions of the general permit because they have the force of law and apply to you. Your project may lose its permit coverage if you do not comply with its terms and conditions. The Department may also withdraw your project from coverage under the general permit and require that you obtain an individual WPDES permit instead, based on the Department's own motion, upon the filing of a written petition by any person, or upon your request.

If you believe that you have a right to challenge this decision to grant permit coverage, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to s. 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with s. NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with s. NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Thank you for your cooperation with the Construction Site Storm Water Discharge Permit Program. If you have any questions concerning the contents of this letter or the general permit, please contact Eric Rortvedt at (608) 273-5612.

Sincerely,



Eric S. Rortvedt, P.E.  
South Central Region  
Water Resources Engineer

ENCLOSURE: Certificate of Permit Coverage

Cc: Dan Wierzba, REA (via email)



# CERTIFICATE OF PERMIT COVERAGE

## UNDER THE WPDES CONSTRUCTION SITE STORM WATER RUNOFF PERMIT Permit No. WI-S067831-05

Under s. NR 216.455(2), Wis. Adm. Code, landowners of construction sites with storm water discharges regulated by the Wisconsin Department of Natural Resources (WDNR) Storm Water Permit Program are required to post this certificate in a conspicuous place at the construction site. This certifies that the site has been granted WDNR storm water permit coverage. The landowner must implement and maintain erosion control practices to limit sediment-contaminated runoff to waters of the state in accordance with the permit.

## EROSION CONTROL COMPLAINTS should be reported to the WDNR Tip Line at **1-800-TIP-WDNR (1-800-847-9367)**

Please provide the following information to the Tip Line:

**WDNR Site No. (FIN): 71655**

**Site Name: Roth Feeder Pig II**

**Address/Location: Harvest Lane Wauzeka, Town of MARIETTA**

Additional Information:

**Landowner: Howard Roth**

**Landowner's Contact Person: Howard (AV) Roth**

**Contact Telephone Number: (608) 476-2377**

**Permit Start Date: March 29, 2021**

**By:**

DATE: March 19, 2021

FILE REF: Roth Feeder II

TO: Tyler Dix – WT/3

FROM: Steve Ales – RR/5

SUBJECT: Hydrogeologic Review of Roth Feeder Pig II Production Area

Tyler:

I've had a chance to review the soils, geology, hydrogeology, and available water quality information near the proposed Roth Feeder Pig II (Roth II) Concentrated Animal Feeding Operation (CAFO) production area. The Roth II production area is proposed to be in the SW ¼ of Sec. 20, T8N, R4W, Marietta Township, Crawford County. The production area would be on south side of Harvest Lane, Wauzeka, WI just to the west of Pine Lane. The production area structures would consist of a farrowing barn, gestation barn, gilt development unit, a composting building and a storage shed.

The Roth II production area would be in the “driftless area” of Wisconsin, an area unglaciated during periods of glacial expansion in North America that covered much of the state. The absence of glaciation and deposition of glacially deposited “drift” soils in the driftless area has resulted in a landscape characterized by upland ridges and stream cut valleys. The proposed production area is located near the top of an east west trending ridge labeled on topo maps as Niland Ridge.

- 1) **Soils, depth to bedrock, bedrock type in the vicinity of Roth II** – Twenty-three (23) soil borings completed on the site indicate the surficial soils to be clay (CL). Borings logs show that in many places beneath the surficial clay soils there are silty soils (ML). A few of the borings indicate that silty sand or sand was found above bedrock. Soil depth ranges from 6' to as much as 18' over the top of the bedrock. Dolomite bedrock was found in all but two of the boring logs. Sandstone was found in those locations. Information from two well construction reports (KB525 and SJ643) adjacent the property indicate that limestone/dolomite is present from below the clay soils to a depth of approximately 260 feet. Well KB525 is located approximately 1400' west of the proposed production area. Well SJ643 is located approximately 1300' east of the proposed production area. About 30' of sandstone was found in KB525 but no sandstone was found in SJ643. A hard shale unit is described in both logs as being present in the bottom 200+ feet of each well. No surficial karst features appear to be present near the facility based on a review of aerial photos from approximately 2000 – 2018 present on the DNR's RR Sites Map database.
- 2) **Regional/local groundwater flow in the vicinity of Roth Feeder Pig II** – Construction reports for the two adjacent wells indicate that the immediate area around the proposed facility is unsaturated with the reported well static water level over 300 feet below the ground surface. The reported well static water level is 308' below ground surface in KB525 and 346' below ground surface in SJ643. This depth to water is not uncommon in this part of Wisconsin where relatively narrow bedrock ridges are surrounded by deeply incised valleys. The bedrock ridge doesn't hold water because the valleys drain the water from the rock formations. Rain/snow that falls on the ridge tops that isn't held by the soil likely runs off the surface and down the nearby adjacent

sloped land surface. Water that does infiltrate into the bedrock near the surface could move either to the northwest, west or south as those are the directions of the closest valleys present in the landscape and are in the direction of the Kickapoo River. While this area is considered a recharge zone to the aquifer based on its position in the landscape, it is likely very little rain/snow falling on the ground surface would enter the water table directly beneath the site. This is due to:

- the clay rich soils at the ground surface limit the amount of water entering the soil and rock,
- bedding structure within the rock impedes the downward movement of water,
- the upper bedrock is fractured, and this allows water to move laterally in the fractures while the water is also moving downward,
- the erosional valleys adjacent the ridge top intersect the bedrock fractures and provide a pathway to drain the water from the bedrock laterally rather than the water moving downward,
- the great depth to water (300+ feet).

The United States Geological Survey Hydrologic Atlas HA-479 (Plate 2) contains a groundwater potentiometric surface map that would indicate groundwater present in the rock beneath the ridge may move to the north, west or south, although the scale on that map makes a site-specific determination difficult to determine.

- 3) **Nitrate nitrogen concentrations and bacterial results in the Town of Marietta** – An extract from the Department's groundwater retrieval network (GRN) data system of samples with nitrate nitrogen detections in water supply wells indicates that this area has relatively low concentrations of nitrate nitrogen in groundwater. Concentrations of nitrate nitrogen are less than 2 milligrams per liter (mg/l). While there are relatively few sample results from this section, the results are consistent and indicate that nitrate contamination is not prevalent in this area. UW Stevens Point Center for Watershed Science and Education maintains the Well Water Quality Viewer. This database doesn't show any results from the exact area where the CAFO production area is proposed. However, an area to the immediate west, and areas northeast and southeast of the proposed CAFO production area show nitrate concentrations at less than 2 mg/l.

There are not very many coliform bacteria results in the DNR's GRN database for wells in this area. The results available do not indicate that bacteria contamination of groundwater is a serious problem. The Water Quality Viewer from UW Stevens Point does not contain any bacterial data from the area surrounding the proposed CAFO production area. There are results to the west of the proposed production area and those data indicate that less than 5% of the sample results tested positive for bacteria. Properly constructed wells in this location are likely to produce water that is coliform bacterially safe.

- 4) **Possible groundwater impacts from swine facility production area activities** - Pollutants of public health concern in swine CAFO facilities are predominantly in animal manure. Swine manure includes nitrogen and potentially pathogenic microorganisms, in addition to possibly hormones and antibiotics needed for herd management. Manure will be stored in vaults located beneath the Gestation Barn and the Gilt Development Unit Barn. Manure generated in the Farrowing Barn will be held in tanks, and then periodically transferred to the Gestation Barn through a gravity draining pipeline.

As this will be a new CAFO operation manure storage structures and transfer systems are required to be designed and constructed to meet all current regulatory standards. These standards

have been established to minimize any leakage of animal waste or process wastewater at the production area that might impact groundwater quality.

5) **Summary:** NR 243.15(7), Wis. Adm. Code provides DNR the authority to require the installation of groundwater monitoring wells in the vicinity of manure storage facilities where DNR has determined monitoring is necessary to evaluate impacts to groundwater and geologic or construction conditions warrant monitoring. I do not think this proposed CAFO production site warrants groundwater monitoring to evaluate impacts to groundwater quality. My reasoning for this includes the site-specific geology and the engineering/construction details of the proposed production site. This includes:

- a. The soil borings at the site show the facility is proposed to be located in an area of clay rich soils. These soils will limit infiltration of surface water (rain, snow, manure spillage) into the subsurface.
- b. The manure will be stored in tanks/vaults designed in accordance with approved engineering specifications to minimize any potential leakage from the facility.
- c. Construction of critical components of the manure storage facility, such as where the walls meet the base, must be overseen by a Wisconsin Professional Engineer or other qualified third party. This requirement will assure the facility is constructed as designed and approved. A properly constructed manure storage vault minimizes the potential for leakage.
- d. The facility design shows that the manure storage vaults will have drain lines to prevent water from building up around the exterior base of each vault. These drain lines will be regularly checked for manure leakage. If leakage is found, then appropriate investigation and remedial measures would be taken to minimize any release of manure and prevent groundwater contamination.
- e. Based on data from two adjacent water supply wells, one approximately 1400' west and one approximately 1300' east, it appears that the static water level at the proposed facility is likely more than 300 feet below the ground surface. Due to the soil and rock types at this location and the great depth to water, groundwater quality data collected from directly below this facility may not be reflective of activities at the ground surface and therefore might not be especially useful in evaluating whether the Roth II production site activities are impacting local groundwater quality. A contaminant spilled on the ground surface is likely to travel laterally away from the site rather than directly going 300 feet straight down to the groundwater below the site.

#### Resources Reviewed:

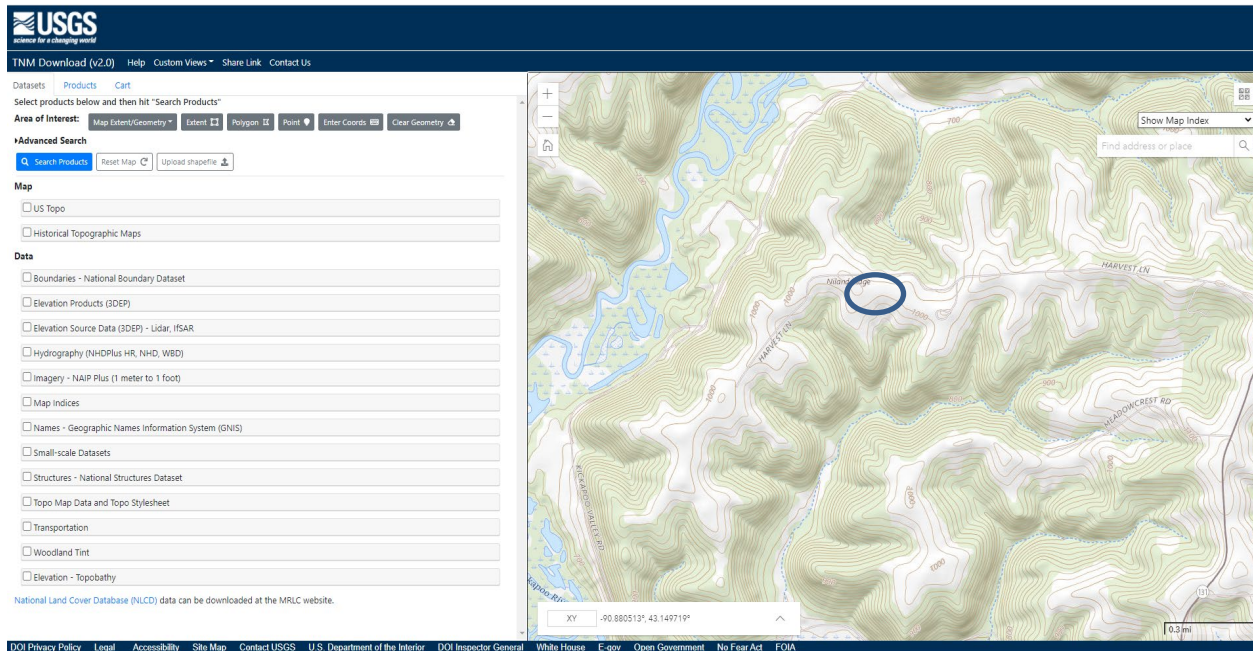
1. CAFO application design plans and supporting documents (soil boring logs, Environmental Analysis Questionnaire and Supplement, etc.). These documents are available at: <https://dnr.wisconsin.gov/topic/CAFO/RothII>
2. CAFO review letters prepared by DNR staff in CAFO program. These documents are available at: <https://dnr.wisconsin.gov/topic/CAFO/RothII>
3. USGS Topographic maps for area of CAFO. See Attachment 1.
4. Nitrate and bacteria water quality data for Marietta Township from DNR's GRN system as of February 16, 2021.  
<https://dnr.wisconsin.gov/topic/Groundwater/GRN.html>



5. Nitrate and bacteria water quality data as of March 9, 2021 from UW Stevens Point Center for Watershed Science and Education database.  
[https://gissrv3.uwsp.edu/webapps/gwc/pri\\_wells/](https://gissrv3.uwsp.edu/webapps/gwc/pri_wells/)
6. USGS Hydrologic Atlas HA-479. <https://pubs.er.usgs.gov/publication/ha479>
7. Well construction reports for wells near proposed CAFO. See Attachment 2.
8. Report from Grobbel Environment & Planning Associates dated October 3, 2020
9. Report from Midwest Environmental Advocates dated November 23, 2020
10. Karst and landscape features – Reviewed RR Sites Map Aerial Photos.  
<https://dnr.wisconsin.gov/topic/Brownfields/rasm.html>

## Attachment 1

### USGS Topographic Map of Roth Feeder Pig 2 Production Site Location on Niland Ridge Blue Oval indicates location



Attachment 2  
Well Construction Reports

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER <b>KB525</b>				State of WI - Private Water Systems - DG/2 Department of Natural Resources, Box 7921 Madison, WI 53707 Please type or Print using a black Pen Please Use Decimals Instead of Fractions.		Form 3300-77A (R 8/00)	
Property Owner <b>MANNING, MIKE</b>		Telephone <b>608-476-2333</b>		1. Well Location <input checked="" type="checkbox"/> Town <input type="checkbox"/> City <input type="checkbox"/> Village of <b>MARRIETTA</b>		Fire # (if available)	
Mailing Address <b>4507 HARVEST LN</b>		City <b>WAUZEKA</b>		State <b>WI</b>		Zip Code <b>53826</b>	
County of Well Location <b>Crawford</b>		County Well Permit No. <b>W</b>		Well Completion Date <b>05/06/1997</b>		Grid or Street Address or Road Name and Number	
Well Constructor (Business Name) <b>CORPLAN WELL DRILLING INC</b>		License # <b>61</b>		Facility ID Number (Public Wells)		Subdivision Name Lot # Block #	
Address <b>501 E OAK ST</b>		Public Well Plan Approval # W--		Gov't Lot # or <b>SE</b> 1/4 of <b>NE</b> 1/4 of Section <b>19</b> T <b>8</b> N; R <b>4</b> <input type="checkbox"/> E <input checked="" type="checkbox"/> W		Latitude Deg. Min. Longitude Deg. Min.	
City <b>BOSCOBEL</b>		State <b>WI</b>		Zip Code <b>53805-1434</b>		Date of Approval (mm/dd/yyyy)	
Hicap Permanent well #		Common Well #		Specific Capacity <b>.1</b> gpm/ft		2. Well Type <input checked="" type="checkbox"/> New <input type="checkbox"/> Replacement <input type="checkbox"/> Reconstruction	
3. Well serves <b>1</b> # of homes and or (e.g. barn, restaurant, church, school, industry, etc.)		High capacity Well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Property? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Lat/Long Method <b>GPS008</b>	
4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties?		Well located within 1,200 feet of a quarry? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, distance in feet from quarry:		Well located in floodplain? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Distance in Feet from Well to Nearest:	
1. Landfill		2. Building Overhang		3. Septic <input type="checkbox"/> Holding Tank <input type="checkbox"/>		4. Sewage Absorption Unit	
5. Nonconforming Pit		6. Buried Home Heating Oil Tank		7. Buried Petroleum Tank		8. Shoreline <input type="checkbox"/> Swimming Pool <input type="checkbox"/>	
9. Downspout/Yard Hydrant		10. Privy		11. Foundation Drain to Clearwater		12. Foundation Drain to Sewer	
13. Building Drain		14. Building Sewer <input type="checkbox"/> Gravity <input type="checkbox"/> Pressure <input type="checkbox"/> Cast Iron or Plastic <input type="checkbox"/> Other		15. Collector or Street Sewer: <input type="checkbox"/> Sanitary units in. diam. <input type="checkbox"/> Storm <input type="checkbox"/> < 6 <input type="checkbox"/> > 6		16. Clearwater Sump	
17. Wastewater Sump		18. Paved Animal Barn Pen		19. Animal Yard or Shelter		20. Silo	
21. Barn Gutter		22. Manure Pipe <input type="checkbox"/> Gravity <input type="checkbox"/> Pressure <input type="checkbox"/> Cast Iron or Plastic <input type="checkbox"/> Other		23. Other Manure Storage		24. Ditch	
25. Other NR 812 Waste Storage		5. Drillhole Dimensions and Construction Method		8. Geology		From To	
From To Upper Enlarged Drillhole Lower Open Bedrock		Dia (in.) (ft.) (ft.)		Type Caving/Noncaving, Color, Hardness, etc.		(ft.) (ft.)	
10 0 264		<input type="checkbox"/> --1. Rotary - Mud Circulation----- <input type="checkbox"/>		--I- DIRT 0 2			
6 264 480		<input checked="" type="checkbox"/> --2. Rotary - Air----- <input type="checkbox"/>		--C- CLAY 2 6			
		<input checked="" type="checkbox"/> --3. Rotary - Air and Foam----- <input type="checkbox"/>		-BL- LIMEROCK @ CREV 6 223			
		<input type="checkbox"/> --4. Drill-Through Casing Hammer		--N- SANDROCK 223 257			
		<input type="checkbox"/> --5. Reverse Rotary		-HH- HARD SHALE 257 480			
		<input type="checkbox"/> --6. Cable-tool Bit in. dia. <input type="checkbox"/>					
		<input type="checkbox"/> --7. Dual Rotary <input type="checkbox"/>					
		<input checked="" type="checkbox"/> 8. Temp. Outer Casing 10 in. dia. depth (ft.)					
		Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, why not?					
6. Casing, Liner, Screen Material, Weight, Specification		From To		9. Static Water Level		11. Well is: <input checked="" type="checkbox"/> Above Grade	
Dia. (in.)		(ft.) (ft.)		ft. above ground surface		12 in. <input type="checkbox"/> Below Grade	
6 NEW BLACK STEEL PLAIN END SAWHILL		0 264		308 ft. below ground surface		Developed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
USA ASTM A53B 6 X 21 18 97 LB						Disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Dia. (in.)		Screen type, material & slot size		10. Pump Test		Capped? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
				Pumping Level 460 ft. below surface			
				Pumping at 10 GPM for 2 hours			
7. Grout or Other Sealing Material. Method		From To # Sacks		12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?			
Method: <b>TREMIE PUMPED</b>		(ft.) (ft.) Cement		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, explain:			
Kind of Sealing Material							
NEAT CEMENT		0 264 94		13. Signature of the Well Constructor or Supervisory Driller		Date signed	
				SAA		06/10/1997	
				Signature of Drill Rig Operator (Mandatory unless same as above)		Date signed	
				SAA		06/10/1997	
Make additional comments on reverse side about geology, additional screens, water quality, etc.				Variance issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

Well Construction Report For WISCONSIN UNIQUE WELL NUMBER <b>SJ643</b>				State of WI - Private Water Systems - DG/2 Department of Natural Resources, Box 7921 Madison, WI 53707 Please type or Print using a black Pen Please Use Decimals Instead of Fractions.		Form 3300-77A (R 8/00)	
Property Owner <b>MCKINLEY, HARRY</b>			Telephone <b>262-654-1184</b>				
Mailing Address <b>1106 57TH ST</b>							
City <b>KENOSHA</b>		State <b>WI</b>	Zip Code <b>53140</b>				
County of Well Location <b>Crawford</b>		County Well Permit No. <b>W</b>	Well Completion Date <b>10/16/2004</b>				
Well Constructor (Business Name) <b>CORPIAN WELL DRILLING INC</b>			License # <b>61</b>	Facility ID Number (Public Wells)			
Address <b>4747 OLD C RD</b>			Public Well Plan Approval # W--				
City <b>BOSCOBEL</b>		State <b>WI</b>	Zip Code <b>53805</b>	Date of Approval (mm/dd/yyyy)			
Hicup Permanent well #		Common Well #		Specific Capacity .1 gpm/ft			
3. Well serves # of homes and or <b>SHED</b>				High capacity Well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
(e.g. barn, restaurant, church, school, industry, etc.)				Property? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
4. Is the well located upslope or sideslope and not downslope from any contamination source, including those on neighboring properties? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Well located within 1,200 feet of a quarry? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, distance in feet from quarry:							
Well located in floodplain? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Distance in Feet from Well to Nearest:							
1. Landfill		9. Downspout/Yard Hydrant		17. Wastewater Sump			
>50 2. Building Overhang		10. Privy		18. Paved Animal Barn Pen			
3. Septic <input type="checkbox"/> Holding Tank <input type="checkbox"/>		11. Foundation Drain to Clearwater		19. Animal Yard or Shelter			
4. Sewage Absorption Unit		12. Foundation Drain to Sewer		20. Silo			
5. Nonconforming Pit		13. Building Drain		21. Barn Gutter			
6. Buried Home Heating Oil Tank		<input type="checkbox"/> Cast Iron or Plastic <input type="checkbox"/> Other		22. Manure Pipe <input type="checkbox"/> Gravity <input type="checkbox"/> Pressure			
7. Buried Petroleum Tank		14. Building Sewer <input type="checkbox"/> Gravity <input type="checkbox"/> Pressure		<input type="checkbox"/> Cast Iron or Plastic <input type="checkbox"/> Other			
		15. Collector or Street Sewer:		23. Other Manure Storage			
		<input type="checkbox"/> Sanitary units in. diam.		24. Ditch			
8. Shoreline <input type="checkbox"/> Swimming Pool <input type="checkbox"/>		16. Clearwater Sump		25. Other NR 812 Waste Storage			
		<input type="checkbox"/> Storm <input type="checkbox"/> < 6 <input type="checkbox"/> > 6					
5. Drillhole Dimensions and Construction Method				8. Geology			
From To Upper Lower				Type, Cavins/Noncavins, Color, Hardness, etc			
Dia. (in.) (ft.) (ft.) Enlarged Drillhole				From To			
				(ft.) (ft.)			
<input type="checkbox"/> 1. Rotary - Mud Circulation				--I-- <b>DIRT</b> <b>0 3</b>			
<input checked="" type="checkbox"/> 2. Rotary - Air				--C-- <b>CLAY</b> <b>3 9</b>			
<input checked="" type="checkbox"/> 3. Rotary - Air and Foam				--L-- <b>LIMEROCK</b> <b>9 268</b>			
<input type="checkbox"/> 4. Drill-Through Casing Hammer				--H-- <b>SHALE</b> <b>268 301</b>			
<input type="checkbox"/> 5. Reverse Rotary				--HH-- <b>HARD SHALE</b> <b>301 480</b>			
<input type="checkbox"/> 6. Cable-tool Bit in. dia. <input type="checkbox"/>							
<input type="checkbox"/> 7. Dual Rotary							
<input checked="" type="checkbox"/> 8. Temp. Outer Casing <b>10</b> in. dia. <b>9</b> depth (ft)							
Removed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
If no, why not?							
6. Casing, Liner, Screen Material, Weight, Specification From To							
Dia. (in.) (ft.) (ft.)							
<b>6 NEW BLACK STEEL PLAIN END</b> <b>0 310</b>							
<b>WHEATLAND ASTM A53B 6X21 #18.97</b>							
9. Static Water Level				11. Well is: <input checked="" type="checkbox"/> Above Grade			
ft. above ground surface				<input type="checkbox"/> Below Grade			
<b>346</b> ft. below ground surface				12 in. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
10. Pump Test				Developed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Pumping Level <b>465</b> ft. below surface				Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Pumping at <b>10</b> GPM for <b>24</b> hours				Capped? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
7. Grout or Other Sealing Material. Method From To # Sacks				12. Did you notify the owner of the need to permanently abandon and fill all unused wells on this property?			
Method: <b>TREMIE PUMPED</b> (ft.) (ft.) Cement				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, explain:			
Kind of Sealing Material							
<b>NEAT CEMENT</b> <b>0 310 105</b>				13. Signature of the Well Constructor or Supervisory Driller Date signed			
				<b>SAA 11/05/2004</b>			
				Signature of Drill Rig Operator (Mandatory unless same as above) Date signed			
				<b>SAA 11/05/2004</b>			
Make additional comments on reverse side about geology, additional screens, water quality, etc. Variance issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							