



Redwood County

www.co.redwood.mn.us

Animal Confinement Feedlot Conditional Use Permit Application

Permit #: 10-9 Date: 5/24/21

Proposed Location of Feedlot Operation:

Address: City: State: MN Zip:
House # Street Name

Parcel #: 50-014-4020 Township: Brookville Section: 14 Twp #: 110 Range: 34

Information about the Operation:

General description of feedlot operation (including type and number of animal units, barns, and manure storage plan):
 The new proposed feedlot will be located in the SE ¼ of the SE ¼ in Section 14 Brookville Township, Redwood County, Minnesota. The proposed new feedlot will be a 122'7" x 224' total confinement facility with a capacity of 3,330 head of finishing swine weighing between 55-300 pounds for a total of 999 animal units. The proposed barn will have an 8' deep concrete below barn manure storage pit with 12 months of storage. The total number of animal units after construction will be 999.

Legal Description of Proposed Feedlot Location:

The South 524.00 feet of the West 322.00 feet of the Southeast Quarter of the Southeast Quarter of Section 14, Township 110 North, Range 34 West, Redwood County, Minnesota.

Site / Plan Information:

Zoning District: Agriculture

Soil Type 1: Canisteo Clay Loam, 0 to 2 percent slopes

Soil Type 2: Normania loam, 1 to 3 percent slopes

Water source for the site: _____

Drainage System: Perforated Tile (perimeter)

Estimated water use:

Animal 1

Animal Type: Finishing Swine

.75 0 gallons/day/animal X 3330 0 number of animals on site X 350 0 number of days present

= 874,125 0

Animal 2

Animal Type: _____

0 gallons/day/animal X 0 number of animals on site X 0 number of days present

= 0 gallons/yr/site

Animal 3

Animal Type: _____

gallons/day/animal X number of animals on site X number of days present

= 0 gallons/yr/site

Total Gallons: 874,125 0

Proposed Building(s) Information: (Please enter dimensions in feet)

Building 1: Width: 122'7" Length: 224'

Building 3: Width: Length:

Building 2: Width: Length:

Building 4: Width: Length:

Setback from road right-of-way: 150 0 feet

Setback from center line of road: 170 0 feet

Estimated date for beginning construction: _____

Estimated completion date: _____

General Contractor:

Name: _____

City: _____

State: MN

Applicant Information:

Note: If the applicant is not one natural person, requested information and signature(s) must be provided for each partner/associate/co-applicant and must include documentation of each co-applicant's legal identity and the legal relationship between them. Each partner/associate/co-applicant must sign or affirm the application before it will be accepted for consideration.

First Name: Brian

Last Name: Schwartz

Business Name: Schwartz Family LLC

Address: 32296 190th St

City: Sleepy Eye

State: MN

Zip: 56085

Home Phone: 507-794-5779

Cell Phone: _____

Email: bschwartz@schwartzfarms.net

List any additional applicants: _____

Land Owner: Complete only if different from Applicant

First Name: Reynold

Last Name: Christensen

Business Name: _____

Address: 44716 Co Hwy 4

City: Sleepy Eye

State: MN

Zip: 56085

Home Phone: _____

Cell Phone: _____

507-220-6810

Email: _____

If the applicant is not the owner of the land, please specify the type of agreement the applicant has with the owner of the land at the proposed site: Purchase Agreement

Feedlot Operator: Complete only if different from Applicant

If the operator is not a natural person(s), you must also provide documentation of the operator's legal identity.

First Name: _____

Last Name: _____

Business Name: _____

Address: _____

City: _____

State: MN

Zip: _____

Home Phone: _____

Cell Phone: _____

Email: _____

I affirm that the forgoing information is true and accurate. I understand that if any portion of this information is false or materially misleading, any conditional use permit issued in reliance upon this information is voidable at the election of Redwood County.

Applicant(s) Signature(s): *Brian Schwartz*

Date: 5-26-21

Landowner Signature: *R.A. Christensen*

Date: 5-25-21

List of Required Documentation: (Application not complete until received)

•MPCA Application

•Manure Spreading Agreements

•Pit Design

•Manure Management Plan

Office Use Only * The section below is to be filled out by the Environmental Office Staff

Permit fee: \$700

Receipt #: 57347

Application Received: 5/26/21

Commission Action:

County Board Action:

Approved: _____

Date: _____

Approved: _____

Date: _____

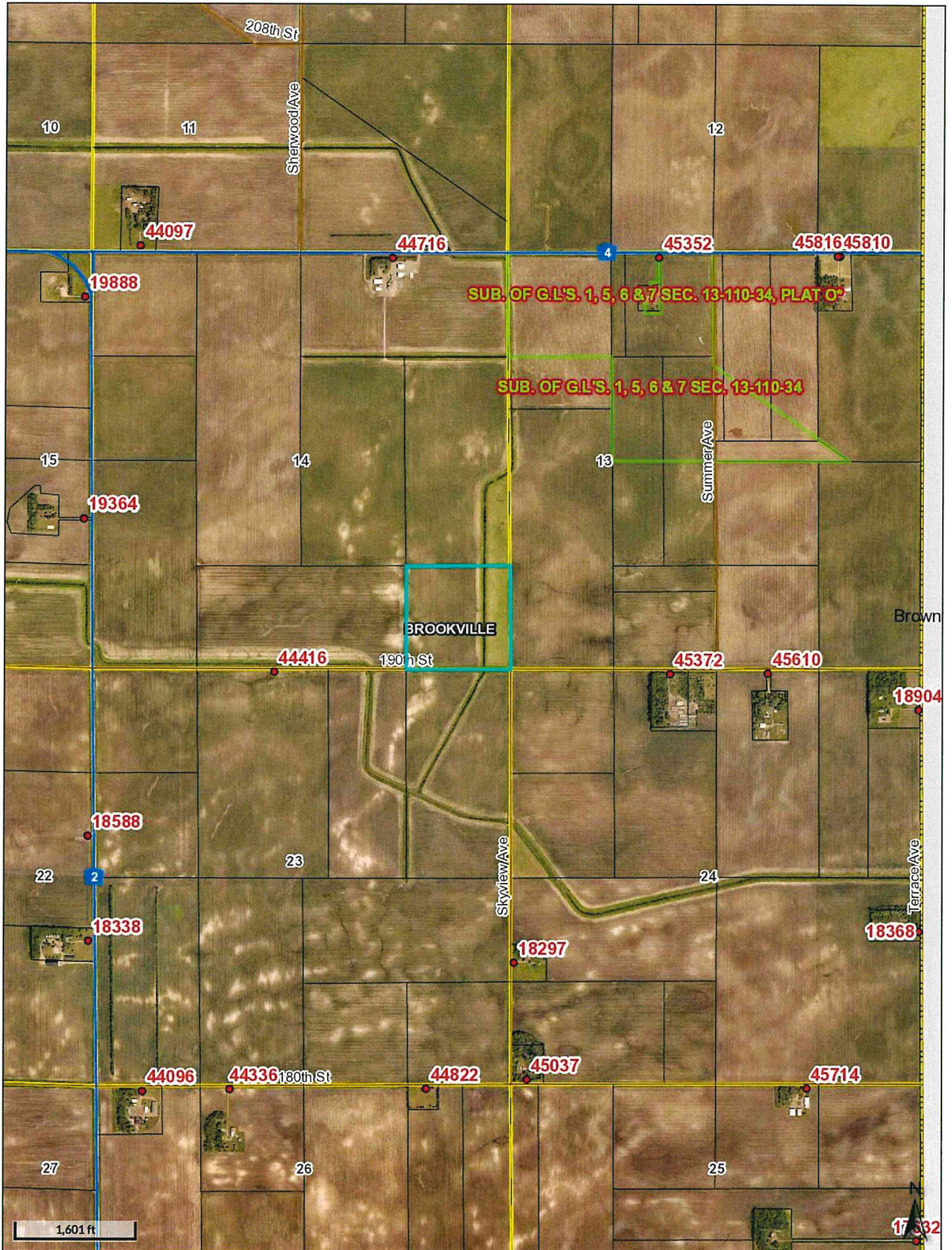
Disapproved: _____

Date: _____

Disapproved: _____

Date: _____

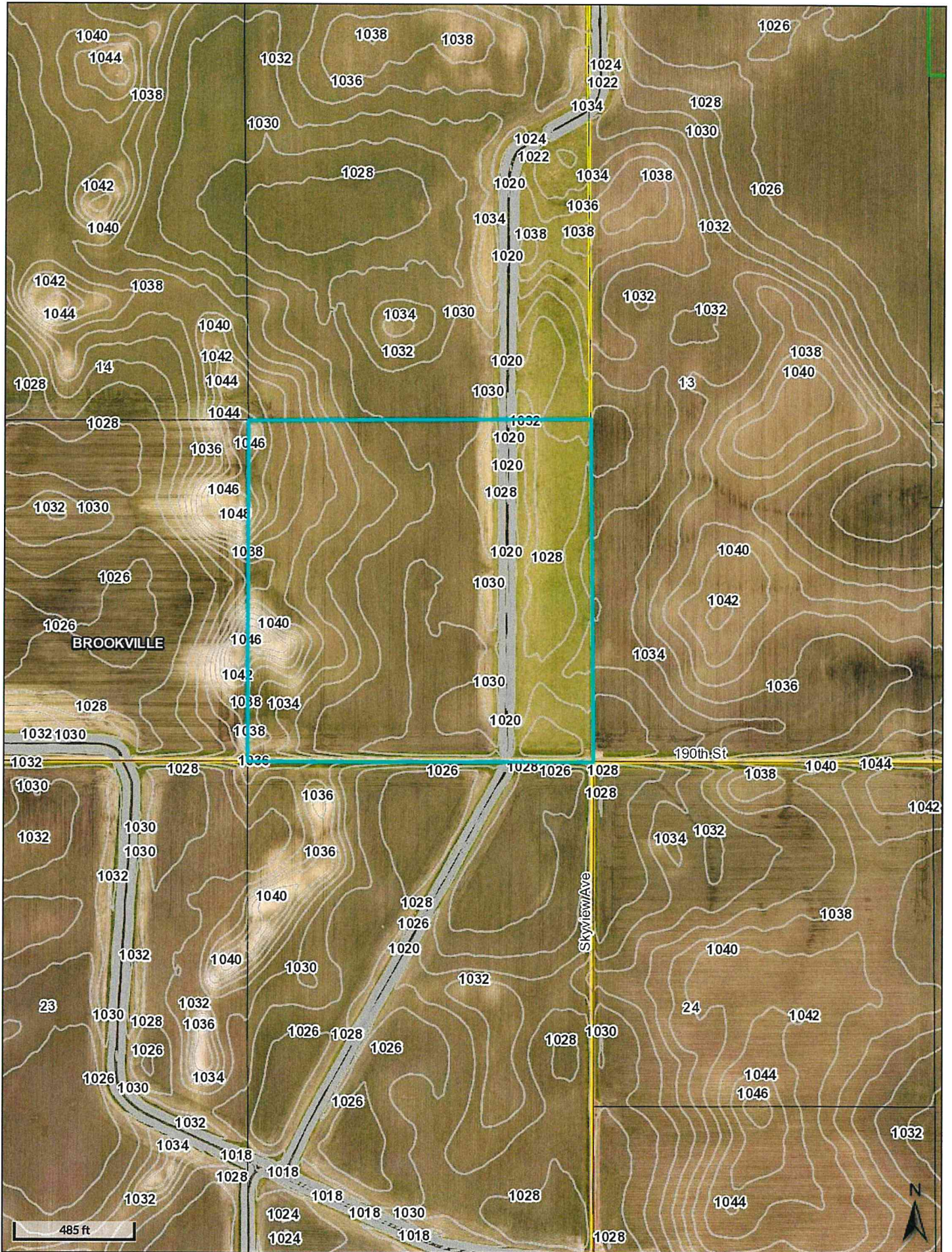
SCHWARTZ OVERVIEW MAP



SCHWARTZ TILE MAP



SCHWARTZ ELEVATION MAP



Animal feedlot or manure storage area permit application

CSF and Interim Permit Program

Doc Type: Permit Application

Applicability: Use this form to obtain, modify, or extend the term of a construction short form (CSF) or interim permit.
Keep a copy of this application form and all submittals for your records.

After completing and signing this form, submit it and any required enclosures as instructed below:

For facilities located in a delegated county, send the signed form and any enclosures to the County Feedlot Officer (CFO).
All other facilities must submit this form and any enclosures to the Minnesota Pollution Control Agency (MPCA) as follows:

- Scan and email the signed form and any enclosures to FeedlotSubmittal.pca@state.mn.us.
- If submission via email is not possible, you can mail the signed form and any enclosures to:

Attn: Feedlot Master File Staff
Minnesota Pollution Control Agency
7381 Airport View Drive SW
Rochester, MN 55902

I. Permit type and reason for application

Feedlot Registration Number: _____

Please indicate which type of feedlot permit you are applying for (*choose only one*):

- Construction Short Form Interim (correcting a pollution hazard)

Please indicate the reason for the permit application (*choose only one*):

- New Permit
(No existing CSF or interim permit)
- Permit Modification
(Changes to sites with an existing CSF or interim permit)
- Permit Extension - Current CSF or Interim Permit number: _____
(Work not completed prior to permit expiration)

For extension requests only - Indicate below the reason(s) the work may not be completed prior to permit expiration

Estimated amount of time required to complete the work: _____ days months

Note: The length of the extension is limited to 24 months for CSF permits and 90 days for interim permits

Note: When the notice to neighbors and property owners is required the content of the notice must include the date the original permit was issued and the new proposed completion date as well as the normally required information.

II. Owner's name(s) and address(es) - (All partners of a Limited Liability Partnership (LLP) must be listed.)

Primary owner – Will be used as the mailing address

Additional owner – attach additional sheets as necessary

Name: Schwartz Family LLC % John & Joe Schwartz

Name: _____

Address: 32296 190th St

Address: _____

City: Sleepy Eye State: MN

City: _____ State: _____

Phone: 507-794-5779 Zip: 56085

Phone: _____ Zip: _____

Email: bschwartz@schwartzfarms.net

Email: _____

Note: The term owner includes all persons having possession, control, or title to an animal feedlot or manure storage area (including lessees or renters). All owners must be listed. Attach to this application the names, addresses, and phone numbers of all additional owners.

III. Facility name and site address

Contact person for day-to-day activities

Site Name: SFI Brookville C

Name: Schwartz Farms % Brian Schwartz

Facility is a MN Ag Water Quality Certified Farm (MAWQCP)

Street: 32296 190th St

Complete if facility address is different than the primary owner address:

City: Sleepy Eye State: MN

Street: 190th St W of Skyview Ave

Phone: 507-794-5779 Zip: 56085

City: Sleepy Eye State: MN

Cell phone: _____

Phone: 507-794-5779 Zip: 56085

Email: bschwartz@schwartzfarms.net

(General letters/notices may be sent by email where one is indicated.)

IV. Facility location

County: Redwood

Township name: Brookville

Township (26 – 71 or 101 – 168)	Range (1 – 51)	Section (1 – 36)	¼ Section (160 acre) (NW, NE, SW, SE)	¼ of ¼ Section (40 acre) (NW, NE, SW, SE)
T 110 N	R 34 W	14	SE	SE

V. Sensitive features

- Is any part of the facility within 1,000 feet of any type of surface waters or tile intake? Yes No
If Yes, select all types below
 Lake River Stream (Perennial or Intermittent) Tile Intake
 Pond Creek Ditch Wetland Calcareous Fen Unknown
- Is any part of the facility located within 300 feet of a river/stream? Yes No
- Is any part of the facility located within a delineated flood plain (100 year flood)? Yes No
- Is any part of the facility located within designated shoreland? Yes No
- Is any part of the facility located within 1,000 feet of a karst feature? (sinkholes, caves, disappearing springs, resurgent springs, karst windows, dry valleys, or blind valleys) Yes No
If Yes, complete a. and b. below:
 - Are there 4 or more sinkholes within 1,000 feet? Yes No
 - Is any part of the facility within 300 feet of a known sinkhole? Yes No
- Is any part of the facility located within 1,000 feet of the following types of wells: Yes No
If Yes, complete a. and b. below:
 - What is the shortest distance from a well to any animal holding area? _____ ft.
What is the shortest distance from a well to any manure storage area? _____ ft.
 - Indicate if the well is any of the following types:
 - a community water supply well
 - a well serving a public school as defined under Minn. Stat. § 120A.05
 - a well serving a private school excluding home school sites
 - a well serving a licensed child care center where the well is vulnerable (Minn. R. 4720.5550, subp. 2)

VI. Environmental Review (complete when construction or expansion is proposed)

Mandatory environmental review is required for the addition of 1,000 or more animal units (AU) at any facility. This threshold is reduced to 500 AU in "sensitive areas". The facility is within a sensitive area when any of the following apply.

- Any part of the facility is within a delineated floodplain (yes to question 3 above)
- Any part of the facility is within designated shoreland (yes to question 4 above)
- Any part of the facility is within 1,000 feet of a karst feature (yes to question 5 above)
- Any part of the facility is within a vulnerable drinking water supply management area
- Any part of the facility is within a federal, state, or local wild and scenic river district
- Any part of the facility is located within the Minnesota River Project Riverbend area or the Mississippi headwaters area

Additionally mandatory environmental review is required for "Phased actions". Phased actions are two or more projects located in the same geographic area and constructed within three years of each other by the same proposer. When this is the case, the animal units from all projects are combined to determine if environmental review is required.

Do you have ownership interest in another livestock operation that was constructed/expanded within the past three years or are you substantially certain you will be constructing/expanding another livestock operation within the next three years?

Yes No

If Yes, how far away (straight-line distance) is it located from the project proposed in this application? _____ miles

There are also rule provisions to require completion of the environmental review process in the event of a citizen petition or upon the discretion of the MPCA. Please see the MPCA fact sheet entitled "When is Environmental Review Required for Feedlots" (available on the MPCA website at <https://www.pca.state.mn.us/quick-links/environmental-review> and/or Minn. R. 4410 for further details.

VII. Animal numbers and animal unit (AU) calculation

Complete the table below to identify the **maximum** number of animals housed at that facility. All animal numbers and animal sizes used to complete this table should reflect the animal holding **capacity** of the facility even if the facility does not currently house or propose to house that number of animals. At no time is the number of animals at the facility allowed to exceed the capacity provided below without first obtaining a permit or permit modification.

Current Capacity - List the current head count **capacity** for each animal type in column 3 below. For sites with a permit, this should match the currently permitted number of animals. Next, multiply the AU Factor in column 2 by the number of animals listed in column 3 to get the **Current AU Capacity** for each animal type (column 4). Finally, add together all AU's in column 4 to get a total at the bottom of the chart. *If this application is for a brand-new feedlot site leave columns 3 and 4 blank. (ie. bare piece of ground)*

Final Capacity - List the final head count **capacity** for each animal type in column 5 below. This number should include current animals plus or minus any expansion or reduction in each animal type. This should reflect the maximum AU capacity requested with this permit application. Next, multiply the AU Factor in column 2 by the number of animals listed in column 5 to get the **Final AU Capacity** for each animal type (column 6). Finally, add together all AU's in column 6 to get a total at the bottom of the chart.

1. Animal type	Current facility capacity		Final facility capacity (Current +/- Changes)		
	2. Animal unit factor	3. Head count	4. Animal units = column 2 x column 3	5. Head count	6. Animal units = column 2 x column 5
A. Dairy cattle					
Mature cow (milked or dry) over 1,000 lbs.	1.4				
Mature cow (milked or dry) under 1,000 lbs.	1.0				
Heifer	0.7				
Calf	0.2				
B. Veal					
Veal	0.2				
C. Beef cattle					
Slaughter steer/heifer, stock cow, or bull	1.0				
Feeder cattle (stocker or backgrounding), heifer	0.7				
Cow and calf pair	1.2				
Calf (weaned)	0.2				
D. Swine					
Over 300 lbs.	0.4				
Between 55 and 300 lbs.	0.3	0	0	3330	999
Under 55 lbs.	0.05				
E. Horses					
Horse	1.0				
F. Sheep					
Sheep or Lamb	0.1				
G. Chickens with a liquid manure system					
Layer Hens or Broilers	0.033				
H. Chickens with a dry manure system					
Broilers over 5 lbs.	0.005				
Broilers under 5 lbs.	0.003				
Layer Hens over 5 lbs.	0.005				
Layer Hens under 5 lbs.	0.003				
I. Turkeys					
Over 5 lbs.	0.018				
Under 5 lbs.	0.005				
J. Ducks					
Duck (with a liquid manure handling system)	0.01				
Duck (with a dry manure handling system)	0.01				
K. Animals not listed in A to J (AU factor in column 2 = average weight of the animal type divided by 1,000 lbs.)					
Animal type:					
Total animal unit capacity			Current AU capacity		Final AU capacity
Add all numbers in column 4 for Current AU total			0		999
Add all numbers in column 6 for Final AU total					

VIII. Animal holding areas

Do any animals at the facility have access to pasture? Yes No

Complete the table below for the following animal holding areas. If needed, continue your list on an additional copy of this page.

- Total confinement barn with underfloor pit** - A barn where animals cannot access an outdoor area and liquid manure enters storage directly beneath the floor. This includes "shallow pits" or "pull plugs".
- Total confinement barn** - A barn where animals cannot access an outdoor area.
- Partial confinement barn** - A barn where animals can directly access an outdoor area (ie. associated open lot).
- Open lot** - An uncovered area where animals are housed outdoors.
- Individual animal housing area** - A structure that houses only one animal at a time (ie. calf huts/hutches).
- Working-Sorting-Hospital area** - A structure or area, covered or uncovered, where animals temporarily enter during load-out or load-in events or when additional care is needed to address medical issues with the animal.
- Milk parlor-Holding area** - A structure or area where animals temporarily enter prior to or during milking.

List each animal holding area in a separate column
Use the far right column for non-rectangular holding areas

Animal holding area ID	Non-Rectangular					
Facility Site Sketch ID (i.e., #1, A, Barn 1)	Barn 1					
Status: (check one box only)	<input checked="" type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed
Proposed - not permitted previously or permitted but not yet operational	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing
Existing - current operational component	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating

List approximate holding area dimensions in feet

(If non-rectangular, use the far right column and list surface area)

Type of animal holding areas	Length X Width	Length X Width	Length X Width	Length X Width	Length X Width	Non-Rectangular (Surface Area)
Total confinement barn with underfloor pit	224' X 122'7"	X	X	X	X	sq. ft
Underfloor pit maximum depth (ft)	Pit Depth: 8	Pit Depth:	Pit Depth:	Pit Depth:	Pit Depth:	Pit Depth:
Underfloor pit volume (gal)	1,400,000 gal	gal	gal	gal	gal	gal
Total confinement barn	X	X	X	X	X	sq. ft
Partial confinement barn	X	X	X	X	X	sq. ft
Associated open lot dimensions (list area for non-rectangular lots)	X sq. ft	X sq. ft	X sq. ft	X sq. ft	X sq. ft	X sq. ft
Open lot	X	X	X	X	X	sq. ft
Individual animal housing area (ie calf huts/hutches that house one animal)	X	X	X	X	X	sq. ft
	Quantity:	Quantity:	Quantity:	Quantity:	Quantity:	Quantity:
Working-Sorting-Hospital area	X	X	X	X	X	sq. ft
Milk parlor-Holding area	X	X	X	X	X	sq. ft
Other buildings for animal husbandry	X	X	X	X	X	sq. ft

Indicate the maximum capacity (number of animals) of each animal holding area
The total number of all animals listed should match the final animal numbers listed on page 3.

Animal numbers	
Mature dairy cows (over 1,000 lbs.)	
Mature dairy cows (under 1,000 lbs.)	
Dairy heifers	
Dairy calves	
Veal	
Slaughter steer/heifer, stock cow or bull	
Feeder cattle-stocker/background/heifer	
Cow and calf pair	
Beef calves (weaned)	
Swine over 300 lbs.	
Swine between 55 and 300 lbs.	3330
Swine under 55 lbs.	
Horses	
Sheep or lamb	
All chickens with liquid manure system	
Broiler chickens over 5 lbs. - dry system	
Broiler chickens under 5 lbs. - dry system	
Laying hens over 5 lbs. - dry system	
Laying hens under 5 lbs. - dry system	
Turkeys - over 5 lbs.	
Turkeys - under 5 lbs.	
Other:	

IX. Liquid Manure Storage Areas (LMSA)

Complete the table below for all your LMSAs based upon liner type. If needed, continue your list on an additional copy of this page.

Additional Instructions:

- Do not list below barn LMSAs in this table – This information has been captured in the animal holding areas table.
- LMSAs with more than one liner type - List this LMSA in the category that represents the sidewall primary liner type.
For example: a LMSA with a concrete floor and earthen sidewalls should be listed in the LMSA - Earthen category.
- LMSAs with dual liners, which is a primary liner underlain by a secondary liner (typically only in karst susceptible areas) - List the LMSA in the category that represents the primary liner; which is, the liner in direct contact with the manure.
For example: a HDPE plastic lined LMSA underlain by a compacted clay liner should be listed in the LMSA - Synthetic category.
- Use the two right columns for circular and other non-rectangular shapes.

LMSA ID	List each LMSA in a separate column					Circular	Non-Rectangular
Facility Site Sketch ID							
Status: (check only one)	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed
See animal holding area table for definitions	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing
	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating

Type of LMSA Liner <i>Do not list below barn LMSAs</i>	List approximate LMSA dimensions in feet <i>(If non-rectangular, use the appropriate column and list diameter or surface area)</i>						Circular	Non-Rectangular <i>(Surface Area)</i>
	Length X Width	Length X Width	Length X Width	Length X Width	Length X Width	Length X Width		
LMSA - Earthen	X	X	X	X	X	Diameter:	sq. ft	
Maximum depth (ft)	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	
LMSA - Concrete	X	X	X	X	X	Diameter:	sq. ft	
Maximum depth (ft)	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	
LMSA - Synthetic ^a	X	X	X	X	X	Diameter:	sq. ft	
Maximum depth (ft)	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	
LMSA - GCL ^b	X	X	X	X	X	Diameter:	sq. ft	
Maximum depth (ft)	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	
LMSA - Steel tank ^c	X	X	X	X	X	Diameter:	sq. ft	
Maximum depth (ft)	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	
LMSA - Other	X	X	X	X	X	Diameter:	sq. ft	
Maximum depth (ft)	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	Depth:	

List the LMSA volume in gallons

Volume of LMSA (gal)							

- Synthetic liners include all plastic or rubber liners (HDPE, EPDM, LDPE, LLDPE, PVC, etc.).
- GCL refers to all types of geosynthetic clay liners where bentonite clay is confined between two synthetic membranes (ie. bentomat®).
- Steel tank refers to above ground steel tanks including those with concrete floors (ie. slurrystore®).

X. Other Facility Components

Complete the table below for the following facility components. If needed, continue your list on an additional copy of this page.

- Permanent Stockpile** - An area where solid manure is stored or processed. Do not list temporary stockpiles
- Feed Storage Area** - Areas where any type of feed is stored in outdoor piles/bunkers, including those covered with plastic. **DO NOT** list vertical silos, grain bins, commodity sheds, or other totally enclosed structures.
- Mortality Compost Area** - **ONLY** list mortality management areas that compost dead animals with litter or manure.
- Vegetated Infiltration Area (VTA)** - A vegetated area with berms on all sides so that liquid can only leave via infiltration into the soil.
- Filter-Buffer Strip** - A vegetated area where liquid flows over a grassed area and is allowed to leave the area via surface flow.

List each component in a separate column

Component ID	Use the two far right columns for non-rectangular shapes					Non-Rectangular	Non-Rectangular
Facility Site Sketch ID							
Status: (check only one)	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed	<input type="checkbox"/> Proposed
See animal holding area table for definitions	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing	<input type="checkbox"/> Existing
	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating	<input type="checkbox"/> Eliminating

List approximate component dimensions in feet

(If non-rectangular, use one of the two far right columns and list surface area)

Type of Component	Length X Width	Length X Width	Length X Width	Length X Width	Length X Width	Non-Rectangular	Non-Rectangular
Permanent Stockpile	X	X	X	X	X	sq. ft	sq. ft
Feed Storage Area	X	X	X	X	X	sq. ft	sq. ft
Mortality Compost Area	X	X	X	X	X	sq. ft	sq. ft
Infiltration Area (VTA)	X	X	X	X	X	sq. ft	sq. ft
Filter-Buffer Strip	X	X	X	X	X	sq. ft	sq. ft

XI. Construction stormwater (CSW) requirements (complete only if construction is proposed)

When construction activities are proposed, indicate the expected acreage of soil disturbance: 1 acres

Construction at the facility disturbs one acre or more but less than 5 acres must comply with the requirements of the CSW NPDES general permit, unless a separate application is made for a CSW permit.

Prior to construction at the facility that disturbs 5 or more acres an application for a CSW permit is required.

XII. Notifications and public meetings

The notifications and public meetings below are required to be done **before** permit issuance.

A. Notification to local zoning officials

When required. This notification is required in *either* of the following situations:

- **Construction of a new** feedlot, or manure storage area (i.e. new site) of any AU capacity.
- **Expansion of an existing** feedlot, or manure storage area of any AU capacity.

Notification methods. The applicant must provide notification of the construction or expansion to all local zoning authorities, including county, town, and city zoning authorities, at least 30 days prior to commencement of the construction or expansion. This notification *must* include, at a minimum, the information provided in Minn. R. 7020.2000, subp.4.,A (1) (a) (i to v).

An example notification can be found in the factsheet [Public Notification Requirements – Feedlots](https://www.pca.state.mn.us/feedlots) available on the MPCA website at <https://www.pca.state.mn.us/feedlots>.

B. Notice to residents and property owners within 5,000 feet of a proposed project

When required. This notice is required in *either* of the following situations:

- **Construction of a new** feedlot, or manure storage area, which will have a capacity of 500 AU or more (i.e. new site).
- **Expansion of an existing** feedlot, or manure storage area, which currently has, or will have upon completion of the expansion, a capacity of 500 AU or more.

Notice methods. The owner shall not less than 20 business days before the anticipated issuance date of the permit, provide notice to each resident and each owner of real property within 5,000 feet of the perimeter of the proposed facility. This notice *must* include, at a minimum, the information provided in Minn. R. 7020.2000, subp.4.

An example notice can be found in the factsheet [Public Notification Requirements – Feedlots](https://www.pca.state.mn.us/feedlots) available on the MPCA website at <https://www.pca.state.mn.us/feedlots>.

Verification of notice.

The MPCA must verify that this notice has been completed prior to permit issuance.

Please include with this permit application one of the following options that provides verification that the required notice has been completed:

- An affidavit of publication from a newspaper of general circulation used to provide this notification.
- A list of all parties, with their location, that were notified by certified mail and copies of all signed mail return receipts.
- A list of all parties, with their location, that were personally visited with a date and signature from each party and certification signed by a notary public indicating in detail what was discussed.

C. Non-delegated county public meeting minutes (Minn. Stat. § 116.07, subd. 7(l))

A county which has not accepted delegation of the feedlot program must hold a public meeting prior to issuance of a feedlot permit by the MPCA for an animal feedlot with a capacity of 300 or more animal units.

Date meeting has occurred or is scheduled to occur: _____

Verification of public meeting.

A copy of the meeting minutes must be provided to the MPCA for verification of completion of this requirement prior to permit issuance.

XIII. Certifications and signature

Notification to local officials

The Applicant certifies that, if the application includes construction of a new facility or expansion of an existing facility, all local zoning authorities have been notified in accordance with Minn. R. 7020.2000 subp. 5.

Construction Stormwater (CSW) Requirements

The Applicant certifies that, if construction will disturb 5 or more acres, they have made a separate application for a CSW permit. For construction activities that disturb at least 1 acre but less than 5 acres, the Applicant certifies to comply with the requirements of the current CSW NPDES general permit (Minn. R. 7090.2020 provides permit coverage without the need for an application).

Need for NPDES or SDS permit

If the MPCA determines that a NPDES or SDS permit is required, the Applicant certifies that this application will serve as an application for a NPDES or SDS permit, as appropriate. The Applicant agrees to submit additional information, as requested by the MPCA, in order to complete the NPDES or SDS permit application process including payment of the permit application fee.

Applicant Signature

I hereby certify that the design, construction, and operation of the facility will be in accordance with this application and plans, specifications, reports, and related communications approved by the MPCA, and in accordance with applicable permit conditions or regulations/standards of the MPCA. I also certify under penalty of law that this document and all attachments were prepared under my direction or supervision and the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The person that signs this application must be one of the following:

- A. For a corporation, a principal executive officer of at least the level of vice president
- B. For a partnership, a general partner
- C. For a sole proprietorship, the proprietor

By typing/signing my name below, I certify the above statements to be true and correct, to the best of my knowledge, and that this information can be used for the purpose of processing this form.

Signature: John Schwartz Title: Owner
(This document has been electronically signed.) Date (mm/dd/yyyy): _____
Office phone: 507-794-5779 Cell phone: _____

To sign up for electronic communications including the MPCA feedlot newsletters, please go to the MPCA website at <https://public.govdelivery.com/accounts/MNPCA/subscriber/new>.

Required enclosures (Permit applications submitted without all required enclosures are incomplete.)

All forms are available on the [CSF & Interim permits](#) page of the MPCA feedlot program website at: <https://www.pca.state.mn.us/feedlots>

- A. A site sketch/aerial photograph indicating the location of the existing and proposed facility components.
- B. A Manure/Nutrient Management Plan (MMP) – The following are optional forms to assist with MMP development:

When all manure is transferred to another entity for utilization, complete a MMP using the form:

[MMP requirements when ownership of manure is transferred.](#)

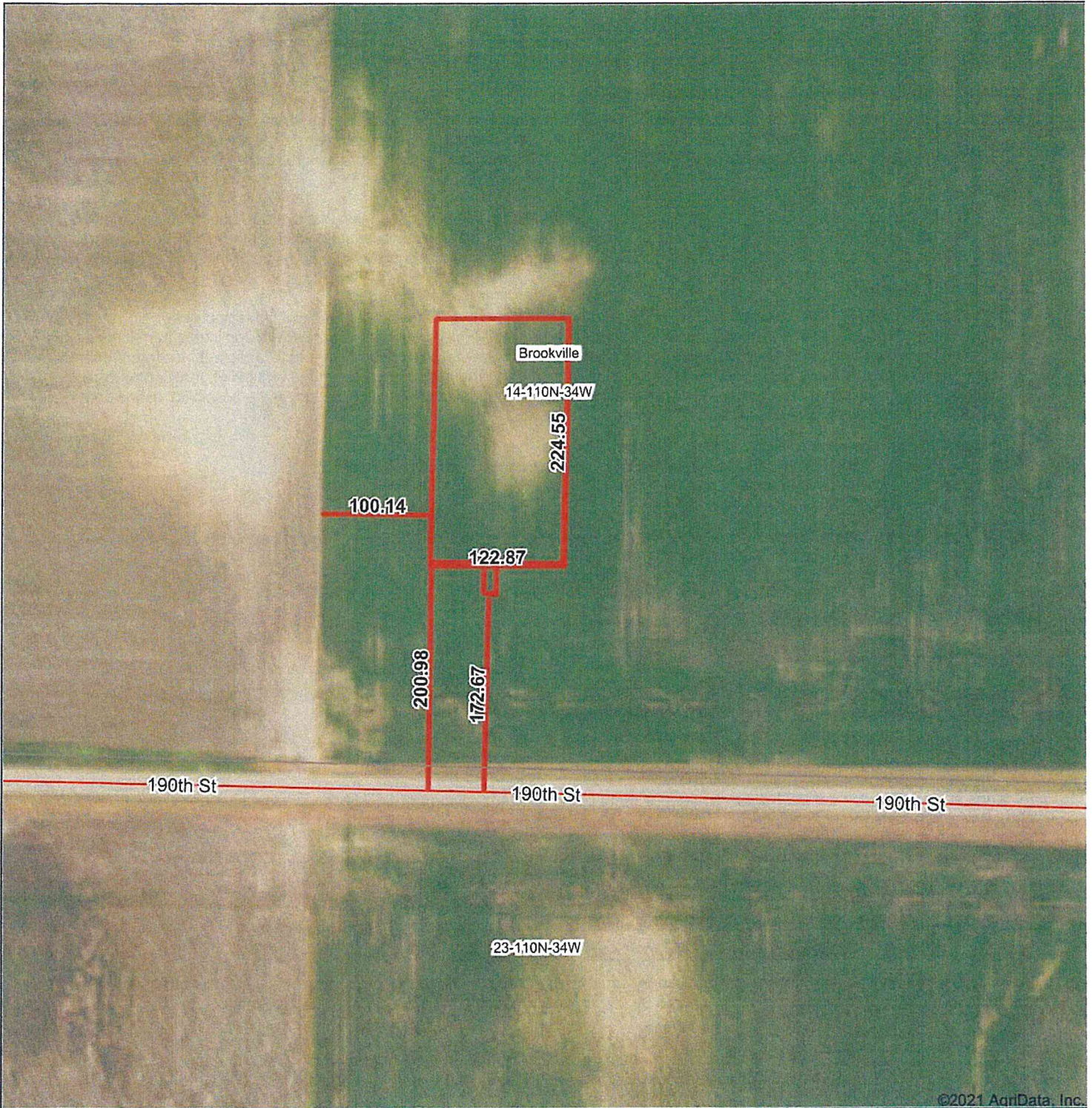
When any portion of manure is applied to land owned, rented, or leased by the applicant(s), or applied to other land where nutrient application decisions are made by the applicant(s), complete a MMP using the spreadsheet form:

[MPCA Manure Management Planner.](#)

Notes: The MMP requirements when ownership of manure is transferred form is incorporated into the spreadsheet to account for instances when only some of the manure is transferred.

- C. Plans and Specifications for construction, modification, or expansion of any of the following:
 - Liquid manure storage area
 - Vegetative infiltration area (VTA)
 - Permanent manure stockpile
 - Filter-Buffer strip
- D. Environmental Assessment Worksheet (EAW) Fee. When environmental review is required and the site is located in a non-delegated county, there is a fee of \$4,650 for processing of an Environmental Assessment Worksheet (EAW). The fee must be included with this permit application. (Check payable to: Minnesota Pollution Control Agency)
- E. Verification of the notifications required in part XII of this application. If not submitted with the application, the MPCA must receive the verification prior to permit issuance. It is strongly recommended that the applicable verifications be included with the permit application.

SFI- Brookville C Site Layout



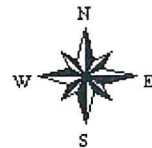
PCM Preferred
Capital
Management

Map Center: 44° 19' 34.87, -94° 53' 26.92



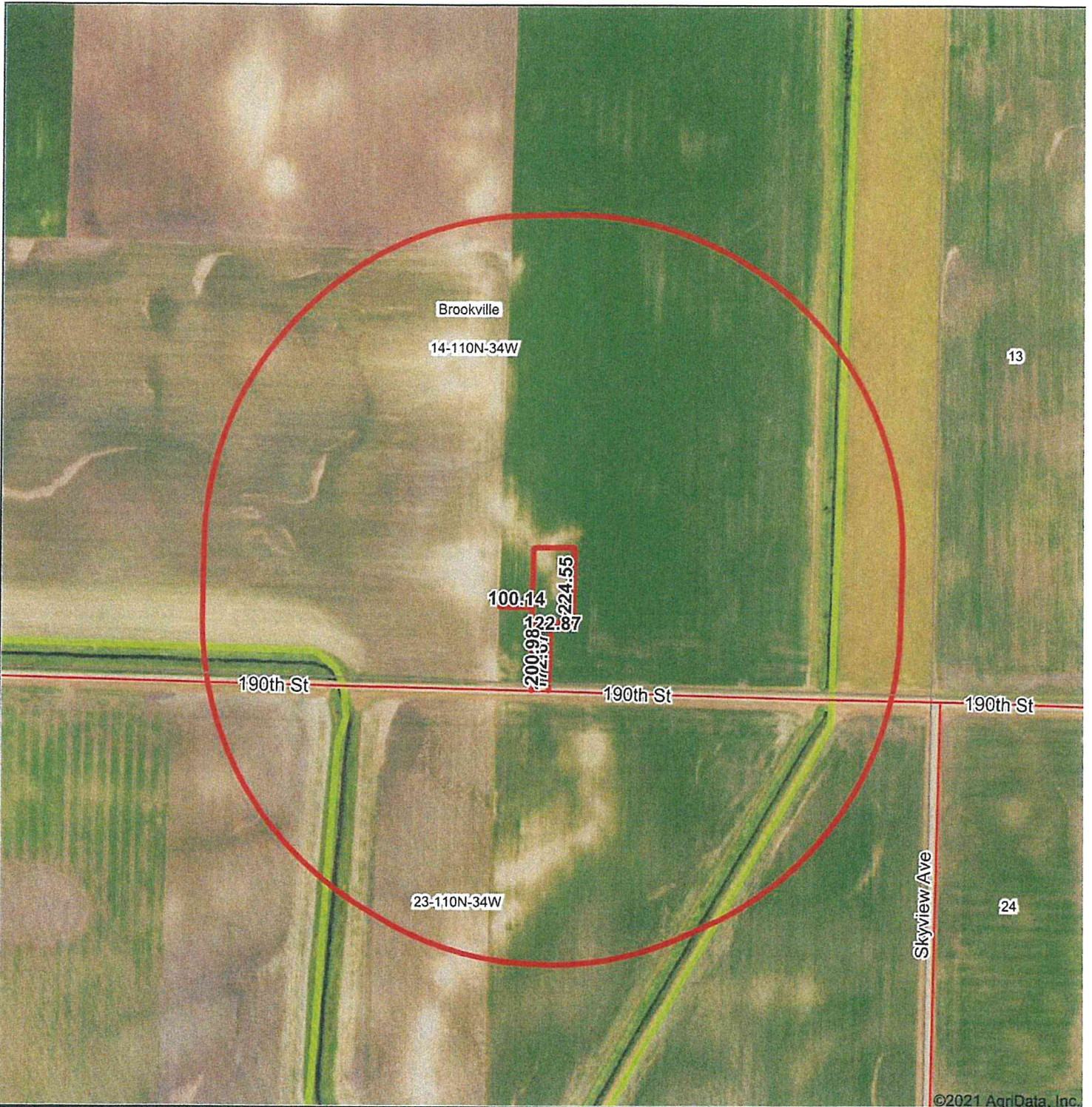
Maps Provided By
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14-110N-34W
Redwood County
Minnesota



5/13/2021

SFI- Brookville C 1,000' Radius



PCM Preferred
Capital
Management

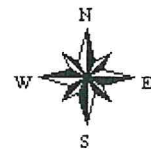
Map Center: 44° 19' 36.76, -94° 53' 27.83



14-110N-34W
Redwood County
Minnesota

Maps Provided By:

CUSTOMIZED ONLINE MAPPING
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5/13/2021

Manure Management Plan (MMP) requirements when ownership of manure is transferred

Feedlot Program

Doc Type: Permit Information Form

Are you transferring ownership of manure?

MMP and record-keeping requirements for feedlot owners are different when manure ownership is transferred. Manure ownership is not considered to be transferred (i.e., feedlot owner/operator retains ownership) when you answer "yes" to either question:

1. Yes No Is manure from the feedlot facility applied onto land that is owned, leased, or rented by the feedlot owner/operator?
2. Yes No For manure application sites not owned, leased, or rented by the feedlot owner/operator, have you as the feedlot owner/operator or employees working under your direction been given control of the crop and nutrient planning decisions, including planning for manure application rates, timing, and methods?

If you answered "No" to both questions, then you are transferring ownership of your manure and the feedlot operator may use these guidelines to complete a MMP.

If you answered "Yes" to either question, you are retaining ownership of manure and must complete a more comprehensive MMP. More information on the requirements when manure ownership is retained and resources to develop a retained ownership MMP can be found on the Minnesota Pollution Control Agency's (MPCA) website at <https://www.pca.state.mn.us/water/feedlots>.

If only a portion of your manure is considered to have transferred ownership, then use this form to develop a MMP for the manure which has transferred ownership, and develop the more comprehensive MMP for the manure which is not transferred.

MMP development

The MMP can be developed using this form or by using other formats that include all required information in Minn. R. ch. 7020.

Name of feedlot facility or operator: SFI - Brookville C Site Registration number: _____

1. Describe the manure storage and handling system and the expected amount of manure and nutrients that will need to be land applied.
 - a) How is the manure stored and handled? What happens to the manure from the time it is generated to the time it is either sold or land applied? Where is it kept? For how long?
All manure is stored in the below barn concrete storage pit with approximately 12 months of storage
 - b) How many months can manure be stored before the storage capacity is exceeded?
12 months or more
 - c) When will manure be provided to the recipient? Which months do you expect that manure will be applied?
Typically manure will be transferred each fall after crops are harvested. September through December would be the window for application.
 - d) How much manure is removed from barns or storage areas per year? How much manure will eventually need to be land-applied?
Amount removed from barns or storage: 1,200,000 Tons Gallons
Amount land applied: 1,200,000 Tons Gallons
 - e) How much of this manure will be transferred ownership: 100%

- f) How many pounds of nitrogen (N) and phosphorus (P₂O₅) will need to be land applied per year? (Multiply the expected nutrient content from Part 3.c) by the amount of manure land applied from Part 1.d) to get your answer.) (e.g., 77 pounds N ÷ 1,000 gallons x 1,300,000 gallons = 100,100 pounds of N or alternatively 45 pounds per ton x 3,000 tons = 135,000 pounds of N) (figure P₂O₅ using the same calculations)

N: 66,000

P₂O₅: 28,800

- g) For new or expanding feedlot facilities, is there enough land potentially available for spreading manure in accordance with allowable rates? Yes No

How will you ensure that enough land owners in the area are willing to purchase your manure or otherwise receive your manure? (e.g., enough land to allow spreading in accordance with state nutrient rate limits)

purchase agreement

2. Describe the manure application methods and equipment.

- a) How will the manure be applied? What method(s) and type(s) of equipment do you expect will be used for manure application by the recipient of your manure, if known?

Liquid tankers or towed hose applicators will incorporate the manure into the soil

3. Describe your nutrient testing methods, the frequency of testing, and the expected nutrient content of the manure to be applied.

- a) How often will manure be sampled and sent to a laboratory for nutrient analysis? (Minimum state requirements are: annual sampling at National Pollutant Discharge Elimination System [NPDES]-permitted facilities; annual sampling for the first three years and once every four years for other feedlots.)

Manure will be sampled every year and submitted to a certified lab for analysis

- b) How will the manure samples be collected to ensure that representative samples are obtained for nutrient analysis? (e.g., How many subsamples? When collected? Where collected? University of Minnesota Extension Service publications may be referenced.)

Subsamples from each storage pit will be collected and thoroughly mixed to create the sample that will be submitted for analysis.

- c) What is the expected nutrient content of manure to be collected? (e.g., What is the nitrogen and phosphorus content expected from each major type of manure storage area?)

N: 55 Pounds per Ton Pounds per 1,000 Gallons

P₂O₅: 24 Pounds per Ton Pounds per 1,000 Gallons

4. Describe how Minnesota's manure application requirements will be provided to manure recipients.

- a) Attach a copy of the state manure application requirements that you will provide to all recipients of your transferred manure. Will you be using Attachment A or another list of state requirements?

SFI will use the MPCA Attachment A

- b) How will you, as a feedlot owner/operator, maintain records associated with the manure transfer and land application sites/rates? Will you use MPCA recordkeeping forms for transferred ownership (Attachment B) or will you use a different form? **Note:** Attachments A and B can be obtained from MPCA offices or on the MPCA's website at <https://www.pca.state.mn.us/water/feedlots>.

SFI will use the MPCA Attachment A & B

- c) How will you provide the manure recipient with manure nutrient test results and expected manure nutrient content? You may use Attachment B or other forms which include test results.

SFI will use the MPCA Attachment B

Animal mortality management (NPDES and SDS permitted sites only)

Indicate with a check mark the anticipated method(s) of dead animal disposal.

Rendering

Carcasses at the pick-up point will comply with the following:

- Kept in an animal-proof, enclosed area.
- At least 200 yards from a neighbor's buildings.
- Picked up within 72 hours (7 days if refrigerated to less than 45 degrees).
- Other: _____

Composting

The composting area will comply with the following:

- Built on an impervious, weight-bearing pad that is large enough to allow equipment to maneuver.
Note: Class V gravel material is not considered to be impervious.
- Covered with a roof to prevent excessive moisture on the composting material, but if sawdust or other water-repelling material is used as the bulking agent, a roof may not be necessary.
- Built of rot-resistant material that is strong enough to withstand the force exerted by equipment.
- Large enough to handle each day's normal mortality through the endpoint of the composting which consists of a minimum of two (2) heat cycles.
- Other: _____

Burial

The following operational practices will be implemented:

- Stay 5 feet above seasonal high water table.
- Stay 1000 feet away from lakes and 300 feet away from rivers, streams, ditches, etc.
- Be covered immediately with enough soil to keep scavengers out (three feet is sufficient).
- Not be placed in sandy or gravelly soil types.
- Maintain at least 10 feet vertical separation between dead animals and bedrock.
- Other: _____

Incineration

The incinerator will meet the following:

- Capable of producing emissions not to exceed 20 percent opacity.
- Fitted with an afterburner that maintains flue gases at 1,200 degrees Fahrenheit for at least 0.3 seconds.
- Ash from the incinerator must be handled in such a manner as to prevent particulate matter from becoming airborne.

Other Method

The following operational practices will be implemented (describe the alternative method below):

Attachment A – Minimum state requirements for applying manure

Provide this information to the manure recipient

Manure analysis

I. Nitrogen rate limits

N _____ P _____ K _____

Limit rates so that estimated plant-available N from all manure and fertilizer sources combined does not exceed the nitrogen recommendations of the University of Minnesota. For corn crops, rates should be consistent with the MRTN.

- 195 lbs/N for corn following corn (as of 2020)
- 150 lbs/N for corn following soybeans (as of 2020)

Calculating N available this year from manure applied to the previous crop

All sources of nitrogen must be considered when calculating nitrogen application rates. This includes residual nitrogen from alfalfa grown two years ago, commercial fertilizer (starter or supplemental), nitrates in groundwater, and manure applied last year.

$$\frac{\text{Application rate last year (tons or gal/acre)}}{1000} \times \text{Liquid only} \times \frac{\text{Availability factor}}{0.15 \text{ for swine}, 0.25 \text{ for all others}} \times \text{N Test last year} = \text{N available this year (lbs/acre)}$$

Crop-available manure N applied to legumes cannot exceed legume nitrogen removal rates; 3.5 lbs N per bushel of soybeans, 50 lbs N per ton of alfalfa, 27 lbs N per ton grass hay.

Calculating a manure application rate for the upcoming crop

$$\frac{\text{Desired amount of N from manure}}{\text{Availability factor (\# from table 1/100)}} \div \text{Manure N Test} \times \frac{1000}{\text{Liquid only}} = \text{Application Rate (tons or gal/acre)}$$

Summer applications – Plant a cover crop where manure is applied in June, July, or August to harvested fields that would otherwise remain without crop cover for the rest of the growing season.

Calculating N available from manure applied for the upcoming crop

$$\frac{\text{Application rate (tons or gal/acre)}}{1000} \times \text{Liquid only} \times \frac{\text{Availability factor (\# from table 1/100)}}{\text{N Test this year}} = \text{N available this year (lbs/acre)}$$

II. Manure application setbacks

Manure application must comply with the following setbacks. County setbacks may be more restrictive.

Feature	Surface application	Incorporation within 24 hrs
Lakes, streams	300*	25'
Wetlands (10+ ac)	300*	25'
Drainage ditches w/o berms	300*	25'
Open Tile Intakes	300'	0'
Sinkholes w/o berms		
Downslope	50'	50'
Upslope	300'	50'
Wells and quarries	50'	50'

* 100' vegetated buffer can be used instead of 300' setback for non-winter applications (50' buffer for wetlands/ditches)

Table 1. Percent of total manure nitrogen available the first year

Animal Type	Broadcast			Injection	
	Incorporation after 4 days	Incorporation 12 - 96 hrs	Incorporation within 12 hrs	Knife	Sweep
Beef	25	45	60	50	60
Dairy	20	40	55	50	55
Swine	35	55	75	70	80
Poultry	45	55	70	70	70

If you have a manure spill contact the state duty officer at 1-800-422-0798

III. Soil phosphorus (P) management

Soil P testing – Test soils for P at least once every four years.

Avoid P build-up within 300 feet of waters* – Where soils test P levels exceed 21 Bray P-1 or 16 Olsen, the rate and frequency of manure applications must not allow soil phosphorus build-up over a six year period, unless a 50-100' vegetative buffer is established along the waters. Single year applications can be based on nitrogen if the remaining phosphorus is removed by subsequent crops.

Avoid extremely high P soils – Avoid manure application onto fields where soils exceed:

- 150 ppm Bray P-1 or 120 ppm Olsen
- 75 ppm Bray P-1 or 60 ppm Olsen within 300 feet of water or tile intakes.

* "waters" refers to lakes, streams, intermittent streams, wetlands over 10 acres, and drainage ditches without protective berms.

IV. Manure recipient record keeping requirements

The cropland manager must keep records of the following for at least three years (six years if applying near waters):

- Manure test dates and results
- Field ID and acreage
- Soil P test dates and results
- Crop grown and yield goal
- Previous crop grown
- N recommendation for the crop grown
- N from irrigation water
- Carry-over N from previous manure applications
- Date and rate of manure application
- Method of application and incorporation timing
- Manure N and P₂O₅ available
- Fertilizer N and P₂O₅ applied
- Total lbs N available/acre (all sources)
- Total lbs P₂O₅ available/acre (all sources)

V. Short-term stockpiling practices

Follow all stockpiling setbacks for waters and conduits to waters (ranging from 50 to 300 feet); avoid sandy soils and high water table soils (<2'); avoid slopes over 6%; use diversions if slopes exceed 2%; and keep records as required in Minn. R. 7020.2125. The stockpile size must not exceed the amount of manure needed to supply nutrient needs to the tract of land where applied.

More information: For more information, contact the MPCA or visit the website at <https://www.pca.state.mn.us/water/feedlots>.



Records when manure ownership is transferred 300 or more animal units

Feedlot Program

Records for feedlot owners (manure generator) and commercial applicators

Doc Type: Permit Information Form

Instructions: This record keeping form is for feedlot owners that transfer the ownership of manure generated by 300 animal units or more. The form must be completed by the feedlot owner, where the manure is generated, and the manure applicator. It can also be used by commercial applicators to complete their record keeping requirements.

You will need to make three copies of this form for each transfer. Triplicate copies are available.

Copy 1: Kept by feedlot owner where manure is generated after completion of step #1.

Copy 2: Kept by applicator after completion of step #3.

Copy 3: Returned to feedlot owner where manure was generated after completion of step #3.

Step 1: Manure generation *(Completed by feedlot owner where manure is generated)*

Facility name where manure generated: _____

Facility address: _____

City: _____ State: _____ Zip: _____

Manure analysis results *(Must be representative of manure transferred)*

Manure source: _____ Date analyzed (mm/dd/yyyy): _____

N: _____ P₂O₅: _____ K₂O: _____ Units: lb/ton lb/1000 gallons

Name of company or individual taking manure from feedlot: _____

Address: _____

City: _____ State: _____ Zip: _____

Total quantity transferred: _____ tons gallons Date(s) transferred: _____

Step 2: Short-term stockpiling *(Completed by owner of the stockpile - Provide form to person applying manure.)*

If no stockpile, go to step 3.

Stockpile location(s)				Quantity stockpiled (tons)	Date stockpile established (mm/dd/yyyy)	Date land applied (mm/dd/yyyy)
County	Township	Section	Quarter			

Step 3: Manure application *(Completed by person applying manure.)*

Name of company or individual that applied manure: _____

Address: _____

City: _____ State: _____ Zip: _____

Minnesota Department of Agriculture commercial applicator license number (if used): _____

Field ID	County	Township	Section	Application rate (tons or gallons/ac)	Application method (see choices below)

Application methods: Incorp. within 12 hours., Incorp. 12 – 96 hours, Incorp. after 96 hours, Sweep injection, Knife injection



Minnesota Pollution Control Agency

520 Lafayette Road North
St. Paul, MN 55155-4194

Emergency Response Plan

NPDES/SDS Permit Program
Feedlot Program

Doc Type: Permit Application

Instructions: This *Emergency Response Plan* is to be used in case of an emergency spill, leak, or failure at the production facility or land application area. This plan is incorporated into the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Permit and submitted to the Minnesota Pollution Control Agency (MPCA).

Facility name: SFI- Brookville C Feedlot registration no.: _____
Owner/Operator name: Schwartz Family LLC Feedlot permit no.: _____

List of critical phone numbers and contacts

	Contact person (or Company)	Phone number	
Emergency contacts			
• Fire/Ambulance	-----	911	
• County Sheriff	Redwood County	507-637-4036	
Agency contacts			
• Minnesota Duty Officer	-----	1-800-422-0798	Provide the MN Duty Officer: • Your contact information • Spill location, date and time? • Spill type and spill amount? • Surface water or field tile impacted? • Progress made to clean up or contain the spilled material?
• MPCA Field Office	Marshall Office	1-507-537-7146	
• County Feedlot Officer	Nick Brozek	1-507-637-4023	
• County Health Department	Southwest Health	507-637-4041	
Other contacts			
• Insurance company			
• Gopher State One Call	-----	1-800-252-1166	
• Board of Animal Health	St. Paul	561-296-2942	
Liquid manure cleanup equipment and supplies (Local vendors for cleanup assistance)			
• Manure pumper	Triple S Pumping Brett Stratmoen	320-226-2726	
• Earth moving equipment	TNT Construction Tim Kerkhoff	507-829-8017	
• Tiling equipment	TNT Construction Tim Kerkhoff	507-829-8017	
• Containment/Absorption materials (hay, straw, cornstalks, sawdust)	TNT Construction Tim Kerkhoff	507-829-8017	
•			
Solid manure cleanup equipment and supplies (Local vendors for cleanup assistance)			
• Manure loading equipment			
• Rendering	Central By-Products	712-262-3225	

Liquid Manure Emergency Response

- Immediately stop the source of the leak or spill:
 - Turn off pumps or valves
 - Clamp hoses or park tractor on hoses
- Contain the spilled manure:
 - Use skid loader or tractor with blade to make berms
 - Install bale checks and block downstream culverts
 - Insert sleeves around tile intakes (or plug/cap)
 - Use tillage equipment to work ground ahead of spill
 - Use absorptive materials
- Make necessary phone calls as listed in the chart above:
 - Notify Minnesota Duty Officer at 1-800-422-0798
 - Notify sheriff's office if spilled on public roads or right-of-ways for traffic control
- Cleanup:
 - Clean up spill immediately from road and roadside
 - Clean up all material, including the contaminated soil, as soon as possible by pumping, scraping, or by other means
 - Land apply manure at agronomic rates or place manure back in the manure storage area
 - Follow recommendations of MPCA staff and/or County Feedlot Officers
 - Restore site to its original conditions
- Document your actions:
 - Keep records of all actions related to the spill and follow up activities

Solid Manure Emergency Response

- Make necessary phone calls as listed in the chart above:
 - Notify Minnesota Duty Officer at 1-800-422-0798
 - Notify sheriff's office if spilled on public roads or right-of-ways for traffic control
 - Cleanup*:
 - Clean up spill immediately from road and roadside
 - Clean up all material, including the contaminated soil, as soon as possible by scraping, or by other means
 - Land apply manure at agronomic rates or place manure back in the solid manure storage area/stockpile
 - Follow recommendations of MPCA staff and/or County Feedlot Officers
 - Restore site to its original conditions
 - Document your actions:
 - Keep records of all actions related to the spill and follow up activities
- *If rain is expected prior to cleanup; actions need to be taken to contain manure contaminated runoff from discharging. (See # 2 under Liquid Manure Emergency Response)

A detailed site map should be displayed on site to assist employees identify sensitive receptors (surface water, wells, tile intakes, etc).

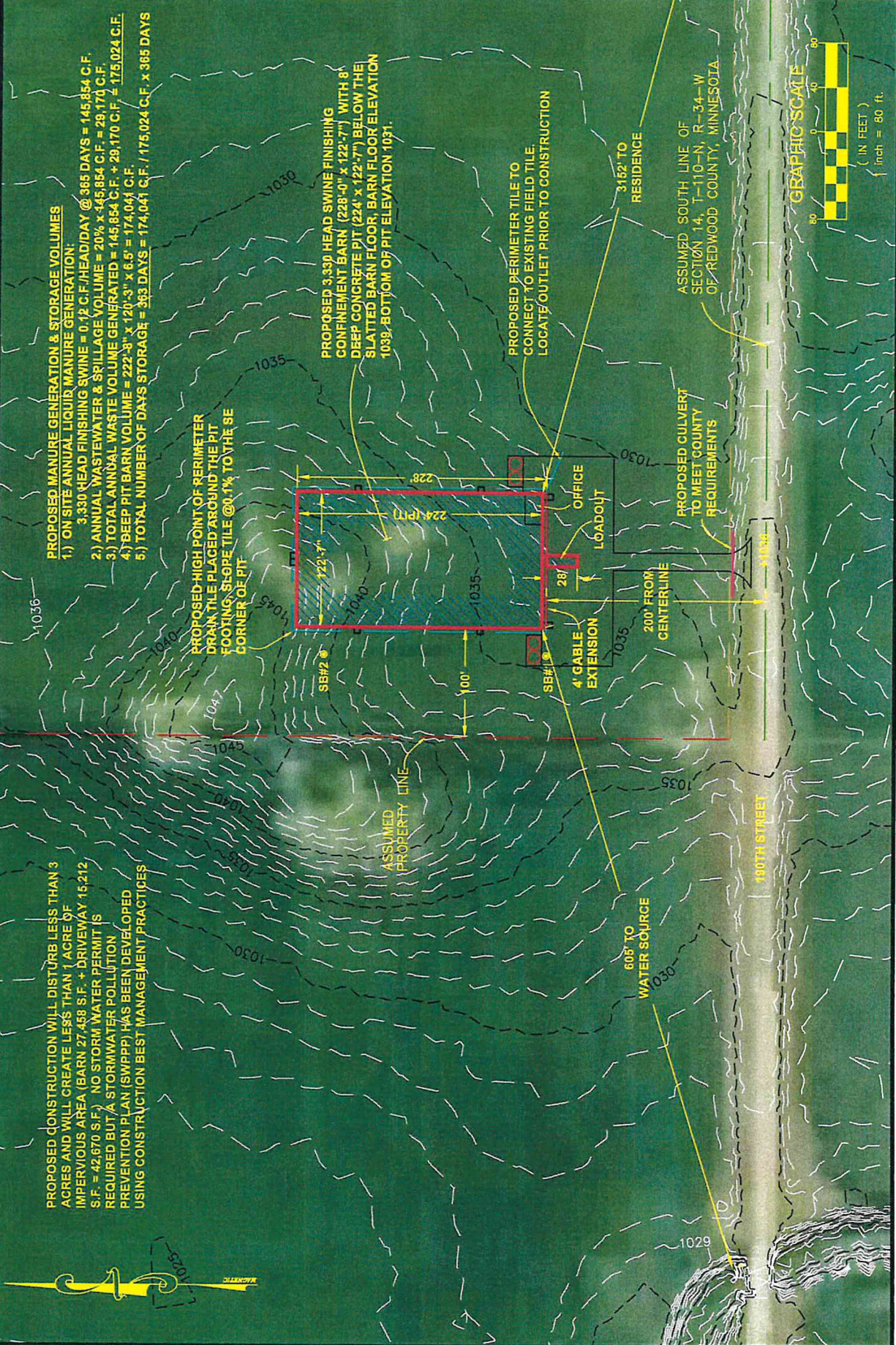
**OFFICIAL PUBLICATION
NOTICE OF APPLICATION
FOR A LIVESTOCK FEEDLOT PERMIT**

Notice is hereby given per Minnesota Statutes, Chapter 116, and Rock County's feedlot ordinance, that Schwartz Family LLC have made an application to the Minnesota Pollution Control Agency / County of Redwood for a permit to build a new feedlot.

The new proposed feedlot will be located in the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ in Section 14 Brookville Township, Redwood County, Minnesota. The proposed new feedlot will be a 122'7" x 224' total confinement facility with a capacity of 3,330 head of finishing swine weighing between 55-300 pounds for a total of 999 animal units. The proposed barn will have an 8' deep concrete below barn manure storage pit with 12 months of storage. The total number of animal units after construction will be 999.

This publication shall constitute as notice to each resident and each owner of real property within 5000 feet of the perimeter of the proposed feedlot, as required by Minnesota State Law.

Schwartz Family LLC
32296 190th St.
Sleepy Eye, MN 56085
Published in the Redwood Gazette May 20, 2021.

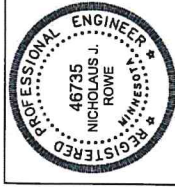


PROPOSED CONSTRUCTION WILL DISTURB LESS THAN 3 ACRES AND WILL CREATE LESS THAN 1 ACRE OF IMPERVIOUS AREA (BARN 27,468 S.F. + DRIVEWAY 15,212 S.F. = 42,670 S.F.). NO STORM WATER PERMIT IS REQUIRED BUT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN DEVELOPED USING CONSTRUCTION BEST MANAGEMENT PRACTICES



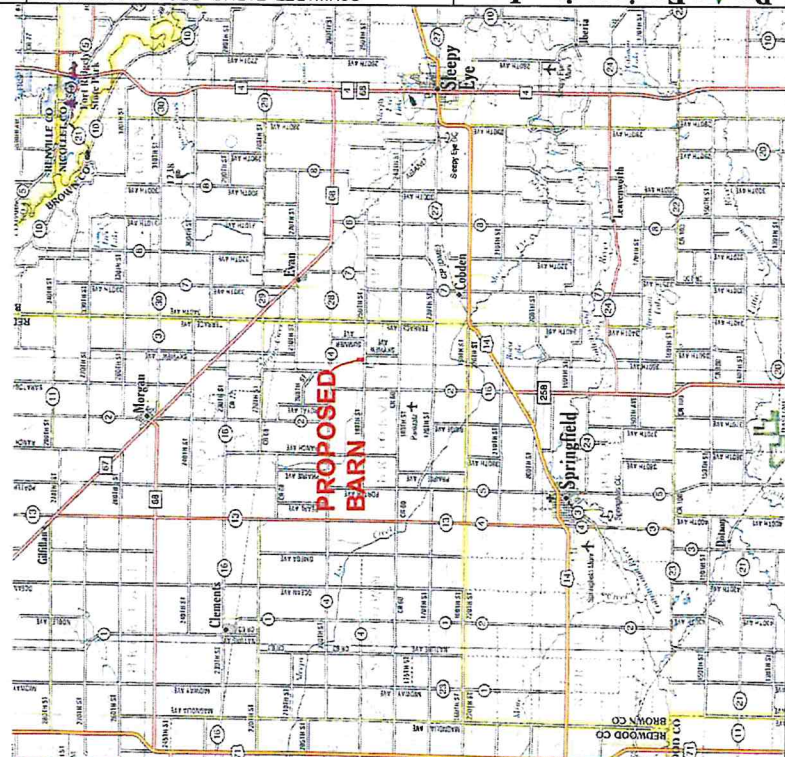
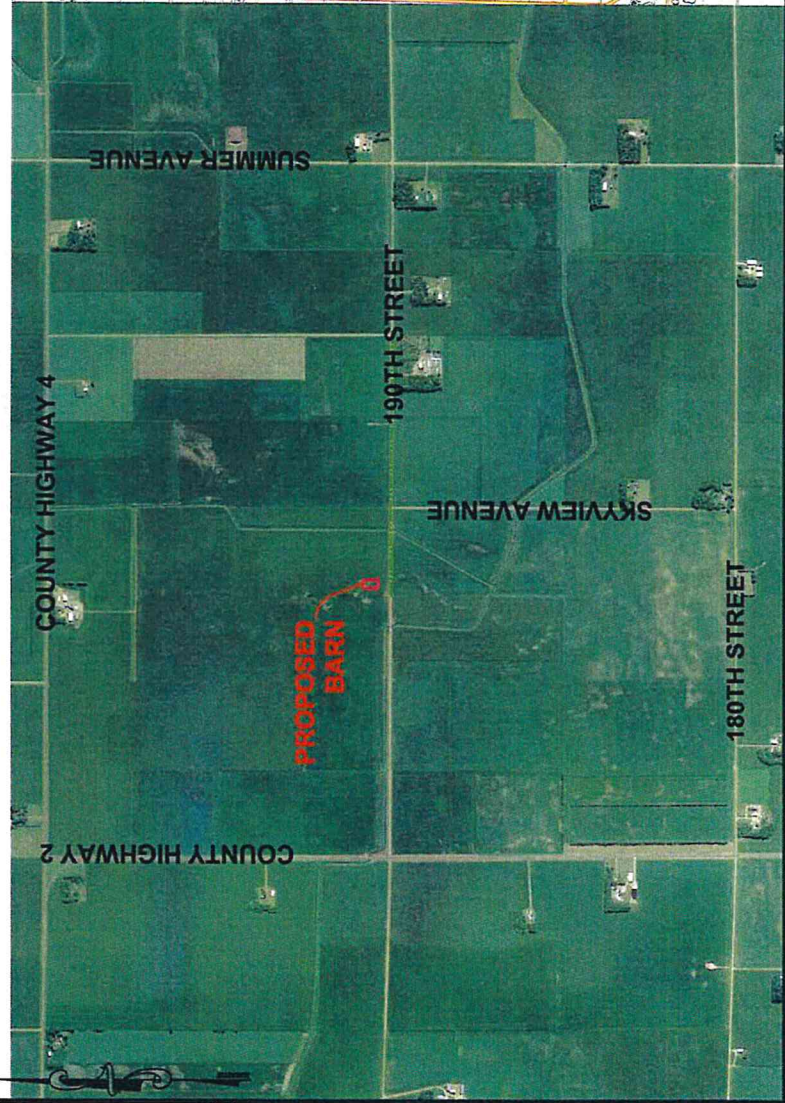
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SHEET 3 --	PIT PLAN		
SHEET 4 --	SIDEWALL END WALL BRACING & BEAM POCKET COLUMN DETAIL	SHEET 7 --	CONCRETE & STRUCTURAL NOTES SLAT LEDGES & STEM WALLS NOTE
SHEET 5 --	PUMP OUT PLAN PUMP OUT SECTION		

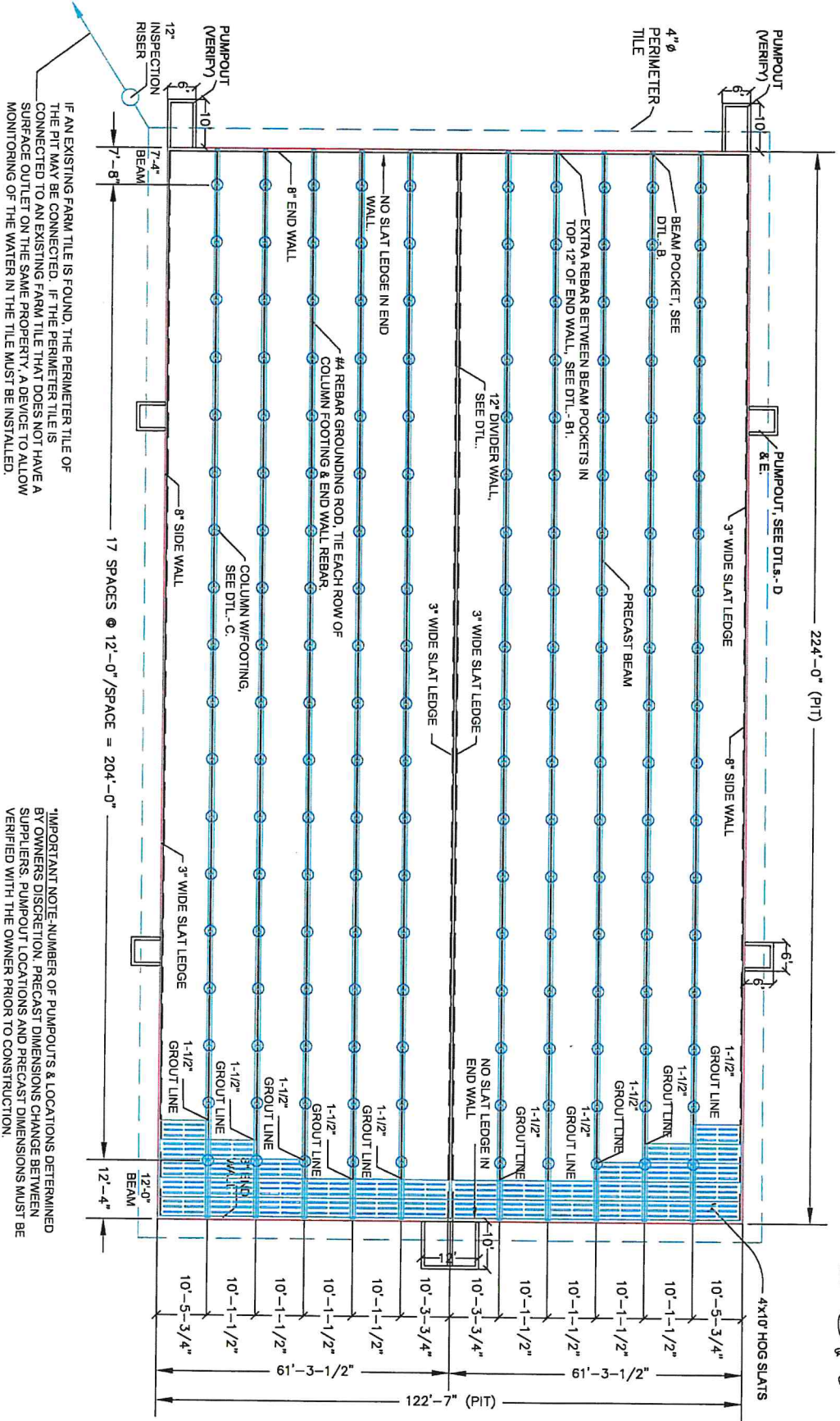


I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.
 Date 5/10/21
 Nicholas J. Rowe, P.E.
 License number 46735
 My license renewed this in June 30, 2022
 Pages or sheets covered by this seal: 17

SHEET 1/17	Project No. 21-059	Checked By N.J.R.	Date 5/10/21	Drawn D.D.A.	SWHARTZ FARMS--BROOKVILLE SITE PROPOSED SWINE CONFINEMENT BARN SE 1/4, SECTION 14, T110N, R34W REDWOOD COUNTY, MINNESOTA	ProAg Engineering, Inc. 77402 U.S. Highway 71, P.O. Box 181 Jackson, MN 56143 (507) 849-7200
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PIT FLOOR PLAN
(OUTSIDE DIMENSIONS 224'-0" x 122'-7" x 8' PIT)
NOT TO SCALE



IF AN EXISTING FARM TILE IS FOUND, THE PERIMETER TILE OF THE PIT MAY BE CONNECTED. IF THE PERIMETER TILE IS CONNECTED TO AN EXISTING FARM TILE THAT DOES NOT HAVE A SURFACE OUTLET ON THE SAME PROPERTY, A DEVICE TO ALLOW MONITORING OF THE WATER IN THE TILE MUST BE INSTALLED.

IMPORTANT NOTE: NUMBER OF PUMPOUTS & LOCATIONS DETERMINED BY OWNERS DISCRETION. PRECAST DIMENSIONS CHANGE BETWEEN SUPPLIERS. PUMPOUT LOCATIONS AND PRECAST DIMENSIONS MUST BE VERIFIED WITH THE OWNER PRIOR TO CONSTRUCTION.

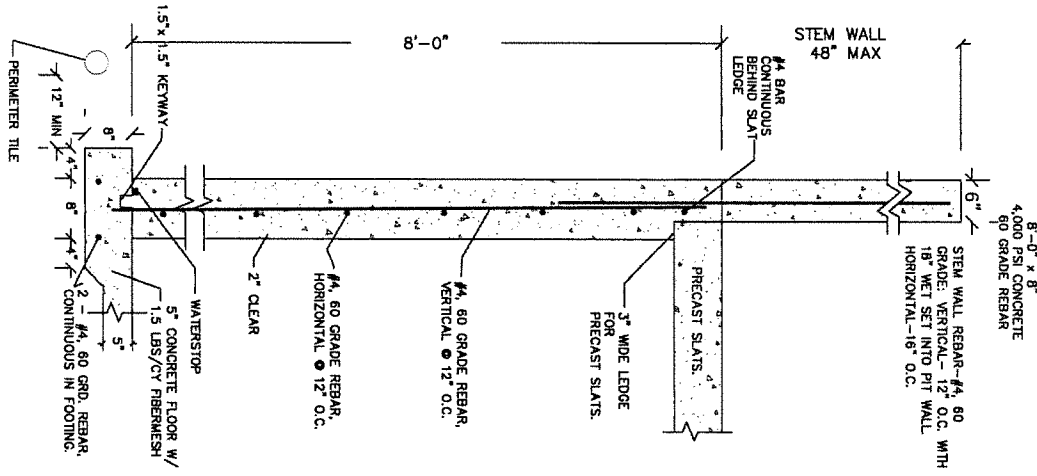
ProAg Engineering, Inc.
 77402 U.S. Highway 71, P.O. Box 181
 Jackegg, MN 56143
 (507) 849-7200

SCHWARTZ FARMS—BROOKVILLE SITE
 PROPOSED SWINE CONFINEMENT BARN
 SE1/4, SECTION 14, T110N, R34W
 REDWOOD COUNTY, MINNESOTA

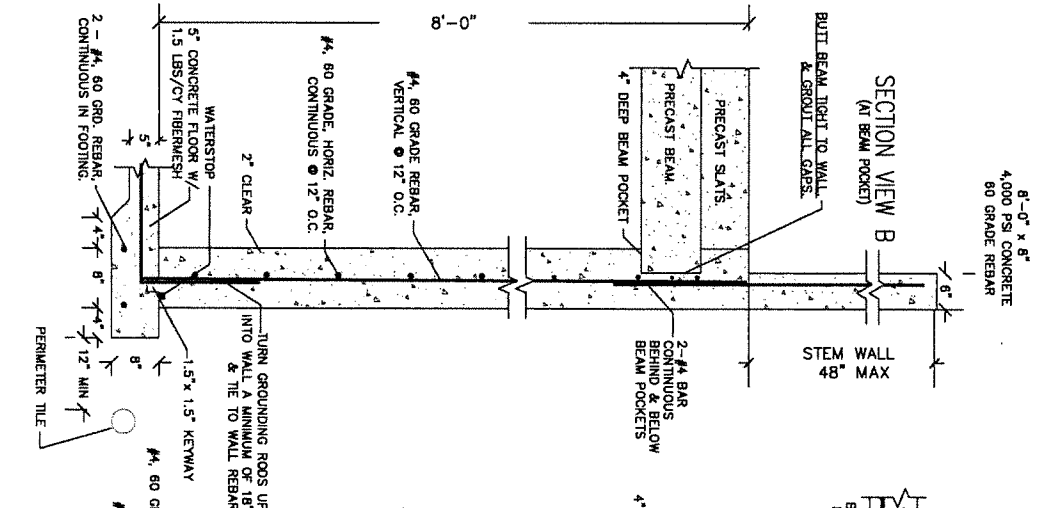
Date	5/10/21	Checked By	N.J.R.	Project No.	21-059
Drawn	D.D.A.				

SHEET
3/7

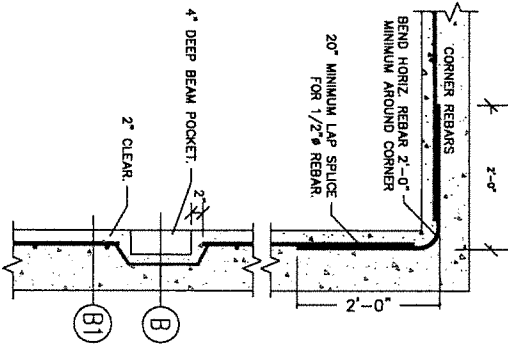
(A) SIDE WALL



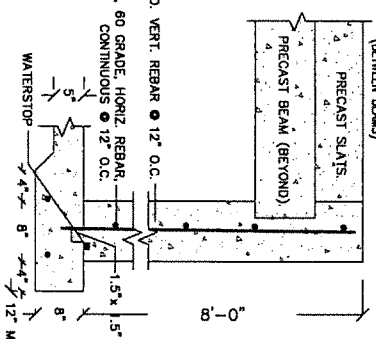
(B) END WALL BRACING & BEAM POCKET



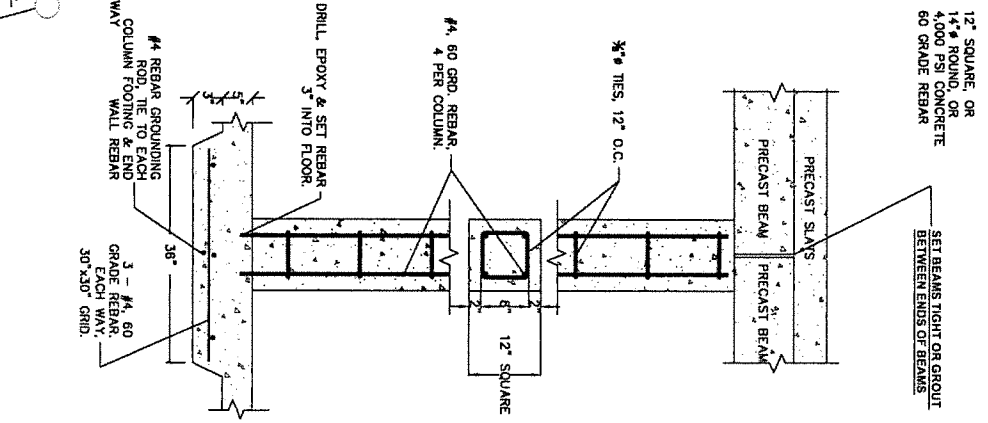
TOP VIEW



SECTION VIEW B1 (BETWEEN BEAMS)



(C) COLUMN DETAIL



IMPORTANT NOTE: PRECAST DIMENSIONS CHANGE BETWEEN SUPPLIERS. PRECAST DIMENSIONS MUST BE VERIFIED WITH THE OWNER PRIOR TO CONSTRUCTION.

ProAg Engineering, Inc.
77402 U.S. Highway 71, P.O. Box 181
Jackson, MN 56143
(507) 849-7200

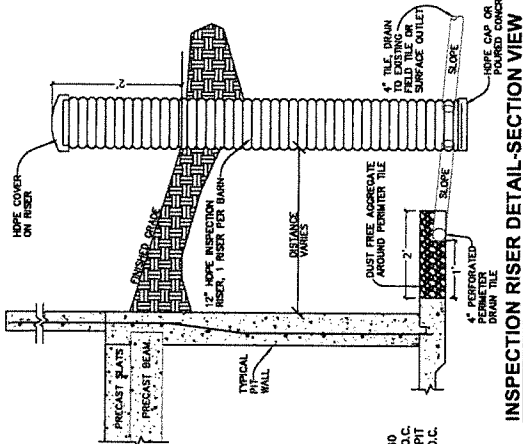
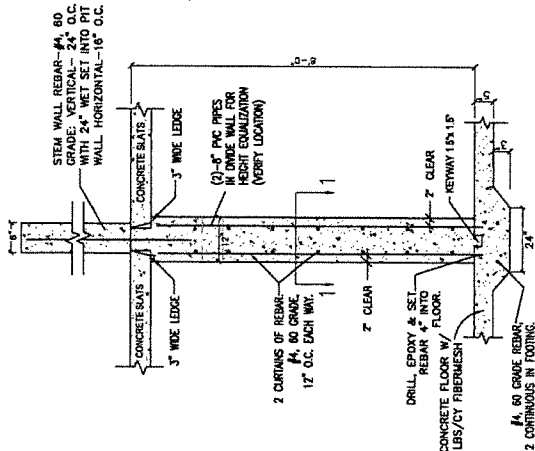
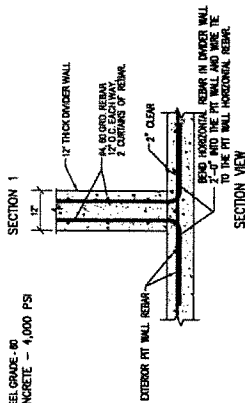
SCHWARTZ FARMS-BROOKVILLE SITE
PROPOSED SWINE CONFINEMENT BARN
SE 1/4, SECTION 14, T110N, R34W
REDWOOD COUNTY, MINNESOTA

Date	5/10/21	Checked By	N.J.R.	Project No.	4/7
Drawn	D.D.A.			21-059	

SHEET 4/7

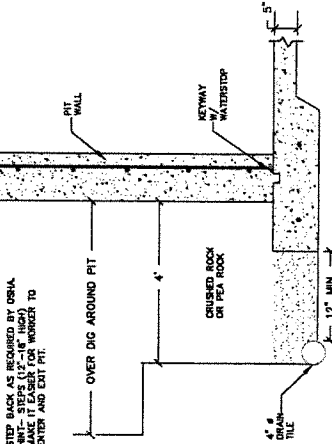
12" DIVIDER WALL

STEEL GRADE - 60
CONCRETE - 4,000 PSI

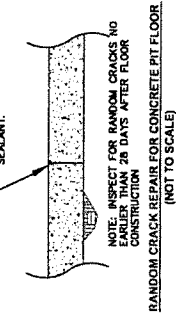


PERIMETER TILE

PERIMETER TILE WITH PEA ROCK COVER INSTALLED BY CONCRETE CONTRACTOR BEFORE POURING FLOOR SLAB.

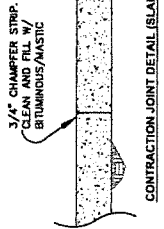


ROUTER OUT CRACK WITH "CRACK CHASER" TO REMOVE ALL CRACKS. CLEAN AND FILL WITH BITUMINOUS SEALANT.

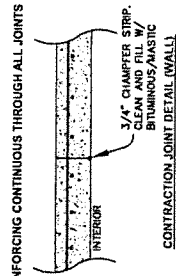


NOTE: INSPECT FOR RANDOM CRACKS NO EARLIER THAN 28 DAYS AFTER FLOOR CONSTRUCTION.

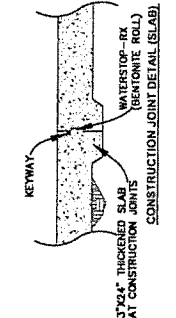
CONSTRUCTION JOINTS



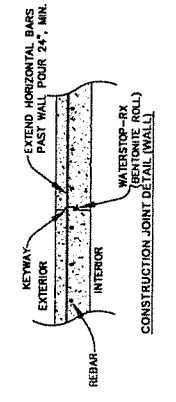
RANDOM CRACK REPAIR FOR CONCRETE PIT FLOOR (NOT TO SCALE)



REINFORCING CONTINUOUS THROUGH ALL JOINTS

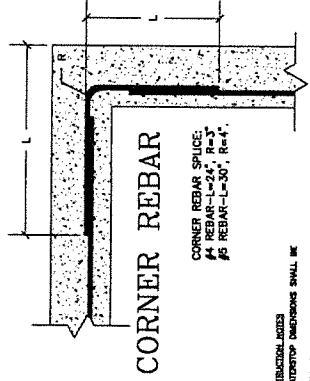


CONSTRUCTION JOINT DETAIL (BLAB)



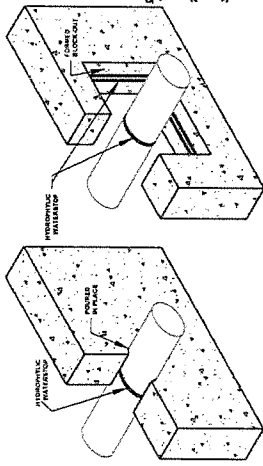
CONSTRUCTION JOINT DETAIL (WALL)

IMPORTANT NOTE - PRECAST DIMENSIONS CHANGE BETWEEN SUPPLIERS. PRECAST DIMENSIONS MUST BE VERIFIED WITH THE OWNER PRIOR TO CONSTRUCTION



CORNER REBAR

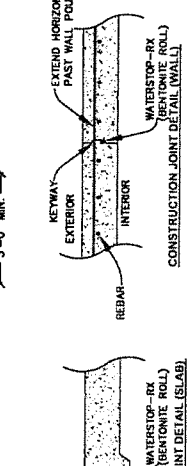
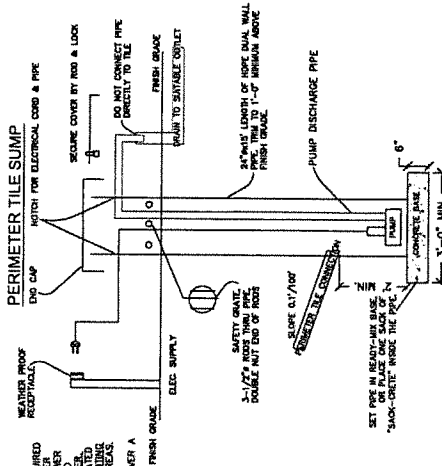
- CONSTRUCTION NOTES
1. WATERSTOP DIMENSIONS SHALL BE AS SHOWN.
 2. REBAR SHALL BE PLACED TO EVEN SURFACES, FREE OF DIRT, OIL, OR LUBRICANTS.
 3. THE REBAR SHALL BE BOUND TO THE CONCRETE AND/OR PIPE PRIOR TO PLACEMENT OF ADJOINING CONCRETE.
 4. THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE FOLLOWED.



LIQUID TIGHT PIPE PENETRATIONS

NOT TO SCALE

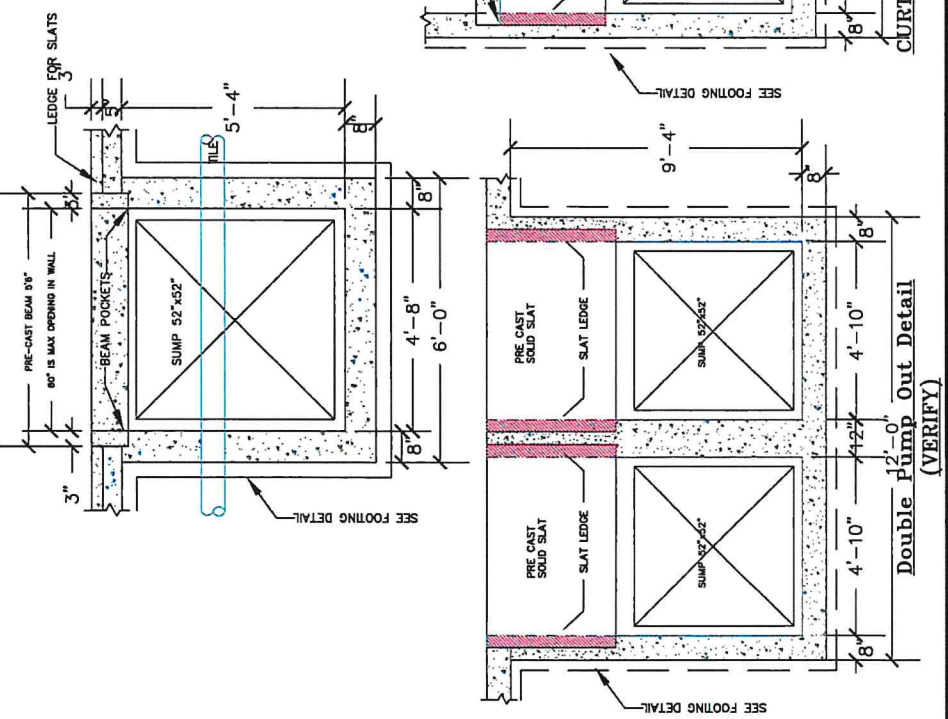
WHERE A PERIMETER TILE SYSTEM IS REQUIRED, THE WATER TABLE OR SATURATED SOIL TO WHICH THE PERIMETER TILE SHALL BE LOCATED AT LEAST ONE FOOT OUTSIDE OF THE FOOTING OF CONCRETE-USED MANURE STORAGE AREAS. SUMP PUMPS SHALL BE REQUIRED WHENEVER A GRANTY OUTLET IS NOT AVAILABLE.



D TYPICAL PUMP OUT PLAN

BEAM MAY BE CAST-IN-PLACE WITH STEM WALL. MINIMUM OF 2-#4, 60 GRADE REBARS IN BOTTOM OF BEAM. PUMPOUT FOOTINGS AND FLOOR SHALL BE POURED WITHOUT CONSTRUCTION JOINTS--SEE DETAIL 1. KEYWAY UNDER WALLS SHALL BE CONTINUOUS AROUND CORNERS AND PUMPOUTS. CONSTRUCTION JOINTS ARE NOT TO BE WITHIN THREE (3) FEET OF A PUMPOUT.

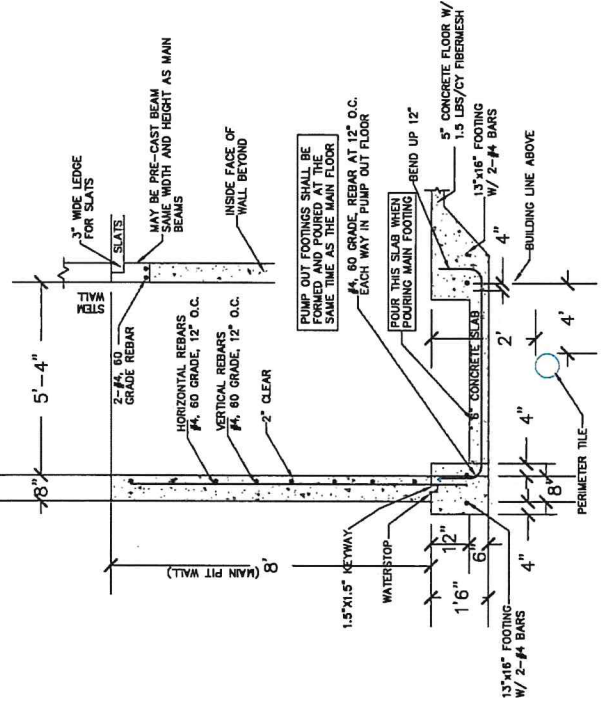
CAUTION: DO NOT DRIVE STAKES THRU PERIMETER TILE.



E PUMP OUT SECTION

8" THICK WALLS FOR 8'-0" DEEP PITS. LOCATE PERIMETER TILE SO SIDE OF TRENCH BECOMES SIDE OF GENERAL EXCAVATION FOR PIT.

TO DEWATER THE SITE IN ADVANCE OF GENERAL EXCAVATION SHALL BE DECIDED BY THE OWNER, ENGINEER AND CONTRACTOR AT TIME OF THE PRECONSTRUCTION MEETING. IF THE TILE IS INSTALLED IN ADVANCE OF EXCAVATION, IT SHOULD BE INSTALLED 4 FT OUT FROM THE PIT WALL AND AT LEAST 2 FT BELOW THE TOP OF THE PIT FLOOR (IN ORDER TO GO UNDER PUMPOUT SUMP). SLOPE THE TILE AT 0.2 FT PER 100 FT TO THE SUMP OR DAYLIGHT OUTLET. PLOW TYPE MACHINES SHALL NOT BE USED WHEN INSTALLING PERIMETER TILE AROUND CONCRETE MANURE STORAGE STRUCTURES PRIOR TO GENERAL EXCAVATION, BECAUSE IT WILL LOOSEN SOIL UNDER WALL FOOTING. USE ONLY A BACKHOE OR TRENCHER.



*IMPORTANT NOTE-NUMBER OF PUMPOUTS & LOCATIONS DETERMINED BY OWNERS DISCRETION. PRECAST DIMENSIONS CHANGE BETWEEN SUPPLIERS. PUMPOUT LOCATIONS AND PRECAST DIMENSIONS MUST BE VERIFIED WITH THE OWNER PRIOR TO CONSTRUCTION.

SHEET 5/7	Project No 21-059	Checked By N.J.R.	Date 5/10/21	Drawn D.D.A.	SCHWARTZ FARMS--BROOKVILLE SITE PROPOSED SWME CONFINEMENT BARN SE 1/4 SECTION 14, T10N R24W REDWOOD COUNTY, MINNESOTA	ProAg Engineering, Inc. 77402 U.S. Highway 71, P.O. Box 181 Jackson, MN 56143 (507) 849-7200
		Date 5/10/21				

CONCRETE & STRUCTURAL NOTES:

1. GENERAL: NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER THESE STRUCTURAL NOTES.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS PRIOR TO STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
3. IN NO CASE SHALL DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THE STRUCTURAL DRAWINGS.
4. DESIGN CHANGES MUST BE APPROVED IN WRITING BY BOTH THE OWNER AND ENGINEER BEFORE PROCEEDING WITH THE WORK. SOME DESIGN CHANGES MAY ALSO REQUIRE MPCA, COUNTY FEED/TOP OFFICER AND/OR NRCS APPROVAL.
5. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING CODES:
 - a. UNIFORM BUILDING CODE (UBC)
 - b. MINNESOTA STATE BUILDING CODE
 - c. AMERICAN CONCRETE INSTITUTE (ACI)
 - d. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE
6. DRAIN TILE
 - 1.) BEFORE ANY PIT CONSTRUCTION, TRENCH AND INSTALL DRAIN AROUND THE PROPOSED PIT, THE DRAIN TILE FLOW LINE MUST BE A MINIMUM OF 12" BELOW THE TOP OF THE DRAIN TILE SHALL BE HEAVY DUTY PERFORATED POLYETHYLENE TUBING 4" TILE WITH PEA ROCK COVER OR 4" TILE W/ FABRIC SLEEVE AND SAND/GRAVEL COVER.
 - 2.) CONNECT THE DRAIN TILE TO AN EXISTING FARM TILE IF AVAILABLE; DISCHARGE TO SURFACE DRAINAGE; OR DRAIN TO A SLUMP AND PUMP TO SURFACE.
7. TEMPORARY BRACING AND BACKFILL
 - 1.) PROVIDE TEMPORARY LATERAL SUPPORT FOR ALL WALLS WHERE GRADE VARIES ON THE TWO SIDES UNTIL THE PERMANENT STRUCTURAL SUPPORT SYSTEM IS IN PLACE.
 - 2.) BACKFILL ONLY AFTER THE FLOOR SLATS OR SOLID FLOOR HAS BEEN INSTALLED.
 - 3.) DO NOT BACKFILL AGAINST WALL UNTIL SLATS ARE INSTALLED AND GROUTED.
 - 4.) BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 14 DAYS BEFORE BACKFILL IS PLACED AGAINST WALLS. EXERCISE CAUTION WHEN BACKFILLING TO BRING UP THE LEVEL UNIFORMLY ON ALL SIDES OF TRENCHES AND PITS.
8. FOOTINGS, FOUNDATIONS & SUBGRADE
 - 1.) SOIL BEARING DESIGN VALUE: 5000 PSF (ASSUMED) ON VIRGIN SOIL OR COMPACTED FILL FOR FOOTINGS.
 - 2.) ALL FOUNDATIONS SHALL BE CONSTRUCTED ON UNDISTURBED NATURAL OR COMPACTED FILL.
 - 3.) EXISTING DISTURBED SUBGRADE SHALL BE RECOMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
 - 4.) ALL FILL UNDER FOOTINGS AND SLAB SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-99.
 - 5.) SAND FILL AS REQUIRED FOR LEVELING SUBGRADES SHALL BE PROVIDED AT ALL SLAB ON GRADE AREAS.
9. REINFORCED CONCRETE
 - 1.) ALL CONCRETE AND REINFORCING WORK SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE'S STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE*, (ACI 318-05)
 - 2.) CONCRETE WORK SHALL CONFORM TO ALL THE REQUIREMENTS OF ACI 301.
 - 3.) CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF FC=3500 PSI FLOOR, 4000 PSI WALLS
 - 4.) WATER CEMENT RATIO SHALL BE 0.45 MAXIMUM
 - 5.) CEMENT SHALL CONFORM TO ASTM C150, TYPE 1.
 - 6.) READY-MIX CONCRETE SHALL BE ORDERED FROM A REPUTABLE SUPPLIER.
 - 7.) READY-MIX CONCRETE SHALL BE MIXED & DELIVERED IN ACCORDANCE WITH ASTM C94.
 - 8.) SLUMP SHALL BE MAXIMUM OF 5"
 - 9.) AIR CONTENT SHALL BE 5% TO 7%
 - 10.) CONCRETE TO BE CURED WITH SONOROBORN CURE AND SEAL OR EQUAL
 - 11.) ADMIXTURES MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER FOR THE PURPOSE OF INCREASING THE WORKABILITY BUT NOT TO REDUCE THE SPECIFIED MINIMUM CEMENT
 - 12.) FLOORS SHALL BE 5" THK WITH 1-1/2" CY OF 3/4" FIBRILLATED POLYPROPYLENE FIBRES
 - 13.) REINFORCING STEEL SHALL BE PLACED IN THE CENTER OF CONCRETE UNLESS NOTED OTHERWISE. STEEL MUST BE SUPPORTED WITH APPROPRIATE CHAIRS OR CONCRETE BLOCKS.
 - 14.) IF CONSTRUCTION JOINTS NECESSARY, COORDINATE LOCATION WITH ENGINEER.
 - 15.) CONSTRUCTION JOINTS SHALL NOT BE PLACED IN THE END WALLS OR WITHIN 3' FT. OF A PUMP-OUT. THE PUMP-OUT FLOOR AND FOOTING MUST BE FORMED AND POURED WITH THE PIT WALLS. THE PUMP-OUT WALLS MUST BE FORMED AND POURED WITH THE PIT WALLS.
10. STEEL
 - 1.) PT = GRADE 60 (60,000 PSI) DEFORMED STEEL
 - 2.) MINIMUM BENDING RADIUS SHALL BE 4 TIMES THE BAR DIAMETER
 - 3.) MINIMUM BENDING RADIUS SHALL BE 6 BAR DIAMETERS
 - 4.) MINIMUM BEND AROUND CORNERS FOR #4 BARS = 24" FOR #5 BARS = 30"
 - 5.) ALL CONCRETE IS REINFORCED UNLESS SPECIFICALLY CALLED OUT AS "NOT REINFORCED". REINFORCE ALL CONCRETE NOT OTHERWISE SHOWN WITH THE SAME STEEL AS IN SIMILAR SECTIONS OR AREAS
 - 6.) WHERE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT UNLESS OTHERWISE NOTED:

WALLS AND SLABS (EXPOSED TO EARTH OR WEATHER).....	2 INCHES
OTHER.....	2 INCHES
11. TOLERANCES & QUALITY CONTROL
 - 1.) COLUMN FINISH ELEVATIONS SHALL BE + OR - 1/4" FROM DESIGN ELEVATION.
 - 2.) WALL ALIGNMENT (HORIZONTAL) SHALL DEVIATE NO MORE THAN 1/4" IN 10 FT. NO MORE THAN 3/4" OVER THE FULL LENGTH OF WALL
 - 3.) WALL BEARING LEDGE ELEVATIONS SHALL BE + OR - 1/4" FROM DESIGN ELEVATION IN 10 FT. AND NO MORE THAN 1/2" OVER THE FULL LENGTH OF WALL
 - 4.) OVERALL FOUNDATION LENGTH & WIDTH DIMENSIONS AND DIAGONAL DIMENSIONS SHOULD BE WITHIN 1/2" OF PLAN DIMENSIONS.
 - 5.) HONEYCOMB AND SHRINKAGE CRACKS WIDER THAN THE THICKNESS OF A PLASTIC CREDIT CARD SHALL BE FILLED WITHIN 48 HOURS WITH CEMENT GROUT SLURRY MOPPED INTO THE CRACKS. DO THE GROUTING OF FLOOR CRACKS BEFORE DIRT AND EQUIPMENT ARE BROUGHT ON THE FLOOR.
12. ELECTRICAL GROUND
 - 1.) INSTALL REINFORCING BARS AS PER ELECTRICAL CODE GROUND AT A MINIMUM LOCATIONS AS PER ELECTRIC CODE. NOTIFY THE LOCAL ELECTRICAL INSPECTOR FOR INSPECTION PRIOR TO PLACING CONCRETE.
 - 2.) WHEN, FOR MORE THAN 3 CONSECUTIVE DAYS, THE MEAN DAILY TEMPERATURE DROPS BELOW 40° F., THE CONTRACTOR SHALL PLACE AND PROTECT THE CONCRETE IN ACCORDANCE WITH ACI 306.
13. HOT WEATHER CONCRETING
 - 1.) WHEN IT IS LIKELY THAT TEMPERATURE BETWEEN 75° F AND 100° F WILL BE APPROACHED OR EXCEEDED; THAT LOW RELATIVE HUMIDITY IS PRESENT; OR WIND VELOCITY WILL EXCEED 10 MPH, THE CONTRACTOR SHALL PLACE & PROTECT THE CONCRETE IN ACCORDANCE WITH CHAPTERS 4 & 5 OF ACI 305.
14. WATERSTOPS & SEALANTS
 - 1.) WATERSTOP TO BE RIBBED PVC OR BENTONITE ROLL, AT CONTRACTORS OPTION.
 - 2.) 3/8" x 3/4" BENTONITE RUBBER EQUAL TO WATERSTOP-RX BY AMERICAN COLLOID COMPANY WATERSTOPS SHALL BE PLACED IN ALL CONSTRUCTION JOINTS ON THE FLOOR AND ALL WATERSTOP JOINTS SHALL BE SEaled WITH WATERSTOP SEALANT.
 - 3.) MAKE PVC WATERSTOPS SEALANT TO BE ELASTOMERIC POLYURETHANE OR BITUMINOUS ASPHALT BASED.
 - 4.) SEALANT TO BE ELASTOMERIC POLYURETHANE OR BITUMINOUS ASPHALT BASED.

*IMPORTANT NOTE- PRECAST DIMENSIONS CHANGE BETWEEN SUPPLIERS. PRECAST DIMENSIONS MUST BE VERIFIED WITH THE OWNER PRIOR TO CONSTRUCTION.

SHEET 7/7

Project No. 21-059

Checked By N.J.R.

Date 5/10/21

Drawn D.D.A.

Redwood County, Minnesota

SE 1/4 SECTION 14, T110N, 34W

PROPOSED SWINE CONFINEMENT BARN

SCHWARTZ FARMS - BROOKVILLE SITE

77402 U.S. Highway 71, P.O. Box 181

Jackson, MN 56143

(507) 849-7200

ProA Engineering Inc.

ProA Engineering Inc.

SUBSURFACE SOIL LOG

PROJECT: Schwartz Farms-Brookville Site BORING NO: 1 DATE DRILLED: 5/4/2021

PROJECT NO: 21-059
 DRILLED BY: Contractor
 CLASSIFIED BY: Travis Anderson
 ProAg Engineering, Inc.
 77402 Highway 71 P.O. Box 181
 Jackson, MN 56143 (507-849-7200)

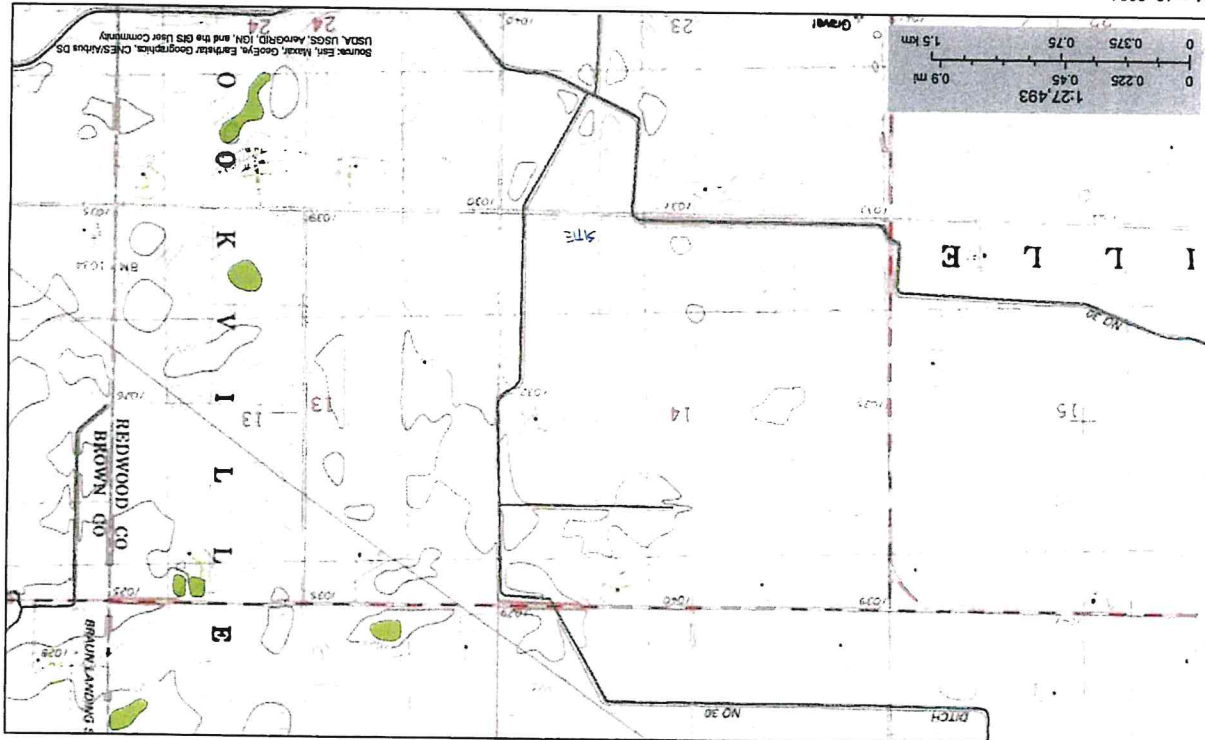
ELEVATION (UGSS)	DEPTH BELOW SURFACE	SOIL DESCRIPTION	UGCS Symbol
1035.0	GRADE		
	0	(TOPSOIL) DARK BROWN SILTY CLAY LOAM	CL
	2	BROWN SILTY CLAY LOAM, TRACE GRAY MOTTLES, TRACE Fe CONCRETIONS, MEDIUM CONSISTENCY	CL
1031.0	PROPOSED BOTTOM OF PIT		
	4	BROWN SILTY CLAY LOAM, TRACE GRAVEL, MEDIUM CONSISTENCY	CL
1028.0	MEASURED GROUNDWATER ELEVATION ON 5/4/21		
	6	BROWN MEDIUM SAND, TRACE GRAVEL, MOIST	SC
1025.0	PROPOSED BOTTOM OF PIT		
	8	BROWN SANDY CLAY LOAM, TRACE GRAVEL, TRACE Fe CONCRETIONS, MEDIUM CONSISTENCY	CL
	10		
	12	*TEST HOLE DUG & FILLED BY BACKHOE TO PREVENT VERTICAL GROUNDWATER TRANSPORT, PER MN RULES*	
	14	**SOILS ARE SUITABLE FOR PROPOSED PIT FOUNDATION	
	16	**PERIMETER TILE REQUIRED**	
	18		
	20		
	22		
	24		
	26		
	28		
	30		
	32		

SUBSURFACE SOIL LOG

PROJECT: Schwartz Farms-Brookville Site BORING NO: 2 DATE DRILLED: 5/4/2021

PROJECT NO: 21-059
 DRILLED BY: Contractor
 CLASSIFIED BY: Travis Anderson
 ProAg Engineering, Inc.
 77402 Highway 71 P.O. Box 181
 Jackson, MN 56143 (507-849-7200)

ELEVATION (UGSS)	DEPTH BELOW SURFACE	SOIL DESCRIPTION	UGCS Symbol
1040.7	GRADE		
	0	(TOPSOIL) DARK BROWN SILTY CLAY LOAM, FRIABLE	CL
	2		
	4		
	6		
	8		
1031.0	PROPOSED BOTTOM OF PIT		
	10	BROWN SILTY CLAY LOAM, TRACE GRAVEL, MEDIUM CONSISTENCY	CL
	12		
	14		
1025.7	BOTTOM OF TEST HOLE		
	16	BROWN MEDIUM SAND, TRACE GRAVEL	SC
	18	*TEST HOLE DUG & FILLED BY BACKHOE TO PREVENT VERTICAL GROUNDWATER TRANSPORT, PER MN RULES*	
	20	**SOILS ARE SUITABLE FOR PROPOSED PIT FOUNDATION	
	22	**PERIMETER TILE REQUIRED**	
	24		
	26		
	28		
	30		
	32		



This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or completeness of the base data shown on this map. All wetlands related to this effort were mapped in accordance with the layer metadata found on the Wetlands Mapper web site.

- Wetlands**
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Estuarine and Marine Wetland
 - Estuarine and Marine Deepwater
 - Lake
 - Other
 - Freshwater Pond
 - Riverine

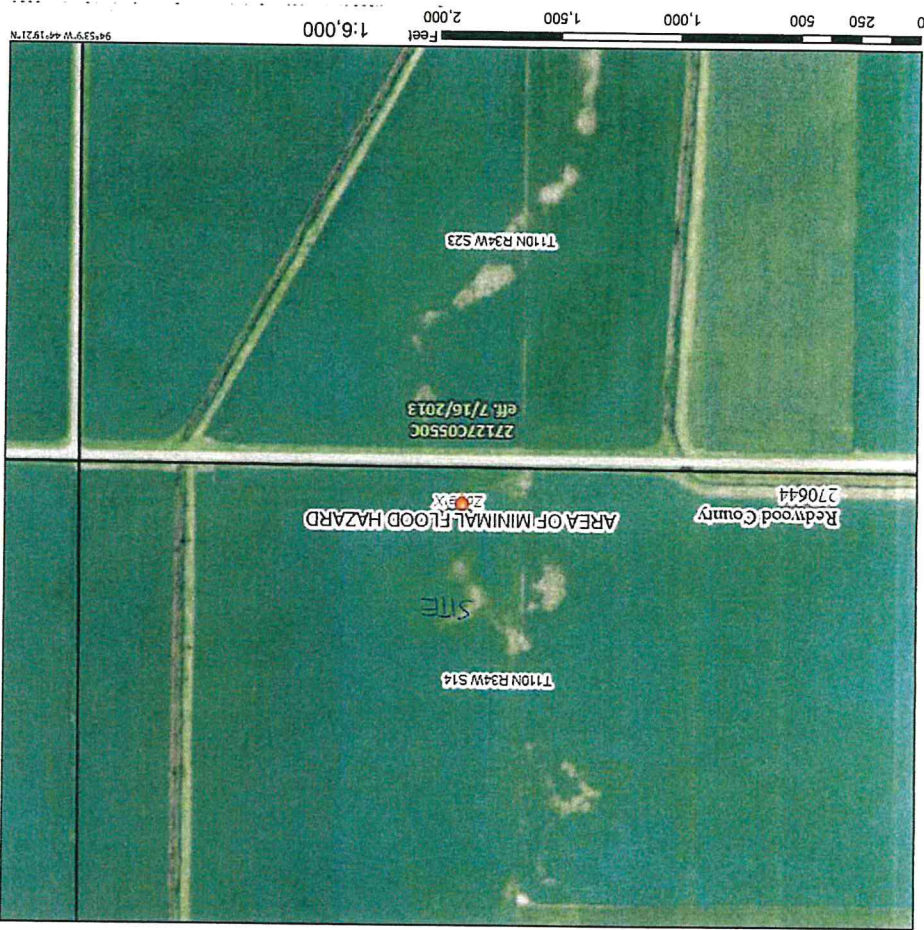
May 10, 2021

National Flood Hazard Layer FIRMette



Legend

- SEE FIRM REPORT FOR DETAILED LEGEND AND INDEX MAP FROM PANEL LAYOUT
- SPECIAL FLOOD**
- Without Base Flood Elevation (BFE) Zone A, A99
 - Regulatory Floodway
- HAZARD AREAS**
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
 - Future Conditions 1% Annual Chance Flood Hazard Zone X
 - Area with Reduced Flood Risk due to Levees, See Notes, Zone X
 - Area with Flood Risk due to Levees Zone D
- OTHER AREAS OF FLOOD HAZARD**
- No screen
 - Area of Minimal Flood Hazard Zone X
 - Effective LOMRs
- OTHER AREAS**
- Area of Undetermined Flood Hazard Zone X
- GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
 - Levee, Dike, or Floodwall
- OTHER FEATURES**
- Cross Sections with 1% Annual Chance Water Surface Elevation
 - Coastal Transact
 - Base Flood Elevation Line (BFE)
 - Limit of Study
 - Jurisdiction Boundary
 - Coastal Transact Baseline
 - Profile Baseline
 - Hydrographic Feature
- MAP PANELS**
- Digital Data Available
 - No Digital Data Available
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.
- This map complies with FEMA's standards for the use of digital base map data. If it is not valid as described below, the base map shown complies with FEMA's base map accuracy standards.
- The flood hazard information is derived directly from the authoritative NFI, which was provided by FEMA. This map was exported on 7/10/2021 at 11:49 AM and does not reflect changes or amendments subsequent to this date and time. The NFI and effective information may change or become superseded by new data over time.
- This map image is valid if the one or more of the following map elements do not appear: missing floor zone labels, legend, scale bar, map creation date, community identifier, FIRM panel number, and FIRM effective date. Map images for unmapped and unnumbered areas cannot be used for regulatory purposes.





May 10, 2021

Wetlands

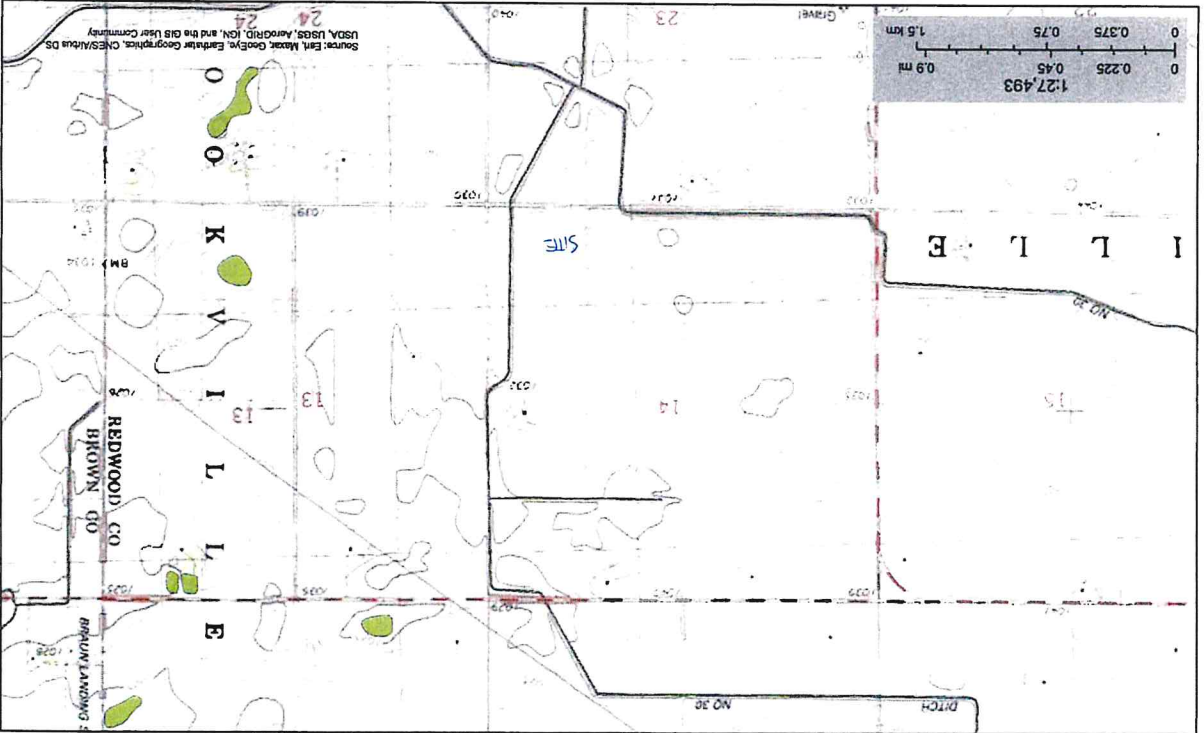
- Estuarine and Marine Wetland
- Estuarine and Marine Deepwater
- Freshwater Emergent Wetland
- Freshwater Pond
- Freshwater Forested/Shrub Wetland
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



May 10, 2021

Wetlands

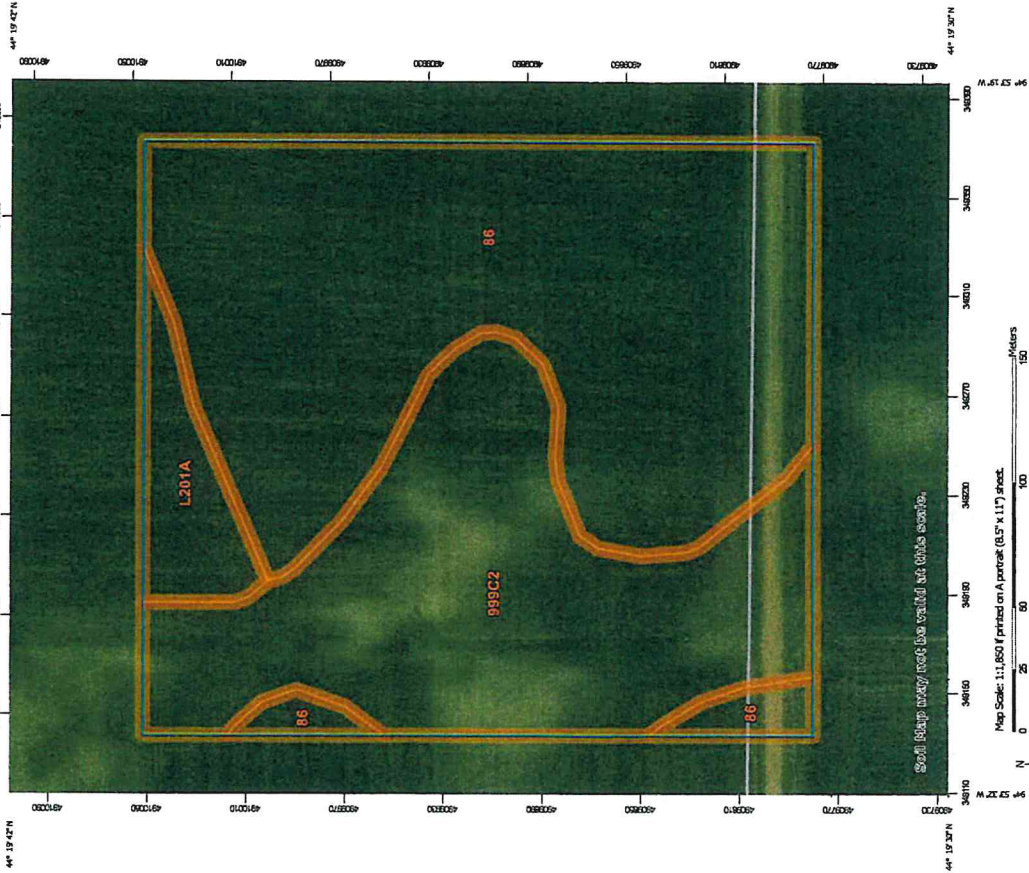
- Estuarine and Marine Wetland
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National Wetlands Inventory (NWI)
This page was produced by the NWI mapper.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
86	Camisao clay loam, 0 to 2 percent slopes	9.2	57.4%
999C2	Storden-Estherville-Vest loams, 6 to 12 percent slopes, eroded	6.0	37.0%
L201A	Normania loam, 1 to 3 percent slopes	0.9	5.5%
Totals for Area of Interest		16.1	100.0%

Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
B6	Canisteo clay loam, 0 to 2 percent slopes	0	9.2	57.4%
999C2	Storden-Esthesville-Ves loams, 6 to 12 percent slopes, eroded	>200	6.0	37.0%
L201A	Normania loam, 1 to 3 percent slopes	70	0.9	5.5%
Totals for Area of Interest			16.1	100.0%

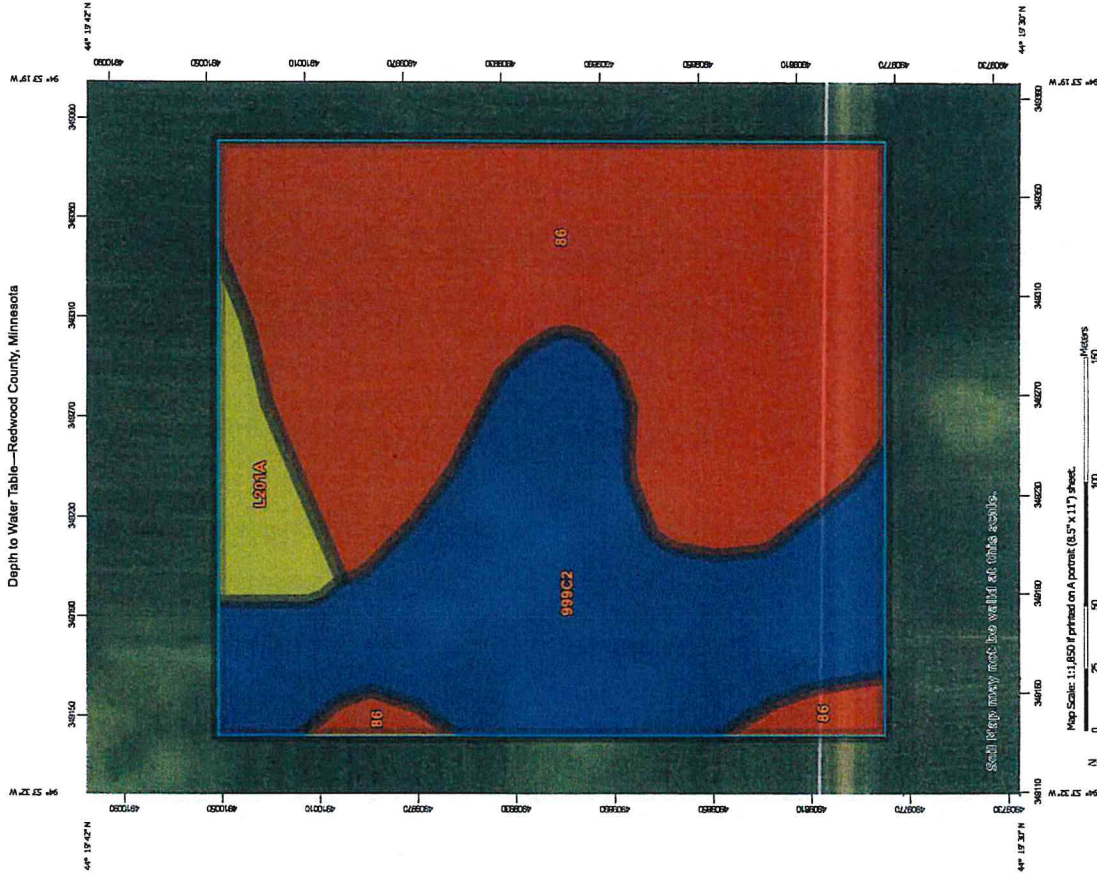
Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

- Units of Measure: centimeters
- Aggregation Method: Dominant Component
- Component Percent Cutoff: None Specified
- Tie-break Rule: Lower
- Interpret Nulls as Zero: No
- Beginning Month: January
- Ending Month: December





ENGINEERING, INC.
 77402 U.S. Hwy 71
 P.O. Box 181
 Jackson, MN 56143
 507-841-3269

TO: OWNER

**INSTRUCTIONS FOR OWNER TO FOLLOW
 BEFORE—DURING—AFTER
 CONSTRUCTION OF MANURE STORAGE**

1. Distribute only complete sets of plans and specifications. Keep a record of who gets plans because you may need to retrieve them later. Please call if you need more copies.
2. Ask your feedlot officer to send a copy of your feedlot permit to ProAg Engineering, Inc. We need this so we know who issued the permit and where reports should be sent.
3. Each Contract for construction of the liquid manure storage (Concrete, tiling earthen basins) should include the following statement:
 10% of the contract amount will be held back until the MPCA Construction Inspection of Liquid Manure Area form has been signed by the Contractor and returned to the Engineer and Engineer certifies that the contract work is complete.
4. A Pre-Construction Meeting shall be held before you start construction. The pre-construction meeting must include the Owner, Engineer, Excavating Concrete Contractors, and County Feedlot Officer. If you start construction without a pre-construction meeting, we reserve the right to cancel our contract.
5. You must notify ProAg Engineering, Inc. and the Permitting Agency:
 1. Three days before you start construction.
 2. Three days before you backfill.
 3. Within three days of completion.
6. Pictures should be taken as the work progresses. This is good protection for you because if problems develop later, you will have a record of what was done. If the Engineer finds problems during inspection, he may request copies of the pictures. Close up pictures showing details are more important than panoramic views. Suggest using single use or digital cameras.
7. MPCA requires that the design engineer submit a written construction report. We cannot do our final inspection and impact hammer test until the concrete is at least 28 days old and all accessory details shown on plans and specs are completed. Then allow at least 2 weeks for us to inspect and write our report.
8. DO NOT make a final payment to contractor until the Engineer's certifies that work is complete.
9. DO NOT put manure in the structure until you have received Engineer's Construction Report.

INSPECTIONS: *ProAg Engineering, Inc. must inspect before pouring concrete

Owner: _____

Location: _____

Barn or Tank Identification: _____

Date: _____ Comment: _____ Initials: _____

Subgrade (No standing water or mud, forms set for proper floor thickness) _____

Floor Reinforcement (Grade, size, clean, location) _____

*Pouring Floor (Concrete, quality, take test cylinder) _____

Floor (Cracks sealed) _____

Perimeter Tile, Monitoring Port or Sump & Pump, Tile Outlet (Functional before forming walls) _____

Wall Forms and Reinforcement (Grade of steel, spacing, vertical reinforcement secured) _____

*Pouring Walls (Concrete quality, take test cylinders) _____

Water Supply Lines (None permitted through pit floor or walls below the HW line) _____

Outside of Walls (Honeycomb patched prior to backfilling) _____

Inside of Walls (Honeycomb patched) _____

Walls (Do impact hammer test) _____

Columns (Honeycomb patched) _____

Beams Grouted (First 3 beams at end walls and each side of solid divider walls) _____

Slats Grouted (Prior to backfilling) _____

Backfill (Height and slope to drain roof away from barns) _____

Finish Grading (Roads, drives, storm water catch basins & drainage) _____



Pro Ag

ENGINEERING, INC.
Nicholaus J. Rowe, P.E.
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507-841-3269
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PRE-CONSTRUCTION MEETING CHECK LIST
OW-Owner, OR-Owner's Representative, CC-Concrete Contractor,
EC-Electrical Contractor, EN-Engineer, EX-Excavator, PC-Precast Supplier
ITEM# RESPONSIBILITY

- 1) Telephone directory _____
- 2) Port-a-potty or Johnny-on-the-spot _____
- 3) Storm Water Pollution Prevention Plan, SWPPP, weekly inspections. _____
- 4) Stake out buildings and pits _____
- 5) Locate underground utilities _____
- 6) Call UTILITIES CALL CENTER _____
- 7) Notify Engineer three days before starting _____
- 8) Notify Engineer three days before backfilling _____
- 9) Notify Electrical Inspector for grounding inspections _____
- 10) Notify Engineer four hours before each concrete pour _____
- 11) Temporary electrical power _____
- 12) Temporary Water _____
- 13) Telephone service _____
- 14) Layout worksite, limits of worksite _____
- 15) Equipment and employee parking _____
- 16) Dirt stockpile area _____
- 17) Construction materials stockpile area(s) _____
- 18) Keep traffic off septic drainfield area(s) _____
- 19) Security (daytime, night time) _____
- 20) Bio-security _____
- 21) Refuse disposal dumpster/burn pit _____
- 22) Concrete truck wash-out area _____
- 23) Does everyone have correct plans? _____
- 24) At completion of construction, notify Engineer for final inspection _____
- 25) Contractor sign MPCA Construction Report _____

PRE-CONSTRUCTION MEETING

PROJECT: _____ **DATE:** _____

LOCATION: _____ 1/4, SECTION _____ TWP _____ CTY _____

OWNER: _____ **PHONE:** _____

Owner's Representative _____ **PHONE:** _____ (to
conduct weekly inspections for SWPPP and notify Engineer and Feedlot Officer.)

GENERAL CONTRACTOR _____ **PHONE:** _____

Contact _____

EXCAVATION CONTRACTOR _____ **PHONE:** _____

Contact _____

Date to start excavation work _____

CONCRETE CONTRACTOR _____ **PHONE:** _____

Contact _____

Date to start concrete work _____

CONCRETE READY MIX _____ **PHONE:** _____

Contact _____

PRE-CAST CONCRETE _____ **PHONE:** _____

Contact _____

GROUTS, BEAMS AND SLATS _____ **PHONE:** _____

Contact _____

FEEDLOT OFFICER _____ **PHONE:** _____

_____ **PHONE:** _____

ELECTRICAL INSPECTOR _____ **PHONE:** _____

_____ **PHONE:** _____

ENGINEER _____ **PHONE:** _____

_____ **PHONE:** _____

SPECIFICATIONS for Concrete Lined Manure Storage Areas

01001 QUALITY ASSURANCE AND CONTROL PLAN

Work under these specifications is subject to County and MPCA inspection and review.

- A. **BEFORE STARTING CONSTRUCTION**, Owner shall:
1. Consult the feedlot permit for required submittals, notifications and approvals
 2. Arrange for pre-construction meeting with engineer, owner and contractors.
 3. Notify engineer, 3 days before starting construction.
 4. Notify permitting agency (MPCA or County) 3 days before starting construction.
- B. **DURING CONSTRUCTION**, Concrete Contractor shall:
1. Notify Engineer, minimum 4 hrs before each concrete pour.
 2. Wait for Engineer's inspection before pouring concrete.
 3. Concrete testing will occur at a minimum of one sample per 100 yards of placed concrete. Testing will include: Air/Slump/Strength per ASTM standards. Sampled concrete will be later tested at a certified testing facility to determine PSI strength requirements and quality assurance.
 4. If concrete is provided by different supplier or with different mixes, additional testing will be done on the first truck according to ASTM standards. Engineer must be notified immediately if any change does occur.
- C. **BEFORE POURING CONCRETE PIT FLOORS**, the following must be completed:
1. Contractor give Engineer & Electrical Inspector advance notice.
 2. Engineer inspect subgrade and floor slab thickness (full 5" thick).
 3. Engineer inspect grade and placement of reinforcing steel.
Steel shall be supported on chairs and tied.
 4. Perimeter tile shall be laid at least 12 inches from pit wall and covered with pea rock or 1/4" - 1/2" crushed rock.
 5. Grounding inspection by Electrical Inspector.

Placement of the perimeter tile and rock cover shall be done by the Concrete Contractor. Tile and rock provided by Owner.

- D. **BEFORE POURING CONCRETE PIT WALLS**, the following must be completed:
1. Contractor give Engineer & Electrical Inspector advance notice.
 2. Engineer inspect forms, reinforcing steel, waterstop and tile.
 3. Tile system shall be working with (temporary or permanent) automatic sump pump or daylight outlet.
 4. Grounding inspection by Electrical Inspector.
- E. **BEFORE BACKFILLING**, items 1 thru 4 must be complete, then Owner notify Engineer, and MPCA or CFO and allow 3 work days for inspection.
1. Concrete contractor shall have patched all cracks and honeycomb.
 2. Pre-cast concrete beams, slabs and slabs in place and grouted.
 3. Permanent tile sump pump or inspection port set in-place, (braced if necessary) and ready for backfilling.
 4. All organic debris shall be removed from the overdig area.
 5. Engineer must inspect items 1 thru 4 and approve before backfilling.

SPECIFICATIONS for Concrete Lined Manure Storage Areas

- F. **UPON COMPLETION**, Owner shall notify Engineer when all of these items are done
1. Backfilling and finish grading completed.
 2. Pumpout covers and safety signs installed.
 3. Concrete Contractor sign MPCA Construction Inspection Form.

G. **ENGINEER** shall conduct inspections as specified in Section 03001.B. and submit construction report to Owner and Permitting agency.

01301 DESIGN CHANGES

Design changes must be approved in writing by both the Owner and the Engineer before proceeding with the work. Some design changes may also require MPCA, COUNTY and/or NRCS approval.

01401 SITE SURVEY

The Contractor shall be responsible for layout of the work. Bidders must visit the site and acquaint themselves with existing conditions. Contractor shall CALL GOPHER-1 and be responsible for location of existing utilities in areas of work.

01501 SUBSURFACE INFORMATION

All available data relating to the subsurface material and conditions that are based upon test borings has been obtained by the Engineer for his/her own use in designing the project. Its accuracy or completeness is not guaranteed by the Owner or Engineer and in no event is it to be considered a part of the contract plans or specifications.

02101 EARTHWORK

- A. This section applies to earthwork (excavation and backfill) for concrete lined manure storage pits and tanks.
- B. Remove one foot (1") of topsoil under all concrete lined manure tanks. Save topsoil for finish grading.
- C. Removal of water: All excavations, fill, grading and embankments shall be maintained in a well drained condition at all times. The Contractor shall have temporary pumping equipment on site to remove water from trenches and excavations until the perimeter tile system is working.
- D. Any over-excavation for concrete footings and slabs on grade shall be backfilled with compacted sand/gravel.
- E. WARNING Engineer must inspect outside of wall and tile and give approval before backfilling.
See Section 01001.
- F. **CLEAN BACKFILL TRENCH**. All organic material, cardboard, wood, paper, straw, etc. shall be removed from trench before backfilling. These materials will decay and contaminate the perimeter tile system.

SPECIFICATIONS for Concrete Lined Manure Storage Areas

- G. Do not backfill against concrete walls until the concrete has cured at least 7 days and all slat and slab floors and beams are in place and grouted to properly brace the walls. Exercise caution when backfilling to bring up the level uniformly on all sides of tanks and pits. Keep all heavy equipment back from the pit and tank walls a distance equal to the depth of the fill. Top off backfill with one foot (1") of topsoil, disk and leave smooth for planting grass.

02401 PERIMETER TILE SYSTEM

MPCA Rules: Where a perimeter tile system is required to control the elevation of the water table or saturated soils, it must lower the water table or saturated soils to below the bottom of the storage liner. Perimeter drainage tile shall be located at least one foot outside of the footing of the concrete-lined manure storage areas. Each manure storage area shall have a dedicated drain tile system with a dedicated riser, manhole or other access for collection of tile-water samples.

- A. PERIMETER TILE shall be 4 inch (unless otherwise shown on plans) heavy duty perforated corrugated polyethylene plastic agricultural-drain pipe. Tile shall be bedded and covered with pea rock or 1/4" - 1/2" crushed rock.
- B. EXISTING TILE LINES intercepted during trenching for the perimeter tile system shall be removed back 10 feet from the tank wall. Existing tiles shall be connected to a suitable by-pass tile system. Do NOT connect existing area tile lines to the perimeter tile system, unless authorized by the Engineer.
- C. GRAVITY OUTLET FOR PERIMETER TILE shall not be used where flood water may backup into the tile and contaminate the dedicated sampling port. The tile outlet shall have a rodent guard. The tile outlet may serve as dedicated sampling port, when it is easily accessible and will never be inundated and contaminated by flood water.
- D. SUMP PUMPS shall be required whenever a gravity outlet is not available. On sites with more than one below ground manure storage structure, only one common sump pump system is required, but each structure must have an individual sampling port.

E. PUMP shall be submersible type with 20 feet heavy duty electrical cord. Pump shall have an adjustable piggy back float switch. Pump shall be capable of 25 GPM at 15 feet head. Pump shall be fitted with a discharge hose or pipe equal or larger than the discharge of the pump. Furnish and install fused weatherproof disconnect switch, plug and receptacle for each pump. Plug type connections should be used for quick exchange of pumps by farm workers.

F. ALTERNATE PLAN to dewater the site in advance of general excavation shall be decided by the owner, engineer and contractor at time of the pre-construction meeting. If the tile is installed in advance of excavation, it should be installed 4 feet out from the pit wall and at least 2 feet below the top of the pit floor. Slope the tile at 0.2 feet per 100 feet to the sump or daylight outlet. Plow type machines shall NOT be used when installing perimeter tile around concrete manure storage structures prior to general excavation, because it will loosen soil under wall footing. Use only a backhoe or trencher.

G. CLEAN BACKFILL TRENCH. All organic material, cardboard, wood, paper, straw, etc. shall be removed from trench before backfilling. These materials will decay and contaminate the perimeter tile system.

SPECIFICATIONS for Concrete Lined Manure Storage Areas

02601 SEWER SYSTEM

- A. Sewer system consists of drains from the barns, cleanouts, sewer main, sewer outlet into concrete tanks and earthen basins, and level control between tagoon cells.
- B. Gravity sewer pipe (non-pressurized) shall be PVC SDR-35 with gasket or glued joints. Sewer cleanouts (CO) shall be located as shown on the plan.
- C. All holes for pipes passing through floors and walls shall be sealed water tight.

02701 FENCE AND GATES

All open top concrete tanks less than 4 feet of wall above ground and earthen manure storage basins shall be fenced. Fence and gates shall be child and livestock proof to prevent unsupervised access.

02801 SIGNS

The Owner shall post warning signs every 100-150 feet around open top tanks and earthen basins: "DANGER, DEEP WATER, KEEP OUT". Post warning sign at each manure pit, reception pit, pumping station and manhole where a 'confined space' may contain manure gases: "DANGER, POISONOUS GAS IN PIT, KEEP OUT".

02901 OTHER WORK

The Owner shall be responsible for putting child-proof fences around open top tanks and child-proof covers on all sumps, pump out ports and providing and utilizing safety guard fences around pump outs when open.

03000 PRECAST CONCRETE

- A. The Precast manufacturer shall submit design data for checking load capacity of the precast system or an Engineer's Certification that the pre-cast components meet the following design loads. For design of beams, slabs and slats refer to Concrete Manure Storage Handbook, MWPS-36, by Midwest Plan Service.

Type of barn	Solid slabs & beams	Slats
Hog nursery barns	35 psf	50 plf
Hog finishing barns	60 psf	125 plf
Sow & boar barns	65 psf	150 plf
Add an additional 160 plf on the edge(s) or slabs that support farrowing stalls.		
Dairy free-stall barns	100 psf	250 plf
Dairy holding & handling pens	125 psf	312 plf

- B. To properly brace pit or tank walls, space between ends of beams, slats and slabs shall be filled with grout and allowed to set 3 days before backfilling.

03001 CAST IN PLACE CONCRETE

- A. READY MIX CONCRETE shall meet requirements of ASTM C-94

SPECIFICATIONS for Concrete Lined Manure Storage Areas

CONTRACTOR shall give copy of this page to Ready Mix Plant prior to bidding.

Concrete, 28 day compressive strength, f _c , psi.	Aggregate, max.	Fibermesh
3,500	2"	1.5 lb/cuyd
4,000	1.5"	none
4,000	1.5"	none
Slump	3" - 6"	
Air entrained	5% - 7%	
Water:cement ratio	0.5	

Fly Ash, maximum 20% of cementitious material. Silica Fume, maximum 20% of cementitious material. The combination of fly ash and silica fume shall not exceed 35% of total cementitious materials. Fly ash and silica fume will increase resistance to sulfates and reduce permeability. CAUTION: fly ash slows curing, especially in cold weather.

To minimize shrinkage cracks in floors, minimize the amount of cement-water paste and maximize the amount of large aggregate. The use of water reducing plasticizers is encouraged. Contractor may order water reducing or other admixtures, except calcium chloride shall not be used.

B. INSPECTIONS AND TESTING.

1. Inspection before each concrete pour shall include evaluation of subgrade, forms, waterstop, placement and grade of reinforcing steel.
2. Concrete shall be sampled and tested for temperature, entrained air, slump and strength (test cylinders) as per ASTM C-94. Minimum of one sample per 100 yards placed.
3. The Inspector shall forward the inspection report including results of the ASTM tests to the Engineer.
4. The Engineer may request core samples be taken for any concrete of questionable strength or quality. All such concrete found to be defective shall be removed and replaced by the Contractor. If concrete is provided by different supplier or with different mixes, additional testing will be done on the first truck, according to ASTM standards. Engineer must be notified immediately if any change does occur.

C. WATERSTOP shall be 3/4" x 3/8" Waterstop RX; 3/4" x 1" Swellstop; Synko-Flex; Hydro-Flex waterstop; Green-sreak Con-Seal CS-231, 220 or 102, or approved equal. These materials come in paper-backed coil or strips and shall be applied as per manufacturer's instructions.

D. All steel in the concrete floors and walls in livestock buildings must form an EQUIPOTENTIAL PLANE and be bonded to the electrical system. This must be coordinated with the Electrical Contractor and will require inspection by the Electrical Inspector prior to each pour of concrete.

E. REINFORCING STEEL shall be deformed bars, f_y = 60,000 psi (Grade 60)

Steel details for deformed rebar.	#4 bars	#5 bars
Bar bending radius, minimum 603"	4"	
Lap splices, minimum 40d	20"	25"
Bend around corner, minimum	24"	30"
Rods through construction joints	30"	36"

SPECIFICATIONS for Concrete Lined Manure Storage Areas

F. Steel reinforcement shall be tied and supported on chairs, bolsters, spacers and other devices. Dowels and rods extending through construction joints shall be secured in positions against displacement before concrete is placed and shall be cleaned before subsequent pouring.

G. Preparation of Forms and Subgrade: Prior to placement of concrete, the forms and subgrade shall be free of wood chips, sawdust, debris, standing water, ice, snow, extraneous oil, mortar and other harmful substances or coatings. Placement of concrete on mud, dried earth, un-compacted fill or frozen subgrade will not be permitted.

H. Excavations shall be made to the dimensions and elevations indicated on the drawings. Should excavation through error be carried to a greater depth or size than indicated or required, such additional depth or size shall be filled with concrete at the CONTRACTOR'S EXPENSE.

I. Tolerances: Elevations of floor slabs, top of walls, silt ledges, beam pockets and top of columns ± 1/4". Horizontal length and width of top of wall, location of beam pockets and columns ± 1/2". Straightness of top of wall ± 1/4". Anchor bolt spacing ± 1" centered in stem wall ± 1/2". Thickness of floor slab shall not be less than 5 inches at any point.

J. Shrinkage cracks and honeycomb areas shall be filled with a mixture of masonry cement and water of medium consistency and brushed into the cracks with a stiff brush. Honeycomb areas shall: 1) have loose stones hammered out, 2) be wetted by brushing in a watery paste of masonry cement, 3) and filled and sealed with mixture of masonry cement with sand.

K. COLD WEATHER. When for more than 3 consecutive days the mean daily temperature drops below 40°F, the contractor shall place and protect the concrete in accordance with ACI 306.

L. HOT WEATHER CONSTRUCTION. When it is likely that temperature between 80°F and 100°F will be approached or exceeded; that low relative humidity is present; or wind velocity will exceed 10 mph, the contractor shall place and protect the concrete in accordance with Chapters 4 & 5 of ACI 305.

M. Freeze/Thaw & Non-Use Protection, Long & Short Term After Construction: After the concrete pit is constructed and prior to its use or during non-use, the concrete floor and subgrade must be protected from freezing. If the pit is empty when the ground surface around the pit begins to freeze, a minimum liquid depth of 2 feet must be added to the pit to prevent freezing the subgrade below the floor. If the barn and pit are not being used for any extended period of time throughout the year (minimum of 60 days), a minimum liquid depth of 2 feet must be maintained in the pit to prevent freezing, groundwater pressure heaving, etc. The barn can also be heated during non-use times during cold weather to prevent freezing in the bottom of the pit instead of placing or leaving additional liquid in the pit.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

*These are recommendations and are not intended to meet the requirements of a site specific SWPPP for an NPDES Storm Water Discharge Permit.

Description of the site:

The site is currently cropland. The project consists of construction of a swine confinement operation with multiple deep pits. After construction, the area surrounding pit will be planted to grass.

Construction Sequence and Best Management Practices (BMP's)

1. The construction site shall be planted to grass (or cover crop) prior to commencement of construction. See Grass Seeding Guidelines.
2. Areas not to be disturbed during construction shall be staked and marked. Considerable rain water and sediment can be trapped on areas planted to grass and not compacted by construction traffic.
3. Install silt fence as shown on the site plan as needed to prevent erosion.
4. All drive entrances shall be protected with rock. Install road culvert(s) as per highway department specifications.
5. Build a berm to prevent field water from entering the construction site. Make berm 18-24" high with 3:1 side slopes. Use loose top soil from the barn area. A berm is an alternative to using silt fence. The loose soil will absorb a lot of water. Construct the berm on the contour with no channel on the up-hill side of the berm.
6. Temporary stockpiles shall have silt fence or other effective sediment controls and cannot be placed in stormwater conveyances, ditches or grass waterways.
7. Dewatering of pits and basins shall be done in a manner that does not cause nuisance conditions or discharge onto down-slope property. Rain and ground water in pit excavations shall not be allowed to flow direct into open tile, unless the tile inlet has silt fence or other protection or the perimeter tile is installed and covered with pea rock or crushed rock.
8. After backfilling and final grading is done, those areas shall be planted to grass. Slopes steeper than 5:1 shall be mulched. All seeding and mulching operations shall commence within 1 week after completion of each portion of the construction or as soon as soil conditions permit. See Grass Seeding Guidelines.
9. After berms are removed and backfill around barns is re-graded (the following spring) those areas shall be re-seeded to grass.
10. Final stabilization is achieved when soils have been stabilized by a uniform perennial vegetative cover over at least 70% of the pervious area, and all drainage ditches and grass waterways have been stabilized, then the silt fence may be removed.
11. The Owner shall keep the plans and records on file for a minimum of six (6) years.

Maintenance of BMP's

1. Owner shall inspect all BMP's weekly and within 24 hours after each rain event of 1/2" or more in 24 hours.
2. Silt shall be removed from behind silt fences within 24 hours of when the depth reaches 1/3 the height of the fence.
3. Mud and crushed rock are tracked onto public roads, it shall be removed within 24 hours.
4. If sediment escapes the site, off-site accumulations must be removed in a manner and frequency sufficient to minimize off-site impacts.

Assignment of Responsibilities for Execution of the SWPPP

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

1. Owner shall be responsible for execution, inspection, record keeping and up-dating The SWPPP as required in Appendix C of the NPDES Feedlot Permit. See form for the Storm Water Pollution Prevention Plan Record.
2. Owner shall inspect all BMP's weekly and within 24 hours after each rain event of 1/2" or more in 24 hours and supervise proper maintenance of erosion and sediment control practices.
3. Earthwork Contractor shall be responsible for implement, manage and maintain both temporary and permanent erosion and sediment control BMP's (except seeding) until final grading has been completed on site.
4. Owner shall be responsible for seedbed preparation, planting and mulching operations prescribed by the SWPPP.
5. Changes to the SWPPP shall be approved and recorded by Owner prior to implementation.

Grass Seeding Guidelines

All in place topsoil shall be salvaged to the maximum extent possible. It is ideal to place 6 inches of top soil in areas to be seeded. Harrowing before and packing with roller after planting will help germination, make the ground smoother and easier to mow. Seeding mixture and rates are recommendations based on DOT specs. Fertilizer is important for quick growth. Mixtures 250 and 280 can be mowed.

Temporary seeding: Fertilizer 10-10-20 at 200 lbs/acre.

- * Oats at 100 lbs/ac for spring/summer seeding of areas that will be left undisturbed for 21 days or more.
- * Winter wheat at 100 lbs/ac for fall seeding of areas that will be disturbed again in the spring, such as backfill around barns.

Turf and agricultural grasses: Fertilizer 20-10-20 at 350 lbs/acre.

General Roadside mix.			
Brome grass, smooth	9.8 lbs/ac	14.0%	
Bluegrass, Kentucky "Certified Park"	20.3	29.0	
Bluegrass, Canada	9.8	14.0	
Switch grass	2.1	3.0	
Wheat-grass, slender	2.8	4.0	
Rye-grass, perennial	14.7	21.0	
Timothy	2.1	3.0	
Redtop	2.1	3.0	
Alfalfa, creeping	4.2	6.0	
White clover	2.1	3.0	
Total	70 lb/ac		
Agricultural Roadside mix			
Alfalfa, creeping	15 lb/ac	30.0%	
Brome grass, smooth	10	20.0	
Redtop	3	6.0	
Rye-grass, perennial	15	30.0	
Switch grass	2	4.0	
Timothy	2	4.0	
Wheat-grass, slender	3	6.0	
Total	50 lb/ac		

OPERATION, INSPECTION AND MAINTENANCE PLAN

NEED FOR OPERATION, INSPECTION AND MAINTENANCE PLAN

Although this Waste Storage Structure has been designed in accordance with MPCA recommendations and its based upon the best available technical knowledge, it must be recognized that any Waste Storage Structure needs to be properly maintained, including periodic inspection. You, the Owner, are responsible for this Waste Storage Structure. The following guidelines for safe operation and maintenance are recommended.

- (1) routine inspections, maintenance and record keeping to be completed to identify and document damage to the liner.
- (2) methods to be used to repair areas of damaged liner.
- (3) methods used to monitor the liquid level in the basin to evaluate proper operation and adequate available storage capacity, and
- (4) routine inspections of perimeter tile line outlets and inspection manholes to ensure proper operation of the system.

Annually, the liquid will be mixed and removed for land application. Liquid level in the pit(s) shall be monitored quarterly (4 times per year) and after any water line breaks or abnormal additions to the pit. The level shall be measured using a rod or wood stick and the depth recorded.

SEMI-ANNUAL INSPECTION OF LIQUID STORAGE AND HANDLING SYSTEMS

Establish a lime each spring and fall for a thorough inspection of the liquid storage and handling systems. DO NOT ENTER COVERED PITS & TANKS.

All concrete storage tanks and reception pits shall be inspected to evaluate the outside of structures for cracks and deterioration of concrete. Any cracks showing discharge of liquid shall be inspected by an engineer and repairs done as prescribed by the engineer.

Maintain the following in proper working order:

- 1) Finish earthwork around the structure should be designed to carry runoff away from the foundation. Rainwater diversions to direct 'clean' water away and 'dirty' water into storage facilities. Grass should be established in those areas not covered by concrete and gravel.
- 2) Childproof covers must be placed upon the pumpouts. Open pumpouts should never be left unattended.
- 3) Warning signs shall be posted to prevent children and others from using the pit other than the intended use.
- 4) Animal wastes shall be handled and utilized as specified in the Manure Management Plan.
- 5) The Waste Storage Structure requires continuous ventilation to safely remove poisonous and noxious gases. Manure agitation will release large amounts of gas and may create a hazardous situation. Ensure that the ventilation fans are operating before agitation and, if possible, evacuate the building.
- 6) Manure pits that contain bearing divider walls should be emptied using a modified pumping plan. All manure sections should be partially emptied to prevent possible divider wall failure. Removal of about 3' of manure is recommended from each section before complete emptying of any one section is undertaken.
- 7) No person should enter a Waste Storage Structure without proper training and without wearing a self-contained breathing device. A second person should remain outside of the structure and should have an immediate means of removing the person inside the structure in an emergency.
- 8) Regular quarterly inspections should be made of the structure and its surroundings for leaks, concrete deterioration and pumpout cover conditions. Inspection of the slats for signs of deterioration is advised.
- 9) Concrete should be inspected for large cracks and exposed reinforcing steel. Joints should be checked for unusual openings.
- 10) Concrete surfaces should be quarterly inspected for erosion, scaling and exposed reinforcing steel.

1

- 11) Perimeter tile, sump pumps, sampling ports and rodent guards at outlets.
- 12) The structure walls are designed to resist earth loads only. Do not operate any equipment on this surface.
- 13) The beam and flooring system is designed for animal loads only. Do not operate any equipment on this surface.
- 14) If, during the inspection, serious defects are discovered, remedial actions may be required. The County Feedlot Officer and Engineer should be contacted and possible the MPCA.

RECORDS

Record the inspections, evaluations and maintenance done in a spiral bound notebook. Also take and date pictures before and after any maintenance work is done on cover and liquid storage and handling facilities.

PERIMETER TILE MONITORING AND CONTINGENCY PLAN

INSPECT PERIMETER TILE AT LEAST ONE WEEK BEFORE EMPTYING STORAGE

All below ground waste storage structures require perimeter tile to relieve the hydrostatic pressures which would otherwise damage the sides of the concrete tanks and manure storage pits under barns. There is a serious problem if the water level in the sump or inspection port is above the pit floor.

It is very important that the ground water level be lowered prior to emptying the manure storage pit. It may take a week or more for the system to lower the ground water pressure once the problem has been corrected.

BASE LINE SAMPLING

It is recommended that base line sampling be done before manure is put in the storage facility to document any pre-existing contamination that may be in the soil. This is especially important if the site is in an old barn-yard area or has received heavy applications of manure for many years.

Base line samples should be collected at least two (2) times prior to the addition of manure into the waste storage structure. If there is no flow from the tile, sampling shall begin as soon as water is available for sampling. Each 'base line' sampling event shall be scheduled at least two (2) weeks apart.

1. The Owner shall contract with an independent laboratory to collect and analyze the samples. The laboratory must be certified. The laboratory report shall include: Chain of custody record, date, parameter, method used, results, units.

2. The water quality parameters to be monitored are:

Total Kjeldahl Nitrogen	Nitrate Nitrogen
Nitrite Nitrogen	Ammonium Nitrogen
Dissolved Oxygen	Chloride
Sulfate	Total Phosphorus
Fecal Coliform	pH
Temperature	Specific Conductivity
Flow (as determined by lime to fill 5 gallon pail)	

CHANGE IN TILE WATER COLOR OR ODOR

If visual observation of the tile water indicates a change in color or odor, then a more urgent response is necessary. A change in color or odor may be caused by either soil and/or manure water. If this should occur, immediately stop all discharge to field tile. Notify the MPCA or Engineer immediately.

Install a sump pump and discharge the tile water onto a vegetated filler strip area. If necessary, plug the line going to field tile with bentonite 'chips'. Bentonite chips may be obtained from your well driller.

2



Purpose: This *Operation and Maintenance Plan* is incorporated into the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Permit and made an enforceable part of the permit and submitted to the Minnesota Pollution Control Agency (MCPA).

Facility name: SFI- Brookville C Feedlot registration no.: _____

Owner/Operator name: Schwartz Family LLC Feedlot permit no.: _____

Liquid Manure Storage Area(s) and Manure Contaminated Runoff Containment Structure(s)

In addition to the Operation and Maintenance (O&M) procedures outlined in the plans and specifications developed for the Liquid Manure Storage Area(s) (LMSA) and/or Manure Contaminated Runoff Containment Structure(s) (MCRCS), the practices identified in the following chart will be employed.

LMSA(s) and/or MCRCS(s) at the facility (list site sketch ID number(s) below) (Group structures with similar O&M practices)	Storage capacity	Design freeboard*	Required O&M (from list below)	Additional O&M practices (choose from list below) (numbers 17 - 24)
<input checked="" type="checkbox"/> Underfloor LMSA (Deep Pit)	(months/days)	(feet)	(required by permit)	(no specific requirements)
List Sketch ID #(s): 1	12 months	1	1 – 16	21
List Sketch ID #(s):			1 – 16	
<input type="checkbox"/> Outdoor LMSA (basin, tank, etc.)	(months/days)	(feet)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 16	
List Sketch ID #(s):			1 – 16	
List Sketch ID #(s):			1 – 16	
<input type="checkbox"/> Runoff Containment Structure	(months/storm event)	(feet)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 16	
List Sketch ID #(s):			1 – 16	

* Freeboard is the volume of a basin only available for use in emergency situations (typically the top one foot of depth). If the depth listed here does not coincide with the design plans and specifications, the correct freeboard will be that which is listed in the design plans and specifications.

Activities required by permit conditions (for those items/structures present at or applicable to the facility)

- Perform weekly visual inspection of stormwater diversion devices.
- Perform weekly visual inspections of runoff control structures.
- Perform weekly visual inspections of devices channeling manure-contaminated runoff to the storage area.
- Perform weekly visual inspections of all LMSAs/MCRCSs.
- Perform weekly reading of depth marker level for all LMSAs/MCRCSs collecting precipitation.
- Maintain design freeboard and operating levels in LMSAs/MCRCSs.
- Perform monthly examination of the monitoring port or drain tile outlet for water flow and signs of discoloration or odor.
- Maintain volume in LMSAs/MCRCSs to avoid the need for winter application of manure and be consistent with the manure management plan (MMP).
- Repair sloughing or settling of earthen embankments (most repairs to liner material need plans and specs from a P.E.).
- Repair of damage to concrete, lumber, steel, or other construction material used.
- Divert surface water flow away from and prevent pooling near liquid manure storage areas.
- Inspect manure handling equipment including hoses and couplings for pump-out periodically for leaks.
- Routine maintenance of equipment such as valves and pumps
- Use automatic shut-off devices on continuous pumping equipment.
- Do not allow the LMSAs/MCRCSs to discharge (unless allowed/exempt by permit conditions).
- Maintain a fence around at grade or near-grade LMSAs.

Additional facility design, maintenance, and operational practices

(No specific items are required in this section, unless incorporated into the design plans and specifications for the structure.)

- Use access pads for pump-out equipment to prevent erosion.
- Use anti-scour practices at pipe outlets to prevent liner damage.
- Removal of built-up solids from separation screens.
- Control vegetation around LMSAs by frequent mowing or other practices.
- Maintain appropriate design volume in LMSAs by controlling sludge build-up.
- Cleaning out of transfer pipes to prevent sludge build up.
- Other: _____
- Other: _____

Solid Manure Storage Areas

In addition to the Operation and Maintenance (O&M) procedures outlined in the plans and specifications developed for the Solid Manure Storage Area(s) the practices identified in the following chart will be employed.

Solid manure storage areas at the facility (list site sketch ID number(s) below) (Group structures with similar O&M practices)	Storage capacity	Quantity stored	Required O&M (from list below)	Additional O&M practices (choose from list below) (numbers 10 - 13)
<input type="checkbox"/> Stockpile (on-site)	(months/days)	(tons)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 8	
List Sketch ID #(s):			1 – 8	
<input type="checkbox"/> Manure pack or litter	(months/days)	(tons)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 8	
List Sketch ID #(s):			1 – 8	
<input type="checkbox"/> Underfloor Storage	(months/days)	(tons)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 8	
List Sketch ID #(s):			1 – 8	
<input type="checkbox"/> Manure Compost	(months/days)	(tons)	(required by permit)	(no specific requirements)
List Sketch ID #(s):			1 – 9	

Activities required by permit conditions (for those items/structures present at or applicable to the facility)

1. Perform weekly visual inspection of stormwater diversion devices
2. Perform weekly visual inspections of runoff control structure:
3. Perform weekly visual inspections of devices channeling manure-contaminated runoff to the manure storage or containment structure
4. Inspect manure hauling equipment periodically for leaks
5. Divert surface water flow away from and prevent pooling near solid manure storage areas
6. Repair of damage to permanent stockpile/storage pad (if a permanent stockpile/storage pad is required)
7. Repair of damage to concrete, lumber, steel, or other construction material used
8. Removal of all manure temporarily placed outside of barn/lot during cleanout process within ten days (no more than six times per year)
9. Operate the compost site in accordance with Minn. R. 7020.2150 (manure compost sites **only**)

Additional facility design, maintenance, and operational practices

(No specific items are required in this section, unless incorporated into the design plans and specifications for the structure.)

10. Routine maintenance of manure handling equipment
11. Removal of built-up solids from separation screens
12. Other: _____
13. Other: _____

General Facility Operations

Initial here: SFI,

by initialing here I indicate that I have read, understand, and agree to the requirements/procedures outlined below. (Initial is required for all facilities using this form.)

- A daily inspection of all water lines, including drinking water or cooling water lines (an equivalent method that incorporates the use of water meters, pressure gages or other monitoring devices is also acceptable)
- Disposal of solid and hazardous waste will be done in accordance with applicable Minnesota Rules
- Animals shall not be allowed to come into contact with waters of the state (except animals on pasture)
- Records of operation and maintenance activities will be kept in accordance with the facility's NPDES/SDS Permit
- Manure storage areas shall be managed and subsequent land application of manure shall be performed in accordance with the approved MMP for the facility.
- For those sites that are required by the MPCA to perform groundwater monitoring, the facility agrees to incorporate the MPCA approved groundwater monitoring plan and/or requirements from the facility's NPDES/SDS Permit into this Operations and Maintenance Plan.

Ancillary Area Stormwater Management

In addition to the Operation and Maintenance (O&M) procedures outlined in the Stormwater Pollution Prevention Plan (SWPPP) developed for the facility (if required) the practices identified in the following chart will be employed to manage stormwater discharges from ancillary areas not included in the definition of the feedlot facility.

Potential Pollutant Transport Areas (not included in the definition of the feedlot facility)	O&M Practices (choose at least one practice from the list below)
<input checked="" type="checkbox"/> Access Roads or Parking Areas used for Transporting Materials To/From Facility	8
<input type="checkbox"/> Non-Manure Materials Handling Areas (Fertilizer/Pesticide Storage, Bulk Oil/Gasoline Storage, Dry Bale/Bedding Storage, Milk/Egg Storage, Etc.)	NA
<input checked="" type="checkbox"/> Garbage/Trash Disposal Sites	7,21
<input type="checkbox"/> Equipment Storage and Maintenance Sites	NA
<input type="checkbox"/> Shipping and Receiving Areas	NA
<input type="checkbox"/> Truck/Equipment Wash Areas	NA
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	

Potential Erosion or Sediment Transport Areas (not included in the definition of the feedlot facility)	O&M Practices (choose at least one practice from the list below)
<input checked="" type="checkbox"/> Access Roads or Parking Areas	5,8
<input checked="" type="checkbox"/> Roof Water Runoff	13
<input checked="" type="checkbox"/> Yard Water Runoff	16,17,21
<input checked="" type="checkbox"/> "Clean-Water" Tile Intakes	15
<input type="checkbox"/> Permanent Stormwater Management Structure Discharge (outlet of stormwater basin, etc)	
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	

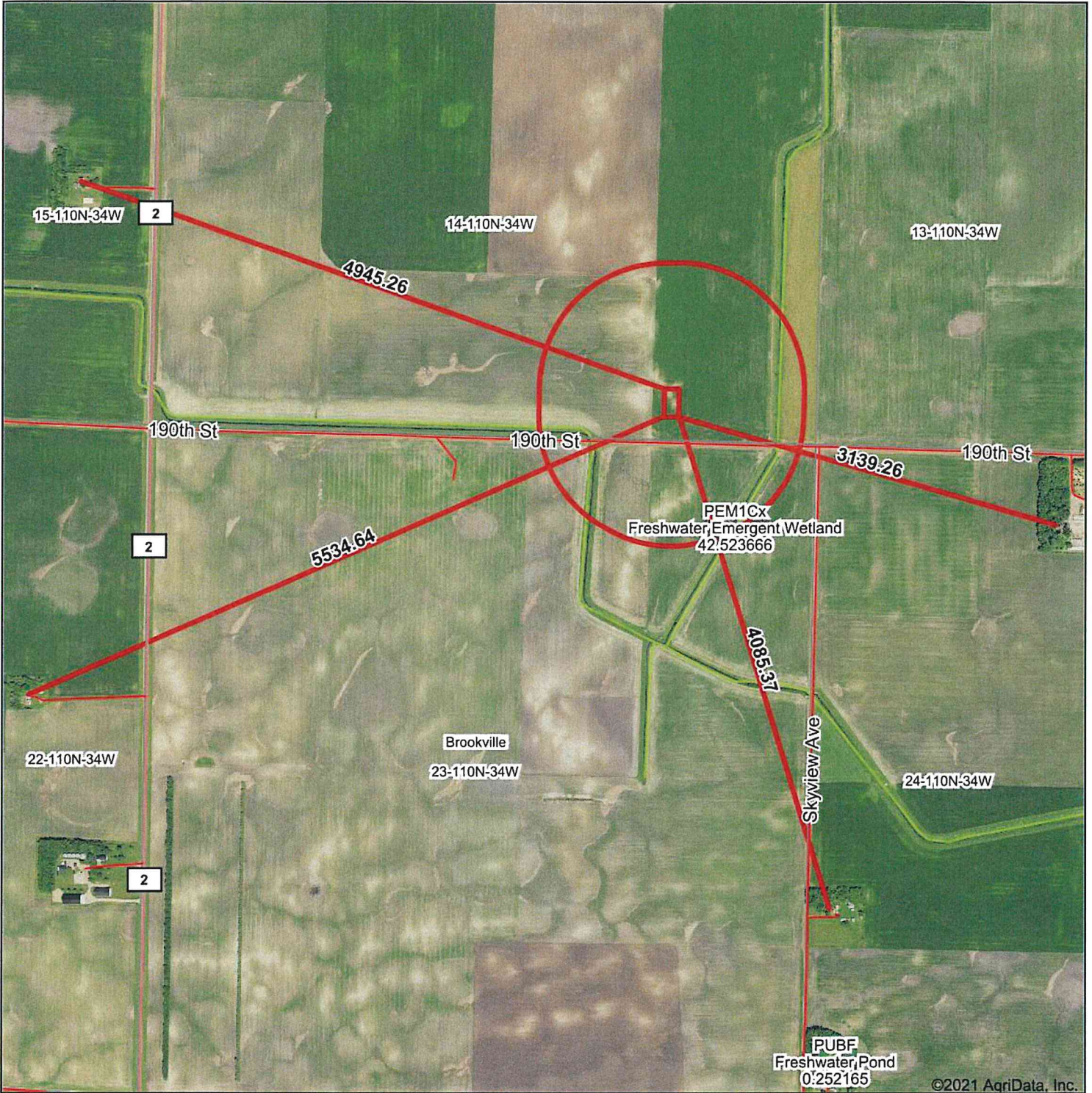
Activities for pollutant transport areas

1. Ancillary area has roof/cover to prevent stormwater mingling with pollutants.
2. Divert surface water flow away from and prevent pooling near ancillary areas.
3. Maintain stormwater diversion devices.
4. Perform visual inspections of runoff diversion devices.
5. Repair of damage to concrete, lumber, steel, or other construction material used.
6. Maintain grass buffers/grass waterways at discharge point
7. Handled/Moved off-site.
8. Maintain site cleanliness.
9. Other: _____
10. Other: _____
11. Other: _____

Activities for erosion or sediment transport areas

12. Provide energy dissipation at the end of channelized flow or pipe/gutter, such as rip-rap.
13. Maintain gravel/rock where roof water falls onto soil.
14. Maintain grass buffers/grass waterways at discharge point.
15. Maintain grass buffer around tile intakes.
16. Maintain grass buffers at the edge of roads/parking areas.
17. Keep vegetative cover where possible.
18. Repair rills that develop to minimize scour of sediment.
19. Maintain stormwater diversion devices.
20. Perform visual inspections of erosion prevention measures.
21. Maintain site cleanliness.
22. Other: _____
23. Other: _____
24. Other: _____

SFI- Brookville C Neighboring Residences



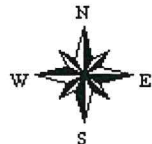
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PCM Preferred
Capital
Management

Map Center: 44° 19' 24.3, -94° 53' 41.13

0ft 1238ft 2475ft

23-110N-34W
Redwood County
Minnesota



5/13/2021

Maps Provided By:



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Odor Management Plan

Schwartz Family LLC
32296 190th St
Sleepy Eye, MN 56085

Regarding the proposed new construction of a total confinement barn housing 3,330 head of finishing pigs for Schwartz Family LLC (SFI- Brookville C), the following MPCA approved odor management strategies will be implemented to help mitigate odors to neighboring areas:

- Maintain clean, dry floors to eliminate manure buildup
- Eliminate manure buildup under gates, feeders, etc.
- Barn floors will be maintained and cleaned to eliminate manure buildup
- Spilled feed will be promptly cleaned up
- Exhaust fans will be maintained to avoid manure and dust accumulation
- Establish adequate separation distances from neighbors
- Maintain a good neighbor policy and avoid manure pumping on holidays or other special occasions
- Will consult with MPCA to identify changes that can be made to reduce odors, if need be.
- Manage mortalities as required by the MN Board of Animal Health

The facility and project will be applied for through a Construction Short Form (CSF) permit. As a condition of the permit, Schwartz Family LLC must follow the MPCA approved Air Emissions Plan and Operation Maintenance Plan. These plans address the prevention and control of offensive odors, gases, fumes, and dust associated with operating a swine facility. Noise and vibration from the feedlot is not expected to increase as a result of project.

Animal Mortality Plan

Schwartz Family LLC
32296 190th St
Sleepy Eye, MN 56085

Regarding the proposed new construction of a total confinement barn housing 3,330 head of finishing pigs for Schwartz Family LLC (SFI- Brookville C), the following MPCA approved animal mortality plan strategies will be implemented to comply with the MN Board of Animal Health:

- Carcasses will be kept in an animal-proof enclosed area on site
- At least 200 yards from a neighbor's building
- Pickup up within 72 hours by rendering company
- Central-Bi-Products can be used in case of an emergency mortality situation.
- If rendering is not available, compost or burial would be used.

The facility and project will be applied for through a Construction Short Form (CSF) permit. As a condition of the permit, Schwartz Family LLC must follow the MPCA approved Air Emissions Plan and Operation Maintenance Plan. These plans address the prevention and control of offensive odors, gases, fumes, and dust associated with operating a swine facility. Noise and vibration from the feedlot is not expected to increase as a result of project.

OFFSET Summary and Results

OFFSET Ver 2.0
University of Minnesota
1/23/2017

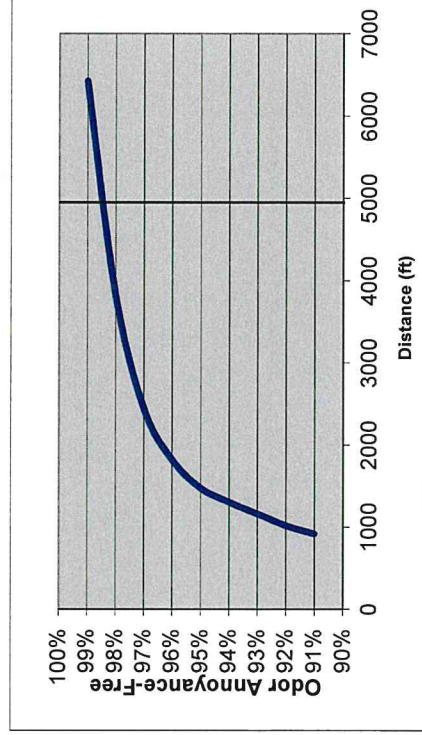
Farm Name	Schwartz Farms
County	19364 Co Hwy 2
Evaluator	NWB
Date	6/14/21

Source Characteristics Summary											
	Similar Sources	Emit Area sq ft	Control Technology Type	Percent Treated	Flux Rates (with control technology)				Source Emission Rates*		
					Odor ou/s/m2	OFFSET OER	H2S ug/s/m2	Ammonia ug/s/m2	Odor ou/s	H2S ug/s	Ammonia ug/s
Buildings											
Swine Wlean to Finish - deep pit	1	27552	None	0%	10.5	34.2	4.5	92.0	26890	11524	235610
Area Sources											
Earthen manure storage	0		None		14.0	13	25.3	107.0	0	0	0
User added	0		None		0.0	0.0	0.0	0.0	0	0	0

*includes control technologies

Site Emissions	
Total Site Area (ft2)	27,552
Total Odor Emission Factor (TOEF)	94
Total Site H2S Emissions (mg/s)	12
Total Site H2S Emission AVERAGE (lbs/day)	2
Total Site H2S Emission MAX (lbs/day)	4
Total Site H2S Emissions (tons/yr)	0
Total Site Ammonia Emissions (mg/s)	236
Total Site Ammonia Emission AVERAGE (lbs/day)	45
Total Site Ammonia Emissions MAX (lbs/day)	90
Total Site Ammonia Emissions (tons/yr)	8

Source Edge to Nearest Neighbor (ft)	4950
OFFSET Annoyance-free frequency	98%



OFFSET Summary and Results

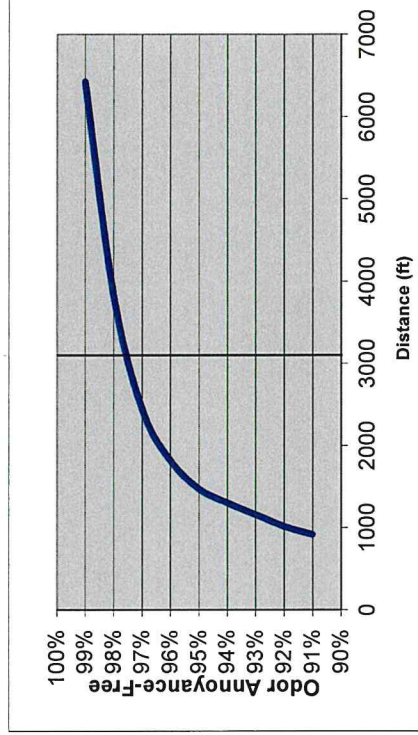
OFFSET Ver 2.0
University of Minnesota
1/21/2017

Farm Name: Schwartz Farms
County: to 45372 190th
Evaluator: NWB
Date: 6/14/21

Source Characteristics Summary			Flux Rates (with control technology)			Source Emission Rates*					
Buildings	Similar Sources	Emit Area sq ft	Control Technology Type	Percent Treated	Odor oul/s/m2	OFFSET OER	H2S ug/s/m2	Ammonia ug/s/m2	Odor oul/s	H2S ug/s	Ammonia ug/s
Swine Wean to Finish - deep pit	1	27552	None	0%	10.5	34.2	4.5	92.0	26890	11524	235610
Area Sources											
Earthen manure storage	0		None		14.0	13	25.3	107.0	0	0	0
User added	0		None		0.0	0.0	0.0	0.0	0	0	0

*Includes control technologies

Site Emissions	
Total Site Area (ft ²)	27,552
Total Odor Emission Factor (TOEF)	94
Total Site H2S Emissions (mg/s)	12
Total Site H2S Emission AVERAGE (lbs/day)	2
Total Site H2S Emission MAX (lbs/day)	4
Total Site H2S Emissions (tons/yr)	0
Total Site Ammonia Emissions (mg/s)	236
Total Site Ammonia Emission AVERAGE (lbs/day)	45
Total Site Ammonia Emissions MAX (lbs/day)	90
Total Site Ammonia Emissions (tons/yr)	8
Source Edge to Nearest Neighbor (ft)	3100
OFFSET Annoyance-free frequency	97%



OFFSET Summary and Results

OFFSET Ver 2.0
University of Minnesota
1/21/2017

Farm Name	Schwartz Farms
County	to 18297 Skyview
Evaluator	NWB
Date	6/14/21

Source Characteristics Summary

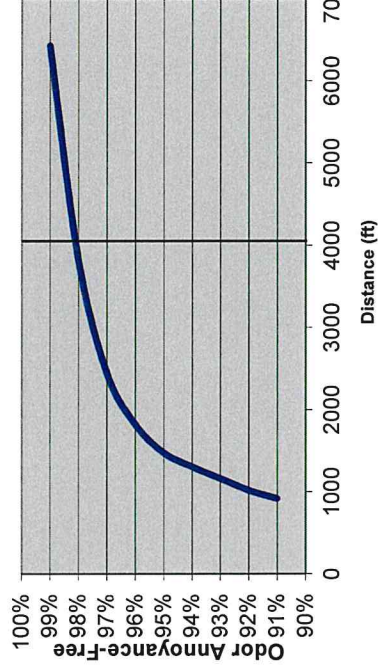
Source	Similar Sources	Emit Area sq ft	Control Technology Type	Percent Treated	Flux Rates (with control technology)			Source Emission Rates*				
					Odor ou/s/m2	OFFSET OER	H2S ug/s/m2	Ammonia ug/s/m2	Odor ou/s	H2S ug/s	Ammonia ug/s	
Buildings												
Swine Wean to Finish - deep pit	1	27552	None	0%	10.5	34.2	4.5	92.0	26890	11524	235610	
Area Sources												
Earthen manure storage		0	None		14.0	13	25.3	107.0	0	0	0	
User added		0	None		0.0	0.0	0.0	0.0	0	0	0	

*Includes control technologies

Site Emissions

Total Site Area (ft ²)	27,552
Total Odor Emission Factor (TOEF)	94
Total Site H2S Emissions (mg/s)	12
Total Site H2S Emission AVERAGE (lbs/day)	2
Total Site H2S Emission MAX (lbs/day)	4
Total Site H2S Emissions (tons/yr)	0
Total Site Ammonia Emissions (mg/s)	236
Total Site Ammonia Emission AVERAGE (lbs/day)	45
Total Site Ammonia Emissions MAX (lbs/day)	90
Total Site Ammonia Emissions (tons/yr)	8

Source Edge to Nearest Neighbor (ft)	4050
OFFSET Annoyance-free frequency	98%



Redwood County Swine Composting Protocol:

- I. Purpose and scope: To allow hog producers to compost their dead livestock (carcasses) in lieu of rendering. These guidelines are based upon Minnesota Rules 1719 (Board of Animal Health), which are incorporated herein by reference. In any instance where these guidelines diverge from Minnesota Rules 1719, the stricter rule shall control.
- II. Site selection – must take into account:
 - a. Prevailing winds – reasonable attempts must be made to avoid sites where the prevailing winds will carry odors onto neighboring land uses (excepting agricultural fields and feedlots).
 - b. Public view – the compost facility must be shielded from public view, so that the composting material is not visible from public roadways or neighboring land uses.
- III. Facility – requirements for construction:
 - a. Overall design: Compost facility must consist of at least three (3) compost bays each with 20 cubic feet of area for every one (1) pound daily normal mortality. Each bay must have poured concrete walls on three sides and be gated on the front so that wild and domestic animals cannot access the compost. The entire structure must sit on a concrete pad and have a roof to deflect rainwater from the compost.
 - b. Floor: Floor must be constructed of 5" thick impervious concrete. Floor must be sloped toward the rear of the facility to keep liquid from running out of the composting area onto the ground.
 - c. Walls: Walls must be constructed of 6" thick impervious concrete. Cement walls must be no more than 5' high. If lower than 5', the walls must include fencing up to 5' to prevent wild or domestic animals from accessing the compost. Cement walls must be high enough to contain the compost material.
 - d. Roof: Roof must be supported by treated wood or metal supports and rafters. Roof must completely cover the composting bays so as to deflect rainwater.
- IV. Process – the following practices must be observed:
 - a. Dead pigs must be added within 24 hours of death.
 - b. Each composting bay shall begin with a 1' layer of litter. Thereafter, carcasses shall be stacked up to 1' and covered by 1' of litter. Add additional layers as needed.
 - c. Litter can be finely chopped vegetable matter (such as corn stalks), sawdust, or finished compost. The carbon to nitrogen ratio must be in the range of 15:1 to 35:1.
 - d. Carcasses must be kept at least 6" from the edge of the compost bay.
 - e. The 3 compost bays allow for a three stage composting process. When the first bay is full, start a new pile in the second bay. When the second bay is full, start a new pile in the third bay. When the third bay is full, empty the first bay and start over. Turn each bay every 7 to 10 days. Add water as necessary to keep up the heat.
 - f. Temperature:
 - i. Must be taken and recorded in each bay daily.
 - ii. Must be at least 130 degrees Fahrenheit.
 - iii. Temperature records must be kept on hand for 2 years.
- V. Protocol:
 - a. Must keep a written composting protocol describing the composting steps on-site.
 - b. Must instruct all employees on-site about the protocol.
- VI. Pests, such as flies and rodents, must be controlled
- VII. Transportation of Carcasses on public roads:
 - a. An owner who transports the owner's own carcasses does not need a permit to do so.
 - b. Carcasses transported on public roads must be in leak-proof, covered containers.
- VIII. Finished compost:
 - a. Must contain no visible soft tissue pieces.
 - b. May be handled and stored according to PCA and Dept. of Agriculture rules.

Conditions for Permit No. 10-21 (Schwartz Farms)

1. The permit holder shall comply with all applicable laws, rules, and regulations, including but not limited to Redwood County Ordinance, as hereafter amended from time to time. If a permit and/or license is required by the local, state, or federal authorities/entities, the permit holder shall apply for and obtain any and all required permits and/or licenses. A copy of all such permits and/or licenses shall be provided to the Redwood County Environmental Office within thirty (30) days of the date the permit holder received the same.
2. The permit holder shall allow the Redwood County Environmental Office to inspect the site for all purposes permitted by law whenever deemed necessary by the Redwood County Environmental Office.
3. All waste, refuse, and the like generated by or from the conditional use must be disposed of in the manner provided by the applicable local, state, and federal statutes, rules, and regulations.
4. The permit holder shall take appropriate and reasonable measures to assure that all surface water runoff satisfies all applicable local, state, and federal discharge standards.
5. The permit holder shall not allow the conditional use to be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted. The permit holder shall not allow the conditional use to impede the normal and orderly development and improvement of surrounding vacant property for uses predominant to the area. Adequate measures shall be taken to prevent or control offensive odor, fumes, dust, and vibration, so that none of the foregoing will constitute a nuisance now or in the future.
6. Adequate utilities, access roads, drainage, and other necessary facilities shall be provided and continue to be provided by the permit holder now and in the future.
7. The manner in which manure is stored and disposed of shall comply with all applicable local, state, and federal laws, rules, and regulations. If manure is applied to land, it shall be applied to land at agronomic rates. Applied manure shall be injected or incorporated within 24 hours. The permit holder shall retain a record of all locations where manure is applied to land. Such records shall be maintained for a period of no less than five (5) years, measured from the date the manure is applied to land. Such records shall be submitted to the Redwood County Environmental Office upon request. The permit holder shall report any changes in spread agreements or spread areas to the Redwood County Environmental Office within thirty (30) days subsequent to any such change.
8. The permit holder shall abide by the Odor Management Plan attached to the application, or by any amended plan approved by the Zoning Administrator.
9. The County Board of Commissioners may at any time impose additional conditions as necessary and appropriate including but not limited to: the planting of trees and shrubs for use as a windbreak for the feedlot operation; the furnishing and placing in a dedicated account, to be administered by the County, an annual payment for reclamation purposes based upon the number of Animal Units involved; and restrictions on the days on which a manure storage structure may be disturbed or manure may be transferred, applied, incorporated, or injected.

10. Dead livestock shall be stored in such a manner as to not create a nuisance. Disposal of dead livestock by burial is strictly prohibited. Dead hogs may be composted according to the Redwood County Swine Composting Protocol, which is attached hereto and incorporated into Conditional Use Permit #9-21.
11. The permit holder shall construct the manure storage structure/concrete pit(s) to meet or exceed the minimum requirements set forth in the plans and specifications prepared by Elliot De Jongh, P.E. and signed by him on May 13, 2021, attached to the permit holder's application.
12. A perimeter tile line shall be maintained around the outside of the base of the pit wall and an inspection manhole shall be provided where the perimeter tile branches out into the local drain tile system.
13. The permit holder shall install a warning sign at all entrances to the concrete pits. These signs shall warn the reader of the dangers of entering the pit.
14. No construction on the pit shall be done between October 15th and April 15th, except by approval of the Zoning Administrator. The Environmental Office shall be contacted for inspection prior to pouring the pit floor and pit walls.
15. The Redwood County Planning Commission shall review the conditional use permit and shall be authorized to take any and all necessary action(s), including but not limited to revoking the conditional use permit and/or requiring the permit holder to reapply for a conditional use permit, if: 1) The Redwood County Environmental Office acquires information previously unavailable that indicates the terms and conditions of the permit do not accurately represent the actual circumstances of the permitted facility or the conditional use; 2) It is discovered subsequent to the issuance of the permit the permit holder failed to disclose all facts relevant to the issuance of the permit or submitted false or misleading information to the Redwood County Environmental Office, the Redwood County Planning Commission, or the Redwood County Board of Commissioners; 3) The Redwood County Environmental Office determines the permitted facility or conditional use endangers human health or the environment; and/or (4) The permit holder violates any of the herein described conditions.



REDWOOD COUNTY ENVIRONMENTAL OFFICE

*Planning & Zoning • Parks & Trails • GIS
Aquatic Invasive Species • Septic Inspector
Drainage Inspector • Agricultural Inspector*

PO BOX 130
REDWOOD FALLS
MINNESOTA 56283
PH: 507-637-4023

REDWOOD COUNTY PLANNING COMMISSION

Schwartz feedlot

Conditional Use Permit Application #10-21

June 29, 2021

FINDINGS OF FACT

ORDINANCE CRITERIA – The Planning Commission may recommend the granting of a Conditional Use Permit in any district provided the proposed use is listed as a conditional use for the district and upon a showing that the standards and criteria stated in this Ordinance will be satisfied and that the use is in harmony with the general purposes and intent of this Ordinance and the Comprehensive Plan.

In determining whether the proposed use is in harmony with the general purposes and intent of the Ordinance and the Comprehensive Plan, the Planning Commission shall consider and make findings on the following questions:

- 1) What potential health safety and welfare impacts were raised at the hearing and why will they, or why won't they, impact the neighboring residents?

- 2) What potential impacts on area property uses were raised at the hearing and why will they, or why won't they, impact the property uses in the area?

3) What potential impacts on property values or future development were raised at the hearing, and why will they, or why won't they, impact the neighboring properties?


4) What infrastructure is needed to support the proposed use and how will it be provided?

5) How do the goals, purpose and policies of the Zoning Ordinance and Comprehensive Plan apply to the proposed project?

NAME: _____

DATE: _____

TO: Whom It May Concern

FROM: Nick Brozek 
Land Use and Zoning Supervisor
Redwood County Environmental Office

COPY



DATE: June 16, 2021

RE: Notice of Public Hearing on Animal Confinement Feedlot Conditional Use Permit Application

Please find enclosed a *Notice of Public Hearing* regarding an *Animal Confinement Feedlot Conditional Use Permit Application* filed by Brian Schwartz, of Schwartz Family LLC, and Reynold Christensen (landowner), pursuant to Minnesota Statute 116 and Redwood County Code of Ordinances, Title XV, Sections 153.290 and 153.142, for the construction of a swine feedlot, consisting of a total confinement barn, including 8' deep, poured-concrete, under-floor manure storage pit, capable of housing 3,330 head of finishing swine weighing between 55-300 pounds (999 animal units), on the following described real property, situated in the County of Redwood, State of Minnesota, to wit:

The South 524.00 feet of the West 322.00 feet of the Southeast Quarter (SE1/4) of Section 14,
Township 110 North, Range 34 West, Brookville Township.

A public hearing thereon will be held before the Redwood County Planning Commission at the Planning Commission meeting starting at 1:00 o'clock p.m. on Tuesday, the 29th day of June, 2021, at the Board Room in the Redwood County Government Center located at 403 South Mill Street, Redwood Falls, MN 56283.

Pursuant to Redwood County Zoning Ordinance, all property owners of record within five hundred (500) feet in incorporated areas and/or one-quarter (1/4) of a mile of the affected property or the ten (10) properties nearest to the affected property, whichever would provide notice to the greatest number of landowners in the unincorporated areas, the township in which the affected property is located, and all municipalities within two (2) miles of the property are required to be notified in writing of the time and place of the public hearing.

If you have any comments or questions regarding this matter, please contact the Redwood County Environmental Office by telephone at (507) 637-4023, via email at Environmental@co.redwood.mn.us, or in writing at *Redwood County Environmental Office, P.O. Box 130, Redwood Falls, MN 56283*.

Enclosure

Cc: Brian Schwartz (w/ encl)
Reynold Christensen (w/ encl)
Emily Wegener, Preferred Capital Management (w/ encl)

Redwood County Government Center - Environmental Department
P.O Box 130 Redwood Falls, MN 56283
(507) 637-4023 redwoodcounty-mn.us Environmental@co.redwood.mn.us

COPY



NOTICE OF PUBLIC HEARING

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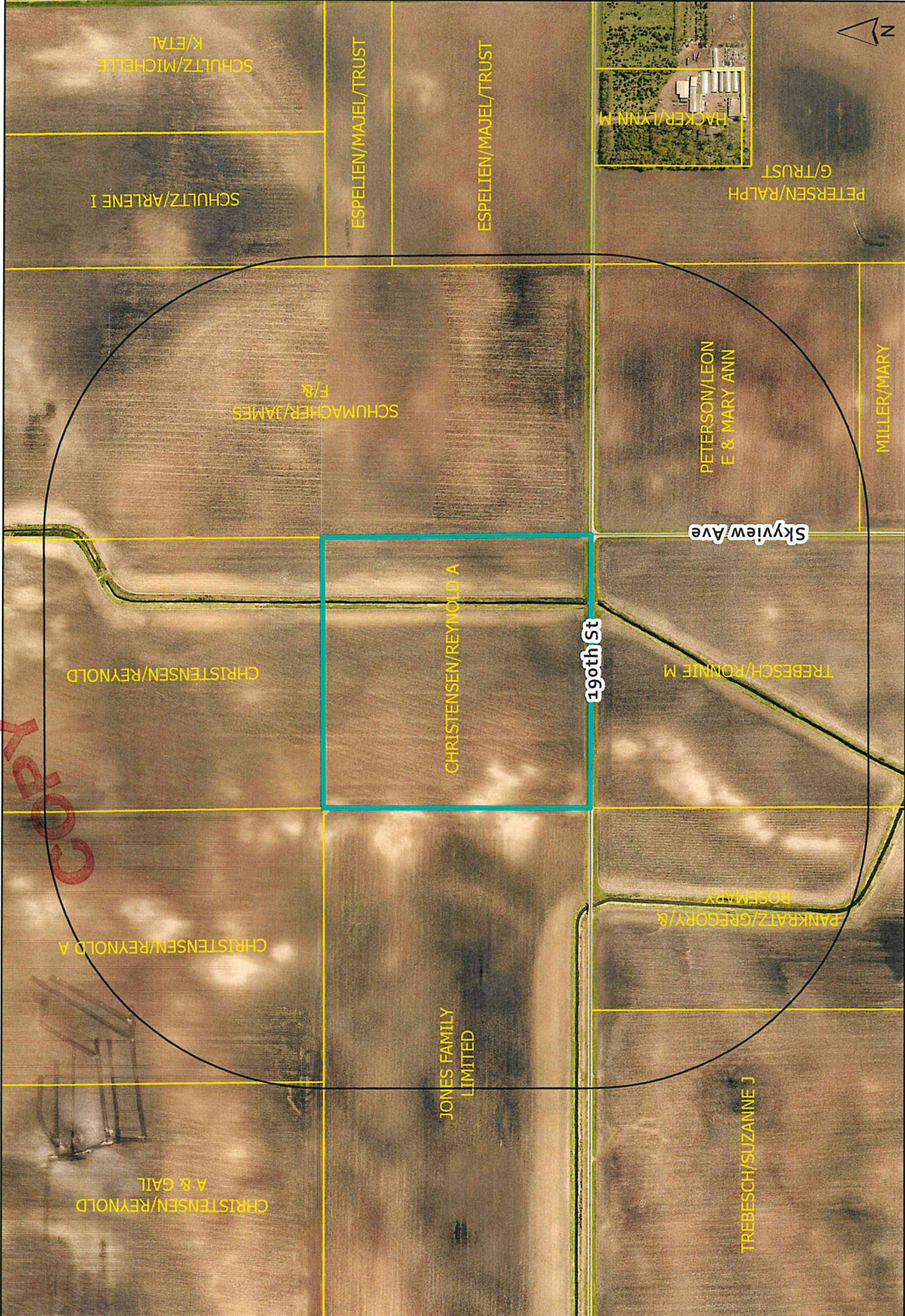
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DATED: June 16, 2021

Nicholas W. Brozek
Land Use & Zoning Supervisor
Redwood County Environmental Office

COPY



- Selected Parcel
- Notification Area
- Parcels
- Municipal Boundaries
- Sections
- Roads

Parcel ID: 50-014-4020

CUP Notification Area: 0 350 700 1,400 Feet

0.26 miles from selected parcel



AFFIDAVIT OF SERVICE VIA U.S. MAIL

STATE OF MINNESOTA)
) ss
COUNTY OF REDWOOD)

RE: *Animal Confinement Feedlot Conditional Use Permit Application submitted Brian Schwartz, of Schwartz Family LLC, and Reynold Christensen (landowner), Permit Application No. 10-21*


I, Lali Ortega, a person not less than eighteen (18) years of age, being first duly sworn upon oath, hereby state a copy of the following:

- 1. Notice of Public Hearing on *Animal Confinement Feedlot Conditional Use Permit Application*; and**
- 2. Notice of Public Hearing**

were duly served upon:

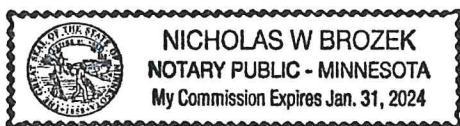
-See Attached-


by enclosing a copy of the same in an envelope, with postage prepaid, and depositing said envelope in a United States Postal Service mailbox located at Redwood Falls, Minnesota on or about the 17th day of June, 2021.



Lali Ortega
Environmental Administrative Assistant

Subscribed and sworn to before me, a Notary Public, on this 17th day of June 2021, by Lali Ortega.





Notary Public

NAME	Address	CITY	STATE	ZIP
ESPELIEN/MAJEL/TRUST	1936 EDWARDS ST UNIT 15	EAST TROY	WI	53120
JONES FAMILY LIMITED	206 S RANGE RD	SPRINGFIELD	MN	56087
MILLER/MARY	2253 WHISPERING TR	EAGAN	MN	55122
PANKRATZ/GREGORY/& ROSEMARY	42488 180 ST	SPRINGFIELD	MN	56087
PETERSEN/RALPH G/TRUST	18338 CO HWY 2	SLEEPY EYE	MN	56085
PETERSON/LEON E & MARY ANN	1700 BEINHORN ST	NEW ULM	MN	56073
SCHULTZ/ARLENE I	306 E SANBORN ST	SPRINGFIELD	MN	56087
SCHUMACHER/JAMES F&	31599 210 ST	SLEEPY EYE	MN	56085
TREBESCH/RONNIE M	45714 180 ST	SLEEPY EYE	MN	56085
TREBESCH/SUZANNE J	45714 180 ST	SLEEPY EYE	MN	56085
REYNOLD CHRISTENSEN	44716 CO HWY 4	SLEEPY EYE	MN	56085
BROOKVILLE TOWNSHIP BOARD OF SUPERVISORS	45413 210 ST	SLEEPY EYE	MN	56085
MN DNR - ECOLOGICAL AND WATER RESOURCES	20596 HIGHWAY 7	HUTCHINSON	MN	55350
PREFERRED CAPITAL MANAGEMENT	1275 HIGHWAY 15 S	FAIRMONT	MN	56031
SCHWARTZ FAMILY LLC	32296 190 ST	SLEEPY EYE	MN	56085
% MICHAEL CHRISTENSEN, CLERK % ANNE HALL, WATER APPROPRIATIONS HYDROLOGIST ATTN EMILY WEGENER ATTN BRIAN SCHWARTZ				

AFFIDAVIT OF PUBLICATION

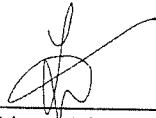
Gannett Newspaper Publications

State of Minnesota
Counties of Brown, Chippewa, Lyon,
Redwood, Watonwan, Yellow Medicine

Lisa Drafall, being first duly sworn, on oath states as follows:

1. I am the Vice President of Sales of the Gannett Newspaper Publications. I have personal knowledge of the facts stated in this Affidavit, which is made pursuant to Minnesota Statutes §331A.07.
2. The newspaper has complied with all of the requirements to constitute a qualified newspaper under Minnesota law, including those requirements found in Minnesota Statutes §331A.02.
3. The dates of the month and the year and day of the week upon which the public notice attached/copied below was published in the newspaper are as follows: - THURSDAY -, the 17th day of JUNE, 2021.
4. The lowest classified rate paid by commercial users for comparable space, as determined pursuant to §331A.06 and §331A.07 is 9.75 column inch.
5. Mortgage Foreclosure Notices. Pursuant to Minnesota Statutes §580.033 relating to the publication of mortgage foreclosure notices: The newspapers' known office of issue is located in Brown, Chippewa, Lyon, Redwood, Watonwan & Yellow Medicine counties. The newspapers comply with the conditions in §580.033, subd. 1, clause (1) or (2). If the newspaper known office of issue is located in a county adjoining the county where the mortgaged premises or some part of the mortgaged premises described in the notice are located, a substantial portion of the newspaper's circulation is in the latter county.

FURTHER YOUR AFFIANT SAITH NOT.

By: 
Vice President of Sales

Subscribed and sworn before me
on the 17th day of JUNE, 2021.

By: 
Notary Public

OFFICIAL PUBLICATION NOTICE OF PUBLIC HEARING

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DATED: June 14, 2021
Nicholas W. Brozek
Land Use & Zoning Supervisor
Redwood County Environmental Office
Published in the Redwood Gazette June 17, 2021.

