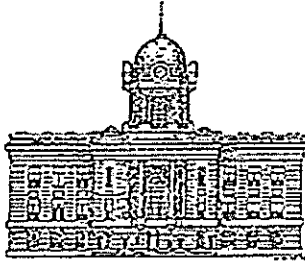


Jasper County, Iowa

Joe Brock
Denny Carpenter
Doug Cupples



Board of Supervisors
Courthouse
PO Box 944
Newton IA 50208
Phone 641-792-7016
Fax 641-792-1053

JASPER COUNTY BOARD OF SUPERVISORS AGENDA

www.co.jasper.ia.us

July 11, 2017

9:30 a.m.

Pledge of Allegiance

- Item 1 **Sanitarian – Kevin Luetters**
 - Public Hearing for Construction Permit Application for a Confinement Feeding Operation

- Item 2 **Engineer – Russ Stutt**
 - a) Purchase of Air Conditioner/Furnace Unit
 - b) Give Approval for the Route Designation through Jasper County for the Creation of a Submarine Veterans Memorial Highway

- Item 3 **Human Resources – Dennis Simon**
 - a) Employee Hiring Resolution – Community Development
 - b) Employee Hiring Resolution - Sheriff

- Item 4 **Sheriff – John Halferty**
 - a) Resolution Establishing fees for Acquiring a Pistol or Revolver
 - b) Approval of Quarterly Report Ending June, 2017
 - c) Approval of Annual Report Ending June, 2017

- Item 5 **CICS – Jody Eaton**
 - a) Central Iowa Community Services Statements of Understanding
 - b) Regional Work Group

- Item 6 **Resolutions Approving Transfer Orders #1378, #1379, and #1380**

- Item 7 **Approval of Recorder's Monthly Report for June, 2017**

- Item 8 **Approval of Board of Supervisors minutes for 6/27/17**

- Item 9 **Board Appointments**

PUBLIC INPUT & COMMENTS



Verification of County Receipt For Manure Management Plans & Plan Updates

This form is for non-permitted operations that are submitting an original manure management plan (MMP) and all confinement feeding operations that must submit an annual updated MMP. This form is not for confinement feeding operations that are applying for a construction permit. (See the Construction Permit Application package for the Verification of County Receipt form used with construction permit applications.)

It must be submitted to the appropriate Department of Natural Resources (DNR) field office to indicate that the county where the confinement feeding operation is located, or will be located, has received a copy of the MMP. If manure is to be applied in additional counties, you must also submit this form indicating that a complete MMP or MMP annual update has been delivered to each of the counties where manure will be applied.

For the confinement feeding operation:

NAME OF OPERATION: Lynn Grove Pork
OWNER: Kevin Van Kooten
LOCATION: SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Sec 26 T 78 R 17 Lynn Grove Jasper
($\frac{1}{4}$ $\frac{1}{4}$) (Section) (Tier) (Range) (Township Name) (County)

THIS SECTION IS TO BE COMPLETED BY THE COUNTY

COUNTY: Jasper
NAME: Teresa Arroniz
TITLE: Deputy Auditor
(Member of the County Board of Supervisors or designated official/employee)

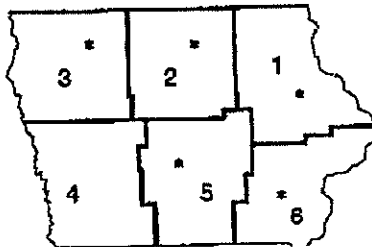
2017 JUN 29 AM 8:52
DENNIS K. PARROTT
JASPER COUNTY AUDITOR

On June 29, 20 17, on behalf of the Board of Supervisors

I received a complete copy of the:

- Original manure management plan, OR amendment to permit (hand size)
- Manure management plan annual update

Please send this signed and dated receipt to the DNR Field Office where the operation is located:



Field Office #1
909 West Main, Suite 4
Manchester, IA 52057
563-927-2640

Field Office #3
1900 N. Grand Ave
Spencer, IA 51301
712-262-4177

Field Office #5
401 SW 7th, Suite 1
Des Moines, IA 50309
515-725-0268

Field Office #2
2300 15th St SW
Mason City, IA 50401
641-424-4073

Field Office #4
1401 Sunnyside Lane
Atlantic, IA 50022
712-243-1934

Field Office #6
1023 W Madison
Washington, IA 52353
319-653-2135

B) In your own words, describe in detail, the proposed construction, expansion, installation, modification or repair being proposed in this project. (Must be completed) Attach additional pages if necessary:

A 48'x176' deep bedded cattle barn for 100 cow/calf pairs with a 48'x24' stockpile at the west end of the barn.

C) Master Matrix (must check one). If any of boxes 1 to 3 are checked, the operation is required to be evaluated with the master matrix if the county, where the confinement feeding operation structure¹ is or would be located, has adopted a 'Construction Evaluation Resolution' (CER). Select the one that best describes your confinement feeding operation:

- 1. A new confinement feeding operation proposed in a county that has adopted a CER.
- 2. An existing operation constructed on or after April 1, 2002, in a county that has adopted a CER.
- 3. An existing operation constructed prior to April 1, 2002, with a current or proposed AUC of 1,667 AU or more, in a county that has adopted a CER.
- 4. None of the above. Therefore, the master matrix evaluation is not required.

D) Qualified Operation (must check one). If any of boxes 1 to 4 are checked, the operation is also a 'qualified operation'. A qualified operation is required to use a manure storage structure that employs bacterial action which is maintained by the utilization of air or oxygen, and which shall include aeration equipment. However, this requirement does not apply if box 5 is checked. Select the one that best describes your confinement feeding operation:

- 1. A swine farrowing and gestating operation with an AUC of 2,500 AU or more. If the replacement breeding swine are raised and used at the operation, the animal units for those replacement animals do not count in the operations total AUC.
- 2. A swine farrow-to-finish operation with an AUC of 5,400 AU or more.
- 3. A cattle confinement feeding operation (including dairies) with an AUC of 8,500 AU or more.
- 4. Other confinement feeding operations with an AUC of 5,333 AU or more.
- 5. This is not a qualified operation because:
 - a. It is below the limits shown on boxes 1 to 4.
 - b. It includes a confinement feeding operation structure¹ constructed prior to May 31, 1995.
 - c. It handles manure exclusively in a dry form (poultry).

ITEM 4 – ANIMAL UNIT CAPACITY (AUC) and, if applicable, ANIMAL WEIGHT CAPACITY (AWC):

A) Calculating AUC – Required for all operations

For each animal species, multiply the maximum number of animals that you would ever confine at one time by the appropriate factor, then add all AU together on Table 1 (page 4). Use the maximum market weight for the appropriate animal species to select the AU factor.

You must complete all applicable columns in Table 1. Use column a) to calculate the existing AUC, before permit for existing operations only. Use column b) to calculate the 'Total proposed AUC' (after a permit is issued) including new operations. The number obtained in column b) is the AUC of the operation and must be used to determine permit requirements. Use column c) to calculate the 'New AU' to be added to an existing operation. To calculate the indemnity fee (see page 7), also use column c), however, if the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c).

In calculating the AUC of a confinement feeding operation, you must include the AUC of all confinement buildings which are part of the confinement feeding operation, unless a confinement building has been abandoned. A confinement feeding operation structure¹ is abandoned if the confinement feeding operation structure¹ has been razed, removed from the site of a confinement feeding operation, filled in with earth, or converted to uses other than a confinement feeding operation structure¹ so that it cannot be used as a confinement feeding operation structure¹ without significant reconstruction. Therefore, in Table 1, enter the animal unit capacity of all the confinement buildings, including those that are from an "adjacent" operation located within 2,500 feet. For more information, contact the AFO Program at (712) 262-4177.

Table 1. Animal Unit Capacity (AUC): (No. HEAD) x (FACTOR) = AUC

Animal Species	a) Existing AUC (Before permit)			b) Total Proposed AUC (After permit)		
	(No. Head)	x (Factor)	= AUC	(No. Head)	x (Factor)	= AUC
Slaughter or feeder cattle	0	1.0	0	100	1.0	100
Immature dairy cattle		1.0			1.0	
Mature dairy cattle		1.4			1.4	
Gestating sows		0.4			0.4	
Farrowing sows & litter		0.4			0.4	
Boars		0.4			0.4	
Gilts		0.4			0.4	
Finished (Market) hogs	4800	0.4	1920	4800	0.4	1920
Nursery pigs 15 lbs to 55 lbs		0.1			0.1	
Sheep and lambs		0.1			0.1	
Horses		2.0			2.0	
Turkeys 7lbs or more		0.018			0.018	
Turkeys less than 7 lbs		0.0085			0.0085	
Broiler/Layer chickens 3 lbs or more		0.01			0.01	
Broiler/Layer chickens less than 3 lbs		0.0025			0.0025	
Fish		0.001			0.001	
TOTALS:		a) Existing AUC:	1920	b) Total proposed AUC:		2020

Note: If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c)

c) New AU = b) - a):
d) **100**

(This is the AUC of the operation)

B) Calculating AWC - Only for operations first constructed prior to March 1, 2003

The AWC is needed for an operation that was first constructed prior to March 1, 2003, to determine some of the minimum separation distance requirements for construction or expansion.

The AWC is the product of multiplying the maximum number of animals that you would ever confine at any one time by their average weight (lbs) during the production cycle. Then add the AWC if more than one animal species is present (examples on how to determine the AWC are provided in 567 IAC 65.1(455B).)

If the operation was first constructed prior to March 1, 2003, you must complete all applicable columns in Table 2:

Table 2. Animal Weight Capacity (AWC): (No. head) * (Avg. weight, lbs) = AWC, lbs

Animal Species	a) Existing AWC (Before Permit)			b) Proposed AWC (After permit)		
	(No. head) x	avg weight	= AWC	(No. head) x	avg weight	= AWC
Slaughter or feeder cattle						
Immature dairy cattle						
Mature dairy cattle						
Gestating sows						
Farrowing sows & litter						
Boars						
Gilts						
Finished (Market) hogs						
Nursery pigs 15 lbs to 55 lbs						
Sheep and lambs						
Horses						
Turkeys 7lbs or more						
Turkeys less than 7 lbs						
Broiler/Layer chickens 3 lbs or more						
Broiler/Layer chickens less than 3 lbs						
Fish						
TOTALS:		a) Existing AWC:		b) Total proposed AWC:		

c) New AWC = b) - a):
d)

(This is the AWC of the operation)

ITEM 8

**Manure Storage Indemnity Fee Form
for Construction Permits**

CASHIER'S USE ONLY
0474-542-474A-0431
Facility ID #
County

Credit fees to: Kevin Van Kooten

Name of operation: Lynn Grove Pork

INSTRUCTIONS:

- 1) Use the 'Total Proposed AUC' from column b), Table 1 (page 4), to select the appropriate fee line in the table below. The 'Total Proposed AUC' is the AUC of the operation.
- 2) Select the animal specie and row number (see examples). Enter the 'New AU' from column c), Table 1 (page 4). The 'New AU' is the number of AU to be added to an existing operation or being proposed with a new operation. **Note:** If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in "New AU" (column c).
- 3) Multiply the 'New AU' by the appropriate 'Fee per AU'. The resulting number is the indemnity fee due.

- **Example 1:** An existing swine operation is expanding from an 'Existing AUC' of 1,000 AU to a 'Total Proposed AUC' of 1,800 AU, and has previously paid an indemnity fee for the existing 1,000 AU. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is other than poultry; enter 800 AU in the 'New AU' column, row 4, and multiply it by \$ 0.15:
 $(800 \text{ AU}) \times (\$ 0.15 \text{ per AU}) = \$ 120.00$
- **Example 2:** An existing poultry operation is expanding from an 'Existing AUC' of 250 AU to a 'Total Proposed AUC' of 2,000 AU and has not paid the indemnity fee for animals housed in the existing buildings. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is poultry and the indemnity fee has not previously been paid, enter 2,000 AU in the 'New AU' column on row 3, and multiply it by \$0.06:
 $(2,000 \text{ AU}) \times (\$ 0.06 \text{ per AU}) = \$ 120.00$
- **Example 3:** If you are proposing a new swine confinement feeding operation with a 'Total Proposed AUC' of 3,500 AU, enter 3,500 AU in the 'New AU' column, row 6 and multiply it by \$ 0.20:
 $(3,500 \text{ AU}) \times (\$ 0.20 \text{ per AU}) = \$ 700.00$
- **Example 4:** If you are applying for a construction permit but you are not increasing the AUC of the operation, and has previously paid the applicable indemnity for the animals housed in the existing buildings, there is no indemnity fee due (\$ 0.00). If no indemnity fee is due, do not submit this page.

Indemnity Fee Table:

Total Proposed AUC - (After permit) from column b), Table 1	Row	Animal species	New AU - from column c), Table 1	x	Fee per AU	Indemnity Fee
Less than 1,000 AU	1	Poultry		x	\$ 0.04 =	
	2	Other		x	\$ 0.10 =	
1,000 AU or more to less than 3,000 AU	3	Poultry		x	\$ 0.06 =	
	4	Other	100	x	\$ 0.15 =	15.00
3,000 AU or more	5	Poultry		x	\$ 0.08 =	
	6	Other		x	\$ 0.20 =	

ITEM 8 (Cont.)

Filing Fees Form
for Construction Permits

CASHIER'S USE ONLY
0473-542-473A-0431
0474-542-474A-0431
Facility ID #
County

Credit fees to: Kevin Van Kooten

Name of operation: Lynn Grove Pork

INSTRUCTIONS:

1. If the operation is applying for a construction permit enclose a payment for the following:
 - Construction application fee \$250.00.
(Note: This fee is non-refundable)
2. A manure management plan must be submitted with a filing fee.
 - Manure management plan filing fee \$250.00
(Note: This fee is non-refundable)
3. If this is a change in ownership then indemnity fees must also be paid on the current (existing) total AUC at the appropriate rate on page 7.
 - Indemnity fee due to ownership change \$ _____
4. Total filing fees: Add the fees paid in items 1, 2 and 3 (above): \$ 500.00

SUMMARY:	
- Manure Storage Indemnity Fee (see previous page) to be deposited in the Manure Storage Indemnity Fee Fund (474)	\$ <u>15.00</u>
- Total filing fees (see item 4 on this page) to be deposited in the Animal Agriculture Compliance Fund (473)	\$ <u>500.00</u>
TOTAL DUE:	\$ <u>515.00</u>

Make check payable to: Iowa Department of Natural Resources or Iowa DNR; and send it along with the construction application documents (See Submittal Checklist No. 1 or 2, pages 10-15.) Note: Do not send this fee to the county.



Manure Management Plan Form

Animal Feeding Operation Information

Instructions: Complete this form for your animal feeding operation. Footnotes are provided on page 4. The information within this form, and the attachments, describes my animal feeding operation, my manure storage and handling system, and my manure management system. I (we) will manage the manure, and the nutrients it contains, as described within this manure management plan. (A revisions of the plan, individual field information, and field summary sheet, and in accordance with current rules and regulations. Deviation by Iowa law will be documented and maintained in my records.

Signed: X Kevin Van Kooten (Signature) Kevin VanKooten (Print name) Date: 4-10-17

Name of operation: Lynn Grove Pork Facility ID No. 62660

Location of the operation: 14845 Thorn Ave. (911 address)
Lynnville (Town) IA (State) 50153 (ZIP)

SW 1/4 of the SE 1/4 of Sec 28 T 78 R 17 Lynn Grove Jasper
 (1/4 1/4) (1/4) (Section) (Tier & Range) (Township Name) (County)

Owner and Contacts of the animal feeding operation:

Owner Kevin Van Kooten Phone 641-780-5246

Address 14937 Thorn Ave, Lynnville, IA 50153

E-mail address (optional) _____ Cell phone (optional) _____

Contact person (if different than owner) Brian Ritland Phone 641-848-7300

Address 620 Country Club Rd. Iowa Falls, IA 50126

E-mail address (optional) _____ Cell phone (optional) _____

This nutrient management plan is for: (check one)

_____ existing operation, not expanding existing operation, expanding _____ existing operation, new owner _____ new operation

Construction and Expansion Dates: 8/22/2005 date of initial construction and all expansions

Table 1. Information about livestock production and manure management system

1	2	3	4	5	6	7
Animal type ^a	Description of Manure Storage/Manure Type ^b (e.g. scraped solids from open feedlot, effluent from runoff basin, bedded barn manure, liquid manure from deep pit)	Max Number of Animals Housed (head)	N ^c lb/1000 gal or lb/ton	P ₂ O ₅ ^c gal or lb/ton	gal/space/dy or ton/space/yr ^d	Annual Manure Production ^e (Gallons or Tons)
Beef, Mature cows	Deep Bedded	100	12	6	365.0	1,233
Grow/finish	BBP	4300	53.4	43.4	365.0	1,026,300
Total Tons						1,233
Total Gallons						1,026,300

Estimated annual animal production^f: 12,305 animals/year

Source of Manure Nutrient Content Data (standard tables, manure analysis, other): Tables/Analysis



620 Country Club Rd.
Iowa Falls, IA 50126
Phone 641-648-7300
Fax 641-648-7310

Fax

To: Jasper County Auditor	From: Jean Knipfel
Fax: 641-792-1053	Pages: 7
Phone:	Date: 6/28/17
Re:	CC:

Urgent
 For Review
 Please Comment
 Please Reply
 Please Recycle

• Comments: Please find attached an amendment to the Lynn Grove Park Expansion. Please sign and fax back the County Verification to 866-748-7310 or e-mail to jean@pinnacleiowa.com. Please call with any questions.

Please staple check here



Iowa Department of Natural Resources

Construction Permit Application Form Confinement Feeding Operations

INSTRUCTIONS:

Prior to constructing, installing, modifying or expanding a confinement feeding operation structure¹, answer questions 1-8 on Item 3, Section A (page 2), to determine if a construction permit is required. To calculate the animal unit capacity (AUC) of the operation, complete Table 1 (page 4.) If a construction permit is required, complete the rest of the form, have the applicant(s) sign it on pages 5 and 6. Mail to the DNR (see address on page 5) this application form, documents and fees requested in Checklist No. 1 or 2 (pages 10-15). See item 5 (page 5), to determine which checklist to use.

If a construction permit is not needed, some pre-construction requirements may still apply prior to the construction of a formed manure storage structure². See page 5 for additional DNR contact information.

THIS APPLICATION IS FOR:

1. A new confinement feeding operation
2. An existing confinement feeding operation (answer all of the following questions):
 - a) Facility ID No. (5 digit number): 62660
 - b) Date when the operation was first constructed: 08/01/2005
 - c) Date when the last construction, expansion or modification was completed: _____

(Not needed if the confinement operation has previously received a construction permit from DNR.)

- d) Is this also an ownership change? Yes No If yes box is checked additional fees apply. See page 8

ITEM 1 – LOCATION AND CONTACT INFORMATION (See page 17 for instructions and an example):

A) Name of operation: Lynn Grove Pork

Location:	<u>SW</u>	<u>SE</u>	<u>26</u>	<u>T78N R17W</u>	<u>Lynn Grove</u>	<u>Jasper</u>
	(1/4 1/4)	(1/4)	(Section)	(Tier & Range)	(Name of Township)	(County)

B) Applicant information:

Name: Kevin Van Kooten Title: Owner

Address: 14937 Thorn Ave, Lynnville, IA 50153

Telephone: 641-780-5245 Fax: _____ Email: _____

C) Person to contact with questions about this application (if different than applicant):

Name: Brian Ritland Title: Contact

Address: 620 Country Club Rd, Iowa Falls, IA 50126

Telephone: 641-648-7300 Fax: _____ Email: _____

- Enclose aerial photo or engineering drawing showing the proposed location of the confinement feeding operation structure¹ and all applicable separation distances, as requested in Attachment 1 (pages 11-12 or 14-15). See example of aerial photo on pages 18 to 19, at the end of this form.
- I manage or am the majority owner of another confinement feeding operation located within 2,500 feet of the proposed site. Please contact the DNR AFO Program staff at (712) 262-4177 to verify site adjacency requirements.

¹ Confinement feeding operation structure = animal feeding operation structure (confinement building, manure storage structure or egg washwater storage structure) that is part of a confinement feeding operation. Manure storage structures include formed and unformed manure storage structures.

² Formed manure storage structure = covered or uncovered concrete or steel tanks, and concrete pits below the building.

ITEM 2 – SITING INFORMATION:

- A) Karst Determination: Go to DNR AFO Siting Atlas at <http://programs.iowadnr.gov/maps/afo/>. Agree to the disclaimer, then search for your site by either scrolling into your location or entering an address or legal description in the bottom search bar. Left click on the location of your proposed structure. Make sure the karst layer box is checked on the map layers. If you cannot access the map, or if you have questions about this issue, contact the AFO Engineer at (712) 262-4177. Check one of the following:
- The site is not in karst or potential karst. Print and enclose the map with the name and location of the site clearly marked.
 - The site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" must be used. Refer to "Applicant's submittal checklist" on page 10 for karst documentation.
 - The site is within 1,000 feet of a known sinkhole, Secondary Containment Barrier is required in accordance with 567 IAC 65.15(17).
- B) Alluvial Soils Determination: Go to the AFO Siting Atlas as described above. Make sure the alluvial layer box is checked on the map legend. If you cannot access the map, or if you have questions about this issue, contact DNR Flood Plain at (866) 849-0321. Check one of the following:
- The site is not in alluvial soils. Print and enclose the map with the name and location of the site clearly marked.
 - The site is in alluvial soils. You will need to submit a request for a flood plain determination from DNR Flood Plain (866) 849-0321. After receiving determination submit one of the following:
 - Not in 100-year floodplain or does not require a flood plain permit. Include correspondence from the DNR Flood Plain Section.
 - Requires flood plain permit. Include flood plain permit.
 - Documentation has been submitted to determine site is not in alluvial soils. Refer to "Applicant's Submittal Checklist" on page 10 for alluvial soils documentation.

ITEM 3 – OPERATION INFORMATION:

- A) A construction permit is required prior to any of the following:
1. Constructing or modifying any unformed manure storage structure³, or constructing or modifying a confinement building that uses an unformed manure storage structure³.
 2. Constructing, installing or modifying a confinement building or a formed manure storage structure² at a confinement feeding operation if, after construction, installation or expansion, the AUC of the operation is 1,000 animal units (AU) or more. This also applies to confinement feeding operations that store manure exclusively in a dry form.
 3. Initiating a change that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in any unformed manure storage structure³, even if no construction or physical alteration is necessary. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
 4. Initiating a change, even if no construction or physical alteration is necessary, that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in a formed manure storage structure² if, after the change, the AUC of the operation is 1,000 AU or more. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
 5. Constructing or modifying any egg washwater storage structure or a confinement building at a confinement feeding operation that includes an egg washwater storage structure.
 6. Initiating a change that would result in an increase in the volume of egg washwater or a modification in the manner in which egg washwater is stored, even if no construction or physical alteration is necessary. Increases in the volume of egg washwater due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
 7. Repopulating a confinement feeding operation if it was closed for 24 months or more and if any of the following apply:
 1. The confinement feeding operation uses an unformed manure storage structure³ or egg washwater storage structure;
 2. The confinement feeding operation includes only confinement buildings and formed manure storage structures² and has an AUC of 1,000 AU or more.
 8. Installing a permanent manure transfer piping system, unless the department determines that a construction permit is not required.

³ Unformed manure storage structure = covered or uncovered anaerobic lagoon, earthen manure storage basin, aerobic earthen structure.

B) In your own words, describe in detail, the proposed construction, expansion, installation, modification or repair being proposed in this project. (Must be completed) Attach additional pages if necessary:
 A 48'x176' deep bedded cattle barn for 100 cow/calf pairs with a 48'x24' stockpile at the west end of the barn. I will also be increasing from 4800hd to 4810hd of finisher swine

C) Master Matrix (must check one). If any of boxes 1 to 3 are checked, the operation is required to be evaluated with the master matrix if the county, where the confinement feeding operation structure¹ is or would be located, has adopted a 'Construction Evaluation Resolution' (CER). Select the one that best describes your confinement feeding operation:

1. A new confinement feeding operation proposed in a county that has adopted a CER.
2. An existing operation constructed on or after April 1, 2002, in a county that has adopted a CER.
3. An existing operation constructed prior to April 1, 2002, with a current or proposed AUC of 1,667 AU or more, in a county that has adopted a CER.
4. None of the above. Therefore, the master matrix evaluation is not required.

D) Qualified Operation (must check one). If any of boxes 1 to 4 are checked, the operation is also a 'qualified operation'. A qualified operation is required to use a manure storage structure that employs bacterial action which is maintained by the utilization of air or oxygen, and which shall include aeration equipment. However, this requirement does not apply if box 5 is checked. Select the one that best describes your confinement feeding operation:

1. A swine farrowing and gestating operation with an AUC of 2,500 AU or more. If the replacement breeding swine are raised and used at the operation, the animal units for those replacement animals do not count in the operations total AUC.
2. A swine farrow-to-finish operation with an AUC of 5,400 AU or more.
3. A cattle confinement feeding operation (including dairies) with an AUC of 8,500 AU or more.
4. Other confinement feeding operations with an AUC of 5,333 AU or more.
5. This is not a qualified operation because:
 - a. It is below the limits shown on boxes 1 to 4.
 - b. It includes a confinement feeding operation structure¹ constructed prior to May 31, 1995.
 - c. It handles manure exclusively in a dry form (poultry).

ITEM 4 – ANIMAL UNIT CAPACITY (AUC) and, if applicable, ANIMAL WEIGHT CAPACITY (AWC):

A) Calculating AUC – Required for all operations

For each animal species, multiply the maximum number of animals that you would ever confine at one time by the appropriate factor, then add all AU together on Table 1 (page 4). Use the maximum market weight for the appropriate animal species to select the AU factor.

You must complete all applicable columns in Table 1. Use column a) to calculate the existing AUC, before permit for existing operations only. Use column b) to calculate the 'Total proposed AUC' (after a permit is issued) including new operations. The number obtained in column b) is the AUC of the operation and must be used to determine permit requirements. Use column c) to calculate the 'New AU' to be added to an existing operation. To calculate the indemnity fee (see page 7), also use column c), however, if the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c).

In calculating the AUC of a confinement feeding operation, you must include the AUC of all confinement buildings which are part of the confinement feeding operation, unless a confinement building has been abandoned. A confinement feeding operation structure¹ is abandoned if the confinement feeding operation structure¹ has been razed, removed from the site of a confinement feeding operation, filled in with earth, or converted to uses other than a confinement feeding operation structure¹ so that it cannot be used as a confinement feeding operation structure¹ without significant reconstruction. Therefore, in Table 1, enter the animal unit capacity of all the confinement buildings, including those that are from an "adjacent" operation located within 2,500 feet. For more information, contact the AFO Program at (712) 262-4177.

Table 1. Animal Unit Capacity (AUC): (No. HEAD) x (FACTOR) = AUC

Animal Species	a) Existing AUC (Before permit)			b) Total Proposed AUC (After permit)		
	(No. Head)	x (Factor)	= AUC	(No. Head)	x (Factor)	= AUC
Slaughter or feeder cattle	0	1.0	0	100	1.0	100
Immature dairy cattle		1.0			1.0	
Mature dairy cattle		1.4			1.4	
Gestating sows		0.4			0.4	
Farrowing sows & litter		0.4			0.4	
Boars		0.4			0.4	
Gilts		0.4			0.4	
Finished (Market) hogs	4800	0.4	1920	4810	0.4	1974
Nursery pigs 15 lbs to 55 lbs		0.1			0.1	
Sheep and lambs		0.1			0.1	
Horses		2.0			2.0	
Turkeys 7lbs or more		0.018			0.018	
Turkeys less than 7 lbs		0.0085			0.0085	
Broiler/Layer chickens 3 lbs or more		0.01			0.01	
Broiler/Layer chickens less than 3 lbs		0.0025			0.0025	
Fish		0.001			0.001	
TOTALS:		a) Existing AUC:	1920	b) Total proposed AUC:	2074	

Note: If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c)

c) New AU = b) - a):
d)

104

(This is the AUC of the operation)

B) Calculating AWC - Only for operations first constructed prior to March 1, 2003

The AWC is needed for an operation that was first constructed prior to March 1, 2003, to determine some of the minimum separation distance requirements for construction or expansion.

The AWC is the product of multiplying the maximum number of animals that you would ever confine at any one time by their average weight (lbs) during the production cycle. Then add the AWC if more than one animal species is present (examples on how to determine the AWC are provided in 567 IAC 65.1(455B).)

If the operation was first constructed prior to March 1, 2003, you must complete all applicable columns in Table 2:

Table 2. Animal Weight Capacity (AWC): (No. head) * (Avg. weight, lbs) = AWC, lbs

Animal Species	a) Existing AWC (Before Permit)			b) Proposed AWC (After permit)		
	(No. head) x	avg weight	= AWC	(No. head) x	avg weight	= AWC
Slaughter or feeder cattle						
Immature dairy cattle						
Mature dairy cattle						
Gestating sows						
Farrowing sows & litter						
Boars						
Gilts						
Finished (Market) hogs						
Nursery pigs 15 lbs to 55 lbs						
Sheep and lambs						
Horses						
Turkeys 7lbs or more						
Turkeys less than 7 lbs						
Broiler/Layer chickens 3 lbs or more						
Broiler/Layer chickens less than 3 lbs						
Fish						
TOTALS:		a) Existing AWC:		b) Total proposed AWC:		

c) New AWC = b) - a):

--

(This is the AWC of the operation)

ITEM 5 – SUBMITTAL REQUIREMENTS Checklists No. 1 or 2 (pages 10-15) describe the submittal requirements, which are based on the type of confinement feeding operation structure¹ and AUC proposed. To determine which checklist to use, choose the option that best describes your confinement feeding operation:

- A) **Formed manure storage structures²:** The proposed confinement feeding operation structure² will be or will use a formed manure storage structure². Check one of the following boxes:
1. A swine farrowing and gestating operation with an AUC of 1,250 AU or more. Use Submittal Checklist No. 2 (page 13).
 2. A swine farrow-to-finish operation with an AUC of 2,750 AU or more. Use Submittal Checklist No. 2 (page 13).
 3. A cattle confinement feeding operation (including dairies) with an AUC of 4,000 AU or more. Use Submittal Checklist No. 2 (page 13).
 4. Other confinement feeding operations with an AUC of 3,000 AU or more. Use Submittal Checklist No. 2 (page 13).
 5. None of the above. Use Submittal Checklist No. 1 (page 10).

If any of boxes 1 to 4 are checked, the operation meets the threshold requirements for an engineer⁴ and a Professional Engineer (PE), licensed in Iowa, is required. For these cases, use Submittal Checklist No. 2 (page 13).

If you checked box 5, your operation is below threshold requirements for an engineer⁴ and a Professional Engineer (PE) is not required. Use Submittal Checklist No. 1 (page 10).

- B) **Unformed manure storage structure³:** The proposed confinement feeding operation structure³, will be or will use an unformed manure storage structure³ or an egg washwater storage structure. A Professional Engineer (PE) licensed in Iowa must design and sign the engineering documents for any size of operation. Use Submittal Checklist No. 2 (page 13) and Addendum "A" (page 16).

ITEM 6 – SIGNATURE:

I hereby certify that the information contained in this application is complete and accurate.

Signature of Applicant(s): X *Ken Van Horn* Date: 4-10-17

MAILING INSTRUCTIONS:

To expedite the application process, follow the submittal requirements explained in Checklist No. 1 or 2 (pages 10 to 16), whichever applies. Page 1 of this form should be the first page of the package. Mail all documents and fees to:

Iowa DNR
 AFO Program
 1900 N Grand Ave
 Gateway North, Ste E17
 Spencer, IA 51301

(Note: Incomplete applications will be returned to the sender.)

Questions

Questions about construction permit requirements or regarding this form should be directed to an engineer of the animal feeding operations (AFO) Program at (712) 262-4177 To contact the appropriate DNR Field Office, go to <http://www.iowadnr.gov/insideDNR/DNRStaffOffices/EnvironmentalFieldOffices.aspx>.

⁴ Threshold requirements for an engineer apply to the construction of a formed manure storage structure². Operations that meet or exceed the threshold requirements for an engineer are required to submit engineering documents signed by a professional engineer licensed in the state of Iowa. Please refer to Checklist No. 2 (pages 13-15).

ITEM 7

Interested Parties Form
Confinement Feeding Operation

Interest means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly or indirectly through a spouse or dependent child, or both.

INSTRUCTIONS:

Please list all persons (including corporations, partnerships, etc.) who have an interest in any part of the confinement feeding operation covered by this permit application.

Full Name	Address	City/State	Zip
Kevin Van Kooten	14937 Thorn Ave	Lynnville, IA	50153

For each name above, please list below all other confinement feeding operations in Iowa in which that person has an interest. Check box "None", below, if there are no other confinement feeding operations in Iowa in which the above listed person(s) has or have an interest.

Operation Name	Location (1/4, 1/4, 1/4, Section, Tier, Range, Township, County)	City
<input checked="" type="checkbox"/> None [There are no other confinements in Iowa in which the above listed person(s) has or have an interest].		

I hereby certify that the information provided on this form is complete and accurate.

Signature of Applicant(s): X Kevin Van Kooten Date: 4-10-17

ITEM 8

**Manure Storage Indemnity Fee Form
for Construction Permits**

CASHIER'S USE ONLY 0474-542-474A-0431 Facility ID # County
--

Credit fees to: Kevin Van Kooten

Name of operation: Lynn Grove Pork

INSTRUCTIONS:

- 1) Use the 'Total Proposed AUC' from column b), Table 1 (page 4), to select the appropriate fee line in the table below. The 'Total Proposed AUC' is the AUC of the operation.
- 2) Select the animal specie and row number (see examples). Enter the 'New AU' from column c), Table 1 (page 4). The 'New AU' is the number of AU to be added to an existing operation or being proposed with a new operation. **Note:** If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in "New AU" (column c).
- 3) Multiply the 'New AU' by the appropriate 'Fee per AU'. The resulting number is the indemnity fee due.

- **Example 1:** An existing swine operation is expanding from an 'Existing AUC' of 1,000 AU to a 'Total Proposed AUC' of 1,800 AU, and has previously paid an indemnity fee for the existing 1,000 AU. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is other than poultry; enter 800 AU in the 'New AU' column, row 4, and multiply it by \$ 0.15:
 $(800 \text{ AU}) \times (\$ 0.15 \text{ per AU}) = \$ 120.00$
- **Example 2:** An existing poultry operation is expanding from an 'Existing AUC' of 250 AU to a 'Total Proposed AUC' of 2,000 AU and has not paid the indemnity fee for animals housed in the existing buildings. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is poultry and the indemnity fee has not previously been paid, enter 2,000 AU in the 'New AU' column on row 3, and multiply it by \$0.06:
 $(2,000 \text{ AU}) \times (\$ 0.06 \text{ per AU}) = \$ 120.00$
- **Example 3:** If you are proposing a new swine confinement feeding operation with a 'Total Proposed AUC' of 3,500 AU, enter 3,500 AU in the 'New AU' column, row 6 and multiply it by \$ 0.20:
 $(3,500 \text{ AU}) \times (\$ 0.20 \text{ per AU}) = \$ 700.00$
- **Example 4:** If you are applying for a construction permit but you are not increasing the AUC of the operation, and has previously paid the applicable indemnity for the animals housed in the existing buildings, there is no indemnity fee due (\$ 0.00). If no indemnity fee is due, do not submit this page.

Indemnity Fee Table:

Total Proposed AUC - (After permit) from column b), Table 1	Row	Animal species	New AU - from column c), Table 1	x	Fee per AU	Indemnity Fee
Less than 1,000 AU	1	Poultry		x	\$ 0.04 =	
	2	Other		x	\$ 0.10 =	
1,000 AU or more to less than 3,000 AU	3	Poultry		x	\$ 0.06 =	
	4	Other	104	x	\$ 0.15 =	15.60
3,000 AU or more	5	Poultry		x	\$ 0.08 =	
	6	Other		x	\$ 0.20 =	

ITEM 8 (Cont.)

Filing Fees Form
for Construction Permits

CASHIER'S USE ONLY
0473-542-473A-0431
0474-542-474A-0431
Facility ID #
County

Credit fees to: Kevin Van Kooten

Name of operation: Lynn Grove Park

INSTRUCTIONS:

1. If the operation is applying for a construction permit enclose a payment for the following:
 Construction application fee \$250.00.
(Note: This fee is non-refundable)
2. A manure management plan must be submitted with a filing fee.
 Manure management plan filing fee \$250.00
(Note: This fee is non-refundable)
3. If this is a change in ownership then indemnity fees must also be paid on the current (existing) total AUC at the appropriate rate on page 7.
 Indemnity fee due to ownership change \$ _____
4. Total filing fees: Add the fees paid in items 1, 2 and 3 (above): \$ 500.00

SUMMARY:	
- Manure Storage Indemnity Fee (see previous page) to be deposited in the Manure Storage Indemnity Fee Fund (474)	\$ <u>15.60</u>
- Total filing fees (see item 4 on this page) to be deposited in the Animal Agriculture Compliance Fund (473)	\$ <u>500.00</u>
TOTAL DUE:	\$ <u>515.60</u>

Make check payable to: Iowa Department of Natural Resources or Iowa DNR; and send it along with the construction application documents (See Submittal Checklist No. 1 or 2, pages 10-15.) Note: Do not send this fee to the county.

ITEM 9

COUNTY VERIFICATION RECEIPT OF DNR CONSTRUCTION PERMIT APPLICATION

This form provides proof that the County Board of Supervisors has been provided with a complete copy of the construction permit application documents (everything except the fees) for the confinement feeding operation or a complete MMP has been provided to the County because manure will be applied in that county:

Applicant: Kevin Van Kooten Telephone: 641-780-5245

Name of operation: Lynn Grove Pork

Location: SW SE 26 T78N R17W Lynn Grove Jasper
(1/4 1/4) (1/4) (Section) (Tier & Range) (Name of Township) (County)

Documents being submitted to the county:

- Construction permit application form: submit items 1 to 9 (see Submittal Checklist No. 1 or 2)
- Attachment 1 - Aerial photos: Must clearly show the location of the proposed confinement feeding operation structure¹ and that all the separation distances are met, including those claimed for points in the master matrix (if applicable).
- Attachment 2 - Statement of design certification, submit any of the following (see Checklist No. 1 or 2):
 - Construction Design Statement form
 - Professional Engineer (PE) Design Certification form
 - Engineering report, construction plans and technical specifications
 - In addition, if proposing an unformed manure storage structure³ or an egg washwater storage structure submit documentation required in Addendum "A" of this construction application form.
- Attachment 3 - Manure management plan.
- Attachment 4 - Master Matrix (if required). You must include supporting documents (see Checklist No. 1 or 2)

THIS SECTION IS RESERVED FOR THE COUNTY

As soon as DNR receives a construction permit application, the DNR will fax your County Auditor a "Courtesy reminder letter" explaining what actions your County Board of Supervisors must complete and the deadlines.

Public Notice is required for all construction permit applications, including those applications not required to be evaluated with the master matrix and applications in counties not participating in the Master matrix.

Counties participating in the master matrix: the county's master matrix evaluation and county's recommendation is required for the following cases:

- A new confinement feeding operation that is applying for a construction permit
- An existing confinement feeding operation that was first constructed on or after April 1, 2002 that is applying for a construction permit.
- An existing confinement feeding operation that was first constructed prior to April 1, 2002 that is applying for a construction permit with an animal unit capacity (AUC) is 1,667 animal units (AU) or more.

I have read and acknowledge the county's duty with this construction permit application, as specified in 567 IAC 65.10 and Iowa Code 459.304. On behalf of the Board of Supervisors for:

COUNTY: Jasper

NAME: Susan Young

TITLE: Auditor Clerk

(Member of the County Board of Supervisors or its designated official/employee)

Date: June 5, 2017

If you do not receive the courtesy reminder letter within a reasonable time, or if you have any questions, please contact the animal feeding operations (AFO) Program at (712) 262-4177 or visit www.iowaDNR.gov

567 IAC 65.11(455B), Table 6

Minimum separation distances for a new confinement feeding operation or expansion of an operation constructed on or after March 1, 2003

Type of Structure (liquid, semi-liquid and dry manure storage)	Total Animal Unit Capacity (AUC) (AU)	Residences, Businesses, Churches, Schools		Public use areas
		Unincorporated Areas	Incorporated Areas	
Anaerobic lagoons and uncovered earthen manure storage basins	500 AU or less	1,875 feet	1,875 feet	1,875 feet
	501 AU to < 1,000 AU	1,875 feet	1,875 feet	1,875 feet
	1,000 AU to < 3,000 AU	2,500 feet	2,500 feet	2,500 feet
	3,000 AU or more	3,000 feet	3,000 feet	3,000 feet
Covered earthen manure storage basins	500 AU or less	1,250 feet	1,875 feet	1,875 feet
	501 AU to < 1,000 AU	1,250 feet	1,875 feet	1,875 feet
	1,000 AU to < 3,000 AU	1,875 feet	2,500 feet	2,500 feet
	3,000 AU or more	2,375 feet	3,000 feet	3,000 feet
Uncovered formed manure storage structures	500 AU or less	None	None	None
	501 AU to < 1,000 AU	1,500 feet	1,875 feet	1,875 feet
	1,000 AU to < 3,000 AU	2,000 feet	2,500 feet	2,500 feet
	3,000 AU or more	2,500 feet	3,000 feet	3,000 feet
Confinement buildings and covered formed manure storage structures	500 AU or less	None	None	None
	501 AU to < 1,000 AU	1,250 feet	1,875 feet	1,875 feet
	1,000 AU to < 3,000 AU	1,875 feet	2,500 feet	2,500 feet
	3,000 AU or more	2,375 feet	3,000 feet	3,000 feet
Egg washwater storage structures	500 AU or less	None	None	None
	501 AU to < 1,000 AU	1,000 feet	1,875 feet	1,875 feet
	1,000 AU to < 3,000 AU	1,500 feet	2,500 feet	2,500 feet
	3,000 AU or more	2,000 feet	3,000 feet	3,000 feet

Distances to Wells

Applies to all Animal Feeding Operations, regardless of the size of operation, including operations with 500 AU or less	Public well		Private well	
	Shallow	Deep	Shallow	Deep
Aerobic structure, anaerobic lagoon, earthen manure storage basin, egg washwater storage structure and open feedlot runoff control basin	1,000 feet	400 feet	400 feet	400 feet
Formed manure storage structure, confinement building, open feedlot solids settling facility and open feedlot.	200 feet	100 feet	200 feet	100 feet

Other Distances

Applies to all Confinement Feeding Operations, regardless of animal unit capacity, including operations with 500 AU or less, unless stated otherwise	
Major water sources, wellhead, cistern of an agricultural drainage well or known sinkhole (Excluding farm ponds, privately owned lakes or when a secondary containment barrier is provided)	1,000 feet
Water sources other than major water sources, surface intakes of an agricultural drainage well (Excluding farm ponds, privately owned lakes or when a secondary containment barrier is provided)	500 feet
Designated wetlands (owned and managed by the Federal government or the Iowa DNR)	2,500 feet
Right-of-way of a public thoroughfare (road, street or bridge) constructed or maintained by the state or a political subdivision (excluding operations with 500 AU or less)	100 feet



459B.202 Distance requirements.

1. Except as provided in subsection 3, the following shall apply:
 - a. A dry bedded confinement feeding operation structure shall not be constructed closer than five hundred feet away from the surface intake of an agricultural drainage well. A dry bedded confinement feeding operation structure shall not be constructed closer than one thousand feet from a wellhead, cistern of an agricultural drainage well, or known sinkhole.
 - b. A dry bedded confinement feeding operation structure shall not be constructed if the dry bedded confinement feeding operation structure as constructed is closer than any of the following:
 - (1) Two hundred feet away from a water source other than a major water source.
 - (2) One thousand feet away from a major water source.
 - (3) Two thousand five hundred feet away from a designated wetland.
 - c. (1) A water source, other than a major water source, shall not be constructed, expanded, or diverted if the water source as constructed, expanded, or diverted is closer than two hundred feet away from a dry bedded confinement feeding operation structure.
 - (2) A major water source shall not be constructed, expanded, or diverted if the major water source as constructed, expanded, or diverted is closer than one thousand feet from a dry bedded confinement feeding operation structure.
 - (3) A designated wetland shall not be established if the designated wetland is closer than two thousand five hundred feet away from a dry bedded confinement feeding operation structure.
 2. A dry bedded confinement feeding operation structure shall not be constructed on land that is part of a one hundred year floodplain.
 3. A separation distance required in subsection 1 shall not apply to any of the following:
 - a. A location or object and a farm pond or privately owned lake, as defined in section 462A.2.
 - b. A dry bedded confinement feeding operation structure constructed with a secondary containment barrier. The department shall adopt rules providing for the construction and use of a secondary containment barrier.
- 2009 Acts, ch 155, §10, 18

Site: Lynn Grove Pork

APPENDIX C
MASTER MATRIX

Question	Score	Air	Water	Community
1	45	29.25	0	17.5
2	30	12	0	18
3	30	12	0	18
4	0	0	0	0
5	0	0	0	0
6	10	4	0	6
7				
8	50	5	25	20
9	25	7.5	7.5	10
10	30	0	22.5	7.5
11				
12	30	27	0	3
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	30	0	27	3
18	0	0	0	0
19	20	0	0	20
20	30	0	0	30
21				
22				
23	25	0	0	25
24	10	0	0	10
25	25	0	12.5	12.5
26	0	0	0	0
27				
28				
29				
30				
31				
32				
33				
34				
35	10	0	7.5	2.5
36	0	0	0	0
37				
38				
39	0	0	0	0
40				
41				
42				
43				
44	0	0	0	0

Only for: "b,c, or d"

Total **440** **100.75** **104.5** **236.5**

Total to Pass **440** **53.38** **67.75** **101.13**

Requires: "Design, Operation, and Maintenance Plan"

APPENDIX C MASTER MATRIX

Proposed Site Characteristics

The following scoring criteria apply to the site of the proposed confinement feeding operation. Mark one score under each criterion selected by the applicant. The proposed site must obtain a minimum overall score of 440 and a score of 53.38 in the "air" subcategory, a score of 67.75 in the "water" subcategory and a score of 101.13 in the "community impacts" subcategory.

1. Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:
 - * Residence not owned by the owner of the confinement feeding operation,
 - * Hospital,
 - * Nursing home, or
 - * Licensed or registered child care facility.

	Score	Air	Water	Community
250 feet to 500 feet	25	16.25		8.75
501 feet to 750 feet	45	29.25		17.50
751 feet to 1,000 feet	65	42.25		22.75
1,001 feet to 1,250 feet	85	55.25		29.75
1,251 feet or more	100	65.00		35.00

- (A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
- (B) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
- (C) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
- (D) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
- (E) A full listing of licensed and registered child care facilities is available at county offices of the department of human services.

2. Additional separation distance, above minimum requirements, from proposed confinement structure to the closest public use area.

	Score	Air	Water	Community
250 feet to 500 feet	5	2.00		3.00
501 feet to 750 feet	10	4.00		6.00
751 feet to 1,000 feet	15	6.00		9.00
1,001 feet to 1,250 feet	20	8.00		12.00
1,251 feet to 1,500	25	10.00		15.00
1,501 feet or more	30	12.00		18.00

- (A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
- (B) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 of 567--Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.

3. Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:
 - * Educational institution,
 - * Religious institution, or

* Commercial enterprise.

	Score	Air	Water	Community
250 feet to 500 feet	5	2.00		3.00
501 feet to 750 feet	10	4.00		6.00
751 feet to 1,000 feet	15	6.00		9.00
1,001 feet to 1,250 feet	20	8.00		12.00
1,251 feet to 1,500	25	10.00		15.00
1,501 feet or more	30	12.00		18.00

- (A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
- (B) The department will award points only for the single building, of the three listed above, closest to the proposed confinement feeding operation.
- (C) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.
- (D) "Religious institution" - a building in which an active congregation is devoted to worship.
- (E) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

4. Additional separation distance, above minimum requirement of 500 feet, from proposed confinement structure to the closest water source.

	Score	Air	Water	Community
250 feet to 500 feet	5		5.00	
501 feet to 750 feet	10		10.00	
751 feet to 1,000 feet	15		15.00	
1,001 feet to 1,250 feet	20		20.00	
1,251 feet to 1,500	25		25.00	
1,501 feet or more	30		30.00	

"Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.

5. Separation distance of 300 feet or more from the proposed confinement structure to the nearest thoroughfare.

	Score	Air	Water	Community
300 feet or more	30	9.00		21.00

- (A) "Thoroughfare" - a road, street, bridge, or highway open to the public and constructed or maintained by the state or a political subdivision.
- (B) The 300-foot distance includes the 100-foot minimum setback plus additional 200 feet.

6. Additional separation distance, above minimum requirements, from proposed confinement structure to the closest critical public area.

	Score	Air	Water	Community
500 feet or more	10	4.00		6.00

- (A) All critical public areas as defined in 567--65.1(455B), are public use areas, and therefore subject to public use area minimum separation distances.
- (B) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
7. Proposed confinement structure is at least two times the minimum required separation distance from all private and public water wells.

	Score	Air	Water	Community
Two times the minimum separation distance	30		24.00	6.00

Refer to Table 6 of 567--Chapter 65 for minimum required separation distances to wells.

8. Additional separation distance, above the minimum requirement of 1,000 feet, from proposed confinement structure to the closest:

- * Agricultural drainage well,
- * Known sinkhole, or
- * Major water source.

	Score	Air	Water	Community
250 feet to 500 feet	5	0.50	2.50	2.00
501 feet to 750 feet	10	1.00	5.00	4.00
751 feet to 1,000 feet	15	1.50	7.50	6.00
1,001 feet to 1,250 feet	20	2.00	10.00	8.00
1,251 feet to 1,500 feet	25	2.50	12.50	10.00
1,501 feet to 1,750 feet	30	3.00	15.00	12.00
1,751 feet to 2,000 feet	35	3.50	17.50	14.00
2,001 feet to 2,250 feet	40	4.00	20.00	16.00
2,251 feet to 2,500 feet	45	4.50	22.50	18.00
2,501 feet or more	50	5.00	25.00	20.00

(A) The department will award points only for the single item, of the three listed above, that is closest to the proposed confinement feeding operation.

(B) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.

(C) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567--Chapter 65.

9. Distance between the proposed confinement structure and the nearest confinement facility that has a submitted department manure management plan.

	Score	Air	Water	Community
Three-quarter of a mile or more (3,960 feet)	25	7.50	7.50	10.00

Confinement facilities include swine, poultry, and dairy and beef cattle.

10. Separation distance from proposed confinement structure to closest:

- * High quality (HQ) waters,
- * High quality resource (HQR) waters, or
- * Protected water areas (PWA)

is at least two times the minimum required separation distance

	Score	Air	Water	Community
Two times the minimum separation distance	30		22.50	7.50

(A) The department will award points only for the single item, of the three listed above, closest to the proposed confinement feeding operation.

(B) HQ waters are identified in 567--Chapter 61.

(C) HQR waters are identified in 567--Chapter 61.

(D) A listing of PWAs is available at:

<http://www.iowadnr.gov/Recreation/CanoeingKayaking/StreamCare/ProtectedWaterAreas.aspx>

11. Air quality modeling results demonstrating an annoyance level less than 2 percent of the time for residences within two times the minimum separation distance.

	Score	Air	Water	Community
University of Minnesota OFFSET model results demonstrating an annoyance level less than 2 percent of the time	10	6.00		4.00e

(A) OFFSET can be found at <http://www.extension.umn.edu/distribution/livestocksystems/D17680.html>. For more information, contact Dr. Larry Jacobson, University of Minnesota, (612) 625-8288, jacob007@tc.umn.edu.

- (B) A residence that has a signed waiver for the minimum separation distance cannot be included in the model.
- (C) Only the OFFSET model is acceptable until the department recognizes other air quality models.

12. Liquid manure storage structure is covered.

	Score	Air	Water	Community
Covered liquid manure storage	30	27.00		3.00

- (A) "Covered" - organic or inorganic material, placed upon an animal feeding operation structure used to store manure, which significantly reduces the exchange of gases between the stored manure and the outside air. Organic materials include, but are not limited to, a layer of chopped straw, other crop residue, or a naturally occurring crust on the surface of the stored manure. Inorganic materials include, but are not limited to, wood, steel, aluminum, rubber, plastic, or Styrofoam. The materials shall shield at least 90 percent of the surface area of the stored manure from the outside air. Cover shall include an organic or inorganic material which current scientific research shows reduces detectable odor by at least 75 percent. A formed manure storage structure directly beneath a floor where animals are housed in a confinement feeding operation is deemed to be covered.
- (B) The design, operation and maintenance plan for the manure cover must be in the construction permit application and made a condition in the approved construction permit.

13. Construction permit application contains design, construction, operation and maintenance plan for emergency containment area at manure storage structure pump-out area.

	Score	Air	Water	Community
Emergency containment	20		18.00	2.00

- (A) The emergency containment area must be able to contain at least 5 percent of the total volume capacity of the manure storage structure.
- (B) The emergency containment area must be constructed on soils that are fine-grained and have low permeability.
- (C) If manure is spilled into the emergency containment area, the spill must be reported to the department within six hours of onset or discovery.
- (D) The design, construction, operation and maintenance plan for the emergency containment area must be in the construction permit application and made a condition in the approved construction permit.

14. Installation of a filter(s) designed to reduce odors from confinement building(s) exhaust fan(s).

	Score	Air	Water	Community
Installation of filter(s)	10	8.00		2.00

The design, operation and maintenance plan for the filter(s) must be in the construction permit application and made a condition in the approved construction permit.

15. Utilization of landscaping around confinement structure.

	Score	Air	Water	Community
Two times the minimum separation distance	20	10.00		10.00

The design, operation and maintenance plan for the landscaping must be in the construction permit application and made a condition in the approved construction permit. The design should contain at least three rows of trees and shrubs, of both fast and slow-growing species that are well suited for the site.

16. Enhancement, above minimum requirements, of structures used in stockpiling and composting activities, such as an impermeable pad and a roof or cover.

	Score	Air	Water	Community
Stockpile and compost facility enhancements	30	9.00	18.00	3.00

- (A) The design, operation and maintenance plan for the stockpile or compost structure enhancements must be in the construction permit application and made a condition in the approved construction permit.
- (B) The stockpile or compost structures must be located on land adjacent or contiguous to the confinement building.

17. Proposed manure storage structure is formed

	Score	Air	Water	Community
Formed manure storage structure	30		27.00	3.00

- (A) "Formed manure storage structure" -a covered or uncovered impoundment used to store manure from an animal feeding operation, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Similar materials may include, but are not limited to, plastic, rubber, fiberglass, or other synthetic materials. Materials used in a formed manure storage structure shall have the structural integrity to withstand

expected internal and external load pressures.

- (B) The design, operation and maintenance plan for the formed manure storage structure must be in the construction permit application and made a condition in the approved construction permit.

18. Manure storage structure is aerated to meet departmental standards as an aerobic structure, if aeration is not already required by the department.

	Score	Air	Water	Community
Aerated manure storage structure(s)	10	8.00		2.00

- (A) Aerobic structure - an animal feeding operation structure other than an egg wash water storage structure which relies on aerobic bacterial action which is maintained by the utilization of air or oxygen and which includes aeration equipment to digest organic matter. Aeration equipment shall be used and shall be capable of providing oxygen at a rate sufficient to maintain an average of 2 milligrams per liter dissolved oxygen concentration in the upper 30 percent of the depth of manure in the structure at all times.

- (B) The design, operation and maintenance plan for the aeration equipment must be in the construction permit application and made a condition in the approved construction permit.

19. Proposed confinement site has a suitable truck turnaround area so that semitrailers do not have to back into the facility from the road

	Score	Air	Water	Community
Truck turnaround	20			20.00

- (A) The design, operation and maintenance plan for the truck turn around area must be in the construction permit application and made a condition in the approved construction permit.

- (B) The turnaround area should be at least 120 feet in diameter and be adequately surfaced for traffic in inclement weather.

20. Construction permit applicant's animal feeding operation environmental and worker protection violation history for the last five years at all facilities in which the applicant has an interest.

	Score	Air	Water	Community
No history of Administrative Orders in last five years	30			30.00

- (A) "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

- (B) An environmental violation is a final Administrative Order (AO) from the department of natural resources or final court ruling against the construction permit applicant for environmental violations related to an animal feeding operation. A Notice of Violation (NOV) does not constitute a violation.

21. Construction permit applicant waives the right to claim a Pollution Control Tax Exemption for the life of the proposed confinement feeding operation structure.

	Score	Air	Water	Community
Permanent waiver of Pollution Control Tax Exemption	5			5.00

- (A) Waiver of Pollution Control Tax Exemption is limited to the proposed structure(s) in the construction permit application.

- (B) The department and county assessor will maintain a record of this waiver, and it must be in the construction permit application and made a condition in the approved construction permit.

22. Construction permit applicant can lawfully claim a Homestead Tax Exemption on the site where the proposed confinement structure is to be constructed

- OR -

the construction permit applicant is the closest resident to the proposed confinement structure.

	Score	Air	Water	Community
Site qualifies for Homestead Tax Exemption or permit applicant is closest resident to proposed structure	25			25.00

Proof of Homestead Tax Exemption is required as part of the construction permit application.

- (A) Applicant includes persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or

dependent child, or both.

23. Construction permit applicant can lawfully claim a Family Farm Tax Credit for agricultural land where the proposed confinement feeding operation is to be located pursuant to Iowa Code chapter 425A.

	Score	Air	Water	Community
Family Farm Tax Credit qualification	25			25.00

- (A) Applicant includes persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

24. Facility size.

	Score	Air	Water	Community
1 to 2,000 animal unit capacity	20			20.00
2,001 to 3,000 animal unit capacity	10			10.00
3,001 animal unit capacity or more	0			0.00

- (A) Refer to the construction permit application package to determine the animal unit capacity of the proposed confinement structure at the completion of construction.
- (B) If the proposed structure is part of an expansion, animal unit capacity (or animal weight capacity) must include all animals confined in adjacent confinement structures.
- (C) Two or more animal feeding operations under common ownership or management are deemed to be a single animal feeding operation if they are adjacent or utilize a common area or system for manure disposal. In addition, for purposes of determining whether two or more confinement feeding operations are adjacent, all of the following must apply:
- At least one confinement feeding operation structure must be constructed on and after May 21, 1998.
 - A confinement feeding operation structure which is part of one confinement feeding operation is separated by less than a minimum required distance from a confinement feeding operation structure which is part of the other confinement feeding operation. The minimum required distance shall be as follows:
 - 1,250 feet for confinement feeding operations having a combined animal unit capacity of less than 1,000 animal units.
 - 2,500 feet for confinement feeding operations having a combined animal unit capacity of 1,000 animal units or more.

25. Construction permit application includes livestock feeding and watering systems that significantly reduce manure volume.

	Score	Air	Water	Community
Wet/dry feeders or other feeding and watering systems that significantly reduce manure volume	25		12.50	12.50

The design, operation and maintenance plan for the feeding system must be in the construction permit application and made a condition in the approved construction permit.

Proposed Site Operation and Manure Management Practices

The following scoring criteria apply to the operation and manure management characteristics of the proposed confinement feeding operation. Mark one score under each criterion that best reflects the characteristics of the submitted manure management plan.

26. Liquid or dry manure (choose only one subsection from subsections "a" - "e" and mark one

		Score	Air	Water	Community
a.	Bulk dry manure is sold under Iowa Code Chapter 200A and surface-applied	15		15.00	
	Bulk dry manure is sold under Iowa Code Chapter 200A and incorporated on the same date it is land-applied	30	12.00	12.00	6.00
b.	Dry manure is composted and land-applied under the requirements of a department manure management plan	10	4.00	4.00	2.00
	Dry manure is composted and sold so that no manure is applied under the requirements of a department manure	30	12.00	12.00	6.00

	management plan				
c.	Methane digester is used to generate energy from manure and remaining manure is surface-applied under the requirements of an approved department manure management plan	10	3.00	3.00	4.00
	After methane digestion is complete, manure is injected or incorporated on the same date it is land-applied under the requirements of an approved department manure management plan	30	12.00	12.00	6.00
d.	Dry manure is completely burned to generate energy and no remaining manure is applied under the requirement of a manure management plan	30	9.00	9.00	12.00
	Some dry manure is burned to generate energy, but remaining manure is land-applied and incorporated on the same date it is land applied	30	12.00	12.00	6.00
e.	Injection or incorporation of manure on the same date it is land-applied	30	12.00	12.00	6.00

- (A) Choose only ONE line from subsection "a", "b," "c," "d," or "e" above and mark only one score in that subsection.
- (B) The injection or incorporation of manure must be in the construction permit application and made a condition in the approved construction permit.
- (C) If an emergency arises and injection or incorporation is not feasible, prior to land application of manure the applicant must receive a written approval for an emergency waiver from a department field office to surface-apply manure.
- (D) Requirements pertaining to the sale of bulk dry manure under pursuant to Iowa Code chapter 200A must be incorporated into the construction permit application and made a condition of the approved construction permit.
- (E) The design, operation and maintenance plan for utilization of manure as an energy source must be in the construction permit application and made a condition in the approved construction permit.
- (F) The design, operation and maintenance plan for composting facilities must be in the construction permit application and made a condition in the approved construction permit.

27. Land application of manure is based on a two-year crop rotation phosphorus uptake level.

	Score	Air	Water	Community
Two-year phosphorus crop uptake application rate	10		10.00	

- (A) Land application of manure cannot exceed phosphorus crop usage levels for a two-year crop rotation cycle.
- (B) The phosphorus uptake application rates must be in the construction permit application and made a condition in the approved construction permit.

28. Land application of manure to farmland that has USDA Natural Resources Conservation Service (NRCS) approved buffer strips contiguous to all water sources traversing or adjacent to the fields listed in the manure management plan.

	Score	Air	Water	Community
Manure application on farmland with buffer strips	10		8.00	2.00

- (A) The department may request NRCS maintenance agreements to ensure proper design, installation and maintenance of filter strips. If a filter strip is present but not designed by NRCS, it must meet NRCS standard specifications.
- (B) The application field does not need to be owned by the confinement facility owner to receive points.
- (C) On current and future manure management plans, the requirement for buffer strips on all land application areas must be in the construction permit application and made a condition in the approved construction permit.

29. Land application of manure does not occur on highly erodible land (HEL), as classified by the USDA NRCS.

	Score	Air	Water	Community
No manure application on HEL farmland	10		10.00	

Manure application on non-HEL farmland must be in the construction permit application and made a condition in the approved construction permit.

30. Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

- * Residence not owned by the owner of the confinement feeding operation,
- * Hospital,
- * Nursing home, or
- * Licensed or registered child care facility.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	3.25		1.75
Additional separation distance of 500 feet	10	6.50		3.50

- (A) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
- (B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.
- (C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
- (D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.
- (E) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
- (F) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
- (G) A full listing of licensed and registered child care facilities is available at county offices of the Department of Human Services

31. Additional separation distance, above minimum requirements (0 or 750 feet, see below), for land application of manure to closest public use area.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	2.00		3.00

- (A) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 in 567--Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.
- (B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.
- (C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
- (D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

32. Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

- * Educational institution,
- * Religious institution, or
- * Commercial enterprise.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	2.00		3.00

- (A) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
- (B) Minimum separation distance for land application of manure injected or incorporated on same date as application: 0 feet.
- (C) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.
- (D) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.
- (E) "Religious institution" - a building in which an active congregation is devoted to worship.
- (F) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers

services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

33. Additional separation distance of 50 feet, above minimum requirements (0 or 200 feet, see below), for the land application of manure to the closest private drinking water well or public drinking water well - OR well is properly closed under supervision of county health officials.

	Score	Air	Water	Community
Additional separation distance of 50 feet or well is properly closed	10		8.00	2.00

- (A) Minimum separation distance for land application of manure injected or incorporated on the same date as application or 50-foot vegetation buffer exists around well and manure is not applied to the buffer: 0 feet.
 (B) Minimum separation distance for land application of manure broadcast on soil surface: 200 feet.
 (C) If applicant chooses to close the well; the well closure must be incorporated into the construction permit application and made a condition in the approved construction permit.

34. Additional separation distance, above minimum requirements, for the land application of manure to the closest:

- * Agricultural drainage well,
- * Known sinkhole,
- * Major water source, or
- * Water source

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	0.50	2.50	2.00
Additional separation distance of 400 feet	10	1.00	5.00	4.00

- (A) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.
 (B) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state, which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567--Chapter 65.
 (C) "Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.
 (D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

35. Additional separation distance above minimum requirements, for the land application of manure, to the closest:

- * High quality (HQ) water,
- * High quality resource (HQR) water, or
- * Protected water area (PWA).

	Score	Air	Water	Community
Additional separation distance of 200 feet	5		3.75	1.25
Additional separation distance of 400 feet	10		7.50	2.50

- (A) HQ waters are identified in 567--Chapter 61.
 (B) HQR waters are identified in 567--Chapter 61.
 (C) A listing of PWAs is available at:
<http://www.iowadnr.gov/Recreation/CanoeingKayaking/StreamCare/ProtectedWaterAreas.aspx>.

36. Demonstrated community support.

	Score	Air	Water	Community
Written approval of 100% of the property owners within a one mile radius	20			20.00

37. Worker safety and protection plan is submitted with the construction permit application.

	Score	Air	Water	Community
Submission of worker safety and protection plan	10			10.00

- (A) The worker safety and protection plan must be in the construction permit application and made a condition in the approved construction permit.
- (B) The worker safety and protection plan and subsequent records must be kept on site with the manure management plan records.

38. Applicant signs a waiver of confidentiality allowing public to view confidential manure management plan land application records

	Score	Air	Water	Community
Manure management plan confidentiality waiver	5			5.00

The waiver of confidentiality must be in the construction permit application and made a condition in the approved construction permit. The applicant may limit public inspection to reasonable times and places.

39. Added economic value based on quality job development (number of full time equivalent (FTE) positions), and salary equal to or above Iowa department of workforce development median (45-2093) -OR-

the proposed structure increases commercial property tax base in the county.

	Score	Air	Water	Community
Economic value to local community	10			10.00

The Iowa Department of Workforce Development regional profiles are available at <http://www.iowaworkforce.org/centers/regional/sites.htm>. Select the appropriate region and then select "Regional Profile."

40. Construction permit application contains an emergency action plan.

	Score	Air	Water	Community
Emergency action plan	5		2.50	2.50

- (A) Iowa State University Extension publication PM 1859 lists the components of an emergency action plan. The emergency action plan submitted should parallel the components listed in the publication.
- (B) The posting and implementation of an emergency action plan must be in the construction permit application and made a condition in the approved construction permit.
- (C) The emergency action plan and subsequent records must be kept on site with the manure management plan records.

41. Construction permit application contains a closure plan.

	Score	Air	Water	Community
Closure Plan	5		2.50	2.50

- (A) The closure plan must be in the construction permit application and made a condition in the approved construction permit.
- (B) The closure plan must be kept on site with the manure management plan records.

42. Adoption and implementation of an environmental management system (EMS) recognized by the department.

	Score	Air	Water	Community
EMS	15	4.50	4.50	6.00

- (A) The EMS must be in the construction permit application and made a condition in the approved construction permit.
- (B) The EMS must be recognized by the department as an acceptable EMS for use with confinement operations.

43. Adoption and implementation of NRCS approved Comprehensive Nutrient Management Plan (CNMP).

	Score	Air	Water	Community
CNMP	10	3.00	3.00	4.00

The implementation and continuation of a CNMP must be in the construction permit application and made a condition in the approved construction permit.

44. Groundwater monitoring wells installed near manure storage structure), and applicant agrees to provide data to the department.

	Score	Air	Water	Community
Groundwater monitoring	15		10.50	4.50

- (A) Monitoring well location, sampling and data submission must meet department requirements.
- (B) The design, operation and maintenance plan for the groundwater monitoring wells, and data transfer to the

department, must be in the construction permit application and made a condition in the approved construction permit.

Score to pass

Total Score	Air	Water	Community
880	213.50	271.00	404.50
440	53.38	67.75	101.13

Design, Operating, & Maintenance Plans & Supporting Documentation

SITE NAME – Lynn Grove Pork

Master Matrix #1

The facility is located an additional **507 feet**, above the required **1,875 feet**, away from the closest residence not owned by the owner of the confinement feeding operation, Hospital, Nursing Home, and Licensed or registered child care facility. Refer to site map. Credits of **45 pts** have been counted in the Master Matrix for **Item 1**.

Master Matrix #2

The facility is located at least an additional **1501 feet**, above the required **2500 feet**, away from the closest Public Use Area; defined as a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Refer to site map. Credits of **30 pts** have been counted in the Master Matrix for **Item 2**.

Master Matrix #3

The facility is located at least an additional **1501 feet**, above the required **1,875 feet**, away from the closest Educational Institute, Religious Institution, or Commercial Enterprise. Refer to site map. Credits of **30 pts** have been counted in the Master Matrix for **Item 3**.

Master Matrix #6

The facility is located an additional **500 feet**, above the required **2,500 feet**, away from the closest critical public area. Refer to site map. Credits of **10 pts** have been counted in the Master Matrix for **Item 6**.

Master Matrix #8

The facility is located an additional **2501 feet**, above the required **1,000 feet**, away from the closest Agricultural drainage well, known sinkhole, or major water source. Refer to site map. Credits of **50 pts** have been counted in the Master Matrix for **Item 8**.

Master Matrix #9

The facility is located at least **three-quarters of a mile** away from the nearest confinement facility that has a submitted department manure management plan. Refer to site map. Credits of **25 pts** have been counted in the Master Matrix for **Item 9**.

Master Matrix #10

The facility is located at least two times the minimum separation distance of **1000 feet**, from the closest high quality water, high quality resource water, or protected water areas. Refer to site map. Credits of **30 pts** have been counted in the Master Matrix for **Item 10**.

Master Matrix #12

Points: We are claiming 30 points because this Manure Storage Structure has a cover. Iowa Code states that "a formed manure storage structure directly beneath a floor where animals are housed in a confinement feeding operation is deemed to be covered." On this Site the building roof is the cover.

Design: The site consists of 2 swine finishing buildings that have manure storage pits directly beneath the roof and floor where the pigs are housed, as required by DNR rules to be considered covered liquid manure storage. The roof has been designed and warranted using ribbed painted, or galvanized steel to withstand appropriate snow and wind loads for Jasper County, Iowa.

Operation: The roof is part of the Structure and has no moving parts, therefore it does not require an operating plan.

Maintenance: Each building's roof and floor will be maintained to provide coverage of the manure storage structure. Maintenance of this cover will be minimal since it consists of steel. This facility will have a caretaker on site and in the buildings daily, if there is evidence of storm damage, or any holes/water leaks, which would be evidence of a hole; if found, they will be immediately repaired with appropriate materials to achieve as-built condition.

Credits of 30 points have been counted in the Master Matrix for **Item 12**.

Master Matrix # 17

Points: We are claiming 30 points because the manure storage structure is formed. The pit is "cast in place" reinforced concrete.

Design: The site will utilize an 8' deep cast in place reinforced concrete pit. The reinforced cast in place structure meets requirements of Chapter 65 for manure storage, the housing of swine, and the support of roof, slats and walls. Tables for steel grade, size and spacing are reviewed by a DNR engineer through the permitting process. Wall and floor thickness, concrete strength, backfill soil categories, and traffic patterns are also reviewed. There will be a wall poured over an approved footing and floor incorporating a water stop that prevents infiltration/exfiltration. Refer to the Construction Design Statement for specifics. The Construction Design Statement has been completed and signed by the building contractor and contains a Construction Certification stating that it was designed in accordance with DNR rules.

Operation: The Manure Storage Structure is static and has no moving parts. The pit will be cleaned and inspected before animals are placed in building looking for any defects, such as cracks or honeycombing, and will be repaired to industry standards. The facility will be operated as a below building concrete pit. There will be a Caretaker on site and in the buildings daily, and will visually monitor manure levels. In addition water usage meters are routinely monitored by the caretaker to insure the ample water supply to pigs, and will also be used to identify excessive usage or leaks. The concrete walls of the manure storage pit are designed for heavy equipment to be operated no less than 5 feet from the walls. The pump-out pits are designed to allow heavy equipment to be operated closer than 5 feet, and are constructed using stronger design specifications.

Perimeter Tile are requirement of this CDS and every tile outlet will have a monitoring location consisting of either a monitoring port including a valve in case of leak, or an outlet to the surface.

Maintenance: Due to the concrete design and specifications for the formed structure, maintenance is expected to be minimal for this structure. As a requirement of the CDS all concrete will be cured to minimize shrinking and cracking. Approximately 12" of pit will be exposed above the soil surface. There will be a Caretaker on site and in the buildings daily, and will routinely looking for cracks in the walls. The building contractor will be notified if any cracking is discovered.

The Caretaker will make routine observations of the perimeter footing tile discharge point, or monitoring port for signs of contamination; such as manure odor, visual discoloration, excessive liquid in the tile during dry periods, and dead foliage. If contamination is observed, an immediate investigation will be conducted to locate the source and the problem will immediately be corrected. A groundwater and/or structural expert will direct the investigation, and the investigation will include closing the tile shutoff valve and taking water samples for visual and laboratory analysis.

Initial Settling of soils will be monitored and corrected to eliminate standing water next to the manure storage structure.

Credits of 30 pts have been counted in the Master Matrix for **Item 17**.

Master Matrix # 19

Design: The site will have a truck turnaround area at least 120 feet in diameter and adequately surfaced for traffic in inclement weather. The site will have a truck turnaround area allowing the trucks to pull in to the site completely off of the road and turn around.

Operation: The driveway will be operated to provide for safe entrance and exit to the property for delivery vehicles and not obstruct the public thoroughfare.

Maintenance: The driveway will be maintained to a level that will support regular truck traffic. The driveway will be constructed with a 2-3 inch base. Road rock gravel will be used as a road surface that will be monitored for the purposes of leveling, filling potholes, and adequate snow removal.

Credits of 20 pts have been counted in the Master Matrix for **Item 19**.

Master Matrix #20

The construction permit applicant has no history of Administrative Orders in the last five years at any site in which the applicant has any interest.

Credits of 30 pts have been counted in the Master Matrix for **Item 20**.

Master Matrix # 22

The construction permit applicant, **Kevin Van Kooten**, is the closest resident to the proposed confinement structure.

Credits of 25 pts have been counted in the Master Matrix for **Item 22**

Master Matrix # 23

The construction permit applicant, **Kevin Van Kooten**, can lawfully claim the Family Farm Tax Exemption on the site where the confinement structure is being constructed. The owner, Kevin Van Kooten, holds 100% ownership interest and also farms the contiguous farm ground.

Credits of 25 pts have been counted in the Master Matrix for **Item 23**.

Master Matrix #24

The facility has a capacity of 2001 to 3000 animal units. Refer to Construction Permit Application, page 3.

Credits of 10 pts have been counted in the Master Matrix for **Item 24**.

Master Matrix #25

Design: The buildings on the site will utilize a wet/dry feeder, dry feeder with watering cups, or swinging nipples. Industry wide accepted data shows significant water savings from any of the three options as compared to a gate mounted watering nipple. Please refer to the attached scientific article illustrating the water savings and benefits any of the three methods mentioned above.

Operation: Feeders, watering cups, or swinging nipples will be adjusted to reduce waste and optimize feed efficiency for the facility. The water savings result in reducing the gallons of water in the pit that later has to be hauled out onto farm fields.

Maintenance: The feeders, watering cups, or swinging nipples will be inspected on a regular basis and adjusted as needed. Water flow will be monitored and adjusted to control waste and excess manure volume.

Credits of 25 pts have been counted in the Master Matrix for **item 25**.

Master Matrix # 31

There are no "public use areas" within 200 feet of any of the fields included in the Manure Management Plan. There will be no manure applied within 200' of a public use area.

Credits of 5 pts have been counted in the Master Matrix for **Item 31**.

Master Matrix #32

A separation distance of 200 feet from the closest educational institution, religious institution, or commercial enterprise, will be kept when land application of manure occurs.

Credits of 5 pts have been counted in the Master Matrix for **Item 32**.

Master Matrix #35

A separation distance of **1200 feet** from the closest high quality water, high quality resource water, or protected water area, will be kept when land application of manure occurs.

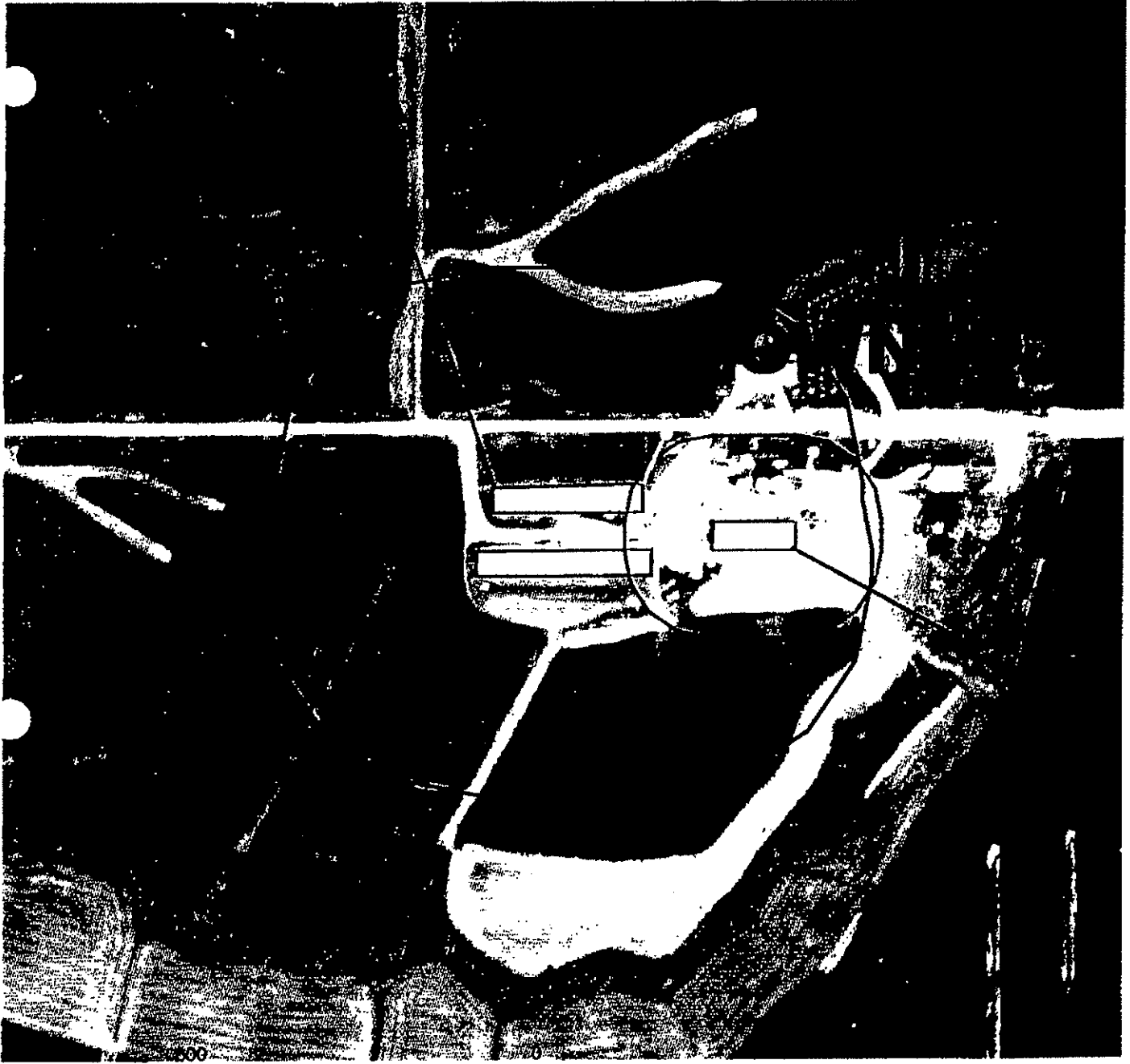
Credits of **10 pts** have been counted in the Master Matrix for **Item 35**.

Master Matrix #41

Upon need of closure of the Site, all buildings will be washed completely and flushed into the below building pits or scraped out. The pits will be completely pumped or cleaned out and applied to the soils at appropriate application rates and methods determined by a manure sample and DNR-management guidelines. The remaining facility buildings and cement structures will be destroyed and disposed of according to approved methods, regulations, and permits required by the appropriate county, state and federal departments/agencies/personnel required at that time.

Credits of **5 pts** have been taken for **Item 41**.

Site; 14 (0.18 ac.)



No Public Use Within 4001'
No Educational, Religious, or Commercial Enterprise within 3376'
No Ag Drainage Well, Known Sinkhole, or Major Water within 3501'
No Well within 101'
No HQ, HQR, or PWA within 2001'

Deep Well
Distance To Deep Wells
119.521
163.28

200ft Water Buffer
500ft Water Buffer

Cattle Barn

Hog Barns

Distance To Water

420.035

586.803

Distance To Row

113.77

Date: Mar 24, 2017
Field Name: Site; 14
Location: Jasper Co., Iowa, U.S.
Section 26, T78N, R17W
Farm Name: Kevin Van Kooten Cattle
Client Name: P-Index
Total Acres: 0.18
Field Boundary Start Location:
Latitude: 41.52620931
Longitude: -92.78343740

pinnacle
100 Country Club Road
Iowa Falls, Iowa 50128
www.pinnacle.com
Office: 641.946.7300
Fax: 641.946.7210

Site; 14 (0.18 ac.)



No Public Use Within 4001'
No Educational, Religious, or Commercial Enterprise within 3376'
No Ag Drainage Well, Known Sinkhole, or Major Water within 3501'
No Well within 101'
No HQ, HQR, or PWA within 2001'

Date: Mar 24, 2017
Field Name: Site; 14
Location: Jasper Co., Iowa, U.S.
Section 26, T78N, R17W
Farm Name: Kevin Van Kooten Cattle
Client Name: P-Index
Total Acres: 0.18
Field Boundary Start Location:
Latitude: 41.52620931
Longitude: -92.78343740



- Cattle Barn
- Hog Barns
- 1 Mile
- Distance To Water
- ▲ 420.035
- ▲ 586.803
- Distance To Row
- ▲ 113.77
- Distance To Residence
- 2382.189
- 2910.868
- 3983.232
- 4260.193
- 4281.99
- ▲ 4446.294
- ▲ 4492.453



Construction Design Statement (CDS)

Instructions:

1. This form is for new or expanding confinement feeding operations with an AUC¹ of more than 500 AU, not required to have a professional engineer (PE)², that are proposing to construct a formed manure storage structure³.
2. Complete and submit Sections 1, 2 and 3 (pages 1 to 5).
3. Complete and submit Section 4 (page 6) only if you are applying for a construction permit and are constructing three or more confinement feeding operation structures⁴.
4. Mail only pages 1 to 5, and page 6 (if applicable) as instructed on page 6. Do not mail the remainder of this form.
5. If the site-specific design is sealed by a PE², do not use this CDS instead use DNR Form 542-8122.

Section 1 - Information about the proposed formed manure storage structure³(s)

A) Information about the operation:

Name of operation: Kevin VanKoster Facility ID No. : _____
 Location: SW SE 3/4 7 18N Linn Co IA Taylor
(1/4 X) (1/4) (Section) (Tier & Range) (Name of Township) (County)

B) Description of the proposed formed manure storage structure³. Include dimensions (length, width, or diameter, depth). Indicate if it is aboveground or belowground; covered or uncovered, made of concrete or steel. If necessary attach more pages:

48' x 176' - above ground unenclosed concrete

C) Karst Determination: Go to <http://www.iowadnr.gov>, select the link to 'Environment' then click on 'Mapping and GIS'. then click on AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the karst box is checked in the left legend. If you cannot access the map, or if you have questions about this issue, contact the AFO Engineer at 712-262-4177. Check one of the following:

- The site is not in karst or potential karst. Print and enclose the map with the name and location of the site clearly marked.
- The Siting Atlas has indicated that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" must be used. Complete and sign Section 3,H (page 5).

D) Alluvial Soils Determination: Go to <http://www.iowadnr.gov>, select the link to 'Environment' then click on 'Mapping and GIS' then click on AFO Siting Atlas. Click on the red push pin icon to enter a legal description of the proposed location. Make sure the alluvial box is checked in the left legend. If you cannot access the map, or if you have questions about this issue, contact DNR Flood Plain at 1-866-849-0321. Check one of the following:

- The site is not in alluvial soils. Print and enclose the map with the name and location of the site clearly marked.
- If the site is in alluvial soils contact DNR Flood Plain at 866-849-0321. You will be required to submit a petition for a declaratory order if less than 1000 AU or request a flood plain determination if 1000 AU or greater. After receiving Flood Plain determination, submit one of the following:
 - Include correspondence from the DNR showing the site is not in 100-year flood plain or does not require a Flood Plain permit .
 - Include copy of the Flood Plain permit if a Flood Plain permit is required.

Section 2 - Manure management plan:

- An original manure management plan (MMP) is enclosed with this form, even if a MMP was previously filed.

Kevin VanKoster Kevin VanKoster 11-17-14
Owner's Name (print) Owner's Signature Date

¹ To determine the AUC see the 'Manure Storage Indemnity Fee' (Form 542-4021) or the 'Construction Permit Application' (Form 542-1428), or visit <http://www.iowadnr.gov>
² PE is a professional engineer licensed in the state of Iowa or a NRCS-Engineer working for the USDA-Natural Resources Conservation Service (NRCS).
³ Formed manure storage structure means a covered or uncovered concrete or steel tank, including concrete pits below the floor.
⁴ Confinement feeding operation structure = A confinement building, a formed or unformed manure storage structure, or an egg washwater storage structure.

Section 3 - Construction design standards: The person responsible for constructing the formed manure storage structure(s)³ must complete pages 2 to 5.

A) **Liquid and semi-liquid manure:** The proposed formed manure storage structure³ will be (check one):

- A.1 A non-circular concrete tank, belowground, with walls laterally braced or below the building concrete pit designed according to 567 IAC Chapter 65, Appendix D.
- A.2 A non-circular concrete tank, belowground, walls designed according to MidWest Plan Service (MWPS), publication MWPS-36. Include design calculations.
- A.3 A circular concrete tank, walls designed according to MidWest Plan Service (MWPS), publication MWPS TR-9. Include design calculations.
- A.4 Will be made of steel, constructed aboveground according to the manufacturer's recommendations.

B) **Dry manure:** The proposed formed manure storage structure³ will be (check one):

- B.1 An aboveground concrete tank, with walls designed according to MWPS-36. Include design calculations.
- B.2 Will be made of steel, constructed aboveground according to the manufacturer's recommendations.
- B.3 Will be a belowground or partially belowground concrete tank, with walls laterally braced designed according to 567 IAC Chapter 65, Appendix D or MWPS-36. Include design calculations.

C) **Details of the proposed design:** Submit an additional completed copy of this page 2 for each formed manure storage structure³ that have different dimensions. Complete all of the following information:

Number of buildings: _____ Building name: _____

Dimensions of proposed formed manure storage structure³

	Length	Width	Height or depth	Wall thickness	Diameter (circular tanks only)
Feet	45'	30'	5'	8"	---
Inches					

To determine the appropriate vertical steel in walls, first check one of the following boxes (must check one):

- a. To use Tables D-1 and D-2 (on pages 7-8), backfilling of walls shall be performed with gravel, sand, silt, and clay mixtures (less than 50 percent fines), with coarse sand with silt or clay (less than 50 percent fines), or cleaner granular material (see page 9 for the unified soils classification). You will need to submit a copy of a USDA soil survey map with the proposed location of the formed manure storage structures³ clearly marked showing the unified soil classification; or a statement signed by a qualified organization or NRCS staff.
- b. Use Tables D-3 and D-4 (on pages 8-9) if backfilling of walls will be performed with soils that are unknown or with low plasticity silts and clays with some sand or gravel (50 percent or more fines); or fine sands with silt or clay (less than 50 percent fines); or low to medium plasticity silts and clays with little sand or gravel (50 percent or more fines); or high plasticity silts and clays (see page 9 for unified soils classification). You must use Tables D-3 and D-4 if you do not submit the soils information requested in box "a", above.

Maximum spacing of steel, in inches

Description of reinforcing steel in walls	Proposed vertical steel in walls [see boxes "a" and "b", above]				Proposed horizontal steel in walls (use Table D-5)
	Walls where vehicles are not allowed within 5 feet (use Table D-1) ^a	All walls with pumpout ports and walls where vehicles are allowed within 5 feet (use Table D-2) ^a	Walls where vehicles are not allowed within 5 feet (use Table D-3) ^b	All walls with pumpout ports and walls where vehicles are allowed within 5 feet (use Table D-4) ^b	
Grade 40, No. 4					3" 4x Grade
Grade 40, No. 5					
Grade 60, No. 4					
Grade 60, No. 5					

D) **Aboveground tanks or partially aboveground tanks:** Liquid and semi-liquid manure (check the following box):

- If the proposed tank is to be constructed aboveground or partially aboveground and will have an external outlet or inlet below the liquid level, the tank will also be constructed according to the 567 IAC 65.15(20).

E) **Steel Tanks:** Certification that the tank will be constructed according to the tank manufacturer's specifications:

Name of tank manufacturer company: _____
 Address: _____
 Telephone: _____ Fax: _____

F) **Additional construction design standards:**

To determine the additional requirements set forth in 567 IAC 65.15(14) that would apply to the proposed formed manure storage structure³, check any of the following 3 boxes based on the information entered on Sections 3.A or 3.B (page 2):

- If you checked boxes A.1, A.2, A.3 or B.3 (on page 2) all of the following 15 additional requirements apply. Complete the numbered items 1 to 15 (below).
- If you checked box 8.1 (on page 2), only the requirements of numbered items 1, 3, 4, 5, 6, 8 and 12 apply and need to check those boxes (below).
- If you checked boxes A.4 or B.2 (on page 2) and the steel tank will have a concrete floor, only the requirements of numbered items 1, 2, 3, 4, 5, 8, 9, 12, apply and need to check those boxes (below).

Additional Requirements that will be followed during construction of the formed manure storage structure(s)³:

1. **Site preparation (check the following box):**
 - The finished subgrade of a formed manure storage structure shall be graded and compacted to provide a uniform and level base and shall be free of vegetation, manure and debris. For the purpose of this subrule, "uniform" means a finished subgrade with similar soils.
2. **Groundwater separation requirements (check one of the following boxes):**
 - When the groundwater table, as determined in 65.15(7)"c," is above the bottom of the formed structure, a drain tile shall be installed along the footings to artificially lower the groundwater table pursuant to 65.15(7)"b"(2). The drain tile shall be placed within 3 feet of the footings as indicated in Appendix D, Figure D-1, at the end of this chapter and shall be covered with a minimum of 2 inches of gravel, granular material, fabric or a combination of these materials to prevent plugging the drain tile. A device to allow monitoring of the water in the drainage tile lines installed to lower the groundwater table and a device to allow shutoff of the drainage tile lines shall be installed if the drainage tile lines do not have a surface outlet accessible on the property where the formed manure storage structure is located.
 - In lieu of the drain tile, a certification signed by a PE², a groundwater professional certified pursuant to 567 Chapter 134, or a qualified staff from NRCS, is being submitted indicating that the groundwater elevation, according to 65.15(7)"c", is below the bottom of the formed structure.
3. **Minimum as-placed concrete compressive strength (check the following box):**
 - All concrete shall have the following minimum as-placed compressive strengths and shall meet American Society for Testing and Materials (ASTM) standard ASTM C 94: 4,000 pounds per square inch (psi) for walls, floors, beams, columns and pumpouts and 3,000 psi for the footings. The average concrete strength by testing shall not be below design strength. No single test result shall be more than 500 psi less than the minimum compressive strength.
4. **Cement and aggregates specifications (check the following box):**
 - Cementitious materials shall consist of Portland cement conforming to ASTM C 150. Aggregates shall conform to ASTM C 33. Blended cements in conformance with ASTM C 595 are allowed only for concrete placed between March 15 and October 15. Portland-pozzolan cement or Portland blast furnace slag blended cements shall contain at least 75 percent, by mass, of Portland cement.
5. **Concrete consolidation and vibration requirements (check the following box):**
 - All concrete placed for walls shall be consolidated or vibrated, by manual or mechanical means, or a combination, in a manner which meets ACI 309.
6. **Minimum rebar specifications: (check the following box):**
 - All rebar used shall be a minimum of grade 40 steel. All rebar, with the exception of rebar dowels connecting the walls to the floor or footings, shall be secured and tied in place prior to the placing of concrete.
7. **Wall reinforcement placement specifications (check the following box):**
 - All wall reinforcement shall be placed so as to have a rebar cover of 2 inches from the inside face of the wall for a belowground manure storage structure. Vertical wall reinforcement should be placed closest to the inside face. Rebar placement shall not exceed tolerances specified in ACI 318.

8. Minimum floor specifications. Complete part a) and b):
- a) Floor thickness requirements (check the following box):
- The floor slab shall be a minimum of 5 inches thick. Nondestructive methods to verify the floor slab thickness may be required by the department. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than 4 1/2 inches.
- b) The floor slab reinforcement shall be located in the middle of the thickness of the floor slab (check one of the following boxes):
- Formed manure storage structures with a depth of 4 feet or more shall have primary reinforcement consisting of a minimum of #4 rebar placed a maximum of 18 inches on center in each direction placed in a single mat.
 - Formed manure storage structure with a depth less than 4 feet shall have shrinkage reinforcement consisting of a minimum of 6 x 6-W1.4 x W1.4 welded wire fabric.
9. Minimum footing specifications (check the following box):
- The footing or the area where the floor comes in contact with the walls and columns shall have a thickness equal to the wall thickness, but in no case be less than 8 inches, and the width shall be at least twice the thickness of the footing. All exterior walls shall have footings below the frostline. Tolerances shall not exceed -1/8 inch of the minimum footing dimensions.
10. Requirement to connect walls to footings (check one of the following boxes):
- The vertical steel of all walls shall be extended into the footing, and be bent at 90°, OR
 - A separate dowel shall be installed as a #4 rebar that is bent at 90° with at least 20 inches of rebar in the wall and extended into the footing within 3 inches of the bottom of the footing and extended at least 3 inches horizontally, as indicated in Appendix D, Figure D-1 (page 10). Dowel spacing (bend or extended) shall be the same as the spacing for the vertical rebar.
 - As an alternative to the 90° bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom, as indicated in Appendix D, Figure D-1 (page 10). Dowel spacing (bend or extended) shall be the same as the spacing for the vertical rebar.
 - In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings. Please submit structural calculations and details of this proposal.
11. Concrete forms specifications (check the following box):
- All walls shall be formed with rigid forming systems and shall not be earth-formed.
12. Curing of concrete requirements (check the following box):
- All concrete shall be cured for at least seven days after placing, in a manner which meets ACI 308, by maintaining adequate moisture or preventing evaporation. Proper curing shall be done by ponding, spraying or fogging water; or by using a curing compound that meets ASTM C 309; or by using wet burlap, plastic sheets or similar materials.
13. Construction joints and waterstops specifications (check the following box):
- All construction joints in exterior walls shall be constructed to prevent discontinuity of steel and have properly spliced rebar placed through the joint. Waterstops shall be installed in all areas where fresh concrete will meet hardened concrete as indicated in Appendix D, Figures D-1 and D-2, at the end of this chapter. The waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department.
14. Backfilling of walls specifications (check the following box):
- Backfilling of the walls shall not start until the floor slats or permanent bracing have been installed. Backfilling shall be performed with material free of vegetation, large rocks or debris.
15. Additional design requirements (check the following box, if applicable):
- A formed manure storage structure with a depth greater than 12 feet shall be designed by a PE or an NRECS engineer.

Handwritten notes:
 1/2" width
 1/2" spacing

G) Construction Certification: The person responsible for constructing the formed manure storage structure³ must sign this page. Any change(s) to the specifications of the formed manure storage structure must be first approved by DNR:

"I hereby certify that I have read and understand the minimum design and construction standards of Iowa Code chapter 459, Subchapter III, and the 567 Iowa Administrative Code (IAC) 65.15(14) "Minimum concrete standards" or 567 IAC 65 (if other than concrete). The proposed formed manure storage structure(s)³ at the operation:

Name of operation: Butch's Sales County: Keokuk
 Owner's name: Butch Baetsle
 will be constructed in accordance with these minimum requirements. Included with this certification are:

- Page 2, for each formed manure storage structure³ that have different dimensions
- Pages 3 to 5 (applicable sections)
- Other documents (specify): _____

Butch Baetsle (Print name) Butch Baetsle (Signature) 10-16-14 (Date)
Butch's Sales (Company) 29542-210th St Harpers Ia (Address) 1-515635-2005 (Phone No.)
 (See page 6 for mailing instructions)

H) Upgraded Concrete Standards Certification: If "Yes" was checked in Section 1.C (page 1) --site exhibits karst terrain or drains into a known sinkhole-- the person responsible for constructing the formed manure storage structure must also complete this section:

567 IAC 65.15(14)"c". Karst terrain—upgraded standards. If the site of the proposed formed manure storage structure is located in an area that exhibits karst terrain or an area that drains into a known sinkhole, the minimum concrete standards set forth in 65.15(14)"a" or "b" shall apply. In addition, the following requirements apply to all formed manure storage structures that store nondry or dry manure (check all of the following boxes):

- (1) A minimum 5-foot vertical separation distance between the bottom of a formed manure storage structure and limestone, dolomite, or other soluble rock is required if the formed manure storage structure is not designed by a PE or an NRCS engineer.
- (2) If the vertical separation distance between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock is less than 5 feet, the structure shall be designed and sealed by a PE or an NRCS engineer who certifies the structural integrity of the structure. A 2-foot-thick layer of compacted clay liner material shall be constructed underneath the floor of the formed manure storage structure. However, it is recommended that any formed manure storage structure be constructed aboveground if the vertical separation distance between the bottom of the structure and the limestone, dolomite, or other soluble rock is less than 5 feet.
- (3) In addition, in an area that exhibits karst terrain or an area that drains into a known sinkhole, a PE, an NRCS engineer or a qualified organization shall submit a soil exploration study based on the results from soil borings or test pits to determine the vertical separation between the bottom of the formed structure and limestone, dolomite, or other soluble rock. A minimum of two soil borings or two test pits, equally spaced within each formed structure, are required. After soil exploration is completed, each soil boring and pit shall be properly plugged with concrete grout, bentonite, or similar materials.
- (4) Groundwater monitoring shall be performed as specified by the department.
- (5) Backfilling shall not start until the floor slats have been placed or permanent bracing has been installed, and shall be performed with material free of vegetation, large rocks, or debris.

"I have read and understand the upgraded concrete standards of IAC 65.15(14)"c", and certify that the proposed formed manure storage structure(s)³ at the above operation will be constructed according to these standards":

Butch Baetsle (Print name) Butch Baetsle (Signature) 10-16-14 (Date)
Butch's Sales (Company) 29542-210th St Harpers Ia (Address) 1-515635-2005 (Phone No.)
 (See page 6 for mailing instructions)

Section 4 - Drainage Tile Certification: Required only if applying for a construction permit and constructing three or more confinement feeding operations structures⁴. This page must be completed and signed by the person responsible for excavating the confinement feeding operation structure⁴:

567 IAC 65.15(1) - Drainage tile removal for new construction of a manure storage structure. Prior to constructing a manure storage structure, other than storage of manure in an exclusively dry form, the site for the animal feeding operation structure shall be investigated for drainage tile lines as provided in this subrule. All applicable records of known drainage tiles shall be examined for the existence of drainage tile lines.

c. The applicant for a construction permit for a formed manure storage structure shall investigate for tile lines during excavation for the structure. Drainage tile lines discovered upgrade from the structure shall be rerouted around the formed manure storage structure to continue the flow of drainage. All other drainage tile lines discovered shall be rerouted, capped, plugged with concrete, Portland cement concrete grout or similar materials or reconnected to upgrade tile lines. Drainage tile lines installed at the time of construction to lower a groundwater table may remain where located. A device to allow monitoring of the water in the drainage tile lines installed to lower the groundwater table and a device to allow shutoff of the drainage tile lines shall be installed if the drainage tile lines do not have a surface outlet accessible on the property where the formed manure storage structure is located.

"I certify that I have read and understand the requirements of 567 IAC 65.15(1)"c" and that to the best of my knowledge, information and belief, the proposed confinement feeding operation structures⁴ at:

Name of operation: EWI County: JACKSON

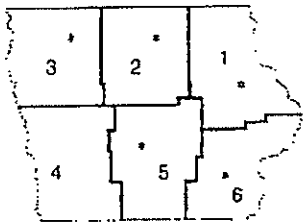
Owner's name: WES VAN DYK

will not impede the drainage of established drainage tile lines which cross their property lines and if construction disturbs drainage tile lines, I will take the necessary measures to reestablish drainage and, upon completion of construction, file a statement that those measures were taken to reestablish drainage."

Wesley Van Dyk (Print name) [Signature] (Signature) 11-17-14 (Date)
Earthworks Inc (Company) Box 456 Sully IA 50257 (Address) 646 990 7339 (Phone No.)

Mailing Instructions: Mail only pages 1 to 5, and page 6 (if applicable) of this CDS according to the following:

- Operations not needing a construction permit (AUC¹ between 501 and 999 AU and constructing a formed manure storage structure³) but required to submit a manure management plan (MMP), at least 30 days prior to beginning construction must file this CDS, the required karst and alluvial soils documentation requested in Section 1,C and 1,D (page 1) along with the required MMP documents and fees with the nearest DNR Field Office:



Field Office 1 909 W Main St Ste 4 Manchester, IA 52057 (563) 927-2640	Field Office 3 1900 N Grand Ave Spencer, IA 51301 (712) 262-4177	Field Office 5 7900 Hickman Rd Ste 200 Windsor Heights, IA 50324 (515) 725-0268
Field Office 2 2300 15th St SW Mason City, IA 50401 (641) 424-4073	Field Office 4 1401 Sunnyside Ln Atlantic, IA 50022 (712) 243-1934	Field Office 6 1023 W Madison Washington, IA 52353 (319) 653-2135

- If a construction permit is required (AUC¹ = 1,000 AU or more and constructing a formed manure storage structure³), mail this CDS, the required construction application documents and fees, at least 90 days prior to beginning construction, to allow for all actions required by Iowa law, to the AFO-Program (DNR Field Office 3, 1900 N Grand, Gateway North Ste E17, Spencer IA 51301). You must follow the instructions in the construction application form (DNR Form 542-1428).

If you have any questions regarding the concrete standards requirements and CDS, contact an engineer of the AFO- Program at 712-262-4177, the nearest DNR Field Office, or visit <http://www.iowadnr.gov/>.

Construction Design Statement (CDS)

for new or expanding confinement feeding operations with an
AUC¹ of more than 500 AU and not required to have a professional engineer (PE)²

Facility ID No.: _____
(if known)

Before filling this form, please read carefully the instructions on pages 13 to 15

Section 1: Required information:

X Name of operation: LYNN GROVE PORK

Owner: Kevin VanKoaten Telephone: 641-527-2961

X Location of the operation: JASPEX SW SE 26 78 17
(County) (Quarter/Quarter) (Quarter) (Section) (Township) (Range No.)

X911 Address: _____
(Street address and number) (City) (State) (Zip Code)

Describe the proposed formed manure storage structure³ including dimensions: length and width, or diameter; depth; and whether the tank is aboveground or belowground; covered or uncovered, made of concrete or steel. If necessary attach more pages:

512' x 3911' x 80' belowground concrete pit covered by a swine finisher

Section 2: Manure management plan

A manure management plan must be submitted with this form, if after construction or expansion of a formed manure storage structure³, the AUC¹ of the operation exceeds 500 animal units (AU), even if a manure management plan was previously submitted to the DNR.

Enclosed is a manure management plan for my operation.

X Signature of owner: _____ Date: _____

¹ Instructions on how to determine the AUC can be found in the Manure Management Plan (Form 542-4000) or the Construction Permit Application (Form 542-1428), which are also available at the DNR web site www.iowaDNR.com (select the link to 'Animal Feeding Operations'). If you have ownership in or assist in the management of another operation that is within 2,500 feet of the proposed confinement feeding operation or that utilizes a common area or system for manure disposal, you must contact an Animal Feeding Operations (AFO) Engineer at (515) 281-8941 or the nearest DNR Field Office (see page 15). This is because the two operations may be considered one and in that case, you must use the combined number of animal units of the operations.

² In this form, a PE is a professional engineer licensed in the state of Iowa or a NRCS-Engineer working for the USDA-Natural Resources Conservation Service (NRCS).

³ Formed manure storage structure means a covered or uncovered concrete or steel tank, including concrete pits below the floor.



Enter Initials here: CGH

Section 3: Construction design standards:

This section is to be completed and signed by the person responsible for constructing the formed manure storage structure(s)³, certifying that it will be constructed according to the minimum construction design standards of Iowa Code 459, subchapter III. Complete sections (a, b or c) that apply to the proposed structure.

a) **Liquid and semi-liquid manure** (non-dry manure). Check one of the following:

(1) The proposed formed manure storage structure³ will be designed and sealed by a PE².

STOP: This form does not apply.

[Engineering documents and PE² certification will be needed.
Contact an AFO Engineer (see page 15) for further information.]

(2) The proposed formed manure storage structure³ is not designed and sealed by a PE², and:

- Will be a non-circular concrete tank, belowground, with walls laterally braced (or below the building), to be constructed in accordance to 567 IAC 65, Appendix D.
- Will be a non-circular concrete tank, belowground, to be constructed in accordance to MidWest Plan Service (MWPS), publication MWPS-36.
- Will be a circular concrete tank, to be constructed in accordance to MidWest Plan Service (MWPS), publication MWPS TR-9.

If any of the 3 boxes above are checked, you must complete pages 3.1 or 4.1 (whichever applies), also pages 7, 8, 9 and 10. If applicable, complete pages 11 and 12.

Will be made of steel, constructed aboveground according to the manufacturer's recommendations. Complete pages 6.1 and 10. If applicable, pages 11 and 12.

b) **Dry manure**. Check one of the following:

(1) The proposed formed manure storage structure³ will be designed and sealed by a PE².

STOP: This form does not apply.

[Engineering documents and PE² certification will be needed.
Contact an AFO Engineer (see page 15) for further information.]

(2) The proposed formed manure storage structure³ is not designed and sealed by a PE² and:

- Will be an aboveground concrete tank. You must complete pages 5.1, 7, 8, 9 and 10. If applicable, complete pages 11 and 12.
- Will be an aboveground steel tank. You must complete pages 6.1 and 10. If applicable, complete pages 11 and 12.

(3) The proposed formed manure storage structure³ is not designed and sealed by a PE² and:

- Will be a belowground or partially belowground concrete tank, to be constructed in accordance to 567 IAC 65, Appendix D, OR
- Will be a belowground or partially belowground concrete tank, to be constructed in accordance to MWPS-36.

If any of the 2 boxes above are checked, you must complete pages 3.1, 7, 8, 9 and 10. If applicable, complete pages 11 and 12.

c) **Upgraded concrete standards**: If the site exhibits karst terrain or drains into a known sinkhole, the upgraded concrete standards of page 11 must be followed, in addition to the requirements explained in sub-paragraphs "a" (non-dry manure) or "b" (dry-manure). For information on karst or sinkhole locations, please contact the DNR-Iowa Geological Survey at (319) 335-1575.

- No karst or sinkholes are present or were identified. Upgraded standards do not apply.
- Yes, karst or sinkholes are present or were identified. You must complete page 11.



Enter initials here:

Non-circular concrete tanks
(Liquid and semi-liquid manure)
(Or dry manure, belowground or partially belowground)

This page is to be used for a proposed non-circular concrete tank, for the storage of liquid and semi-liquid manure (non-dry), OR for a belowground or partially belowground concrete tank, for the storage of manure exclusively in a dry form (Submit additional copies of page 3.1 for other formed manure storage structures being proposed with different dimensions):

Confinement Building Type: Finishing Swine Number of buildings: 1
(For example, "Swine nursery", "Farrowing", "Finishing swine")

Is the formed manure storage structure³ with walls laterally braced ?

- Yes No

Type of material to be used for backfilling the walls (must check one box):

- Clean gravel, sand or sand-gravel mixtures (maximum 5% of fines). (If using Appendix D, Tables D-1 or D-2 apply)
- Gravel, sand, silt and clay mixtures, coarse sands with silt and/or clay (less than 50% fines). (If using Appendix D, Tables D-1 or D-2 apply)
- Low-plasticity silts and clays with some sand and/or gravel (50% or more fines), fine sands with silt and/or clay (less than 50% fines). (If using Appendix D, Tables D-3 or D-4 apply)
- Low to medium plasticity silts and clays with little sand and/or gravel (50% or more fines). (If using Appendix D, Tables D-3 or D-4 apply)
- Unknown. (If using Appendix D, Tables D-3 or D-4 apply)

Vehicles allowed within 5 feet of the walls:

- Yes No

Dimensions of concrete tank	Feet	Inches
Length	391	1
Width	51	2
Height or depth	8	0
Wall thickness	0	8

Vertical steel in walls:

- Grade 40, Rebar No. _____ Spacing: _____ (inches)
- Grade 60, Rebar No. 4 Spacing: 9 (inches)

Vertical steel in wall with pump out ports (if different than the above):

- Grade 40, Rebar No. _____ Spacing: _____ (inches)
- Grade 60, Rebar No. _____ Spacing: _____ (inches)

Horizontal steel in walls:

- Grade 40, Rebar No. 4 Spacing: 12 (inches)
- Grade 60, Rebar No. _____ Spacing: _____ (inches)

Now complete pages 7, 8, 9 and 10. In addition, if applicable, complete pages 11 and 12.



Enter Initials here: CAH

II. Section 3: Additional concrete requirements

In addition to pages 2, 3.1, 4.1 and/or 5.1, all or some of the following additional requirements apply if the design is not prepared and sealed by a PE². To determine what additional requirements apply, please check one box in section A or B as follows:

A. The proposed formed manure storage structure³ is:

- A concrete tank, for the storage of liquid or semi-liquid manure (non-dry manure).
- A concrete tank, for the storage of manure exclusively in a dry form. The tank will be belowground or partially belowground

If you checked either box, all of the following additional requirements (numbered items 1 to 15) apply.

B. The proposed formed manure storage structure³ is:

- An aboveground concrete tank, for the storage of manure exclusively in a dry form.

If you checked this box, only the requirements of numbered items 1, 3, 4, 5, 6, 8 and 12 apply.

Additional Requirements - Check all the boxes that apply:

1. Subgrade preparation (check all of the following boxes): *Customer Responsibility*

- Finished subgrade will be graded and compacted.
- A uniform and level finished subgrade, made with similar soils will be provided.
- Subgrade will be free of vegetation, manure or debris.

2. Unless a PE² had determined according to 65.15(7)"c" that the formed manure storage structure³ will be constructed above the ground water table, a drain tile must be installed to artificially lower the ground water table as required in 65.15(7)"b" (check all boxes that apply):

- Drain tile will be located as required in 65.15(14)"a"(2), numbered item 2.
- Drain tile will have a device to allow shut off and monitoring pursuant to 65.15(1)"c". (Only if applying for a construction permit).
- A PE² certification according to 65.15(7)"c", is included.

3. The minimum compressive strength of the concrete, as placed will be (check all boxes that apply):

- 4,000 psi (walls, floors, pumpouts, beams, columns).
- 3,000 psi (footings).
- Test cylinders may be obtained.



Enter Initials here: CGH

Page 8

4. Cement and aggregates (check all boxes that apply):

- Portland cement will be in conformance with the American Society for Testing and Materials (ASTM) Standard ASTM C 150.
- Aggregates will be in conformance with Standard ASTM C 33.
- Blended cements will be in conformance with Standard ASTM C 595. Use will be limited between March 15 and October 15, and must contain at least 75% by mass of portland cement.

(See page 14 for information on where to obtain these ASTM standards).

5. Concrete consolidation or vibration will be done, according to American Concrete Institute (ACI) Building Code ACI 309 (check all boxes that apply):

- Mechanical, OR
- Manual, OR
- Combination.

(See page 14 for information on where to obtain the ACI 309).

6. Rebar will be (check all of the following boxes):

- Minimum grade 40.
- Rebar will be secured and tied in placed, prior to the placing of the concrete, with the exception of dowels.

7. Rebar cover and rebar placement (check all boxes that apply):

- Minimum of 2 inches from the inside face of the wall (below the ground tanks).
- Vertical rebar will be placed closer to the inside face of the wall.

8. Floor slabs will be (check all boxes that apply):

- Minimum of 5 inches thick
- Reinforcement minimum of #4 rebar spaced at 18" o.c. if tank height or depth is 4 feet or more.
- Shrinkage reinforcement minimum with 6 x 6- W1.4xW1.4 wire mesh if the tank height or depth is less than 4 feet.

9. Footings (thicken the area where the floor comes in contact with the walls and columns): (check all of the following boxes):

- Minimum thickness shall be the wall thickness or 8 inches, whichever is greater.
- Minimum length shall be twice the thickness.



Enter Initials here: CAH

10. Tie bars or dowels to connect walls to footings (check all boxes that apply):

- Vertical steel of exterior walls will extend into the footing and bent at 90°, OR
- Will install a separate dowel (spacing will be the same as vertical rebar, for bent or extended dowel) according to either of the following:
 - #4 rebar bent at 90° with at least 20" or bar in the wall and extended into the footing, within 3" of the bottom of the footing and extended at least 3" horizontally, OR
 - #4 rebar, at least 12 inches into the footing with a minimum concrete cover of 3 inches at the bottom of the footing. For this alternative, footing must be at least 15 inches thick.

11. Rigid forms for placing of concrete (complete the needed information):

- Specify material used in concrete forms Wood or Aluminum

12. All concrete will be cured, or adequate moisture protection will be provided, for at least 7 days, according to Building Code ACI 308, by using any of the following (check all boxes that apply):

- Cured with water by ponding (when applicable), spraying or fogging, OR
- Cured with a curing compound that meets Standard ASTM C 309.
- Protected with wet burlap or plastic sheets, OR.
- Other (specify): _____

(See page 14 for information on where to obtain the ACI 308 or ASTM C 309).

13. Construction joints will prevent discontinuity of steel and waterstops will be installed where fresh concrete meets hardened concrete. This is a critical component to provide water tightness to the structure (check all boxes that apply):

- Will install waterstops made of plastic, OR
- Will install waterstops made of rolled bentonite, OR
- Other (specify but DNR must approve it): _____

14. Backfilling of walls (check all of the following boxes):

- Will be done after floor slats or permanent wall bracing have been installed.
- Will use material free of vegetation, large rocks or debris. Customer's Responsibility

15. If the concrete tank is deeper or higher than 12 feet, a PE² must design the structure (check the box that apply):

- Concrete tank will have a depth or height of 12 feet or less.
- Concrete tank will have a depth or height more than 12 feet. Therefore a PE² must design it.

STOP: This form does not apply.

{Engineering documents and PE² certification will be needed. Contact an AFO Engineer (see page 15) for further information.}



II. Section 3: Construction certification.

This section is to be completed and signed by the person responsible for constructing the formed manure storage structure(s)³, and if a PE² is not required:

"I hereby certify that I have read and understand the minimum design and construction standards of Iowa Code chapter 459, Subchapter III, and the 567 Iowa Administrative Code (IAC) 65.15(14) "Minimum concrete standards" or 567 IAC 65 (if other than concrete). The proposed formed manure storage structure(s)³ at the confinement feeding operation

X Name of operation: LYNN GROVE PORK

X Location of the operation: IASPE SW SE 26 78 17
(County) (Quarter/Quarter) (Quarter) (Section) (Township) (Range No.)

will be constructed in accordance with these minimum requirements."

Included with this certification are the following pages of the construction design statement (check all the boxes that apply):

- Page 2
- Page 3.1
- Page 4.1
- Page 5.1
- Page 6.1
- Pages 7, 8 and 9
- Page 11 (karst terrain or sinkholes areas)
- Other (specify): _____

Chris Harmsen

(Print name)

Chris Harmsen

(Signature)

05-20-05

(Date)

P. S. I.

(Company)

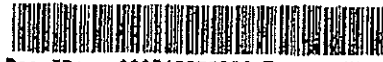
1204 69 Ave N, Wellman

(Address)

(319) 646-2430

(Phone No.)





Doc ID: 003545670002 Type: GEN
Recorded: 04/20/2017 at 11:43:55 AM
Fee Amt: \$12.00 Page 1 of 2
Jasper County, Iowa
Denise Allan County Recorder

Waiver of Separation Distance

File 2017-00002337

Prepared by: Eldon McAfee
6701 Westown Parkway, Suite 100, West Des Moines, Iowa 50266
(515)271-5916

Return to: Eldon McAfee
6701 Westown Parkway, Suite 100, West Des Moines, Iowa 50266

Tax Address: Kevin and Brenda Van Kooten
14937 Thorn Ave.
Lynnville, IA 50153

Re: #1. Grantor's property: The Northeast Quarter of the Southeast Quarter of Section 26, Township 78 North, Range 17 West of the 5th P.M., Jasper County, Iowa, EXCEPT Commencing at a point 20 rods West of the Southeast corner of the Northeast Quarter of the Southeast Quarter of said Section, thence North 4 rods thence West 40 rods, thence South 4 rods, thence East to the place of beginning.

#2. And concerning Grantee's property: The Southwest Quarter of the Southeast Quarter and the Southeast Quarter of the Southwest Quarter of Section Twenty-Six in Township Seventy-eight North, Range Seventeen West of the Fifth P.M., Jasper County, Iowa.

Grantees: Kevin and Brenda Van Kooten
14937 Thorn Ave.
Lynnville, IA 50153

Grantors: Larry and Lorrie Ludwick
15098 Thorn Ave.
Lynnville, IA 50153

2 pages

pd 12.00
Kevin Van Kooten
(a.a.)

ck

Waiver of Separation Distance

The undersigned is titleholder to the above-described property, property # 1. Kevin Van Kooten and Brenda Van Kooten, husband and wife, are titleholders to the above-described property, property #2. Kevin and Brenda Van Kooten operate a swine confinement operation and a cattle confinement building with dry bedded manure stockpile on property #2. The swine confinement operation has an animal unit capacity of 1,920 animal units and the cattle confinement building with a dry bedded manure stockpile has an animal unit capacity of 100 animal units for a total animal unit capacity of 2,020 animal units. Pursuant to Iowa Code §459.202(4) (2017) a separation distance of 1,875 feet is required between the swine and cattle confinement structures and the undersigned's land where the residence is located. Pursuant to Iowa Code §459B.301(1)(2017) a separation distance of 1,250 feet is required between the dry bedded manure stockpile and the undersigned's land where the residence is located.

Pursuant to Iowa Code §459.205(2) and §459B.301(2)(2017), the undersigned as titleholders to the land where the residence is located hereby waive the enforcement of these separation distance requirements between the Grantor's residence and the confinement operation. This waiver shall apply only to the facilities described in this agreement, shall be perpetual and shall run with the land, shall be binding on the heirs, assigns, successors and transferees of the undersigned, and shall be a valid and complete waiver of all separation distance requirements of animal feeding operations provided in the Iowa Code, whether now existing or amended in the future.

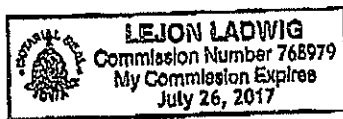
Granted this 16th day of March 2017.

Larry Ludwick
Larry Ludwick

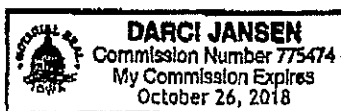
Lorrie Ludwick
Lorrie Ludwick

County of Jasper, State of Iowa ss.

On this 16th day of March, 2017, before me, the undersigned a Notary Public in and for said State, personally appeared Larry Ludwick and Lorrie Ludwick, husband and wife, to me personally known, who being by me duly sworn, acknowledged the execution of the foregoing instrument to be the voluntary act and deed voluntarily executed.



Lejon Ladwig
Notary Public in and for the State of Iowa



















Darcy Jansen

Site; 14 (0.18 ac.)



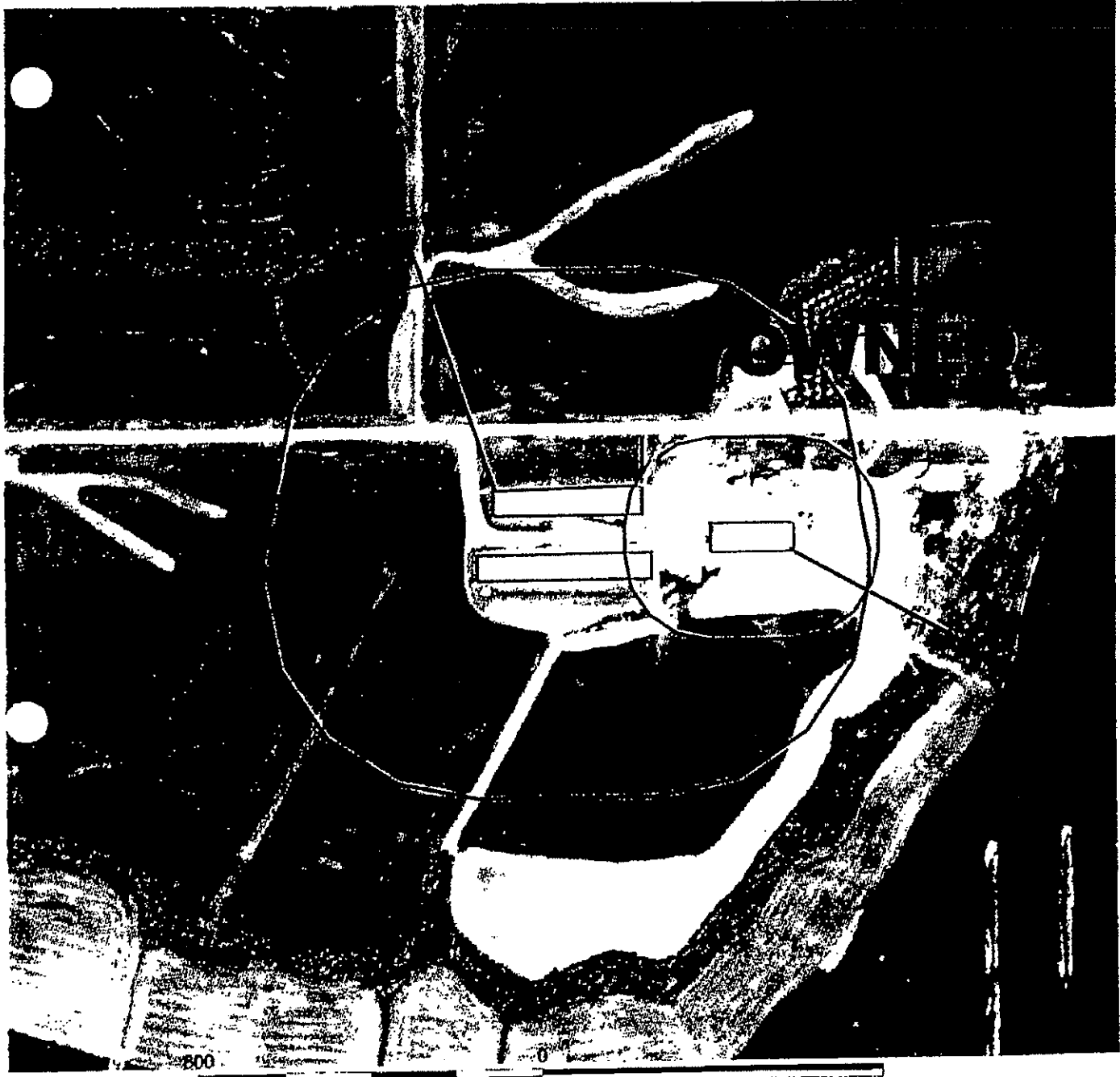
No Public Use Within 4001'
 No Educational, Religious, or Commercial Enterprise within 3376'
 No Ag Drainage Well, Known Sinkhole, or Major Water within 3501'
 No Well within 101'
 No HQ, HQR, or PWA within 2001'

Date: Mar 24, 2017
 Field Name: Site; 14
 Location: Jasper Co., Iowa, U.S.
 Section 26, T78N, R17W
 Farm Name: Kevin Van Kooten Cattle
 Client Name: P-Index
 Total Acres: 0.18
 Field Boundary Start Location:
 Latitude: 41.52620931
 Longitude: -92.78343740

-  Cattle Barn
-  Hog Barns
-  1 Mile
-  Distance To Water
-  420.035
-  586.803
-  Distance To Row
-  113.77
-  Distance To Residence
-  2382.189
-  2910.868
-  3983.232
-  4260.193
-  4281.99
-  4446.294
-  4492.453










Site; 14 (0.18 ac.)



No Public Use Within 4001'
 No Educational, Religious, or Commercial Enterprise within 3376'
 No Ag Drainage Well, Known Sinkhole, or Major Water within 3501'
 No Well within 101'
 No HQ, HQR, or PWA within 2001'

Deep Well
 Distance To Deep Wells
 119.521
 163.28

-  200ft Water Buffer
-  500ft Water Buffer
-  Cattle Barn
-  Hog Barns
- Distance To Water
-  420.035
-  586.803
- Distance To Row
-  113.77

Date: Mar 24, 2017
 Field Name: Site; 14
 Location: Jasper Co., Iowa, U.S.
 Section 26, T78N, R17W
 Farm Name: Kevin Van Kooten Cattle
 Client Name: P-Index
 Total Acres: 0.18
 Field Boundary Start Location:
 Latitude: 41.52620931
 Longitude: -92.78343740





Basemaps Measure Bookmarks Mail Map Info Soil

Map layers Legend Soil

AFO Siting Data

Sinkholes



Ag Drainage Well



Wells



High Qty Wtr Resource (Rivers)

Major Water Source (Rivers)

Major Water Source (Lake)



Surface Water

Ag Drainage Districts



Alluvial Soils

Alluvia: Aquifer

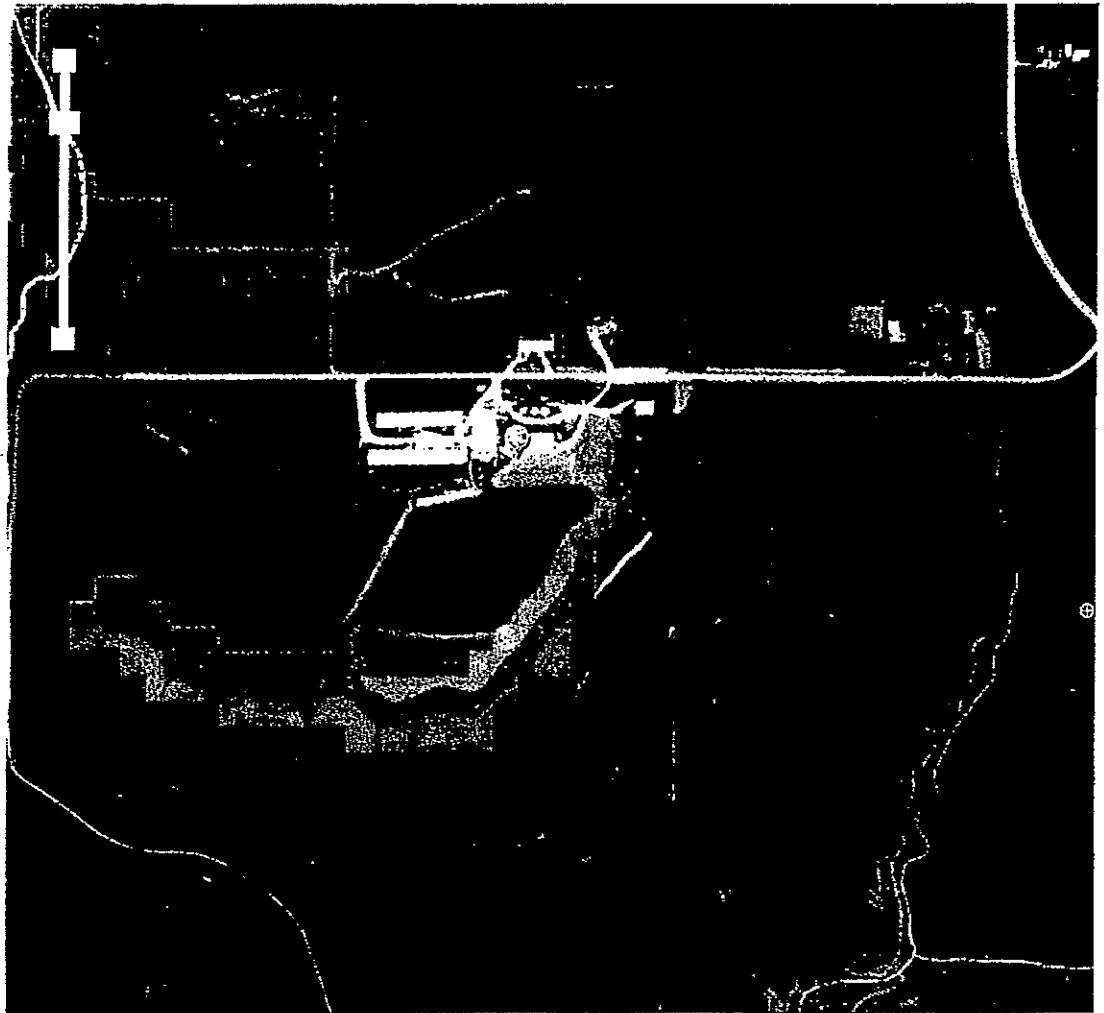
Alluvial Soils

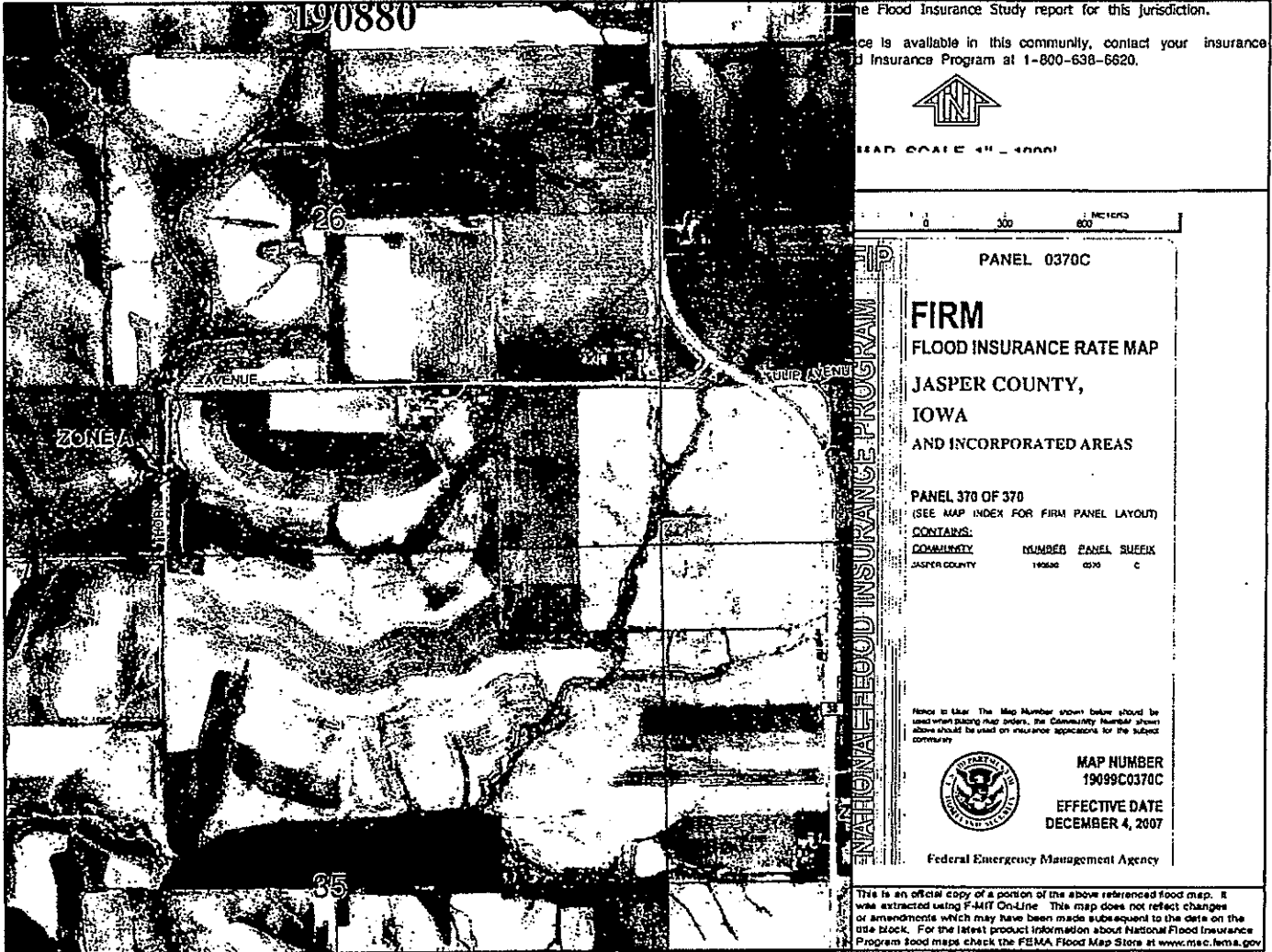
AFO Model/Support Data

Sinkhole or Potential Karst

Sinkhole w/ 1000 ft radius

Karst and Potential Karst





The Flood Insurance Study report for this jurisdiction.
 If insurance is available in this community, contact your insurance agent or the National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 1000'

0 300 600 METERS

PANEL 0370C

FIRM
 FLOOD INSURANCE RATE MAP
 JASPER COUNTY,
 IOWA
 AND INCORPORATED AREAS

PANEL 370 OF 370
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JASPER COUNTY	190880	0370	C

Please Note: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
 19099C0370C
EFFECTIVE DATE
 DECEMBER 4, 2007
 Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Lynn Grove Park

Leger

Lynn Grove Park

Lynn Grove Park

Lincoln Ave

Google earth

© 2016 Google

500 ft



Original research

Impact of feeders and drinker devices on pig performance, water use, and manure volume

Michael C. Brumm, MS, PhD; James M. Dahlquist, MS; Jill M. Heemstra, MS

Summary

Objective: To determine the impact of feeder and drinker designs on pig performance, water use, and manure volume.

Methods: Experiment One compared a wet/dry feeder to a dry feeder with wall-mounted nipple drinker. Experiment Two compared a swinging nipple drinker to a gate-mounted nipple, and Experiment Three compared a bowl drinker to the swinging drinker of Experiment Two. In all experiments, pigs were housed in pens of 20–24 pigs per pen in partially slatted, mechanically ventilated facilities.

Results: In Experiment One, water disappearance (L per pig per day) was 4.49 for the wet/dry feeder versus 6.06 for the dry feeder plus nipple drinker. In Experiment Two, water disappearance was 4.90 L per pig per day for the swinging drinker versus 5.50 for the gate-mounted drinker. In Experiment Three, water disappearance was 3.78 for the bowl versus 5.01 for the swinging drinker. Summer manure production in Experiment One was 4.96 L per pig per day for the wet-dry feeder versus 7.02 for the nipple drinker. Winter manure production was 3.96 L per pig per day for the swinging drinker versus 4.59 for the nipple drinker in Experiment Two.

Implications: These results document the wide range in water use and manure volume associated with feeder and drinker devices installed in swine facilities. They also suggest lower amounts of total water use and manure volume than those currently cited in the literature or used by regulatory officials.

For the overall experiment, pigs on wet/dry feeders used 1 kg of water less per kg of feed than did pigs on the conventional system.

The overall W:F ratio was lowest for the wet/dry feeder (1.78; Experiment One) and similar to the bowl drinker (1.89; Experiment Three).

In observations consistent with ours in Experiment One, Maton and Daelemans¹⁴ concluded that all wet feeders included in their experiments reduced water spillage so that water consumption was only 70%–80% of that observed from conventional feeders and nipple drinkers. In addition, slurry (manure) volume was reduced by 20%–30% in their study.

Table 2: Manure production

	Experiment One (summer)		Experiment Two	
	Dry	Wet/dry	Swing	Nipple
Per pig per day				
Volume	7.02 L (1.85 gal)	4.96 L (1.31 gal)	3.96 L (1.05 gal)	4.59 L (1.21 gal)
Mass ^a	7.0 kg (15.4 lb)	4.9 kg (10.8 lb)	3.9 kg (8.6 lb)	4.5 kg (9.9 lb)
Per 1000 kg bodyweight				
Mass	109 kg (240 lb)	76 kg (167 lb)	61 kg (134 lb)	70 kg (154 lb)

^a 990 kg per m³ (61.8 lb per cu. foot); ASAE⁸

References - refereed


1. Thulin AJ, Brumm MC. Water: The forgotten nutrient. In: Miller ER, Ullrey DE, Lewis AJ, Eds. *Swine Nutrition*. Boston, Massachusetts: Butterworth-Heinemann. 1991:315-324.
3. NRC. Nutrient Requirements of Swine (9th Ed.) National Academy Press, Washington, DC. 1988
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5. Brumm MC, Sutton AL, Jones DD. Effect of season and pig size on swine waste production. *Trans ASAE*. 1980;23:165-168.
10. Patterson DC. A comparison of offering meal from a self-feed hopper having built-in watering with some conventional systems of offering meal and pellets to finishing pigs. *Anim Feed Sci Tech*. 1989;26:261-270.
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12. Walker N. A comparison of single- and multispace feeders for growing pigs fed non-pelleted diets ad libitum. *Anim Feed Sci Tech*. 1990;30:169-173.
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15. Miyawaki K, Hoshina K, Itoh S. Effects of feed and water mixture for finishing pigs on eating speed and feed intake. *Jpn J Swine Sci*. 1997;34:1-8.
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References - nonrefereed

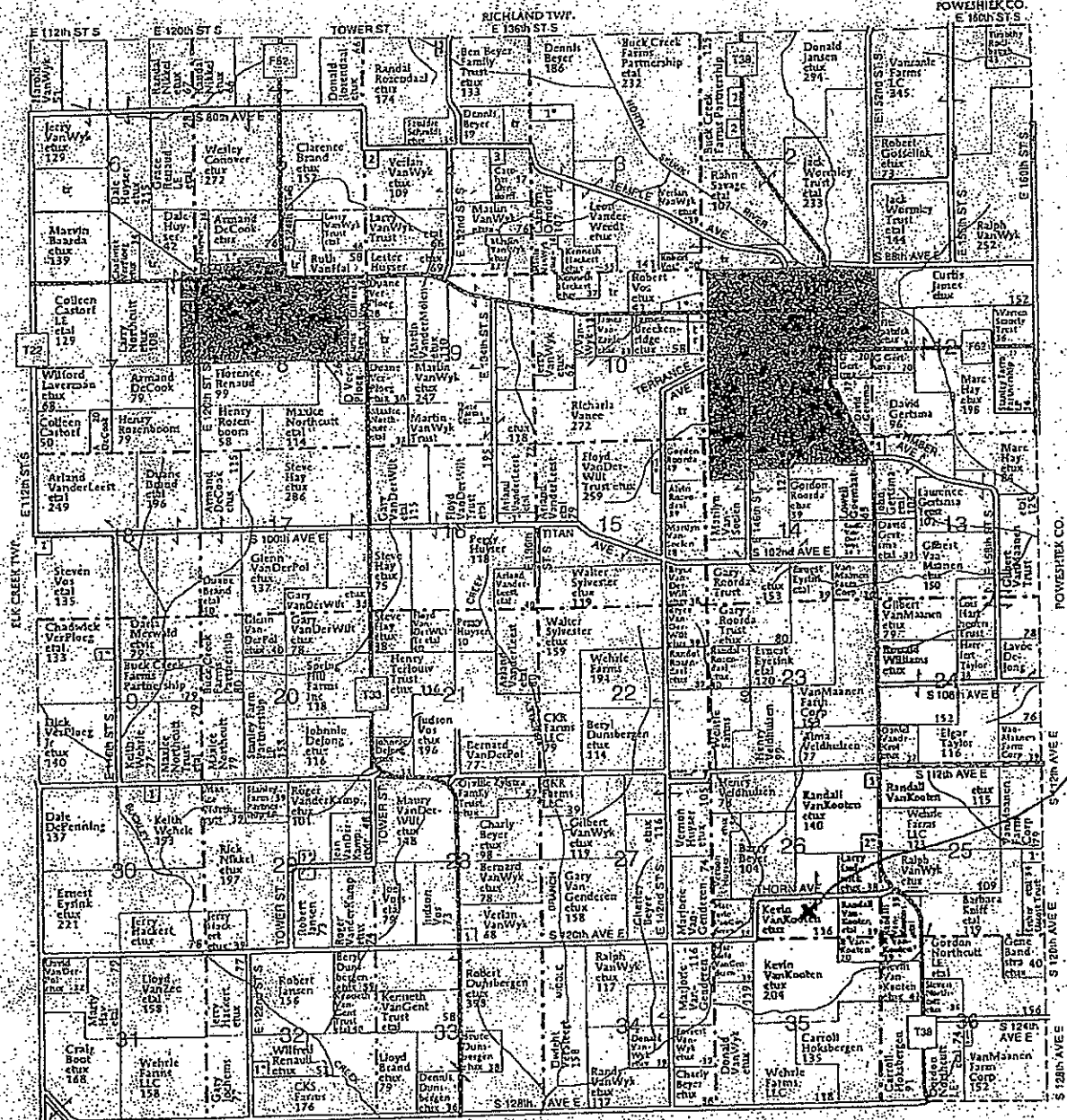
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STATE BANK
Lynnville Sully
 Member FDIC

527-2535 594-3744
 Lynnville Sully
 www.lynnvillebank.com



T-78-N LYNN GROVE PLAT R-17-W



LYNN GROVE TOWNSHIP

- SECTION 2**
 1. VerWoort, Daniel 5
 2. James, Matthew 5
- SECTION 3**
 1. Boyer Family Trust, Ben 19

SECTION 4

1. Roetzdaal, Donald 6
 2. City of Sully, 12
 3. VanRees, Duane 5
- SECTION 5**
 1. Vanderleest, Warren 15
- SECTION 10**
 1. Melsa, Larry 15

SECTION 11

1. Gertsma, David 11
- SECTION 15**
 1. Lunkhart, Monty 9
- SECTION 16**
 1. Baarda, Shaun 5
- SECTION 18**
 1. Powers, Glna 5

SECTION 19

1. VanBrogen, Deryl 8
- SECTION 25**
 1. Coover, Ben 6
- SECTION 26**
 1. VanWyt, Chelnette 6
 2. VanMaanen, Dale 8
- SECTION 27**
 1. Wehrle Farms 9

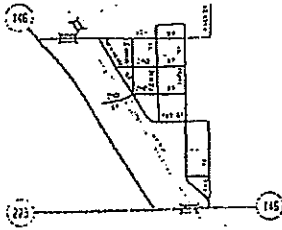
SECTION 28

1. Hackert, Paul 6
- SECTION 29**
 1. Pothoven, Kent 6
- SECTION 30**
 1. Hackert, Jerry 5
- SECTION 32**
 1. VanWyt, Donovan 5

SECTION 35

1. Burgitt, Bryan 6

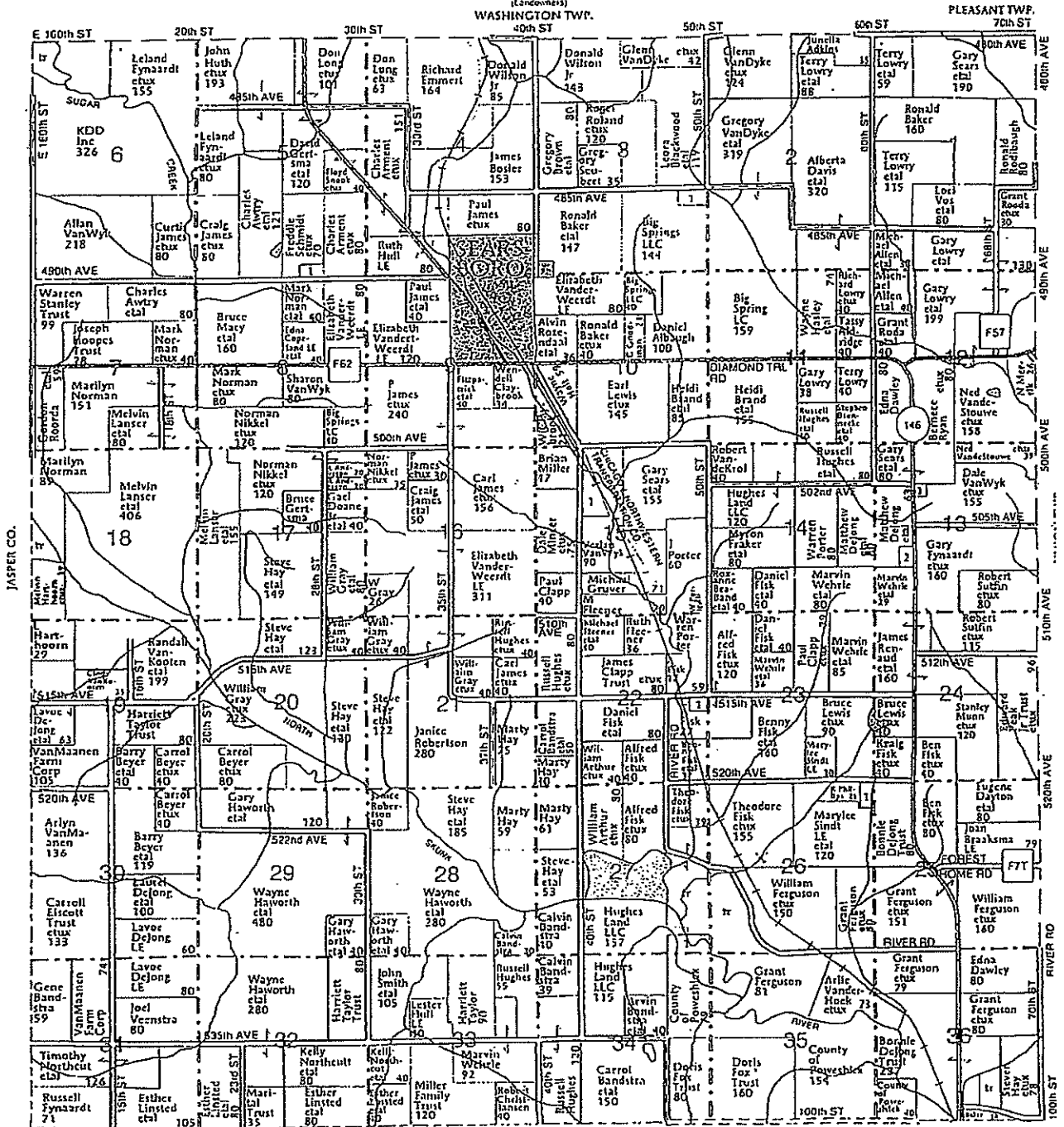
Searsboro City Map



T-78-N

SUGAR CREEK PLAT

R-16-W



SUGAR CREEK TOWN-SHIP
SECTION 3

1. Big Springs LC
SECTION 5
1. Permer, Karen
SECTION 13

1. Fish, Jason
2. Dean, David
SECTION 15
1. Thompson, Martin

SECTION 27
1. Fisk, Benny
SECTION 28

1. Fleener, Donald
SECTION 27
1. County of Powsheik



Manure Management Plan Form

Animal Feeding Operation Information

Instructions: Complete this form for your animal feeding operation. Footnotes are provided on page 4. The information within this form, and the attachments, describes my animal feeding operation, my manure storage and handling system, and my manure management system. I (we) will manage the manure, and the nutrients it contains, as described within this manure management plan. Revisions of the plan, individual field information, and field summary sheet, and in accordance with current rules and regulations. Deviations by Iowa law will be documented and maintained in my records.

Signed: X Kevin Van Kooten Kevin VanKooten Date: 4-10-17
(Signature) (Print name)

Name of operation: Lynn Grove Pork Facility ID No. 62660

Location of the operation: 14845 Thorn Ave.
(911 address)
Lynnville IA 50153
(Town) (State) (Zip)

SW 1/4 of the SE 1/4 of Sec 26 T 78 R 17 Lynn Grove Jasper
(1/4 1/4) (1/4) (Section) (Tier & Range) (Township Name) (County)

Owner and Contacts of the animal feeding operation:

Owner Kevin Van Kooten Phone 641-780-5245
 Address 14937 Thorn Ave, Lynnville, IA 50153
 E-mail address (optional) _____ Cell phone (optional) _____

Contact person (if different than owner) Brian Ritland Phone 641-648-7300
 Address 620 Country Club Rd. Iowa Falls, IA 50126
 E-mail address (optional) _____ Cell phone (optional) _____

This nutrient management plan is for: (check one)

existing operation, not expanding existing operation, expanding existing operation, new owner new operation

Construction and Expansion Dates: 8/22/2005 date of initial construction and all expansions

Table 1. Information about livestock production and manure management system

1	2	3	4	5	6	7
Animal type ^a	Description of Manure Storage/Manure Type ^b <small>(e.g. scraped solids from open feedlot, effluent from runoff basin, bedded barn manure, liquid manure from deep pit)</small>	Max Number of Animals Housed (head)	N ^c lb/1000 gal or lb/ton	P ₂ O ₅ ^c lb/1000 gal or lb/ton	gal/space/dy or ton/space/yr ^d	Annual Manure Production ^e (Gallons or Tons)
Beef, Mature cows	Deep Bedded	100	12	6	12.3	1,233
Grow/finish	BBP	4810	53.4	43.4	0.6	1,026,300
Total Tons						1,233
Total Gallons						1,026,300

Estimated annual animal production^f: 12,325 animals/year

Source of Manure Nutrient Content Data (standard tables, manure analysis, other): Tables/Analysis



MINNESOTA VALLEY TESTING LABORATORIES, INC.

1126 N. Front St. - New Ulm, MN 56073 - 800-782-3557 - Fax 507-359-2890
2616 E. Broadway Ave. - Bismarck, ND 58501 - 800-279-6885 - Fax 701-258-9724 MEMBER
1201 Lincoln Highway - Nevada, IA 50201 - 800-362-0855 - Fax 515-382-3885 ACIL
www.mvtl.com

MANURE ANALYSIS REPORT

THE PINNACLE GROUP
620 COUNTRY CLUB RD
IOWA FALLS IA 50126

Date Received: Jul 8 2016
Date Reported: Jul 13 2016
Account #: 001141
WO #: 17-7522
Lab #: 16-N5318

SAMPLE INFORMATION

Site Name: LYNN GROVE PORK 1
Sample ID: BBP

Site No: 9289

Table with 4 columns: ANALYTE, ANALYSIS AS RECEIVED, TOTAL NUTRIENTS lbs/1000 gal, TOTAL NUTRIENTS lbs/Ton. Rows include Moisture, Total; Nitrogen, Total; Phosphorus as P2O5; Potassium as K2O.

Approved by: J. Joel Sieh
J. Joel Sieh
Feed Laboratory Manager

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Manure Management Plan Form

Determining Maximum Allowable Manure Application Rate

Page 2

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)¹ _____

Corn-Corn-Soybean N-Rate Cattle (A)

(Identify this application scenario by letter)

Method to determine optimum crop yield² USDA Iowa Ag Statistics County yields

Timing of application Spring/Fall

Method of application³ Surface apply solid (dry) manure with no incorporation

Application loss factor 0.7

If spray irrigation is used, identify method⁴ _____

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton) ¹					
Total N	12	P ₂ O ₅		6	
%TN Available 1st year ^k	90%	2nd year	0%	3rd year	0%
Available N 1st year ^l	7.6	2nd year ^m	0.0	3rd year ⁿ	0.0

Table 3. Crop usage rates^o

lb/bu or lb/ton	N	P ₂ O ₅
Corn	1.2	0.32
Soybean	3.8	0.8
Alfalfa	50	12.5
Oat and Straw	0.75	0.4

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

1	Applying Manure For (crop to be grown) ^p		Corn	Corn	Soybean	Corn
2	Optimum Crop Yield ^q	bu or ton/acre	201	201	59	201
3	P ₂ O ₅ removed with crop by harvest ^q	lb/acre	64.3	64.3	47.2	64.3
4	Crop N utilization ^r	lb/acre	241	241	224	241
5a	Legume N credit ^s	lb/acre	50.0	0	0	50
5b	Commercial N planned ^t	lb/acre	0	0	0	0
5c	Manure N carryover credit ^u	lb/acre	0	0.0	0.0	0.0
6	Remaining crop N need ^v	lb/acre	191	241	224	191
7	Manure rate to supply remaining N ^w	ton/acre	25.3	31.9	29.7	25.3
8	P ₂ O ₅ applied with N-based rate ^x	lb/acre	152	191	178	152

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P ₂ O ₅ planned ^y	lb/acre	0	0	0	0
10	Manure rate to supply P removal ^z	ton/acre	10.7	10.7	7.9	10.7
11	Manure rate for P based plan ^{aa}	ton/acre	10.7	18.6	0.0	10.7
12	Manure N applied with P-based plan ^{bb}	lb/acre	81	141	0	81

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate ^{cc}	ton/acre	25.3	31.9	0	25.3
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When applicable, manure application rates must be based on the P index value as follows:

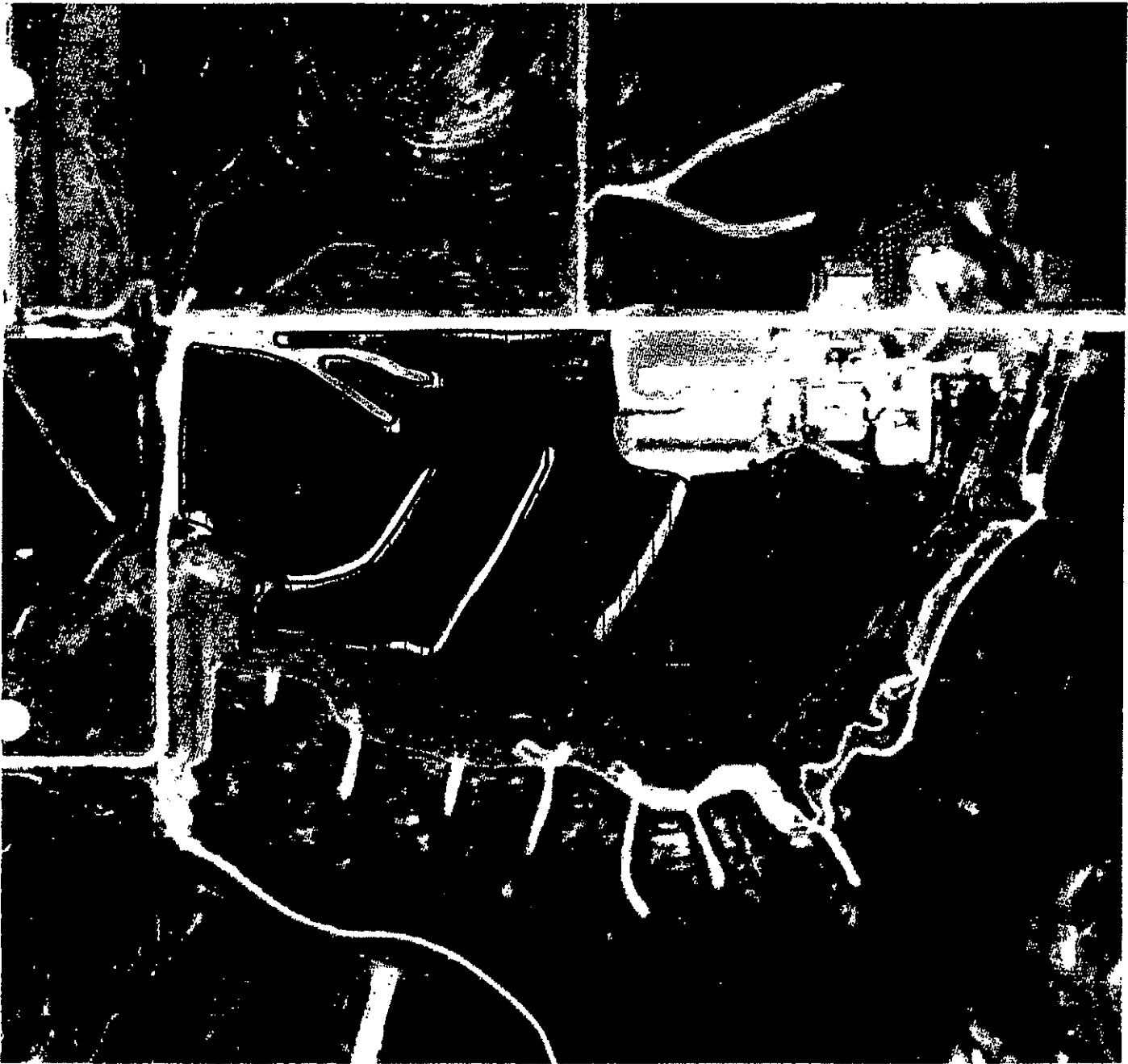
(0-2) N-based manure management.

(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.

(>5-15) No manure application until practices are adopted to reduce P index to 5 or below.


(>15) No manure application.

50781726P3400; 11 (40.76 ac.)

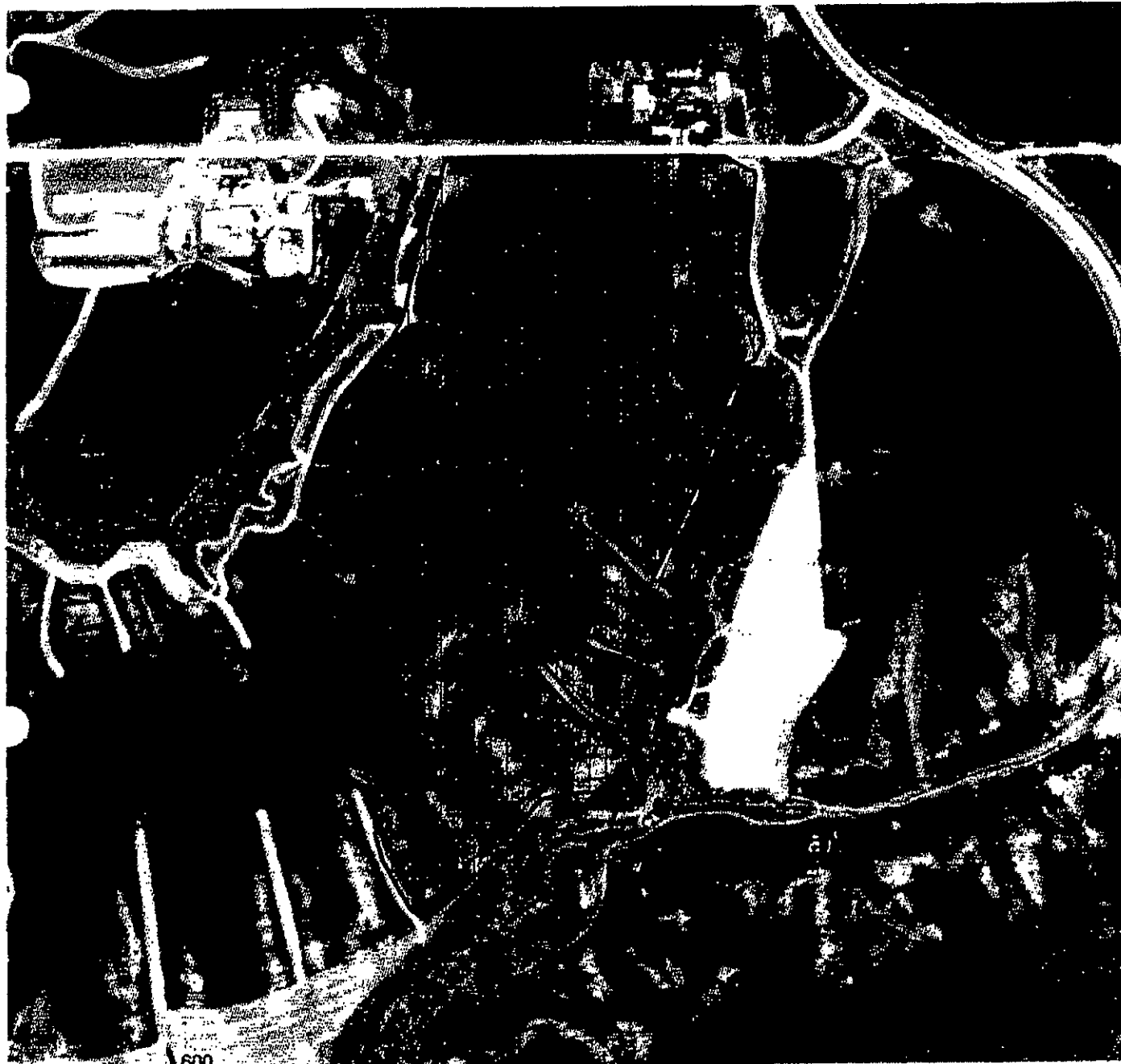


Date: May 11, 2017
Field Name: 50781726P3400; 11
Location: Poweshick Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 40.76
Field Boundary Start Location:
Latitude: 41.52674922
Longitude: -92.78562774

pinnacle
120 Country Club Road
Iowa Falls, Iowa 50126
Office: 515.698.7300
Fax: 515.698.7310
www.pinnacleone.com


 (40.8ac.) Field Boundary

50781726P4400; 11 (54.86 ac.)

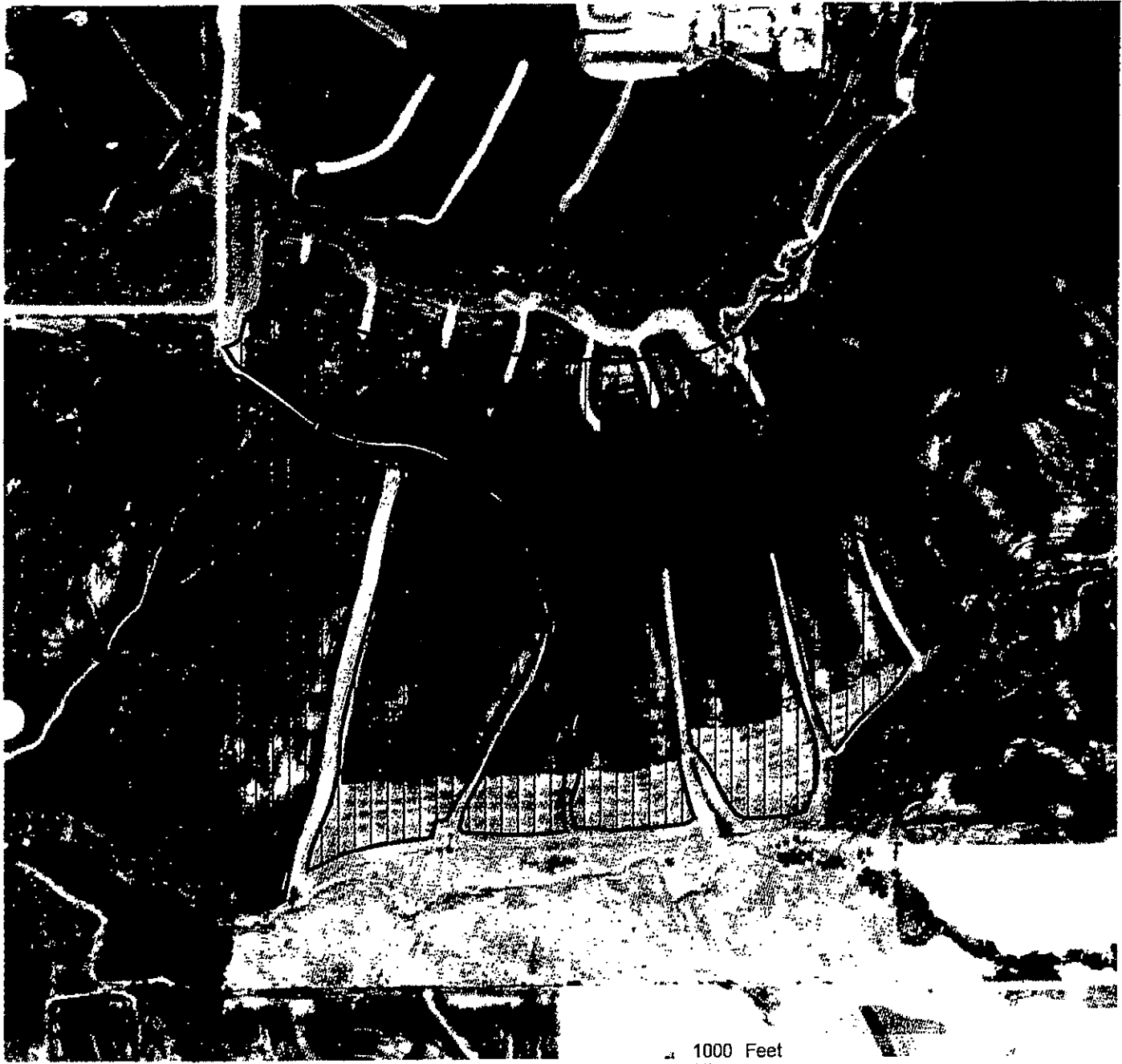


Date: May 11, 2017
Field Name: 50781726P4400; 11
Location: Poweshick Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 54.86
Field Boundary Start Location:
Latitude: 41.52143727
Longitude: -92.78092099



 (54.9ac.) Field Boundary


50781735P7000; 11 (107.99 ac.)



1000 Feet

Date: May 11, 2017
Field Name: 50781735P7000; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 107.99
Field Boundary Start Location:
Latitude: 41.52197440
Longitude: -92.78892259



 (108.0ac.) Field Boundary



Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)^f

Corn-Corn N-Rate Swine (B) Jasper Co.

(Identify this application scenario by letter)

Method to determine optimum crop yield^e USDA Iowa Ag Statistics County yields Timing of application Spring/Fall

Method of application Knifed in or soil injection of liquid manure Application loss factor 0.98

If spray irrigation is used, identify method _____

Table 2. Manure nutrient concentration

Table 3. Crop usage rates^o

Manure Nutrient Content (lbs/1000gal or lbs/ton) ^j					
Total N	53.4	P ₂ O ₅		43.4	
%TN Available 1st year ^k	90%	2nd year	0%	3rd year	0%
Available N 1st year ^l	47.1	2nd year ^m	0.0	3rd year ⁿ	0.0

lb/bu or lb/ton	N	P ₂ O ₅
Corn	1.2	0.32
Soybean	3.8	0.8
Alfalfa	50	12.5
(Oat and Silage)	0.75	0.4

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

	Applying Manure For (crop to be grown) ^p		Corn	Corn	Corn	Corn
2	Optimum Crop Yield ^q	bu or ton/acre	201	201	201	201
3	P ₂ O ₅ removed with crop by harvest ^q	lb/acre	64.3	64.3	64.3	64.3
4	Crop N utilization ^r	lb/acre	241	241	241	241
5a	Legume N credit ^s	lb/acre	0.00	0	0	0
5b	Commercial N planned ^t	lb/acre	0	0	0	0
5c	Manure N carryover credit ^u	lb/acre	0	0.0	0.0	0.0
6	Remaining crop N need ^v	lb/acre	241	241	241	241
7	Manure rate to supply remaining N ^w	gal/acre	5121	5121	5121	5121
8	P ₂ O ₅ applied with N-based rate ^x	lb/acre	222	222	222	222

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P ₂ O ₅ planned ^y	lb/acre	0	0	0	0
10	Manure rate to supply P removal ^z	gal/acre	1482	1482	1482	1482
11	Manure rate for P based plan ^{aa}	gal/acre	1482	1482	1482	1482
12	Manure N applied with P-based plan ^{bb}	lb/acre	70	70	70	70

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate ^{cc}	gal/acre	5121	5121	5121	5121
----	---	----------	------	------	------	------

When applicable, manure application rates must be based on the P index value as follows:


- (0-2) N-based manure management.
- (>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.
- (>5-15) No manure application until practices are adopted to reduce P index to 5 or below.
- (>15) No manure application.

50781713P4600; 11 (59.55 ac.)



Date: Feb 19, 2016
Field Name: 50781713P4600; 11
Location: Poweshick Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 59.55
Field Boundary Start Location:
Latitude: 41.55334214
Longitude: -92.76134643

pinnacle
100 Country Club Road
Iowa Falls, Iowa 50125
Office: 641.648.7300
Fax: 641.648.7310
www.pinnacleone.com

 (59.6ac.) Field Boundary



Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)^f

Corn-Corn-Bean N-Rate Swine (C) Jasper Co.

(identify this application scenario by letter)

Method to determine optimum crop yield^g USDA Iowa Ag Statistics County yields Timing of application Spring/Fall

Method of application Knifed in or soil injection of liquid manure Application loss factor 0.98

If spray irrigation is used, identify method _____

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton) ^j					
Total N	53.4	P ₂ O ₅		43.4	
%TN Available 1st year ^k	90%	2nd year	0%	3rd year	0%
Available N 1st year ^l	47.1	2nd year ^m	0.0	3rd year ⁿ	0.0

Table 3. Crop usage rates^o

lb/bu or lb/ton	N	P ₂ O ₅
Corn	1.2	0.32
Soybean	3.8	0.8
Alfalfa	50	12.5
Oat and Stra	0.75	0.4

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

		Corn	Corn	Soybean	Corn
1	Applying Manure For (crop to be grown) ^p				
2	Optimum Crop Yield ^q	bu or ton/acre	201	201	59
3	P ₂ O ₅ removed with crop by harvest ^q	lb/acre	64.3	64.3	47.2
4	Crop N utilization ^r	lb/acre	241	241	224
5a	Legume N credit ^s	lb/acre	50.00	0	0
5b	Commercial N planned ^t	lb/acre	0	0	0
5c	Manure N carryover credit ^u	lb/acre	0	0.0	0.0
6	Remaining crop N need ^v	lb/acre	191	241	224
7	Manure rate to supply remaining N ^w	gal/acre	4060	5121	4760
8	P ₂ O ₅ applied with N-based rate ^x	lb/acre	176	222	207

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P ₂ O ₅ planned ^y	lb/acre	0	0	0	0
10	Manure rate to supply P removal ^z	gal/acre	1482	1482	1088	1482
11	Manure rate for P based plan ^{aa}	gal/acre	1482	2570	0	1482
12	Manure N applied with P-based plan ^{bb}	lb/acre	70	121	0	70

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate ^{cc}	gal/acre	4060	5121	0	4060
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When applicable, manure application rates must be based on the P index value as follows:

(0-2) N-based manure management.

(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.

(>5-15) No manure application until practices are adopted to reduce P index to 5 or below.


(>15) No manure application.

50781724P2400C; 11 (28.17 ac.)

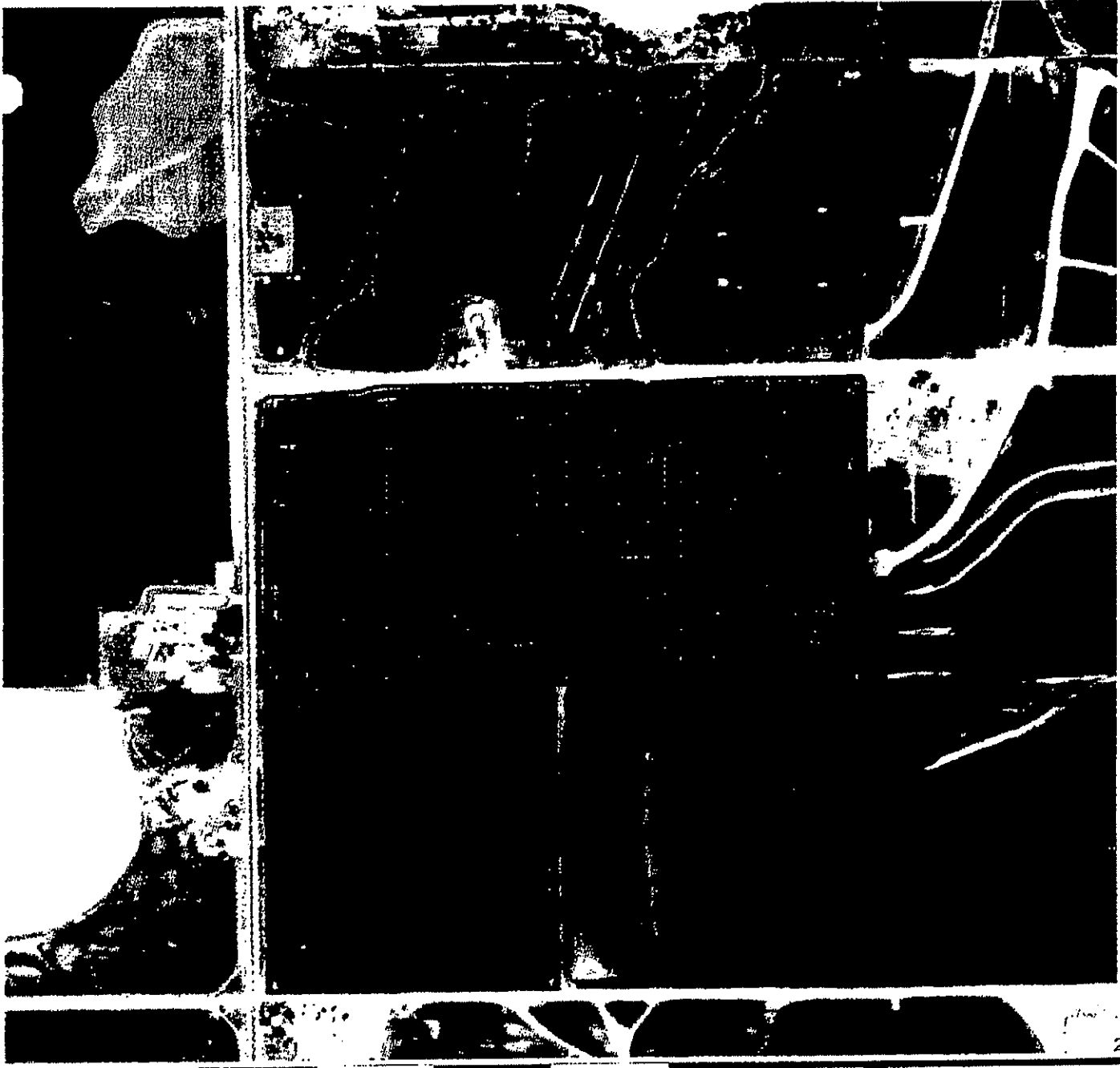


Date: May 11, 2017
Field Name: 50781724P2400C; 11
Location: Poweshick Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 28.17
Field Boundary Start Location:
Latitude: 41.54858169
Longitude: -92.76884465




 (28.2ac.) Field Boundary

50781724P3700; 11 (75.47 ac.)



Date: May 10, 2017
Field Name: 50781724P3700; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 75.47
Field Boundary Start Location:
Latitude: 41.54136396
Longitude: -92.76673362




 (75.5ac.) Field Boundary

50781725P2700; 11 (104.72 ac.)

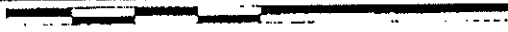


Date: May 10, 2017
Field Name: 50781725P2700; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 104.72
Field Boundary Start Location:
Latitude: 41.53761476
Longitude: -92.77183231

pinnacle
620 County Club Road
Jesseville, Iowa 50126
Office: 641.548.7320
Fax: 641.648.7310
www.pinnacleiowa.com


 (104.8ac.) Field Boundary

50781725P3300B; 11 (49.68 ac.)

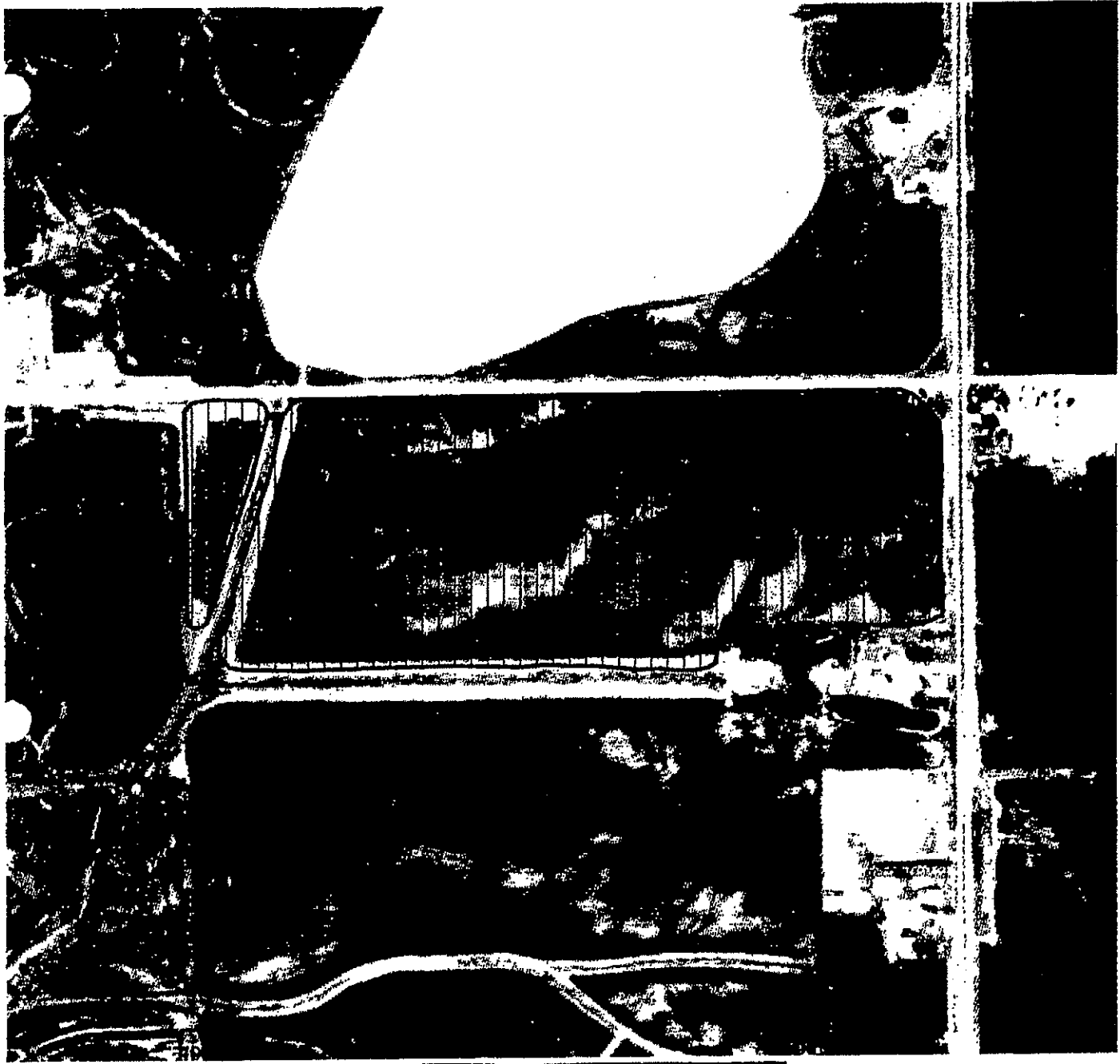


Date: May 10, 2017
Field Name: 50781725P3300B; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 49.68
Field Boundary Start Location:
Latitude: 41.52669725
Longitude: -92.77597321

pinnacle
620 County Club Road Office: 641.548.7320
Iowa Falls, Iowa 50125 Fax: 641.548.7310
www.pinnacle.com


 (49.7ac.) Field Boundary

50781726P1700B; 11 (50.93 ac.)



Date: May 10, 2017
Field Name: 50781726P1700B; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Park 1 and 2
Client Name: P-Index
Total Acres: 50.93
Field Boundary Start Location:
Latitude: 41.53748964
Longitude: -92.78569403

pinnacle
430 Country Club Road
Iowa Falls, Iowa 50126
Office: 641.648.7300
Fax: 641.648.7310
www.pinnacleiowa.com

 (50.9ac.) Field Boundary

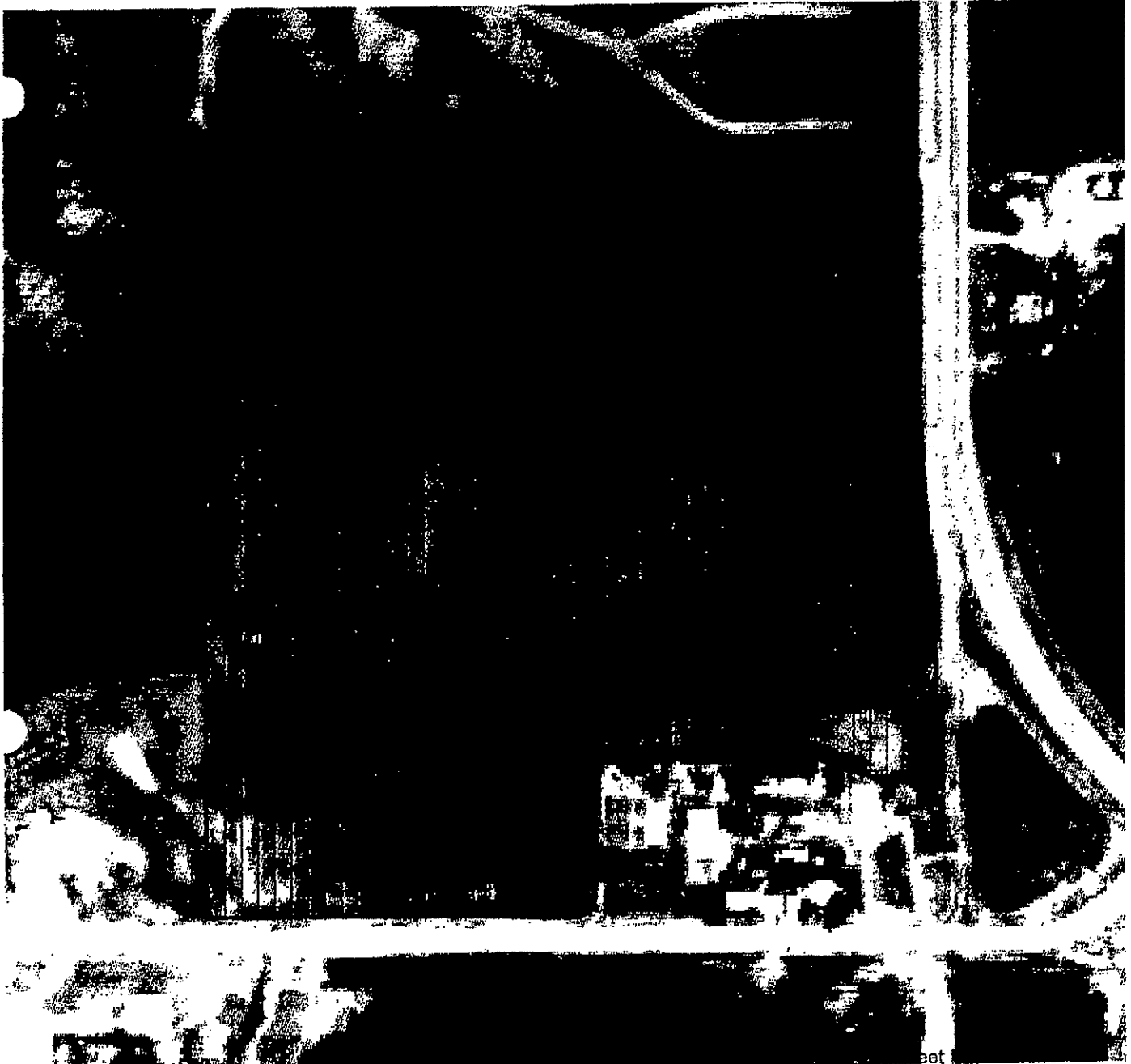
50781726P1800; 11 (83.11 ac.)



Date: May 10, 2017
Field Name: 50781726P1800; 11
Location: Poweshick Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 83.11
Field Boundary Start Location:
Latitude: 41.53168250
Longitude: -92.77644180


pinnacle
630 Country Club Road Office: 641.540.7300
Iowa Falls, Iowa 50126 Fax: 641.540.7310
www.pinnacleiwa.com

50781726P4100; 11 (34.94 ac.)



Date: May 11, 2017
Field Name: 50781726P4100; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 34.94
Field Boundary Start Location:
Latitude: 41.52692677
Longitude: -92.78070435




 (34.9ac.) Field Boundary

50781726P4200; 11 (31.48 ac.)



Date: May 11, 2017
Field Name: 50781726P4200; 11
Location: Poweshick Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 31.48
Field Boundary Start Location:
Latitude: 41.52694950
Longitude: -92.78544388

pinnacle
620 Country Club Road
Iowa Falls, Iowa 50125
www.pinnacleone.com
Office: 841.546.7330
Fax: 541.546.7310


 (31.5ac.) Field Boundary

50781736P2300; 11 (53.65 ac.)



Date: May 11, 2017
Field Name: 50781736P2300; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 53.65
Field Boundary Start Location:
Latitude: 41.51747452
Longitude: -92.77130348

pinnacle
620 County Club Road Office: 641.548.7300
Iowa Falls, Iowa 50126 Fax: 641.040.7910
www.pinnacleiowa.com

 (53.7ac.) Field Boundary



Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)^f

Corn-Corn-Bean P-Rate Swine (D) Jasper Co.

(identify this application scenario by letter)

Method to determine optimum crop yield^g USDA Iowa Ag Statistics County yields ▼ Timing of application Spring/Fall

Method of application^h Knifed in or soil injection of liquid manure ▼ Application loss factor 0.98

If spray irrigation is used, identify method _____

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton) ^j					
Total N	53.4	P ₂ O ₅		43.4	
%TN Available 1st year ^k	90%	2nd year	0%	3rd year	0%
Available N 1st year ^l	47.1	2nd year ^m	0.0	3rd year ⁿ	0.0

Table 3. Crop usage rates^o

lb/bu or lb/ton	N	P ₂ O ₅
Corn	1.2	0.32
Soybean	3.8	0.8
Alfalfa	50	12.5
Oat and Straw	0.75	0.4

*Use blank space above to add crop not listed

Table 4. Calculations for rate based on nitrogen (always required)

	Applying Manure For (crop to be grown) ^p		Corn	Corn	Soybean	Corn
1	Optimum Crop Yield ^q	bu or ton/acre	201	201	59	201
2	P ₂ O ₅ removed with crop by harvest ^r	lb/acre	64.3	64.3	47.2	64.3
3	Crop N utilization ^s	lb/acre	241	241	224	241
4	Legume N credit ^t	lb/acre	50.00	0	0	50
5a	Commercial N planned ^u	lb/acre	0	0	0	0
5b	Manure N carryover credit ^v	lb/acre	0	0.0	0.0	0.0
6	Remaining crop N need ^w	lb/acre	191	241	224	191
7	Manure rate to supply remaining N ^x	gal/acre	4060	5121	4760	4060
8	P ₂ O ₅ applied with N-based rate ^y	lb/acre	176	222	207	176

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P ₂ O ₅ planned ^z	lb/acre	0	0	0	0
10	Manure rate to supply P removal ^{aa}	gal/acre	1482	1482	1088	1482
11	Manure rate for P based plan ^{ab}	gal/acre	1482	2570	0	1482
12	Manure N applied with P-based plan ^{ac}	lb/acre	70	121	0	70

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate ^{cc}	gal/acre	1482	2570	0	1482
----	---	----------	------	------	---	------

When applicable, manure application rates must be based on the P index value as follows:

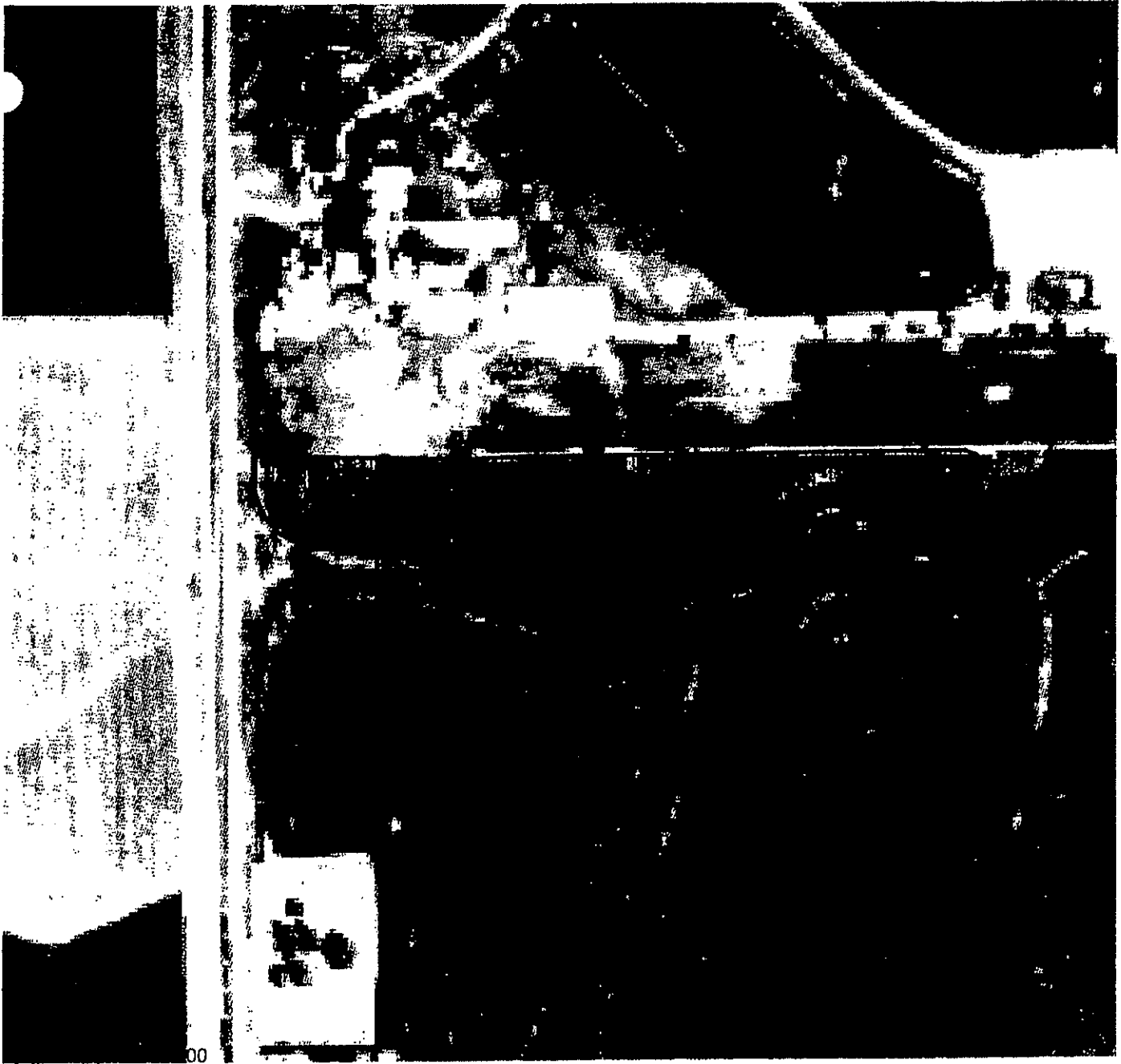
(0-2) N-based manure management.

(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.

(>5-15) No manure application until practices are adopted to reduce P index to 5 or below.

(>15) No manure application.


50781724P2300B; 11 (3.99 ac.)



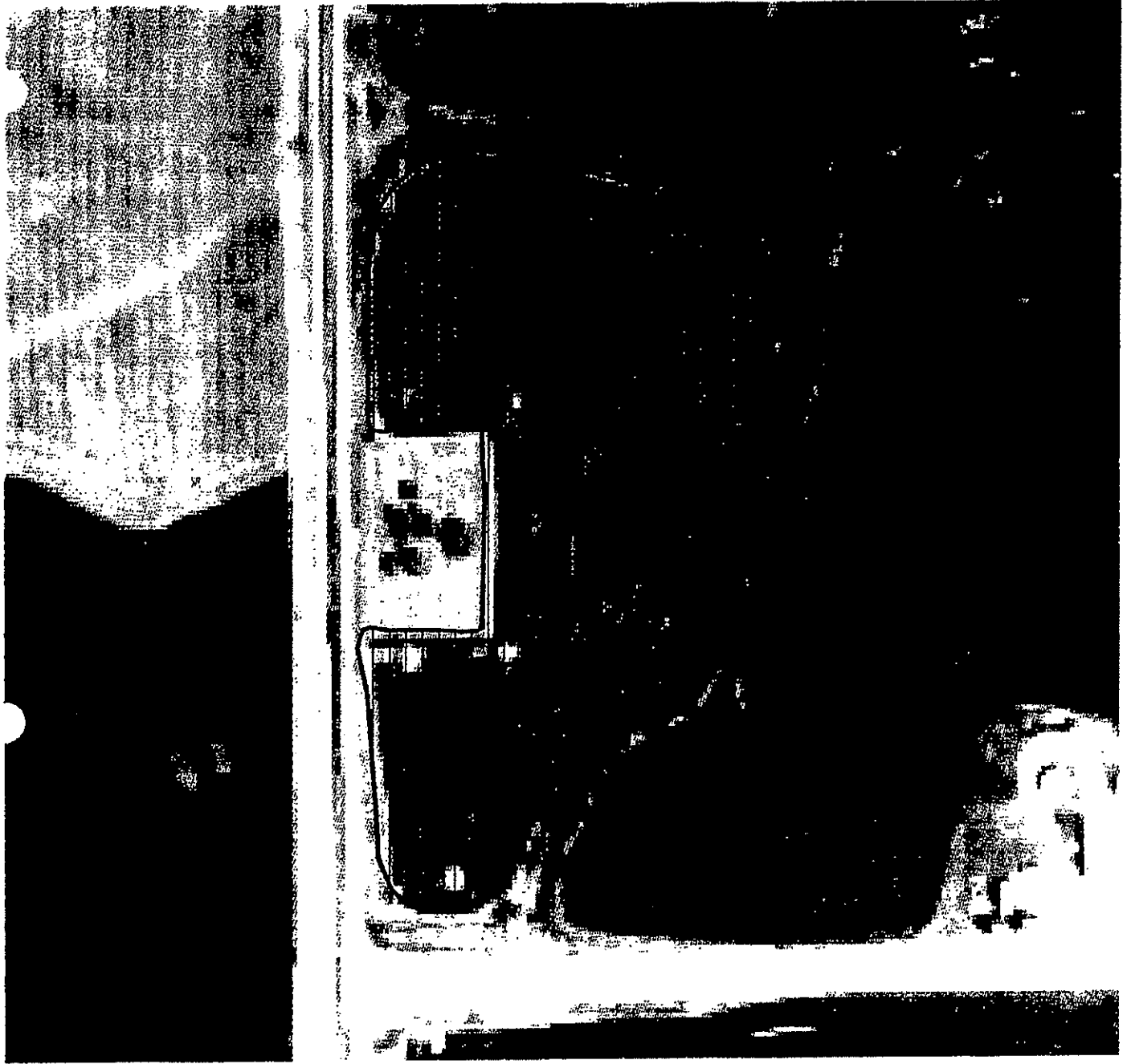
00

Date: May 10, 2017
Field Name: 50781724P2300B; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 3.99
Field Boundary Start Location:
Latitude: 41.54795106
Longitude: -92.77489285




 (4.0ac.) Field Boundary

50781724P2300C; 11 (8.16 ac.)

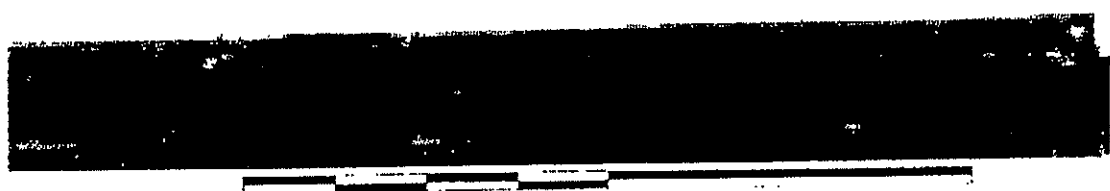


Date: May 10, 2017
Field Name: 50781724P2300C; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 8.16
Field Boundary Start Location:
Latitude: 41.54704231
Longitude: -92.77599835

pinnacle
620 Country Club Road
Iowa Falls, Iowa 50126
www.pinnacleiowa.com
Office: 541.548.7300
Fax: 541.545.7310


 (8.2ac.) Field Boundary

50781724P2400B; 11 (22.29 ac.)

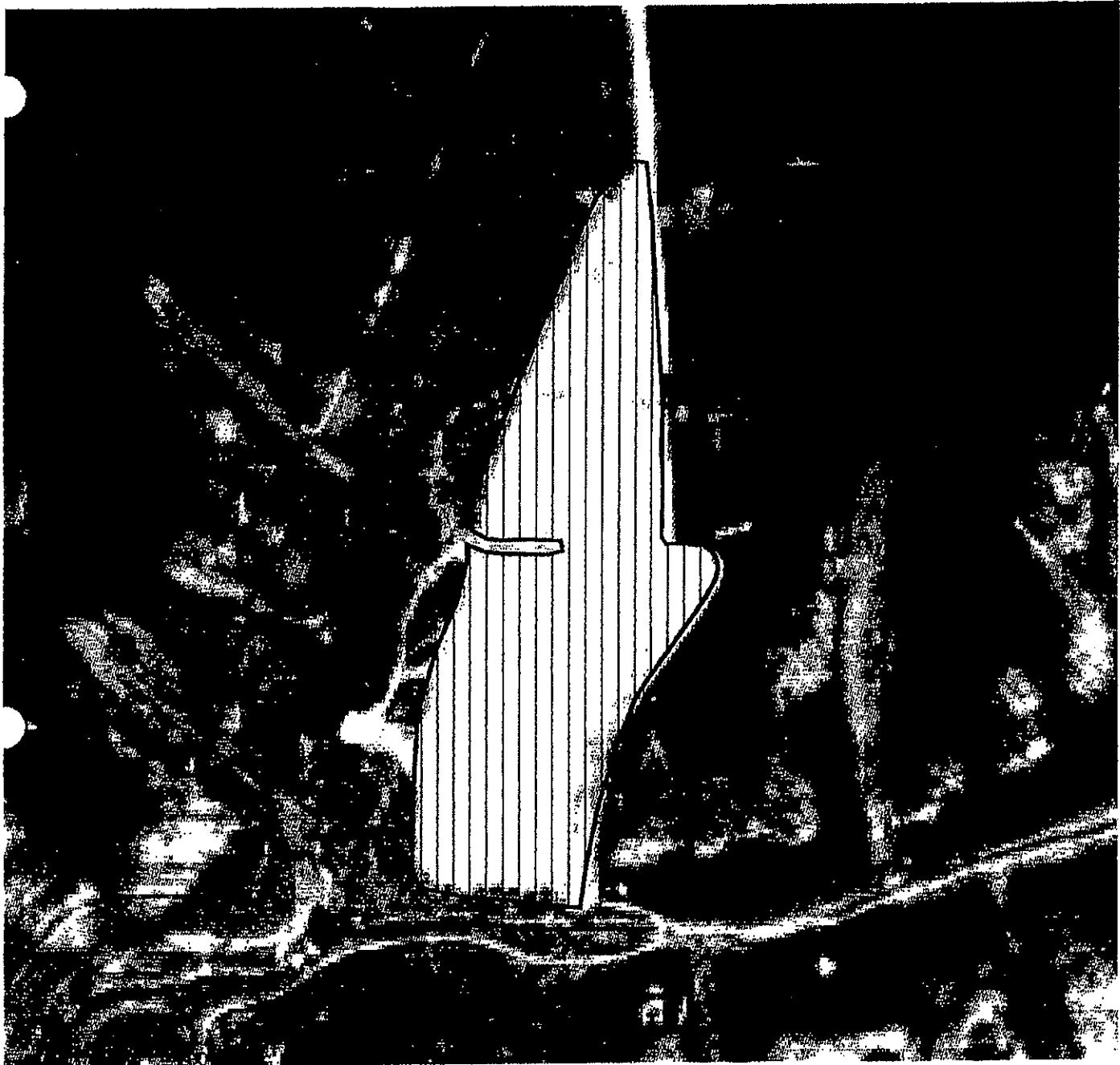


Date: May 10, 2017
Field Name: 50781724P2400B; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 22.29
Field Boundary Start Location:
Latitude: 41.54663366
Longitude: -92.77004902




 (22.3ac.) Field Boundary

50781725P3300C; 14 (7.34 ac.)



Date: May 10, 2017
Field Name: 50781725P3300C; 14
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 7.34
Field Boundary Start Location:
Latitude: 41.52250854
Longitude: -92.77531938

pinnacle
420 County Club Road Office: 641.648.7300
Iowa Falls, Iowa 50128 Fax: 641.648.7310
www.pinnacleiowa.com

 (7.3ac.) Field Boundary



Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)^f

Corn-Bean N-Rate Swine (E) Jasper Co.

(identify this application scenario by letter)

Method to determine optimum crop yield^e USDA Iowa Ag Statistics County yields Timing of application Spring/Fall

Method of application Knifed in or soil injection of liquid manure Application loss factor 0.98

If spray irrigation is used, identify method _____

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton) ^j					
Total N	53.4	P ₂ O ₅		43.4	
%TN Available 1st year ^k	90%	2nd year	0%	3rd year	0%
Available N 1st year ^l	47.1	2nd year ^m	0.0	3rd year ⁿ	0.0

Table 3. Crop usage rates^o

lb/bu or lb/ton	N	P ₂ O ₅
Corn	1.2	0.32
Soybean	3.8	0.8
Alfalfa	50	12.5
Out and Stra v	0.75	0.4

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

1	Applying Manure For (crop to be grown) ^p		Corn v	Soybean v	Corn v	Soybean v
2	Optimum Crop Yield ^q	bu or ton/acre	201	59	201	59
3	P ₂ O ₅ removed with crop by harvest ^r	lb/acre	64.3	47.2	64.3	47.2
4	Crop N utilization ^s	lb/acre	241	224	241	224
5a	Legume N credit ^t	lb/acre	50.00	0	50	0
5b	Commercial N planned ^u	lb/acre	0	0	0	0
5c	Manure N carryover credit ^v	lb/acre	0	0.0	0.0	0.0
6	Remaining crop N need ^w	lb/acre	191	224	191	224
7	Manure rate to supply remaining N ^x	gal/acre	4060	4760	4060	4760
8	P ₂ O ₅ applied with N-based rate ^y	lb/acre	176	207	176	207

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P ₂ O ₅ planned ^z	lb/acre	0	0	0	0
10	Manure rate to supply P removal ^{aa}	gal/acre	1482	1088	1482	1088
11	Manure rate for P based plan ^{ab}	gal/acre	2570	0	2570	0
12	Manure N applied with P-based plan ^{ac}	lb/acre	121	0	121	0

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate ^{cc}	gal/acre	4060	0	4060	0
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When applicable, manure application rates must be based on the P index value as follows:

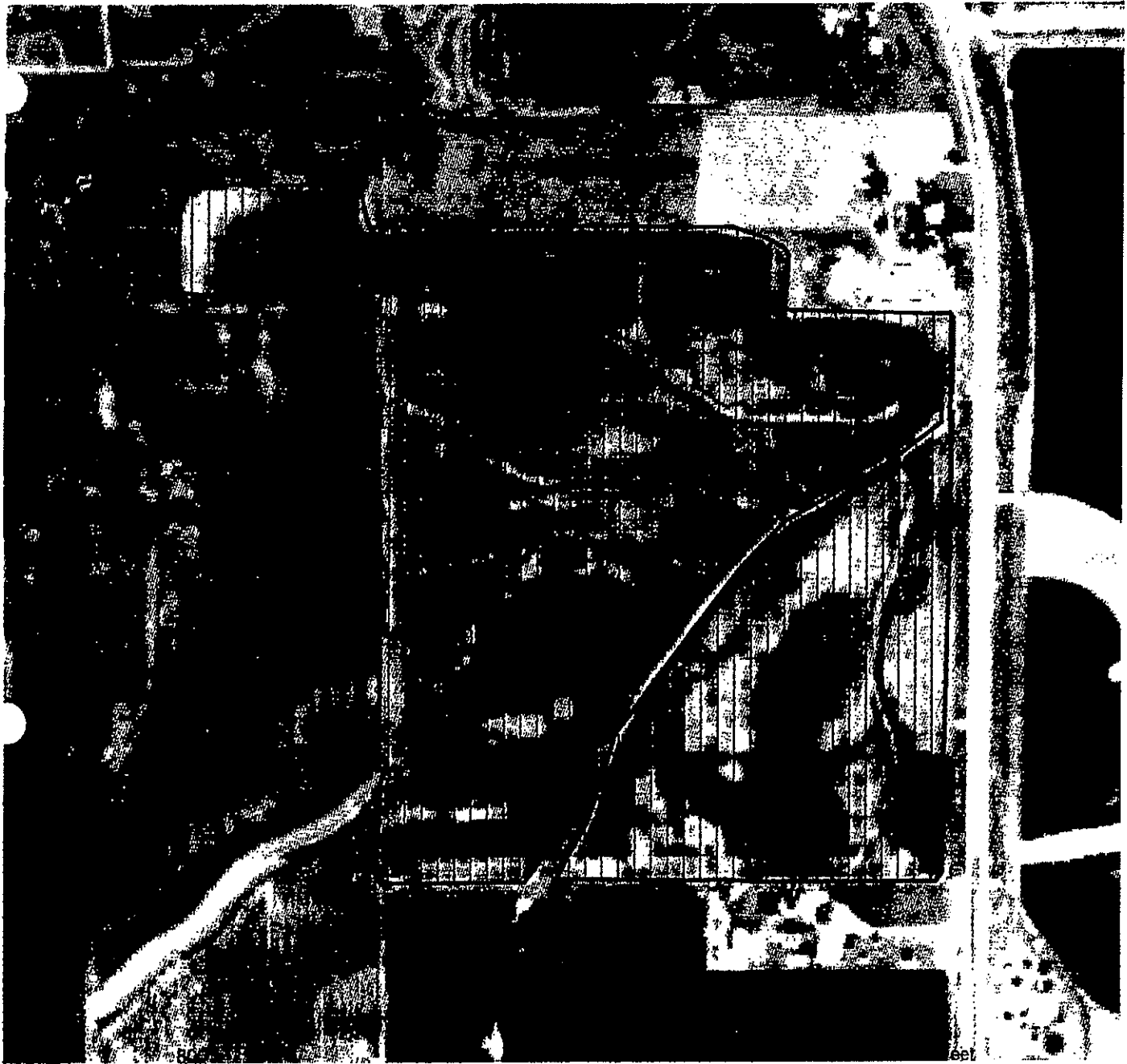
(0-2) N-based manure management.

(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.

(>5-15) No manure application until practices are adopted to reduce P index to 5 or below.


(>15) No manure application.

50781714P1600; 11 (41.51 ac.)



Date: Apr 25, 2016
Field Name: 50781714P1600; 11
Location: Poweshick Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 41.51
Field Boundary Start Location:
Latitude: 41.56011619
Longitude: -92.78097956

pinnacle
630 Country Club Road
Iowa Falls, Iowa 50126
Office: 541.646.7300
Fax: 541.646.7310
www.pinnacleone.com

 (41.5ac.) Field Boundary



Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)^f

Corn-Bean P-Rate Swine (F) Jasper Co.

(Identify this application scenario by letter)

Method to determine optimum crop yield^g USDA Iowa Ag Statistics County yields Timing of application Spring/Fall

Method of application Knifed in or soil injection of liquid manure Application loss factor 0.98

If spray irrigation is used, identify method _____

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton) ^j					
Total N	53.4	P ₂ O ₅		43.4	
%TN Available 1st year ^k	90%	2nd year	0%	3rd year	0%
Available N 1st year ^l	47.1	2nd year ^m	0.0	3rd year ⁿ	0.0

Table 3. Crop usage rates^o

lb/bu or lb/ton	N	P ₂ O ₅
Corn	1.2	0.32
Soybean	3.8	0.8
Alfalfa	50	12.5
Out and Sra	0.75	0.4

*Use blank space above to add crop not listed

Table 4. Calculations for rate based on nitrogen (always required)

		Corn	Soybean	Corn	Soybean
1	Applying Manure For (crop to be grown) ^p				
2	Optimum Crop Yield ^q	bu or ton/acre	201	59	201
3	P ₂ O ₅ removed with crop by harvest ^q	lb/acre	64.3	47.2	64.3
4	Crop N utilization ^r	lb/acre	241	224	241
5a	Legume N credit ^s	lb/acre	50.00	0	50
5b	Commercial N planned ^t	lb/acre	0	0	0
5c	Manure N carryover credit ^u	lb/acre	0	0.0	0.0
6	Remaining crop N need ^v	lb/acre	191	224	191
7	Manure rate to supply remaining N ^w	gal/acre	4060	4760	4060
8	P ₂ O ₅ applied with N-based rate ^x	lb/acre	176	207	176

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P ₂ O ₅ planned ^v	lb/acre	0	0	0
10	Manure rate to supply P removal ^z	gal/acre	1482	1088	1482
11	Manure rate for P based plan ^{aa}	gal/acre	2570	0	2570
12	Manure N applied with P-based plan ^{bb}	lb/acre	121	0	121

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate ^{cc}	gal/acre	2570	0	2570	0
----	---	----------	------	---	------	---

When applicable, manure application rates must be based on the P index value as follows:

(0-2) N-based manure management.

(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.

(>5-15) No manure application until practices are adopted to reduce P index to 5 or below.


(>15) No manure application.

50781714P1100; 11 (8.59 ac.)



Date: Apr 25, 2016
Field Name: 50781714P1100; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 8.59
Field Boundary Start Location:
Latitude: 41.56607341
Longitude: -92.77799335

pinnacle
433 COUNTRY CLUB ROAD OFFICE: 641.646.7300
LOWA PALS, IOWA 50126 FAX: 641.649.7110
www.pinnacleiowa.com

 (8.6ac.) Field Boundary



Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Complete form by filling in blanks, yellow-colored cells, and drop down menus. Gray shaded cells will calculate automatically. Footnotes are given on pages 4, 5 and 6.

Management Identification (Mgt ID)^f

Corn-Corn N-Rate Swine (G) Poweshiek Co.

(identify this application scenario by letter)

Method to determine optimum crop yield^g USDA Iowa Ag Statistics County yields Timing of application Spring/Fall

Method of application Knifed in or soil injection of liquid manure Application loss factor 0.98

If spray irrigation is used, identify method _____

Table 2. Manure nutrient concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton) ^j					
Total N	53.4	P ₂ O ₅		43.4	
%TN Available 1st year ^h	90%	2nd year	0%	3rd year	0%
Available N 1st year ⁱ	47.1	2nd year ^m	0.0	3rd year ⁿ	0.0

Table 3. Crop usage rates^o

lb/bu or lb/ton	N	P ₂ O ₅
Corn	1.2	0.32
Soybean	3.8	0.8
Alfalfa	50	12.5
Oat and Stra	0.75	0.4

*Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required)

1	Applying Manure For (crop to be grown) ^p		Corn	Corn	Corn	Corn
2	Optimum Crop Yield ^r	bu or ton/acre	200	200	200	200
3	P ₂ O ₅ removed with crop by harvest ^q	lb/acre	64.0	64.0	64.0	64.0
4	Crop N utilization ^t	lb/acre	240	240	240	240
5a	Legume N credit ^s	lb/acre	0.00	0	0	0
5b	Commercial N planned ^l	lb/acre	0	0	0	0
5c	Manure N carryover credit ^u	lb/acre	0	0.0	0.0	0.0
6	Remaining crop N need ^v	lb/acre	240	240	240	240
7	Manure rate to supply remaining N ^w	gal/acre	5096	5096	5096	5096
8	P ₂ O ₅ applied with N-based rate ^x	lb/acre	221	221	221	221

Table 5. Calculations for rate based on phosphorus (fill out only if P-based rates are planned)

9	Commercial P ₂ O ₅ planned ^y	lb/acre	0	0	0	0
10	Manure rate to supply P removal ^z	gal/acre	1475	1475	1475	1475
11	Manure rate for P based plan ^{aa}	gal/acre	1475	1475	1475	1475
12	Manure N applied with P-based plan ^{bb}	lb/acre	69	69	69	69

Table 6. Application rates that will be carried over to page 3

13	Planned manure application rate ^{cc}	gal/acre	5096	5096	5096	5096
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When applicable, manure application rates must be based on the P index value as follows:

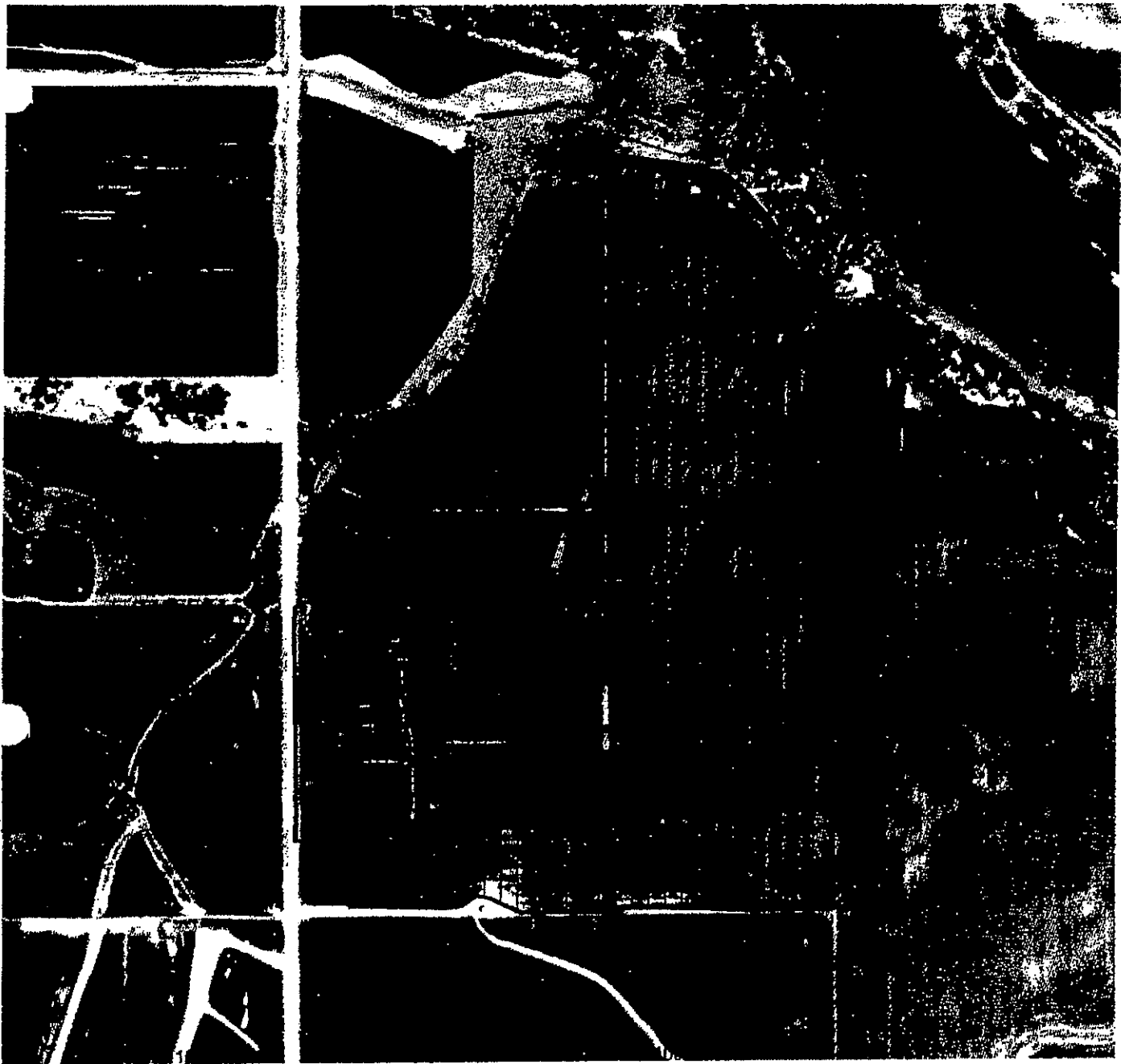
(0-2) N-based manure management.

(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.

(>5-15) No manure application until practices are adopted to reduce P index to 5 or below.


(>15) No manure application.

79781619P2200; 11 (100.23 ac.)



Date: Feb 7, 2017
Field Name: 79781619P2200; 11
Location: Poweshiek Co., Jasper Co., Mahaska Co., Iowa, U.S.
Farm Name: Lynn Grove Pork 1 and 2
Client Name: P-Index
Total Acres: 100.23
Field Boundary Start Location:
Latitude: 41.55178439
Longitude: -92.76160006



 (100.2ac.)Field Boundary



Manure Management Plan Form

Year by Year Manure Management Plan Summary

Instructions: Complete this form for each of the next four growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Footnotes are given on page 6.

Crop year(s): 2017

1 Field Designation ^{ec}	2 Field Location ____ of the ____ 1/4 Sec ____ T ____ R ____ Township Name _____ County Name _____	3 Mgt Id ^{ff}	4 Planned Crop	5 Acres receiving manure ^{ee}	6 Own. rent. agreement (include length of agreement) ^{hh}	7 P index value ⁱⁱ	8 HEL (Y/N) ^{jj}	9 Planned Application		10 Correct Soil Test for P ^{kk} (Yes or No)	
								gal or ton/acre	gal or ton/field ^{ll}		
50781713P4600	E1/2 SE, 13, 78, 17, Lynn Grove, Jasper	B	Corn	59.6	Own	1.49	Y	5121	305212	Yes	
50781714P1100	NE1/4, 14, 78, 17, Lynn Grove, Jasper	F	Beans	8.6	Rent	2.34	Y	0	0	Yes	
50781714P1600	NE1/4, 14, 78, 17, Lynn Grove, Jasper	E	Beans	41.5	Rent	1.81	Y	0	0	Yes	
50781724P2300B	N1/2, SW, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	4.0	Rent	4.39	Y	1482	5928	Yes	
50781724P2300C	SW, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	8.2	Rent	2.50	Y	1482	12152	Yes	
50781724P2400B	SE, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	22.3	Rent	3.22	Y	1482	33049	Yes	
50781724P2400C	SE, NW, 24, 78, 17, Lynn Grove, Jasper	C	Corn	28.2	Rent	1.81	Y	5121	144412	Yes	
50781724P3700	N1/2, SW, 24, 78, 17, Lynn Grove, Jasper	C	Corn	75.5	Rent	0.92	Y	5121	386636	Yes	
50781725P2700	N1/2, NW, 25, 78, 17, Lynn Grove, Jasper	C	Corn	104.8	Own	1.54	Y	5121	536681	Yes	
50781725P3300B	SW 25 & W1/2 NW, 36, 78, 17, Lynn Grove, Jasper	C	Beans	49.7	Own	1.26	Y	0	0	Yes	
50781725P3300C	SW1/4, 25, 78, 17, Lynn Grove, Jasper	D	Beans	7.3	Own	4.76	Y	0	0	Yes	
50781726P1700B	N1/2, NE, 26, 78, 17, Lynn Grove, Jasper	C	Beans	50.9	Own	1.78	Y	0	0	Yes	
50781726P1800	S1/2, NE, 26, 78, 17, Lynn Grove, Jasper	C	Corn	83.1	Own	1.92	Y	4060	337386	Yes	
50781726P4100	NE, SE, 24, 78, 17, Lynn Grove, Jasper	C	Corn	34.9	Rent	1.05	Y	4060	141694	Yes	
50781726P4200	NW, SE, 26, 78, 17, Lynn Grove, Jasper	C	Corn	31.5	Own	1.98	Y	4060	127890	Yes	
50781736P2300	SW NW 36 & SE NE 35, 78, 17, Lynn Grove, Jasper	C	Corn	53.7	Own	1.30	Y	5121	274998	Yes	
79781619P2200	NW, NW, 19 & SW, SW, 18, 78, 16, Sugar Creek, Poweshieck	G	Corn	100.2	Rent	1.69	Y	5096	510619		
									0		
50781726P3400	SE, SW & SW, SE, 26, 78, 17, Lynn Grove, Jasper	A	Corn	40.8	Own	1.98	Y	31.9	1302	Yes	
50781726P4400	SW, SW, 26, 78, 17, Lynn Grove, Jasper	A	Corn	54.9	Own	1.16	Y	31.9	1751	Yes	
50781735P7000	N1/2, 35, 78, 17, Lynn Grove, Jasper	A	Beans	108	Own	1.89	Y	0	0	Yes	
									0		
									0		
Total acres available for manure application				899.5	Total gallons that could be applied				2,816,656		
					Total Tons that could be applied				3,053		



Manure Management Plan Form

Year by Year Manure Management Plan Summary

Instructions: Complete this form for each of the next four growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Footnotes are given on page 6.

Crop year(s): 2018

1 Field Designation ^{ee}	2 Field Location ____ 1/4 of the ____ 1/4 Sec ____ 1 ____ R ____ Township Name _____, County Name _____	3 Mg: lb ^{ff}	4 Planned Crop	5 Acres receiving manure ^{ee}	6 Own. rent. agreement (include length of agreement) ^{mm}	7 P index value ⁿⁿ	8 HEL (Y/N) ^{oo}	9 Planned Application		11 Correct Soil Test for P ^{ll} (Yes or No)	
								gal or ton/acre	gal or ton/field ^{kk}		
50781713P4600	E1/2 SE, 13, 78, 17, Lynn Grove, Jasper	B	Corn	59.6	Own	1.49	Y	5121	305212	Yes	
50781714P1100	NE1/4, 14, 78, 17, Lynn Grove, Jasper	F	Corn	8.6	Rent	2.34	Y	2570	22102	Yes	
50781714P1600	NE1/4, 14, 78, 17, Lynn Grove, Jasper	E	Corn	41.5	Rent	1.81	Y	4060	168490	Yes	
50781724P2300B	N1/2, SW, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	4.0	Rent	4.39	Y	2570	10280	Yes	
50781724P2300C	SW, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	8.2	Rent	2.50	Y	2570	21074	Yes	
50781724P2400B	SE, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	22.3	Rent	3.22	Y	2570	57311	Yes	
50781724P2400C	SE, NW, 24, 78, 17, Lynn Grove, Jasper	C	Beans	38.2	Rent	1.81	Y	0	0	Yes	
50781724P3700	N1/2, SW, 24, 78, 17, Lynn Grove, Jasper	C	Beans	75.5	Rent	0.92	Y	0	0	Yes	
50781725P2700	N1/2, NW, 25, 78, 17, Lynn Grove, Jasper	C	Beans	104.8	Own	1.54	Y	0	0	Yes	
50781725P3300B	SW, 25 & W1/2 NW, 36, 78, 17, Lynn Grove, Jasper	C	Corn	49.7	Own	1.26	Y	4060	201782	Yes	
50781725P3300C	SW1/4, 25, 78, 17, Lynn Grove, Jasper	D	Corn	7.3	Own	4.76	Y	1482	10819	Yes	
50781726P1700B	N1/2, NE, 26, 78, 17, Lynn Grove, Jasper	C	Corn	50.9	Own	1.78	Y	4060	206654	Yes	
50781726P1800	S1/2, NE, 26, 78, 17, Lynn Grove, Jasper	C	Corn	83.1	Own	1.92	Y	5121	425555	Yes	
50781726P4100	NE, SE, 24, 78, 17, Lynn Grove, Jasper	C	Corn	34.9	Rent	1.05	Y	5121	178723	Yes	
50781726P4200	NW, SE, 26, 78, 17, Lynn Grove, Jasper	C	Corn	31.5	Own	1.98	Y	5121	161312	Yes	
50781736P2300	SW NW 36 & SE NE 35, 78, 17, Lynn Grove, Jasper	C	Beans	53.7	Own	1.30	Y	0	0	Yes	
79781619P2200	NW, NW, 19 & SW, SW, 18, 78, 16, Sugar Creek, Poweshieck	G	Corn	100.2	Rent	1.69	Y	5096	510619		
									0		
50781726P3400	SE, SW & SW, SE, 26, 78, 17, Lynn Grove, Jasper	A	Beans	40.8	Own	1.98	Y	0	0	Yes	
50781726P4400	SW, SW, 26, 78, 17, Lynn Grove, Jasper	A	Beans	54.9	Own	1.16	Y	0	0	Yes	
50781735P7000	N1/2, 35, 78, 17, Lynn Grove, Jasper	A	Corn	108	Own	1.89	Y	25.3	2732	Yes	
									0		
									0		
Total acres available for manure application				899.5	Total gallons that could be applied				2,279,932		
					Total Tons that could be applied				2,732		



Manure Management Plan Form Year by Year Manure Management Plan Summary

Instructions: Complete this form for each of the next four growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Footnotes are given on page 6.

Crop year(s): 2019

Field Designation ^{ec}	Field Location ____ 1/4 of the ____ 1-4 Sec ____ T ____ R ____ Township Name _____ County Name _____	Mgt Id ^{ff}	Planned Crop	Acres receiving manure ^{es}	Own, rent, agreement (include length of agreement) ^{eh}	P index value ⁱⁱ	HEL (Y/N) ^{jj}	Planned Application		Correct Soil Test for P ^{ll} (Yes or No)	
								gal or ton/acre	gal or ton/field ^{kk}		
50781713P4600	E1/2 SE, 13, 78, 17, Lynn Grove, Jasper	B	Corn	59.6	Own	1.49	Y	5121	305212	Yes	
50781714P1100	NE1/4, 14, 78, 17, Lynn Grove, Jasper	F	Beans	8.6	Rent	2.34	Y	0	0	Yes	
50781714P1600	NE1/4, 14, 78, 17, Lynn Grove, Jasper	E	Beans	41.5	Rent	1.81	Y	0	0	Yes	
50781724P2300B	N1/2, SW, NW, 24, 78, 17, Lynn Grove, Jasper	D	Beans	4.0	Rent	-4.39	Y	0	0	Yes	
50781724P2400B	SE, NW, 24, 78, 17, Lynn Grove, Jasper	D	Beans	8.2	Rent	2.50	Y	0	0	Yes	
50781724P2400C	SE, NW, 24, 78, 17, Lynn Grove, Jasper	C	Corn	28.2	Rent	1.81	Y	4060	114492	Yes	
50781724P3700	N1/2, SW, 24, 78, 17, Lynn Grove, Jasper	C	Corn	75.5	Rent	0.92	Y	4060	306530	Yes	
50781725P2700	N1/2, NW, 25, 78, 17, Lynn Grove, Jasper	C	Corn	104.8	Own	1.54	Y	4060	425488	Yes	
50781725P3300B	SW, 25 & W1/2 NW, 36, 78, 17, Lynn Grove, Jasper	C	Corn	49.7	Own	1.26	Y	5121	254514	Yes	
50781725P3300C	SW1/4, 25, 78, 17, Lynn Grove, Jasper	D	Corn	7.3	Own	-4.76	Y	2570	18761	Yes	
50781726P1700B	N1/2, NE, 26, 78, 17, Lynn Grove, Jasper	C	Corn	50.9	Own	1.78	Y	5121	260659	Yes	
50781726P1800	S1/2, NE, 26, 78, 17, Lynn Grove, Jasper	C	Beans	83.1	Own	1.92	Y	0	0	Yes	
50781726P4100	NE, SE, 24, 78, 17, Lynn Grove, Jasper	C	Beans	34.9	Rent	1.05	Y	0	0	Yes	
50781726P4200	NW, SE, 26, 78, 17, Lynn Grove, Jasper	C	Beans	31.5	Own	1.98	Y	0	0	Yes	
50781736P2300	SW NW 36 & SE NE 35, 78, 17, Lynn Grove, Jasper	C	Corn	53.7	Own	1.30	Y	4060	218022	Yes	
79781619P2200	NW, NW, 19 & SW, SW, 18, 78, 16, Sugar Creek, Poweshieck	G	Corn	100.2	Rent	1.69	Y	5096	510619		
									0		
50781726P3400	SE, SW & SW, SE, 26, 78, 17, Lynn Grove, Jasper	A	Corn	40.8	Own	1.98	Y	25.3	1032	Yes	
50781726P4400	SW, SW, 26, 78, 17, Lynn Grove, Jasper	A	Corn	54.9	Own	1.16	Y	25.3	1389	Yes	
50781735P7000	N1/2, 35, 78, 17, Lynn Grove, Jasper	A	Corn	108	Own	1.89	Y	31.9	3445	Yes	
									0		
									0		
Total acres available for manure application				899.5	Total gallons that could be applied				2,414,296		
					Total Tons that could be applied				5,866		



Manure Management Plan Form

Year by Year Manure Management Plan Summary

Instructions: Complete this form for each of the next four growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Footnotes are given on page 6.

Crop year(s): 2020

1 Field Designation ^{cc}	2 Field Location ___ 1/4 of the ___ 1/4 Sec ___ T ___ R ___ Township Name ____, County Name ____.	3 Mgt Id ^{ff}	4 Planned Crop	5 Acres receiving manure ^{ee}	6 Own. rent. agreement (include length of agreement) ^{hh}	7 P index value ⁱⁱ	8 HEL (Y/N) ^{jj}	9 Planned Application		11 Correct Soil Test for P ^{ll} (Yes or No)
								gal or ton/acre	gal or ton/field ^{kk}	
50781713P4600	E1/2 SE, 13, 78, 17, Lynn Grove, Jasper	B	Corn	59.6	Own	1.49	Y	5121	305212	Yes
50781714P1100	NE1/4, 14, 78, 17, Lynn Grove, Jasper	F	Corn	8.6	Rent	2.34	Y	2570	22102	Yes
50781714P1600	NE1/4, 14, 78, 17, Lynn Grove, Jasper	E	Corn	41.5	Rent	1.81	Y	4060	168490	Yes
50781724P2300B	N1/2, SW, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	4.0	Rent	4.39	Y	1482	5928	Yes
50781724P2300C	SW, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	8.2	Rent	2.50	Y	1482	12152	Yes
50781724P2400B	SE, NW, 24, 78, 17, Lynn Grove, Jasper	D	Corn	22.3	Rent	3.22	Y	1482	33049	Yes
50781724P2400C	SE, NW, 24, 78, 17, Lynn Grove, Jasper	C	Corn	28.2	Rent	1.81	Y	5121	144412	Yes
50781724P3700	N1/2, SW, 24, 78, 17, Lynn Grove, Jasper	C	Corn	75.5	Rent	0.92	Y	5121	386636	Yes
50781725P2700	N1/2, NW, 25, 78, 17, Lynn Grove, Jasper	C	Corn	104.8	Own	1.54	Y	5121	536681	Yes
50781725P3300B	SW, 25 & W1/2 NW, 36, 78, 17, Lynn Grove, Jasper	C	Beans	49.7	Own	1.26	Y	0	0	Yes
50781725P3300C	SW 1/4, 25, 78, 17, Lynn Grove, Jasper	D	Beans	7.3	Own	4.76	Y	0	0	Yes
50781726P1700B	N1/2, NE, 26, 78, 17, Lynn Grove, Jasper	C	Beans	50.9	Own	1.78	Y	0	0	Yes
50781726P1800	S1/2, NE, 26, 78, 17, Lynn Grove, Jasper	C	Corn	83.1	Own	1.92	Y	4060	337386	Yes
50781726P4100	NE, SE, 24, 78, 17, Lynn Grove, Jasper	C	Corn	34.9	Rent	1.05	Y	4060	141694	Yes
50781726P4200	NW, SE, 26, 78, 17, Lynn Grove, Jasper	C	Corn	31.5	Own	1.98	Y	4060	127890	Yes
50781736P2300	SW NW 36 & SE NE 35, 78, 17, Lynn Grove, Jasper	C	Corn	53.7	Own	1.30	Y	5121	274998	Yes
79781619P2200	NW, NW, 19 & SW, SW, 18, 78, 16, Sugar Creek, Poweshiek	G	Corn	100.2	Rent	1.69	Y	5096	510619	
									0	
50781726P3400	SE, SW & SW, SE, 26, 78, 17, Lynn Grove, Jasper	A	Corn	40.8	Own	1.98	Y	31.9	1302	Yes
50781726P4400	SW, SW, 26, 78, 17, Lynn Grove, Jasper	A	Corn	54.9	Own	1.16	Y	31.9	1751	Yes
50781735P7000	N1/2, 35, 78, 17, Lynn Grove, Jasper	A	Beans	108	Own	1.89	Y	0	0	Yes
									0	
									0	
Total acres available for manure application				899.5	Total gallons that could be applied				3,007,248	
					Total Tons that could be applied				3,053	



RUSLE2 Profile Erosion Calculation Record

Info: 50781713P4600 (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\281C2 Otley silty clay loam, 5 to 9 percent slopes, moderately eroded\Otley silty clay loam moderately eroded 90%

Slope length (horiz): 200 ft

Avg. slope steepness: 7.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CC North	vegetations\Corn, grain	bushels	208.00

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 *t*/ac/yr

Soil loss erod. portion: 2.0 *t*/ac/yr

Detachment on slope: 2.0 *t*/ac/yr

Soil loss for cons. plan: 2.0 *t*/ac/yr

Sediment delivery: 2.0 *t*/ac/yr

Crit. slope length: 200 ft

Surf. cover after planting: 66 %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
11/1/0	Manure injector, liquid high disturb.30 inch		89
11/15/0	Chisel, st. pl.		67
4/10/1	Cultivator, field 6-12 in sweeps		63
4/15/1	Planter, double disk opnr	Corn, grain	66
10/20/1	Harvest, killing crop 50pct standing stubble		90



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			= Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI	
50781713P4E00	2.00	1.00	0.44	1.00	1.10	0.91	0.88		1.36	0.30	0.09	0.53		1.00	0.08	0.08	1.49

liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781714P1100 (Liquid)

File: profiles/default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\179E2 Gara loam, 14 to 18 percent slopes, moderately eroded\Gara loam moderately eroded 85%

Slope length (horiz): 97 ft

Avg. slope steepness: 16 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Corn, grain	bushels	154.00
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Soybean, mw 30 in rows	bu	45.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 11 t/ac/yr

Detachment on slope: 11 t/ac/yr

Soil loss for cons. plan: 11 t/ac/yr

Sediment delivery: 11 t/ac/yr

Crit. slope length: 97 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		75
4/10/1	Cultivator, field 6-12 in sweeps		50
4/15/1	Planter, double disk opnr	Corn, grain	47
10/25/1	Harvest, killing crop 50pct standing stubble		80
4/28/2	Chisel, st. pt.		53
4/28/2	Cultivator, field 6-12 in sweeps		53
5/1/2	Planter, double disk opnr	Soybean, mw 30 in rows	57
10/20/2	Harvest, killing crop 50pct standing stubble		73



Iowa Phosphorus Index

Credits: Iowa State University
USDA National Soil Tillage Laboratory
USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			= Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI	
5078:714P1100 -	11.30	1.00	0.35	0.50	1.20	0.75	1.88		1.89	0.12	0.09	0.38		1.00	0.66	0.08	2.34

(Liquid)



RUSLE2 Profile Erosion Calculation Record

Info: 50781714P1600 (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\281D2 Otley silty clay loam, 9 to 14 percent slopes, moderately eroded\Otley silty clay loam moderately eroded 85%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Corn, grain	bushels	199.00
managements\CMZ 04\c.Other Local Mgt Records*CB South	vegetations\Soybean, mw 30 in rows	bu	58.000

Contouring: b, absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 5.9 t/ac/yr

Detachment on slope: 5.9 t/ac/yr

Soil loss for cons. plan: 5.9 t/ac/yr

Sediment delivery: 5.9 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/25/0	Manure injector, liquid low disturb.30 inch		83
4/10/1	Cultivator, field 6-12 in sweeps		58
4/15/1	Planter, double disk opnr	Corn, grain	56
10/25/1	Harvest, killing crop 50pct standing stubble		87
4/28/2	Chisel, st. pl.		62
4/28/2	Cultivator, field 6-12 in sweeps		62
5/1/2	Planter, double disk opnr	Soybean, mw 30 in rows	66
10/20/2	Harvest, killing crop 50pct standing stubble		81



Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion P _i		RCN Factor	STP Factor	P App Factor	Runoff P _i		Flow Factor	STP Factor	Tile/Sub P _i		P Index
50781714P1600 (Liquid)	5.90	1.00	0.37	0.70	1.20	0.78	1.42		1.35	0.15	0.09	0.32		1.00	0.08	0.08	1.81	



RUSLE2 Profile Erosion Calculation Record

Info: 50781724P2300B (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\76D2 Ladoga silt loam, 9 to 14 percent slopes, moderately eroded\Ladoga silt loam moderately eroded 95%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	158.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	158.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	46.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 7.0 t/ac/yr

Detachment on slope: 7.0 t/ac/yr

Soil loss for cons. plan: 7.0 t/ac/yr

Sediment delivery: 7.0 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb,30 inch		76
4/12/1	Cultivator, field 6-12 in sweeps		51
4/24/1	Planter, double disk opnr	Corn, grain, high yield	46
10/23/1	Harvest, killing crop 50pct standing stubble		80
11/10/1	Manure injector, liquid low disturb,30 inch		88
12/2/1	Chisel, st. pt.		61

.2/2	Cultivator, field 6-12 in sweeps		55
4/22/2	Planter, double disk opnr	Corn, grain, high yield	56
10/23/2	Harvest, killing crop 50pct standing stubble		83
12/10/2	Chisel, st. pt.		57
4/8/3	Cultivator, field 6-12 in sweeps		58
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	61
10/12/3	Harvest, killing crop 50pct standing stubble		77



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI		
50781724P23009 --	7.00	1.00	0.42	0.70	1.20	1.22	3.05		1.58	0.87	0.09	1.19		1.00	0.15	0.15	4.38	

Log mid



RUSLE2 Profile Erosion Calculation Record

Info: 50781724P2300C (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\76D2 Ladoga silt loam, 9 to 14 percent slopes, moderately eroded\Ladoga silt loam moderately eroded 95%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	158.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	158.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	46.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 *t*/ac/yr

Soil loss erod. portion: 7.0 *t*/ac/yr

Detachment on slope: 7.0 *t*/ac/yr

Soil loss for cons. plan: 7.0 *t*/ac/yr

Sediment delivery: 7.0 *t*/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		76
4/12/1	Cultivator, field 6-12 in sweeps		51
4/24/1	Planter, double disk opnr	Corn, grain, high yield	46
10/23/1	Harvest, killing crop 50pct standing stubble		80
11/10/1	Manure injector, liquid low disturb.30 inch		88
12/2/1	Chisel, st. pt.		61

... 2/2	Cultivator, field 6-12 in sweeps		55
4/22/2	Planter, double disk opnr	Corn, grain, high yield	56
10/23/2	Harvest, killing crop 50pct standing stubble		83
12/10/2	Chisel, st. pt.		57
4/8/3	Cultivator, field 6-12 in sweeps		58
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	61
10/12/3	Harvest, killing crop 50pct standing stubble		77



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tilth Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			= Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI	
59781724P2330C --	7.00	1.00	0.19	1.00	1.10	1.05	1.55		1.58	0.47	0.09	0.87		1.00	0.08	0.08	2.50

Large wind



RUSLE2 Profile Erosion Calculation Record

Info: 50781724P2400B (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County
 Soil: Jasper County, Iowa\65E Lindley loam, 14 to 18 percent slopes\Lindley loam 90%
 Slope length (horiz): 96 ft
 Avg. slope steepness: 20 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	126.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	126.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	37.000

Contouring: b. absolute row grade 2 percent
 Strips/barriers: (none)
 Diversion/terrace, sediment basin: (none)
 Subsurface drainage: (none)
 Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr
 Soil loss erod. portion: 17 t/ac/yr
 Detachment on slope: 17 t/ac/yr
 Soil loss for cons. plan: 17 t/ac/yr
 Sediment delivery: 17 t/ac/yr

Crit. slope length: 96 ft
 Surf. cover after planting: -- %
 Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		69
4/12/1	Cultivator, field 6-12 in sweeps		44
4/24/1	Planter, double disk opnr	Corn, grain, high yield	40
10/23/1	Harvest, killing crop 50pct standing stubble		75
11/10/1	Manure injector, liquid low disturb.30 inch		83
12/2/1	Chisel, st. pt.		56

.2/2	Cultivator, field 6-12 in sweeps		49
4/22/2	Planter, double disk opnr	Corn, grain, high yield	50
10/23/2	Harvest, killing crop 50pct standing stubble		78
12/10/2	Chisel, st. pt.		52
4/8/3	Cultivator, field 6-12 in sweeps		52
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	55
10/12/3	Harvest, killing crop 50pct standing stubble		70



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI		
S0781724P24008	17.00	1.00	0.10	1.00	1.10	1.05	1.95		2.15	0.47	0.09	1.19		1.00	0.08	0.08	3.22	

Lrg wtd



RUSLE2 Profile Erosion Calculation Record

Info: 50781724P2400C (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County
 Soil: Jasper County, Iowa\55E Lindley loam, 14 to 18 percent slopes\Lindley loam 90%
 Slope length (horiz): 96 ft
 Avg. slope steepness: 20 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	126.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	126.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	37.000

Contouring: b. absolute row grade 2 percent
 Strips/barriers: (none)
 Diversion/terrace, sediment basin: (none)
 Subsurface drainage: (none)
 Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr
 Soil loss erod. portion: 17 t/ac/yr
 Detachment on slope: 17 t/ac/yr
 Soil loss for cons. plan: 17 t/ac/yr
 Sediment delivery: 17 t/ac/yr

Crit. slope length: 96 ft
 Surf. cover after planting: -- %
 Avg. ann. forage harvest: 0 t/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		69
4/12/1	Cultivator, field 6-12 in sweeps		44
4/24/1	Planter, double disk opnr	Corn, grain, high yield	40
10/23/1	Harvest, killing crop 50pct standing stubble		75
11/10/1	Manure injector, liquid low disturb.30 inch		83
12/2/1	Chisel, st. pt.		56

.2/2	Cultivator, field 6-12 in sweeps		49
4/22/2	Planter, double disk opnr	Corn, grain, high yield	50
10/23/2	Harvest, killing crop 50pct standing stubble		78
12/10/2	Chisel, st. pt.		52
4/8/3	Cultivator, field 6-12 in sweeps		52
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	55
10/12/3	Harvest, killing crop 50pct standing stubble		70



Iowa Phosphorus Index

Credits: Iowa State University
USDA National Soil Tilth Laboratory
USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			= Overall
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI	
50781724P2400C --	17.00	0.05	1.00	0.50	1.20	1.05	0.54		2.15	0.47	0.09	1.19		1.00	0.08	0.08	1.84

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781724P3700 (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County
 Soil: Jasper County, Iowa\281C2 Otley silty clay loam, 5 to 9 percent slopes, moderately eroded\Otley silty clay loam moderately eroded 90%
 Slope length (horiz): 200 ft
 Avg. slope steepness: 7.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	211.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	211.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	61.000

Contouring: b. absolute row grade 2 percent
 Strips/barriers: (none)
 Diversion/terrace, sediment basin: (none)
 Subsurface drainage: (none)
 Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr
 Soil loss erod. portion: 2.9 t/ac/yr
 Detachment on slope: 2.9 t/ac/yr
 Soil loss for cons. plan: 2.9 t/ac/yr
 Sediment delivery: 2.9 t/ac/yr

Crit. slope length: 200 ft
 Surf. cover after planting: -- %
 Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		84
4/12/1	Cultivator, field 6-12 in sweeps		60
4/24/1	Planter, double disk opnr	Corn, grain, high yield	55
10/23/1	Harvest, killing crop 50pct standing stubble		87
11/10/1	Manure injector, liquid low disturb.30 inch		93
12/2/1	Chisel, st. pt.		69

12/2	Cultivator, field 6-12 in sweeps		63
4/22/2	Planter, double disk opnr	Corn, grain, high yield	64
10/23/2	Harvest, killing crop 50pct standing stubble		89
12/10/2	Chisel, st. pt.		65
4/8/3	Cultivator, field 6-12 in sweeps		66
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	69
10/12/3	Harvest, killing crop 50pct standing stubble		85



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			= Overall										
	Gross Erosion	x	Sediment Trap Factor	x	SDR	x	Buffer Factor		x	Enrichment Factor	x	STP Factor		=	Erosion PI	RCN Factor		x	STP Factor	+	P App Factor) =	Runoff PI	Flow Factor	x	STP Factor	=
50781724P3700 --	2.90		1.00		0.08		1.00		1.10		0.90		0.24	1.58		0.29		0.09		0.50	1.00		0.08		0.03		0.92

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781725P2700 (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\281D2 Otley silty clay loam, 9 to 14 percent slopes, moderately eroded\Otley silty clay loam moderately eroded 85%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	166.00
managements\CMZ 04c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	166.00
managements\CMZ 04c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	48.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 6.5 t/ac/yr

Detachment on slope: 6.5 t/ac/yr

Soil loss for cons. plan: 6.5 t/ac/yr

Sediment delivery: 6.5 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		77
4/12/1	Cultivator, field 6-12 in sweeps		52
4/24/1	Planter, double disk opnr	Corn, grain, high yield	47
10/23/1	Harvest, killing crop 50pct standing stubble		81
11/10/1	Manure injector, liquid low disturb.30 inch		89
12/2/1	Chisel, st. pt.		63

.2/2	Cultivator, field 6-12 in sweeps		56
4/22/2	Planter, double disk opnr	Corn, grain, high yield	57
10/23/2	Harvest, killing crop 50pct standing stubble		84
12/10/2	Chisel, st. pt.		59
4/8/3	Cultivator, field 6-12 in sweeps		59
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	62
10/12/3	Harvest, killing crop 50pct standing stubble		78



Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall P Index							
	Gross Erosion	x	Sediment Trap Factor	x	SDR	x	Buffer Factor		x	Enrichment Factor	x	STP Factor		=	Erosion PI	RCH Factor			STP Factor	+ P App Factor	=	Runoff PI	Flow Factor	x	STP Factor
50781725P2700 --	5.50		1.00		0.09		1.00		1.10		1.00		0.68	1.58	0.41	0.09		0.79	1.00		0.08		0.08		1.54

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781725P3300B (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\570D2 Nira silty clay loam, 9 to 14 percent slopes, moderately eroded\Nira silty clay loam moderately eroded 95%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	152.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	152.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	44.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 7.4 t/ac/yr

Detachment on slope: 7.4 t/ac/yr

Soil loss for cons. plan: 7.4 t/ac/yr

Sediment delivery: 7.4 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb,30 inch		74
4/12/1	Cultivator, field 6-12 in sweeps		49
4/24/1	Planter, double disk opnr	Corn, grain, high yield	45
10/23/1	Harvest, killing crop 50pct standing stubble		79
11/10/1	Manure injector, liquid low disturb,30 inch		87
12/2/1	Chisel, st. pt.		60

2/2	Cultivator, field 6-12 in sweeps		54
4/22/2	Planter, double disk opnr	Corn, grain, high yield	55
10/23/2	Harvest, killing crop 50pct standing stubble		82
12/10/2	Chisel, sl. pt.		56
4/8/3	Cultivator, field 6-12 in sweeps		57
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	60
10/12/3	Harvest, killing crop 50pct standing stubble		76



Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RGN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI		P Index
5078172SP33C9B --	7.40	1.00	0.09	1.00	1.10	0.88	0.62		1.53	0.27	0.09	0.56		1.00	0.08	0.08	1.26	

Legend



RUSLE2 Profile Erosion Calculation Record

Info: 50781725P3300C (Liquid)

File: profilesdefault

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\822D2 Lamoni silty clay loam, 9 to 14 percent slopes, moderately eroded\Lamoni silty clay loam moderately eroded 95%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	99.000
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	99.000
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	29.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 3.0 t/ac/yr

Soil loss erod. portion: 14 t/ac/yr

Detachment on slope: 14 t/ac/yr

Soil loss for cons. plan: 14 t/ac/yr

Sediment delivery: 14 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		61
4/12/1	Cultivator, field 6-12 in sweeps		38
4/24/1	Planter, double disk opnr	Corn, grain, high yield	34
10/23/1	Harvest, killing crop 50pct standing stubble		70
11/10/1	Manure injector, liquid low disturb.30 inch		79

2/1	Chisel, st. pt.		50
4/12/2	Cultivator, field 6-12 in sweeps		44
4/22/2	Planter, double disk opnr	Corn, grain, high yield	45
10/23/2	Harvest, killing crop 50pct standing stubble		72
12/10/2	Chisel, st. pt.		46
4/8/3	Cultivator, field 6-12 in sweeps		47
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	50
10/12/3	Harvest, killing crop 50pct standing stubble		62



Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion P		RCN Factor	STP Factor	P App Factor	Runoff P		Flow Factor	STP Factor	Tile/Sub P		
50781725P3300C --	14.00	1.00	0.26	1.00	1.10	0.94	3.78		2.15	0.33	0.09	0.90		1.00	0.08	0.08		4.76

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781726P1700B (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\93D2 Shelby-Adair complex, 9 to 14 percent slopes, moderately eroded\Shelby loam moderately eroded 60%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	138.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	138.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	40.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 8.3 t/ac/yr

Detachment on slope: 8.3 t/ac/yr

Soil loss for cons. plan: 8.3 t/ac/yr

Sediment delivery: 8.3 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		71
4/12/1	Cultivator, field 6-12 in sweeps		47
4/24/1	Planter, double disk opnr	Corn, grain, high yield	42
10/23/1	Harvest, killing crop 50pct standing stubble		77
11/10/1	Manure injector, liquid low disturb.30 inch		85
12/2/1	Chisel, st. pt.		58

3/2/2	Cultivator, field 6-12 in sweeps		51
4/22/2	Planter, double disk opnr	Corn, grain, high yield	52
10/23/2	Harvest, killing crop 50pct standing stubble		80
12/10/2	Chisel, st. pt.		54
4/8/3	Cultivator, field 6-12 in sweeps		55
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	57
10/12/3	Harvest, killing crop 50pct standing stubble		73



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Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			= Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI	
50781726P17C08 --	8.30	0.05	1.00	1.00	1.10	1.05	0.48		2.15	0.48	0.09	1.22	1.00	0.08	0.08	1.78	

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781726P1800 (Liquid)

File: profiles/default

Inputs:

Location: USAIowa\Jasper County
 Soil: Jasper County, Iowa\3D2 Shelby-Adair complex, 9 to 14 percent slopes, moderately eroded\Shelby loam moderately eroded 60%
 Slope length (horiz): 150 ft
 Avg. slope steepness: 12 %

Management		Vegetation	
management\CMZ 04\c.Other Local Mgt Records\CCB South	yield units	vegetations\Corn, grain, high yield	# yield units, #/ac
management\CMZ 04\c.Other Local Mgt Records\CCB South	138.00	vegetations\Corn, grain, high yield	138.00
management\CMZ 04\c.Other Local Mgt Records\CCB South	138.00	vegetations\Corn, grain, high yield	138.00
management\CMZ 04\c.Other Local Mgt Records\CCB South	40.000	vegetations\Soybean, mw 30 in rows	bu

Contouring: b, absolute row grade 2 percent
 Strips/barriers: (none)
 Diversion/terrace, sediment basin: (none)
 Subsurface drainage: (none)
 Adjust res. burial level: Normal res. burial

Outputs:
 T value: 5.0 Vacyr
 Soil loss erod. portion: 8.3 Vacyr
 Detachment on slope: 8.3 Vacyr
 Soil loss for cons. plan: 8.3 Vacyr
 Sediment delivery: 8.3 Vacyr
 Crit. slope length: 150 ft
 Surf. cover after planting: -- %
 Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb, 30 inch		71
4/12/1	Cultivator, field 6-12 in sweeps		47
4/24/1	Planter, double disk opnt	Corn, grain, high yield	42
10/23/1	Harvest, killing crop 50pct standing stubble		77
11/10/1	Manure injector, liquid low disturb, 30 inch		85
12/2/1	Chisel, st, pt		58

.2/2	Cultivator, field 6-12 in sweeps		51
4/22/2	Planter, double disk opnr	Corn, grain, high yield	52
10/23/2	Harvest, killing crop 50pct standing stubble		80
12/10/2	Chisel, st. pt.		54
4/8/3	Cultivator, field 6-12 in sweeps		55
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	57
10/12/3	Harvest, killing crop 50pct standing stubble		73



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Iowa Phosphorus Index

Credits: Iowa State University
USDA National Soil Tillage Laboratory
USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			= Overall
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI	
50781726P1850 --	8.30	0.05	1.00	0.70	1.20	1.12	0.35		2.15	0.55	0.09	1.38		1.00	0.15	0.15	1.92

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781726P4100 (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\570C2 Nira silty clay loam, 5 to 9 percent slopes, moderately eroded\Nira silty clay loam moderately eroded 95%

Slope length (horiz): 200 ft

Avg. slope steepness: 7.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	194.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	194.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	56.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 *t*/ac/yr

Soil loss erod. portion: 3.2 *t*/ac/yr

Detachment on slope: 3.2 *t*/ac/yr

Soil loss for cons. plan: 3.2 *t*/ac/yr

Sediment delivery: 3.2 *t*/ac/yr

Crit. slope length: 200 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb,30 inch		82
4/12/1	Cultivator, field 6-12 in sweeps		57
4/24/1	Planter, double disk opnr	Corn, grain, high yield	52
10/23/1	Harvest, killing crop 50pct standing stubble		85
11/10/1	Manure injector, liquid low disturb,30 inch		91
12/2/1	Chisel, st. pt.		67

.2/2	Cultivator, field 6-12 in sweeps		60
4/22/2	Planter, double disk opnr	Corn, grain, high yield	61
10/23/2	Harvest, killing crop 50pct standing stubble		87
12/10/2	Chisel, st. pt.		63
4/8/3	Cultivator, field 6-12 in sweeps		64
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	66
10/12/3	Harvest, killing crop 50pct standing stubble		83



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Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			= Overall
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI	
50781725P4100	3.20	1.00	0.10	1.00	1.10	0.93	0.32		1.58	0.33	0.09	0.95		1.00	0.08	0.08	1.05

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781726P4200 (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\93D2 Shelby-Adair complex, 9 to 14 percent slopes, moderately eroded\Shelby loam moderately eroded 60%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\CGB South	vegetations\Corn, grain, high yield	bushels	138.00
managements\CMZ 04\c.Other Local Mgt Records\CGB South	vegetations\Corn, grain, high yield	bushels	138.00
managements\CMZ 04\c.Other Local Mgt Records\CGB South	vegetations\Soybean, mw 30 in rows	bu	40.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 8.3 t/ac/yr

Detachment on slope: 8.3 t/ac/yr

Soil loss for cons. plan: 8.3 t/ac/yr

Sediment delivery: 8.3 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		71
4/12/1	Cultivator, field 6-12 in sweeps		47
4/24/1	Planter, double disk opnr	Corn, grain, high yield	42
10/23/1	Harvest, killing crop 50pct standing stubble		77
11/10/1	Manure injector, liquid low disturb.30 inch		85
12/2/1	Chisel, st. pt.		58

2/2	Cultivator, field 6-12 in sweeps		51
4/22/2	Planter, double disk opnr	Corn, grain, high yield	52
10/23/2	Harvest, killing crop 50pct standing stubble		80
12/10/2	Chisel, st. pt.		54
4/8/3	Cultivator, field 6-12 in sweeps		55
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	57
10/12/3	Harvest, killing crop 50pct standing stubble		73



Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI		P Index
5078172EP4200 -	8.30	0.05	1.00	0.50	1.20	1.18	0.29		2.15	0.63	0.09	1.53		1.00	0.15	0.15		1.98

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 50781736P2300 (Liquid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\93E2 Shelby-Adair complex, 14 to 18 percent slopes, moderately erode\Shelby loam moderately eroded 70%

Slope length (horiz): 97 ft

Avg. slope steepness: 16 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*\CCB South	vegetations\Corn, grain, high yield	bushels	128.00
managements\CMZ 04\c.Other Local Mgt Records*\CCB South	vegetations\Corn, grain, high yield	bushels	128.00
managements\CMZ 04\c.Other Local Mgt Records*\CCB South	vegetations\Soybean, mw 30 in rows	bu	37.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 11 t/ac/yr

Detachment on slope: 11 t/ac/yr

Soil loss for cons. plan: 11 t/ac/yr

Sediment delivery: 11 t/ac/yr

Crit. slope length: 97 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure injector, liquid low disturb.30 inch		69
4/12/1	Cultivator, field 6-12 in sweeps		44
4/24/1	Planter, double disk opnr	Corn, grain, high yield	40
10/23/1	Harvest, killing crop 50pct standing stubble		75
11/10/1	Manure injector, liquid low disturb.30 inch		84
12/2/1	Chisel, st. pl.		56

4/2/2	Cultivator, field 6-12 in sweeps		50
4/22/2	Planter, double disk opnr	Corn, grain, high yield	50
10/23/2	Harvest, killing crop 50pct standing stubble		78
12/10/2	Chisel, st. pt.		52
4/8/3	Cultivator, field 6-12 in sweeps		53
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	56
10/12/3	Harvest, killing crop 50pct standing stubble		70



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall P Index									
	Gross Erosion	x	Sediment Trap Factor	x	SDR	x	Buffer Factor		x	Enrichment Factor	x	STP Factor		=	Erosion PI	RCN Factor			x	(STP Factor	+	P App Factor) =	Runoff PI	Flow Factor	x
5078:736P2300 -	11.00		0.05		1.00		1.20		1.10		0.93		0.57	1.58		0.33		0.09		0.66	1.00		0.08		0.08		1.30

Liquid



RUSLE2 Profile Erosion Calculation Record

Info: 79781619P2200**Liquid**

File: profiles\default

Inputs:

Location: USA\Iowa\Poweshiek County

Soil: Poweshiek County, Iowa\281C2 Otley silty clay loam, 5 to 9 percent slopes, moderately eroded\Otley silty clay loam moderately eroded 95%

Slope length (horiz): 180 ft

Avg. slope steepness: 6.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\CC South	vegetations\Corn, grain	bushels	208.00

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 2.7 t/ac/yr

Detachment on slope: 2.7 t/ac/yr

Soil loss for cons. plan: 2.7 t/ac/yr

Sediment delivery: 2.7 t/ac/yr

Crit. slope length: 180 ft

Surf. cover after planting: 65 %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
11/10/0	Manure injector, liquid low disturb.30 inch		95
11/15/0	Chisel, sl. pl.		75
5/10/1	Cultivator, field 6-12 in sweeps		64
5/11/1	Planter, double disk opnr	Corn, grain	65
10/20/1	Harvest, killing crop 50pct standing stubble		90



v. 1/23/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tilth Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI		P Index
79781619P2200 --	2.70	1.00	0.43	1.00	1.10	0.87	1.13		1.40	0.26	0.09	0.48		1.00	0.08	0.08	1.59	

Legum



RUSLE2 Profile Erosion Calculation Record

Info: 50781726P3400 (Solid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\24E2 Shelby loam, 14 to 18 percent slopes, moderately eroded\Shelby loam moderately eroded 90%

Slope length (horiz): 97 ft

Avg. slope steepness: 16 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records\CBB South	vegetations\Corn, grain, high yield	bushels	139.00
managements\CMZ 04\c.Other Local Mgt Records\CBB South	vegetations\Corn, grain, high yield	bushels	139.00
managements\CMZ 04\c.Other Local Mgt Records\CBB South	vegetations\Soybean, mw 30 in rows	bu	40.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 10 t/ac/yr

Detachment on slope: 10 t/ac/yr

Soil loss for cons. plan: 10 t/ac/yr

Sediment delivery: 10 t/ac/yr

Crit. slope length: 97 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op. %
10/30/0	Manure spreader, solid and semi-solid		70
4/12/1	Cultivator, field 6-12 in sweeps		48
4/24/1	Planter, double disk opnr	Corn, grain, high yield	44
10/23/1	Harvest, killing crop 50pct standing stubble		77
11/10/1	Manure spreader, solid and semi-solid		80
12/2/1	Chisel, st. pt.		54

.2/2	Cultivator, field 6-12 in sweeps		52
4/22/2	Planter, double disk opnr	Corn, grain, high yield	55
10/23/2	Harvest, killing crop 50pct standing stubble		80
12/10/2	Chisel, st. pt.		55
4/8/3	Cultivator, field 6-12 in sweeps		55
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	58
10/12/3	Harvest, killing crop 50pct standing stubble		73



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillth Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI		
50781726P3400 -	10.00	1.00	0.14	0.50	1.20	1.05	0.87		1.58	0.48	0.22	1.10		0.00	0.08	0.00		1.98

Solid



RUSLE2 Profile Erosion Calculation Record

Info: 50781726P4400 (Solid)

File: prof:es\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\281D2 Otley silty clay loam, 9 to 14 percent slopes, moderately eroded\Otley silty clay loam moderately eroded 85%

Slope length (horiz): 150 ft

Avg. slope steepness: 12 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	166.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	166.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	48.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 6.3 t/ac/yr

Detachment on slope: 6.3 t/ac/yr

Soil loss for cons. plan: 6.3 t/ac/yr

Sediment delivery: 6.3 t/ac/yr

Crit. slope length: 150 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
10/30/0	Manure spreader, solid and semi-solid		76
4/12/1	Cultivator, field 6-12 in sweeps		54
4/24/1	Planter, double disk opnr	Corn, grain, high yield	49
10/23/1	Harvest, killing crop 50pct standing stubble		82
11/10/1	Manure spreader, solid and semi-solid		84
12/2/1	Chisel, st. pt.		59

2/2	Cultivator, field 6-12 in sweeps		57
4/22/2	Planter, double disk opnr	Corn, grain, high yield	60
10/23/2	Harvest, killing crop 50pct standing stubble		84
12/10/2	Chisel, st. pt.		59
4/8/3	Cultivator, field 6-12 in sweeps		60
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	62
10/12/3	Harvest, killing crop 50pct standing stubble		78



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
USDA National Soil Tillage Laboratory
USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall P Index
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI		
50781725P44CC --	6.30	0.05	1.00	1.00	1.10	0.92	0.32		1.55	0.31	0.22	0.84		0.00	0.08	0.00	1.16	

solid



RUSLE2 Profile Erosion Calculation Record

Info: 50781735P7000 (Solid)

File: profiles\default

Inputs:

Location: USA\Iowa\Jasper County

Soil: Jasper County, Iowa\179E2 Gara loam, 14 to 18 percent slopes, moderately eroded\Gara loam moderately eroded 85%

Slope length (horiz): 97 ft

Avg. slope steepness: 16 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	131.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Corn, grain, high yield	bushels	131.00
managements\CMZ 04\c.Other Local Mgt Records*CCB South	vegetations\Soybean, mw 30 in rows	bu	38.000

Contouring: b. absolute row grade 2 percent

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Subsurface drainage: (none)

Adjust res. burial level: Normal res. burial

Outputs:

T value: 5.0 t/ac/yr

Soil loss erod. portion: 12 t/ac/yr

Detachment on slope: 12 t/ac/yr

Soil loss for cons. plan: 12 t/ac/yr

Sediment delivery: 12 t/ac/yr

Crit. slope length: 97 ft

Surf. cover after planting: -- %

Avg. ann. forage harvest: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op. %
10/30/0	Manure spreader, solid and semi-solid		69
4/12/1	Cultivator, field 6-12 in sweeps		47
4/24/1	Planter, double disk opnr	Corn, grain, high yield	43
10/23/1	Harvest, killing crop 50pct standing stubble		76
11/10/1	Manure spreader, solid and semi-solid		79
12/2/1	Chisel, st. pt.		53

.. 2/2	Cultivator, field 6-12 in sweeps		51
4/22/2	Planter, double disk opnr	Corn, grain, high yield	54
10/23/2	Harvest, killing crop 50pct standing stubble		79
12/10/2	Chisel, st. pt.		53
4/8/3	Cultivator, field 6-12 in sweeps		54
5/8/3	Planter, double disk opnr	Soybean, mw 30 in rows	56
10/12/3	Harvest, killing crop 50pct standing stubble		71



v. 1/22/2007

Iowa Phosphorus Index

Credits: Iowa State University
 USDA National Soil Tillage Laboratory
 USDA Natural Resource Conservation Service

Field Number	Erosion							+	Runoff				+	Tile / Subsurface Recharge			=	Overall
	Gross Erosion	Sediment Trap Factor	SDR	Buffer Factor	Enrichment Factor	STP Factor	Erosion PI		RCN Factor	STP Factor	P App Factor	Runoff PI		Flow Factor	STP Factor	Tile/Sub PI		
50781735P7002	12.00	0.05	1.00	1.00	1.10	0.97	0.64		2.15	0.37	0.22	1.26		0.00	0.00	0.00	1.85	

Solid

Manure Management Plan Form

Appendix A8: Iowa Ag Statistics County Corn and Soybean Yield Averages, 2012-2016

(continued)

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County	Corn			Soybeans		
	5-yr. avg. yield (bu/ac)	5-yr. ave. yield + 10% (bu/ac)	Avg. yield of 4 highest (bu/ac)	5-yr. avg. yield (bu/ac)	5-yr. ave. yield + 10% (bu/ac)	Avg. yield of 4 highest (bu/ac)
Harrison	173	190	183	49	54	52
Henry	173	191	184	53	58	55
Howard	173	190	182	51	56	53
Humboldt	176	193	183	50	55	52
Ida	188	206	197	57	63	59
Iowa	181	199	192	53	58	55
Jackson	174	191	189	54	60	56
Jasper	183	201	191	53	59	56
Jefferson	163	179	178	48	52	49
Johnson	175	192	185	51	56	52
Jones	175	192	187	55	60	56
Keokuk	171	188	185	51	56	53
Kossuth	183	201	187	52	58	55
Lee	160	176	171	49	54	52
Linn	174	191	186	52	57	54
Louisa	178	196	183	52	58	55
Lucas	137	151	150	44	48	46
Lyon	186	204	192	58	64	60
Madison	154	169	167	47	51	49
Mahaska	177	195	188	52	57	54
Marion	164	180	176	50	55	51
Marshall	184	202	190	56	62	58
Mills	168	185	178	49	54	52
Mitchell	174	192	185	51	56	53
Monona	160	176	171	49	54	52
Monroe	141	155	160	44	48	48
Montgomery	164	180	172	50	55	51
Muscatine	176	194	182	55	60	57
O'Brien	190	209	198	58	64	60
Osceola	187	206	191	54	59	55
Page	161	177	172	51	56	52
Palo Alto	180	197	183	51	56	54
Plymouth	180	198	197	55	60	59
Pocahontas	183	202	188	51	56	53
Polk	172	189	179	50	55	52
Pottawattamie	179	197	191	52	57	56
Poweshiek	182	200	189	52	57	54
Ringgold	137	151	154	42	47	45
Sac	174	192	185	53	58	56
Scott	181	199	194	58	64	60
Shelby	183	202	195	54	59	56
Sioux	188	207	199	60	66	63

Manure Management Plan Form

Appendix A8: Iowa Ag Statistics County Corn and Soybean Yield Averages, 2012-2016

(continued)

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County	Corn			Soybeans		
	5-yr. avg. yield (bu/ac)	5-yr. ave. yield + 10% (bu/ac)	Avg. yield of 4 highest (bu/ac)	5-yr. avg. yield (bu/ac)	5-yr. ave. yield + 10% (bu/ac)	Avg. yield of 4 highest (bu/ac)
Story	173	190	182	49	54	51
Tama	180	198	185	55	60	57
Taylor	147	162	161	45	50	48
Union	150	165	166	45	49	48
Van Buren	159	175	171	47	52	49
Wapello	159	175	175	48	53	50
Warren	155	171	168	48	53	50
Washington	177	195	188	53	58	55
Wayne	137	151	157	41	45	45
Webster	176	193	185	50	55	53
Winnebago	177	195	184	51	56	54
Winneshieck	179	196	188	52	57	53
Woodbury	177	194	187	52	57	55
Worth	174	191	181	51	56	53
Wright	178	196	184	50	55	52

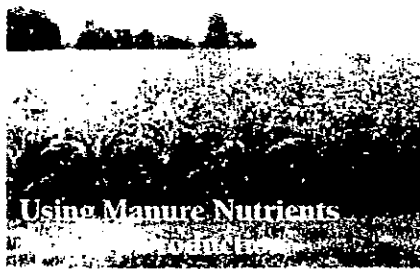
Crop Year 2018

Manure Management Plan Form

Appendix A8: Iowa Ag Statistics County Corn and Soybean Yield Averages, 2012-2016

Page 7

County	Corn			Soybeans		
	5-yr. avg. yield (bu/ac)	5-yr. ave. yield + 10% (bu/ac)	Avg. yield of 4 highest (bu/ac)	5-yr. avg. yield (bu/ac)	5-yr. ave. yield + 10% (bu/ac)	Avg. yield of 4 highest (bu/ac)
Adair	156	171	168	48	53	51
Adams	157	173	169	48	53	50
Allamakee	174	192	180	53	58	54
Appanoose	133	146	155	41	45	45
Audubon	171	188	185	52	57	55
Benton	173	190	184	53	58	55
Black Hawk	171	189	183	52	57	54
Boone	177	194	184	50	56	53
Bremer	176	194	187	53	59	55
Buchanan	175	193	184	53	58	54
Buena Vista	177	195	184	51	57	54
Butler	174	191	187	51	56	53
Calhoun	172	189	182	49	54	52
Carroll	166	182	181	51	56	54
Cass	169	186	181	51	56	54
Cedar	183	202	189	56	62	58
Cerro Gordo	169	186	180	50	55	53
Cherokee	191	210	200	59	65	61
Chickasaw	173	190	185	50	55	51
Clarke	136	150	151	42	46	44
Clay	182	200	186	53	58	55
Clayton	183	201	190	56	62	58
Clinton	185	203	196	56	62	57
Crawford	177	195	188	54	60	56
Dallas	171	188	182	50	55	52
Davis	143	157	166	44	48	47
Decatur	140	154	160	42	46	45
Delaware	178	195	189	54	60	57
Des Moines	179	197	188	53	58	54
Dickinson	173	190	176	50	55	51
Dubuque	188	207	197	57	62	57
Emmet	180	198	184	49	54	51
Fayette	179	197	187	54	59	55
Floyd	170	187	181	50	55	53
Franklin	180	198	188	51	56	53
Fremont	169	186	178	51	56	53
Greene	168	184	178	49	54	52
Grundy	185	203	190	57	63	58
Guthrie	159	175	171	48	52	50
Hamilton	171	188	180	49	54	52
Hancock	178	195	186	51	57	54
Hardin	179	197	184	52	57	53



Using Manure Nutrients

Nutrients in Animal Manure
Manure can supply nutrients required by crops and replenish nutrients removed from soil by crop harvest. Since manure contains multiple nutrients, applications should consider not only what is needed for the crop to be grown but also how the ratio of nutrients in manure could affect soil test levels. This ensures adequate nutrient supply and reduces potential for over- or under-application and subsequent buildup or depletion in the soil. Good manure nutrient management should consider crop nutrient and long-term impacts on crop nutrient supply and soil nutrients.

Manure has characteristics that make nutrient management different and sometimes more complicated than fertilizer. These include a mix of organic and inorganic nutrient forms; variation in nutrient concentration and form; variation in dry matter and resultant handling as a liquid or solid; and relatively low nutrient concentration requiring large application volumes. Since manure nutrient composition can vary significantly, sampling and laboratory analysis are always needed, while with fertilizer nutrient concentrations are provided as a guaranteed analysis.

The manure nutrient concentration varies considerably between animal species, dietary options, animal genetics, animal performance, production management and facility type, and collection, bedding, storage, handling, and equating for land application. Use of average or "book" nutrient values can be helpful for designing a new facility and creating manure management plans but is not very helpful in determining specific manure nutrient supply or application rates due to wide variation in nutrient concentrations between production facilities. For example, a recent sampling across swine finishing facilities found a range in total N from 32 to 79 lb N/1,000 gal, P from 17 to 54 lb P₂O₅/1,000 gal, and K from 23 to 48 lb K₂O/1,000 gal. A similar or larger range can be found with other manure types. Nutrient analyses often vary greatly as storage facilities are emptied or manure is stockpiled, and also among multiple samples collected from loads during land application. Therefore, collecting multiple manure samples and maintaining a history of analysis results will improve use of manure nutrients.

For determining manure application rates and equating to crop fertilization requirements, it is most helpful if manure analyses give N, P₂O₅, and K₂O based on an as-received or wet basis in lb per ton or lb per 1,000 gal units. It is beyond the scope of this publication to give detailed manure sampling and laboratory analysis

recommendations. These can be found in the extension materials listed on page 7. If manure analyses are provided from the laboratory in other units, they must be converted to these units. See the LSU Extension manure sampling publication for appropriate conversion factors. If manure average nutrient values or methods to estimate manure nutrient concentrations based on excretion are of interest or needed for planning purposes, those can be found in the Midwest Plan Service bulletins listed on page 7.

Manure Nutrient Availability for Crops

Nutrient management guidelines use the words "manure nutrient availability" when suggesting manure applications to supply nutrients needed by crops. However, the meaning of "availability" for manure nutrients often is not clear or is use not consistent. Available is defined as present or ready for immediate use, or present in such chemical or physical form as to be usable (as by a plant). The main reasoning for using the term "available" in describing manure nutrients is that some portions are in forms that cannot be used by plants immediately upon application to soil and have to be converted to a form that plants can take up. The term "available" is not typically applied to fertilizers because most include chemical forms that plants can take up or are quickly converted upon application to soil. According to this definition, most inorganic fertilizers contain basically

100 percent crop-available nutrients. For example, anhydrous ammonia dissolves in water and rapidly changes to ammonium, urea hydrolyzes to ammonium within a few days, and ammonium is further transformed to nitrate by soil microorganisms. Monoammonium phosphate (MAP) and diammonium phosphate (DAP) are highly soluble in water and dissolve to ammonium and orthophosphate. Potassium chloride (KCl, potash), dissolves in water to potassium (K⁺) and chloride (Cl⁻) ions. Both orthophosphate and K ions are taken up by plants. Because all K contained in manure is in the K⁺ ionic form, manure K is readily crop available in all manure sources.

For manure N and P, there is usually a mix of organic and inorganic materials that varies among manure

sources, production systems, bedding, storage, and handling. This variety in forms of N and P in manure contributes to greater uncertainty in manure nutrient management compared with fertilizers. The ratio of inorganic (mainly ammonium) and organic N varies considerably with the manure source. This was shown, for example, by on-farm research that included manure sampling and analysis from swine and poultry operations. The fraction of total N as ammonium N was almost 100 percent for swine manure from the liquid portion of anaerobic lagoons, 65 to 100 percent (average 84 percent) for liquid swine manure from under-building pits or storage tanks, and 10 to 40 percent (average 20 percent) for solid poultry manure. The large ammonium-N concentration and organic-N fraction that is easily mineralized after applica-



tion to soil explain why N in liquid swine manure is considered "highly" crop available and almost comparable to fertilizer N. Other manures have lower ammonium-N concentrations and greater (and longer in degraded) organic materials due to feeding swine feed materials. Considerable P in swine manure is orthophosphate and calcium phosphate compounds (derived both from feed and mineral supplements added to rations) that are soluble or dissolve quickly once applied to soil. The rest is organic P, which varies greatly in complexity and reaction in soil. Testing manure for ammonium-N or water-soluble N can be a way of estimating immediately available N. Unfortunately, a similarly useful test does not exist for P. Therefore, the availability estimate for manure N and P can be, and often is, less than 100 percent of total N and P.

Manure Nutrient Supply
There is a clear difference between crop availability of nutrients in long supply of nutrients. Significant amounts of plant available forms of nutrients in both fertilizer and manure might be lost and become unavailable to crops after application. For example, N can be lost through processes such as leaching, volatilization, or denitrification while P can be lost through erosion and surface runoff. Also, these nutrients can be converted too short or long periods of time into forms not usable by plants through processes such as immobilization in organic materials for N and

Manure nutrient loss, application rate, and distribution uncertainties usually are not included in crop nutrient availability estimates. Instead, they are handled by suggested management practices. Not all published guidelines are consistent in this regard and, therefore, suggested crop nutrient availability do vary between states and regions. In this publication, use of "availability" refers to manure nutrients potentially available for plant uptake (with no losses) by the first crop after application or beyond, and percent nutrient availability values provided correlate to those for commonly used fertilizers. The guidelines in this publication assume supply issues are handled in the best way possible as is done with fertilizers. It is important to understand that for successful manure nutrient management, in many instances supply issues are as, or more, critical than estimates of nutrient availability.

Improving crop nutrient supply with manure can be achieved by understanding the issues related to manure nutrient analysis, application rate, application distribution, and the benefits and risks related to management practices such as application timing and placement that influence potential losses. Additionally, use of available tools to determine initial soil nutrient levels and adjust application rates can help provide for adequate manuring nutrient supply when either manure or fertilizer is used. These tools include commonly used pre-plant soil testing for P and K, estimator of N application rate based

on response trial data (such as

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Improving crop nutrient supply with manure can be achieved by understanding the issues related to manure nutrient analysis, application rate, application distribution, and the benefits and risks related to management practices such as application timing and placement that influence potential losses. Additionally, use of available tools to determine initial soil nutrient levels and adjust application rates can help provide for adequate manuring nutrient supply when either manure or fertilizer is used. These tools include commonly used pre-plant soil testing for P and K, estimator of N application rate based

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on response trial data (such as

the Corn Nitrogen Rate Calculator), and tools to help determine need for additional N after planting corn such as the late-spring soil nitrate test and in-season crop sensing for N stress.

Manure Nutrient Application Recommendations
To determine manure application rates, the following information is required: needed crop nutrient fertilization rate for N, P, K, or other deficient nutrients; manure type; nutrient analysis; nutrient crop availability; and method of application. Nutrient recommendations for crops are provided in other Iowa State University Extension publications and are not repeated here (see list on page 7).

Once the needed nutrient application rate is determined, the manure rate to supply crop available nutrients is calculated based on the specific manure source being used.

An additional consideration is what portion of the needed fertilization will be supplied from manure—to meet the full crop nutrient requirement, or a partial requirement from manure and the remaining from fertilizer. This is an important consideration because manure contains multiple nutrients and a manure rate to supply the most deficient nutrient can over-supply other nutrients. Also, manure application to meet the least deficient or most environmentally restrictive nutrient application can result in under-supply of other nutrients.

In these cases, use of fertilizers in addition to manure application is necessary to appropriately meet all nutrient application requirements

Manure Nutrient Availability Values
Many of the manure N, P, and K crop availability estimates listed in Table 1 are derived from research trials conducted in Iowa. However, when local research is lacking, applicable information was taken from research conducted in other states. For manure sources not listed in the table, values based on manure with similar characteristics can provide a reasonable estimate.

Table 1. First-year nutrient availability for different animal manure sources.

Manure Source	Nitrogen ^a	Phosphorus ^b	Potassium ^c
	Percent of Total Nutrient Applied		
Beef cattle (solid or liquid)	30-40	60-100	90-100
Dairy (solid or liquid)	30-40	60-100	90-100
Liquid swine (anaerobic pit)	90-100	90-100	90-100
Liquid swine (anaerobic lagoon)	90-100 ^d	90-100 ^d	90-100
Poultry (all species)	50-60	90-100	90-100

^aThe estimate for N availability do not account for potential volatile N losses during and after land application. Conversion factors for soluble acids, bedding type and amount, and both sampling and analysis.

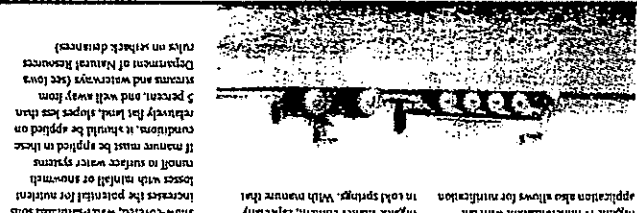
^bThe ranges in P and K availability are provided to account for variation in sampling and analysis, and for needed P and K supply with different soil test levels. A small portion of manure P may not be available immediately after application, but all P is potentially available over time. Use lower P and K availability values for soils testing in the Very Low and Low soil test interpretation categories, where large yield loss could occur if insufficient P or K is applied and a reasonable buildup is desirable. Use 100% when manure is applied to maintain soil test P and K in the Optimum soil test category, when the probability of a yield response is small.

^cValues apply for the liquid portion of manure manure in lagoons; the N and P availability will be less and difficult to estimate with solid waste.



While manure N may become crop available over multiple years for some sources, there should not be an expectation that all of the manure N will eventually become crop available. This happens because low organic N will not have second-year crop available N. The manure N that is available in the first year is converted to ammonia, which is then converted to nitrate. This conversion is rapid and occurs over a short period of time. The manure N that is converted to nitrate is available to plants as nitrate-N. The manure N that is converted to nitrate is also available to plants as nitrate-N. The manure N that is converted to nitrate is also available to plants as nitrate-N.

When nitrogen is applied to a field, it is available to plants as nitrate-N. The manure N that is converted to nitrate is also available to plants as nitrate-N. The manure N that is converted to nitrate is also available to plants as nitrate-N. The manure N that is converted to nitrate is also available to plants as nitrate-N. The manure N that is converted to nitrate is also available to plants as nitrate-N.



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Table 2. Correction Factors for Crop Production

Application Method	Correction Factor
Direct Injection	0.98-1.00
Bandcast (Liquid)	0.95-0.99
Bandcast (Solid)	0.75-0.90
Broadcast	0.70-0.85
Incorporation	0.60-0.75

Apply the manure total N rate applied over the application correction factor to determine the portion of total manure N remaining.

Adapted from *Manure Management Handbook*, 2nd Edition, by the National Center for Manure Management Research, 2003.

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Using Manure Nutrients for Crop Production

1. Sample calculation of Manure Application Rates:
 Nitrogen, P, and K fertilization requirements in these examples are determined from appropriate extension publications and Web-based tools listed at the right.

1. Sample 1
- Manure source: liquid waste treatment liming under/building pit
 - Manure analysis: 40 lb N/1,000 gal, 23 lb P₂O₅/1,000 gal, 35 lb K₂O/1,000 gal
 - Intended crop: corn in a corn-soybean rotation
 - Soil tests: 10 ppm Bray P-1 (Optimum), 104 ppm Ammonium Acetic K (Low) (Optimum)
 - Crop yield and P and K removal for determining manure rates needed to maintain the Optimum soil test category: 200 bushels corn yields 75 lb P₂O₅/acre and 60 lb K₂O removed
 - Manure rate based on corn N fertilization requirement of 135 lb N/acre
 - Manure application: reduced low N for N, P, and K.
 - Manure N volatilization correction factor: 0.9
 - Manure rate: 120 lb P₂O₅/acre = (95 lb P₂O₅/acre × 1.00) = 1.7 tons/acre
 - Manure available N and K nutrients applied: 1.7 tons/acre × (72 lb N/ton × 0.90) × 0.90 = 60 lb N/acre and 1.7 tons/acre × (154 lb K₂O/ton × 1.00) = 92 lb K₂O/acre
 - Corn N fertilization need and K needed for the corn and soybean crops with a Low soil test category: 130 lb N/acre and 172 lb K₂O/acre
 - Crop available N and K applied with manure is not adequate for N, need additional 70 lb fertilizer N/acre (130 lb N/acre - 60 lb N/acre) and applied K is not adequate for the corn and soybean crops, need additional 80 lb K₂O/acre (172 - 92 lb K₂O/acre) from fertilizer
2. Sample 2
- Manure source: solid by-product from a liquid waste treatment
 - Manure analysis: 72 lb N/ton, 60 lb P₂O₅/ton, 54 lb K₂O/ton
 - Intended crop: corn-soybean rotation
 - Soil tests: 18 ppm Bray P-1 (Optimum), 120 ppm Ammonium Acetic K (Low)
 - Manure rate based on P requirement for the crop maximum at 120 lb P₂O₅/acre
 - Manure application: low N, incorporated when first crop
 - Manure nutrient availability: 55 percent for N, 100 percent for P and K
 - Manure N volatilization correction factor: 0.90
 - Manure rate: 120 lb P₂O₅/acre = (95 lb P₂O₅/acre × 1.00) = 1.7 tons/acre
 - Manure available N and K nutrients applied: 1.7 tons/acre × (72 lb N/ton × 0.55) × 0.90 = 60 lb N/acre and 1.7 tons/acre × (54 lb K₂O/ton × 1.00) = 92 lb K₂O/acre
 - Corn N fertilization need and K needed for the corn and soybean crops with a Low soil test category: 130 lb N/acre and 172 lb K₂O/acre
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- Additional Resources
- PM 1688 A General Guide for Crop Nutrient and Liming Recommendations in Iowa
 - PM 287 Take a Good Sample to Help Make Good Decisions
 - PM 2015 Concepts and Rationale for Regional Nitrogen Rate Guidelines for Corn
 - PM 1714 Nitrogen Fertilizer Recommendations for Corn in Iowa
 - PM 2026 Sensing Nitrogen Stress in Corn
 - PM 1594 Cornstalk Tilling to Evaluate Nitrogen Management
 - PM 15188 How to Sample Manure for Nutrient Analysis
 - A3769 Recommended Methods of Manure Analysis (University of Wisconsin)
 - MWPS-18-S1 Manure Characteristics Section 1 (Midwest Plan Service)
 - MWPS-18 Livestock Waste Facilities Handbook, Third Edition (Midwest Plan Service)
 - Corn Nitrogen Rate Calculator <http://extension.agron.iastate.edu/soilfertility/shortcuts.aspx>

Using Manure Nutrients for Crop Production

Summary

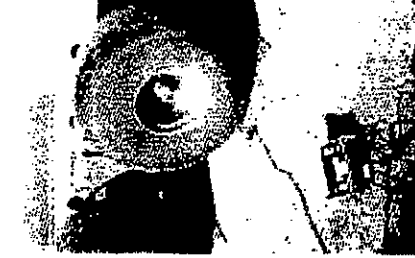
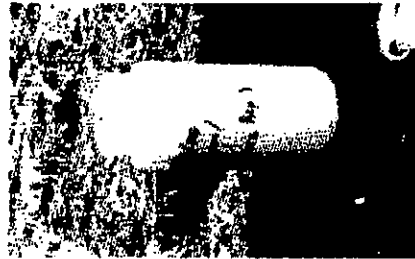
- Carefully manage the nutrients in animal manure as you would manage fertilizer.
 - Have representative manure samples analyzed to determine nutrient concentration. At a minimum, samples should be analyzed for moisture (dry matter) and total N, P, and K. For additional information on N composition, samples can be analyzed for ammonium. Maintain a manure analysis history for production facilities.
 - Set the manure application rate according to crop fertilization requirements and for the crop availability of manure N, P, and K.
 - Adjust manure rates for estimated N volatilization.
- For manure application rates, consider the crop N, P, and K fertilization requirements and field P-index ratings, but do not exceed the crop N fertilization need.
 - Consider the nutrient needs of crop rotations rather than just individual crops, which is especially important for P and K management.
 - Allocate manure to fields based on soil tests and crops to be grown.
 - Fall applications of manure should not be made until the soil temperature is 50° F and cooling, especially for manure sources that have a large portion of N as ammonium.
 - Do not apply manure to snow-covered, frozen, or water-saturated sloping ground to reduce risk of nutrient loss and water quality impairment.

Prepared by John E. Sawyer and Antonio P. Molino, professors of agronomy and extension soil fertility specialist, Iowa State University.

PEER REVIEWED This publication was peer-reviewed by three independent reviewers using a double-blind process.

and junior for all prohibitive discrimination to all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. No all prohibited laws apply to all programs. Many records can be made available by electronic means for: USDA, Office of Civil Rights, Room 128-05, Wilentz Building, 14th and Independence Avenue, NW Washington, DC 20250-9410 or call 202-720-9494

based in the University of Cooperative Extension work. Act of May 8 and June 30, 1914 in cooperation with the U.S. Department of Agriculture, Jack M. Payne, Director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa





BROOKER CORPORATION



PLUMBING, HEATING & AIR CONDITIONING
200 N. 8TH AVE. E.
P.O. BOX 1022
NEWTON, IOWA 50208
PHONE: 641-792-2387 FAX: 641-792-4748
www.brookermech.com



PURCHASER: Jasper County
LOCATION: PO Box 944

CITY: Newton

PHONE: 521-8844
STATE: IA **ZIP:** 50208

ATTN: Adam Sparks

RE: Furnace & A/C Replacement
Jasper County Engineer's Office

We propose to furnish material and labor for the referenced project:

- Install two Ruud U96VA1002521MSB(A) High Efficient Furnaces
- 2-Stage 96% Efficient 100,000BTU's ECM Motor
- Install two Ruud RA1660AJ1NA Condensing Units
- 5-Ton R-410A Freon 16 S.E.E.R. / 13 EER
- Install two Aspen CC60E44-245L-023 Vertical Coils
- Install two 2-Stage Programmable Thermostats
- Gas Lines
- Low Voltage Wiring
- Connect to existing systems

Total Price \$17,207.00

Rebates:

- Black Hills Energy will rebate \$600 for a 96% efficient furnace - $\$600 \times 2 = \$1,200.00$
- Black Hills Energy will rebate \$70 for programmable thermostats - $\$70 \times 2 = \140.00
- *Alliant Energy will rebate \$500 for a 16 S.E.E.R./13 EER a/c system - $\$500 \times 2 = \$1,000.00$
- *Alliant Energy will rebate \$100 for a ECM blower motor - $\$100 \times 2 = \200.00
- *Alliant Energy will rebate \$50 for a programmable thermostat - $\$50 \times 2 = \100.00

***Note: For this rebate to be effective, your ductwork system must pass "SAVE" testing**

Thank you for the opportunity to quote this project. If you have any questions, please contact our office.
EXISTING MATERIALS BEING REPLACED TO BECOME PROPERTY OF: BROOKER CORPORATION

OUR WORK WILL BE PERFORMED IN THE HIGHEST WORKMAN-LIKE MANNER AND WILL COMPLY WITH EXISTING GOVERNING CODES AND REGULATIONS. ALL LABOR FURNISHED BY US WILL BEAR A ONE YEAR WARRANTY FROM DATE OF INSTALLATIONS. FIXTURES AND EQUIPMENT FURNISHED BY US WILL CARRY WARRANTIES OF MANUFACTURES AND WILL BE EXPLAINED PRIOR TO ACCEPTANCE OF PROPOSAL OR AS LISTED BELOW.

PRICE AND TERMS: THE BELOW AMOUNT IS DUE AND PAYABLE UPON COMPLETION OF WORK PERFORMED. INTEREST AT 1.5% PER MONTH(18% ANNUALLY) WILL BE CHARGED ON ALL PAST DUE AMOUNTS WITH A MINIMUM CHARGE OF 50 CENTS FOR ANY BALANCE UNDER \$35.00.

THE PRICE IS SUBJECT TO CHANGE AFTER 30 DAYS FROM THE DATE OF THE PROPOSAL UNLESS SIGNED BY BOTH THE CONTRACTOR AND PURCHASER.

CONTRACTOR: BROOKER PLUMBING & HTG.

PURCHASER:

BY: Terry Purvis

DATE: 06/26/17

BY:

DATE:



BROOKER CORPORATION



PLUMBING, HEATING & AIR CONDITIONING
200 N. 8TH AVE. E.

P.O. BOX 1022
NEWTON, IOWA 50208

PHONE: 641-792-2387 FAX: 641-792-4748

www.brookermech.com



PURCHASER: Jasper County
LOCATION: PO Box 944

CITY: Newton

PHONE: 521-8844

STATE: IA **ZIP:** 50208

ATTN: Adam Sparks

RE: Jasper County Engineer's Office
West Basement Area

We propose to furnish material and labor for the referenced project:

- Install Goodman ARUF37C14 Air Handler
- Install Goodman 5kw Heat Strip
- Install Goodman GSX140361 Condensing Unit
3-Ton R410A Freon 14 S.E.E.R.
- Flush existing Lineset
- Return Air Drop
- Connect to existing system

Total Price \$4,216.00

Brooker

Total \$ 21,423

for all 3 units

Subtract rebates after installed

Thank you for the opportunity to quote this project. If you have any questions, please contact our office.
EXISTING MATERIALS BEING REPLACED TO BECOME PROPERTY OF: BROOKER CORPORATION

OUR WORK WILL BE PERFORMED IN THE HIGHEST WORKMAN-LIKE MANNER AND WILL COMPLY WITH EXISTING GOVERNING CODES AND REGULATIONS. ALL LABOR FURNISHED BY US WILL BEAR A ONE YEAR WARRANTY FROM DATE OF INSTALLATIONS. FIXTURES AND EQUIPMENT FURNISHED BY US WILL CARRY WARRANTIES OF MANUFACTURES AND WILL BE EXPLAINED PRIOR TO ACCEPTANCE OF PROPOSAL OR AS LISTED BELOW.

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CONTRACTOR: BROOKER PLUMBING & HTG.

PURCHASER:

BY: Terry Purvis

DATE: 06/27/17

BY:

DATE:

Van Ryswyk Plumbing & Heating, Inc.

PO Box 520
 Monroe, IA 50170

Estimate

Date	Estimate #
6/28/2017	1930

Name / Address
Jasper County Maintenance 113 West 2nd Street South Newton, IA 50208 USA

Description	Qty	Rate	U/M	Project
				engineer office
				Total
Provide and install 2- 95%, 100,000 2 stage Armstrong furnace mod# a96df2e110 with ECM blower motor Provide and install 2 5ton 15.5 SEER Armstrong AC condensers and coils mod.# 4scu14160p Provide and install new line sets and materials as per code Labor SAVE testing for rebates Provide and install programmable and wifi stats @Engineer office				17,140.38
<i>Van Ryswyk</i> Total \$21,683.88 for all 3 units Subtract rebates after installed				

We appreciate your business	Subtotal	\$17,140.38
	Sales Tax (7.0%)	\$0.00
	Total	\$17,140.38

Van Ryswyk Plumbing & Heating, Inc.

Estimate

PO Box 520
 Monroe, IA 50170

Date	Estimate #
6/28/2017	1931

Name / Address
Jasper County Maintenance 113 West 2nd Street South Newton, IA 50208 USA

Project

Description	Qty	Rate	U/M	Total
Install Armstrong air handler and 15KW electric heat strip Install 3 ton Concord AC condenser Mod # 4ac14136 14 SEER Install materials to meet code including new line set Labor SAVE test for rebates @ Maintenance shed				4,543.50

We appreciate your business	Subtotal	\$4,543.50
	Sales Tax (7.0%)	\$0.00
	Total	\$4,543.50

Mechanical System Recommendation



Date: 6/27/2017
 Job Name: West Furnace & A.C. Replacement
 At:

To: Jasper Co. Maintenance Bldg
 Address:

Items Included In Recommendation			
Installation Material	Yes	Cutting	No
Installation Labor	Yes	Patching	No
Electrical Wiring	Yes	Digging	No
Necessary Plumbing - Condensate		Required Permits	Yes
Gas Piping	No	Vent Piping	No

We recommend the following equipment:

Carrier fan coil model FB4CNP042L00, this model uses an ECM blower motor, TXV refrigeration coil and has 3.5-ton blower capacity. A field installed electric heat package will be installed.

Carrier air conditioner model 24ABC636A003, 15.5 SEER with 34,200 BTU cooling capacity. This model uses Puron "ozone-friendly" refrigerant.

Honeywell digital and programmable thermostat model T6 Pro.

New easily accessible 16x25x1 air filter rack with 5' of 25x10 duct.

Commercial Warranties:

5 year limited on compressor and parts
 1 year limited on labor

Commercial Rebates:

\$350 direct from Alliant - A.C.
 \$50 direct from Alliant - Thermostat

Warnick & Reeves
 Total \$17,770
 for all 3 units

Thank you for the opportunity to quote this bid.

Subtract rebates after installed

Existing equipment being replaced, if any, to be property of

Dealer will remove
 (Dealer / Purchaser)

REASONS TO BUY FROM WARNICK & REEVES MECHANICAL

1. Licensed, Bonded and Insured.
2. Radio dispatched service trucks.
3. Phone answered 24 hours, 7 days a week.
4. Extended warranty on all equipment installed.
5. We sell - We service - We care.
6. Continuing education program for all personnel.
7. We service all makes and models of equipment.
8. Proper design and installation join to give you trouble free operation for a better return on your investment.
9. Quality service at a reasonable price.

Warnick & Reeves Mechanical Warranty Policy

Our work will be performed in the highest skilled manner and will comply with existing governing codes and regulations. All labor on new equipment furnished by us will bear a one year warranty from the date of installation. All material and equipment furnished by us will carry the printed manufacturer warranty. This warranty will be explained to you before acceptance of this proposal.

PRICE AND TERMS

A. Cash <input checked="" type="checkbox"/> on completion.
B. _____ 1/2 payment now.
C. _____ 1/2 payment day of completion.
D. _____ 90% each month - work completed
Add 3% to total price if paying by credit card.

	Tax	Total
Heating Equipment <u>Carrier FB4 with Electric Heat Package</u>	No	
Air Conditioner Equip. <u>Carrier 24ABC6</u>	No	\$5,635.00
Plumbing Equipment _____		
Other Equipment _____		

Customer Cost After Rebates = \$5,235.00

Unless signed by purchaser
price subject to change 30 days
from following date.

TOTAL PRICE	<u>\$5,635.00</u>
Payment terms	<u>A</u>

The above amount is due and payable on or before the 10th of the month following purchase. Interest at 1 1/2% per month (equal to 18% annually) charged on all past due accounts a minimum charge of \$1.00 for any balance under \$25.00

Dealer Warnick & Reeves Mechanical

Purchaser _____

By Jack Reeves

By _____

Date 6/27/2017 jw

Date _____

Mechanical System Recommendation



Date: 6/20/2017
 Job Name: 2 Furnaces and A.C.'s Replacement
 At

To: Jasper Co. Engineers Office
 Address: 910 N 11th Ave E
 Newton, Iowa 50208

Items Included In Recommendation			
Installation Material	Yes	Cutting	No
Installation Labor	Yes	Patching	No
Electrical Wiring	Yes	Digging	No
Necessary Plumbing - Condensate		Required Permits	Yes
Gas Piping	Yes	Vent Piping	Yes

We recommend the following equipment:

2 - Carrier furnaces model 59TP6A120E24-22, 96.5% efficient with 117,000 BTU heating output on high fire and 76,000 on low. This model is 2-stage and uses a variable speed blower motor.

2 - Carrier air conditioners model 24ABC660A003, 16 SEER - 13 EER with 49,000 BTU cooling capacity. This model uses Puron "ozone-friendly" refrigerant.

2 - Honeywell digital and programmable thermostat model T6 Pro.

Commercial Warranties:

20 year limited on heat exchanger
 5 year limited on compressor and parts
 1 year limited on labor

Commercial Rebates:

\$500 x 2 = \$1,000 direct from Alliant - A.C.'s
 \$100 x 2 = \$200 direct from Alliant - Blower Motors
 \$50 x 2 = \$100 direct from Alliant - Thermostats
 \$700 x 2 = \$1,400 direct from Black Hills - Furnaces
 \$70 x 2 = \$140 direct from Black Hills - Thermostats

Thank you for the opportunity to quote this bid.

Existing equipment being replaced, if any, to be property of

Dealer will remove
 (Dealer / Purchaser)

REASONS TO BUY FROM WARNICK & REEVES MECHANICAL

1. Licensed, Bonded and Insured.
2. Radio dispatched service trucks.
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PRICE AND TERMS

- A. Cash X on completion.
 B. _____ 1/2 payment now.
 C. _____ 1/2 payment day of completion.
 D. _____ 90% each month - work completed
Add 3% to total price if paying by credit card.

	Tax	Total
Heating Equipment 2 - Carrier 59TP6 - 96.5%	No	
Air Conditioner Equip. 2 - Carrier 24ABC6 - 16 SEER	No	\$12,135.00
Plumbing Equipment		
Other Equipment		

Customer Cost After Rebates = \$9,295.00

Unless signed by purchaser
price subject to change 30 days
from following date

TOTAL PRICE	\$12,135.00
Payment terms	A

The above amount is due and payable on or before the 10th of the month following purchase. Interest at 1 1/2% per month (equal to 18% annually) charged on all past due accounts a minimum charge of \$1.00 for any balance under \$25.00

Dealer Warnick & Reeves Mechanical

Purchaser _____

By Jack Reeves *Jack Reeves*

By _____

Date 6/20/2017 jw

Date _____



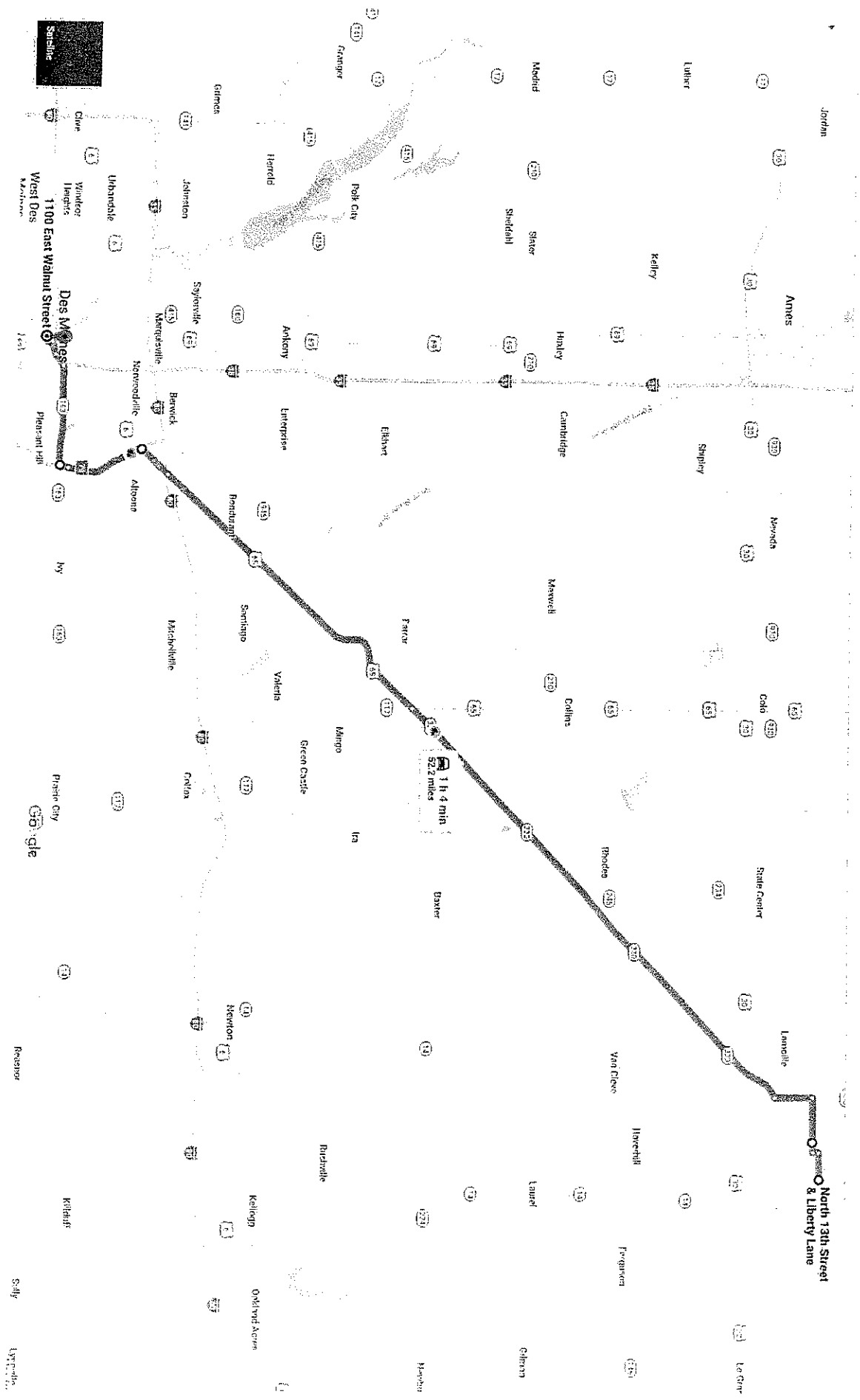
USSVI
Central Region Director
David L. Farran
P O Box 825
Waverly, IA 50677
bream243@q.com

Proposing a Submarine Veterans Memorial Highway

1. History of WWII Sub Vets and USSVI
2. Sub Vets Memorial Highway Concept, Highways exist in several states, including:
 - a. Missouri
 - b. New York
 - c. Oklahoma
 - d. Connecticut
 - e. California
3. Iowa Route Selection being proposed is from Iowa Veterans Home in Marshalltown to the S-36 Memorial' South of the State Capitol in Des Moines.
 - a. IVH – The John J. Marino Submarine Memorial Library is a section of the Main Library at the IA Vets Home.
 - b. Who was John Marino?
 - i. John Marino was the first known Iowan to lose his life on a US Navy Submarine. John Marino died on the USS Squalus, (SS-192) on May 23, 1939, when a valve failure caused it to sink.(The Squalus was salvaged and recommissioned as the USS Sailfish (SS – 192) and made 12 War Patrols during WWII, surviving the war intact.

*MARINO, JOHN JOSEPH S 2
SERVICE # 321 06 38
DATE and PLACE of BIRTH: June 13, 1918 Marshalltown,
Iowa
GRAVE LOCATION: Riverside Cemetery, Marshalltown, IA
HOMETOWN: Marshalltown, Iowa
Home in 1930: Marshalltown, Marshall, Iowa 1930 Census
ENLISTED: Des Moines, Iowa on June 22, 1936
FATHER: Tony Marino Born in Italy
Address of Parents 711 E. Linn St., Marshalltown, Iowa
MOTHER Mollie Preissinger, Born in Illinois*

- c. The S – 36 Submarine Memorial is on the Capitol Grounds in Des Moines, just south of the Capitol Building.
 - d. During WWII there were 52 US Submarines and over 3500 men lost. The World War II Submarine Veterans assigned a lost submarine to each State, requesting that each state create a memorial to the assigned submarine. The S-36 was assigned to Iowa.
 - e. Although not by design, this route covers just over 52 miles.
4. Started this project in 2016, in January 2017 by contacting Tim Crouch, State Traffic Engineer, Office of Traffic and Safety, Highway Division of the Iowa DOT.
- a. We have received preliminary acceptance from the DOT for this project contingent on approval of the municipalities and counties affected by the selected route.
 - b. These Permission Request Letters are being mailed to satisfy the contingency listed in item "a" above.
 - c. State Representative Sandy Salmon and Former State Senator Bob Brunkhorst have been in the loop from the beginning.
5. Signage information:
- a. The Iowa Regulations set a minimum distance between signs of 5 miles or at any turns involved.
 - b. State requirements limit size to 30" by 24", and recommend that they be no less than 24" by 24". Only color to avoid would be RED and no 8 sided signs.
 - c. Some initial suggestions for the signs, most would also contain an arrow. Final design will be determined at least in part by the costs and number to be installed.
6. Questions or Comments?



North 13th Street & Liberty Lane

Des Moines
1100 East Walnut Street
West Des Moines

114.4 mi
522 miles

RESOLUTION _____

Whereas, the Jasper County Sheriff's Office is responsible for issuing permits to acquire a pistol or revolver, to those citizens that comply with the requirements. Citizens will be required to pay forty (\$40) dollars for a five year permit to acquire a pistol or revolver. Funds collected from permit to acquire a pistol or revolver fees will be directed to Jasper County General Fund. Citizens who request a duplicate permit to acquire a pistol or revolver will be required to pay twenty (\$20).

Therefore, be it resolved by the Board of Supervisors of Jasper County, that this county does establish a forty (\$40) fee for a permit to acquire a pistol or revolver, valid for 5 years, and a twenty (\$20) fee for a duplicate permit to acquire a pistol or revolver. All weapon permit fees are non refundable.

Enacted this ____ day of _____, 2017

Chairperson, Board of Supervisors

Joe Brock

Attest: _____

Auditor, Dennis Parrott

JASPER COUNTY SHERIFF'S
REPORT OF RECEIPTS AND DISBURSEMENTS
For the 4th Quarter Ending

ITEM #4b
July 11, 2017 Agenda

June 30, 2017
APR-MAY-JUN

FY: 2016-2017
QTR: 4th

RECEIPTS:

Fees	\$ 33,902.95
Mileage	\$ 18,283.57
Miscellaneous to Treasurer	\$ 75,084.76
QTSB	\$ -----
Board/Care Prisoners	\$ 45,965.00
Work Release & Prisoner Reimb	\$ 9,705.77
CW Permits County	\$ 7,720.00
Purchase Permits	\$ 330.00
DARE Trust Fund	\$ 480.00
DARE Reimbursement	\$ -
Miscellaneous	\$ 3,114.26
Sex Offender Registry	\$ 175.00
Prisoner's Phone	\$ 4,892.05
K-9	\$ -
In House Detention	\$ -
City Law Enforcement	\$ -----
Drug Task Force Reimbursement	\$ -
Tobacco Compliance Checks	\$ -
Forfeiture Money	\$ -
Concessions/Comm	\$ -
QT-Pay Reim-Speedway	\$ -----
Overpayment-\$5 or less	\$ 39.13
Donations - Reserve Deputy	\$ -
Inmate Medical Reimbursement	\$ 2,663.55
Motor Vehicle Inspection Fee	\$ -
Miscellaneous Trusts	\$ 54,330.62
CW Permits to State IDPS	\$ 1,930.00
Condemnations	\$ -
Sheriff's Sale	\$ 447,030.13
Voided Check outside Date Parameter-Redeposited	\$ 116.87
RECEIPTS TOTAL	\$ 630,678.90

DISBURSEMENTS:

County Treasurer Receipts	\$ 127,271.28
Clerks of Court	\$ 26,000.00
Garnished Funds (other)	\$ -
CW Permits to IDPS	\$ 1,930.00
Miscellaneous Trusts	\$ 5,317.81
Sheriff's Sale	\$ 447,030.13
MT Disbursed	\$ 23,588.93
Unclaimed fees to Treasurer	\$ -

DISBURSEMENTS TOTAL \$ 631,138.15

BALANCE ON HAND BEGINNING OF QUARTER	\$ 9,301.38
---	-------------

Total Receipts	\$ 630,678.90
Total Disbursements	\$ 631,138.15

BALANCE ON HAND END OF QUARTER	\$ 8,842.13
-----------------------------------	-------------

I, the undersigned, do hereby certify that the report given above is a correct report of fees and expenses charged, and of collections and disbursements by me as Sheriff during the specified period.

Dated this 30th day of June, 2017.


JOHN R. HALFERTY, Sheriff
Jasper County, Iowa

prepared by Julie P. Dadds

JASPER COUNTY SHERIFF'S
REPORT OF RECEIPTS AND DISBURSEMENTS
For the FISCAL YEAR 2016-2017

ITEM #4c
July 11, 2017 Agenda

July 1, 2016 through June 30, 2017 Year End TOTALS

RECEIPTS:

Fees	\$ 126,452.54
Mileage	\$ 72,315.57
Miscellaneous to Treasurer	\$ 262,526.91
GTSB	\$ _____
Board/Care Prisoners	\$ 138,025.00
Work/Release & Prisoner Reimb	\$ 37,751.97
C/W Permits County	\$ 42,165.00
Purchase Permits	\$ 1,840.00
DARE Trust Fund	\$ 2,080.00
DARE Reimbursement	\$ -
Miscellaneous	\$ 14,460.69
Sex Offender Registry	\$ 750.00
Prisoner's Phone	\$ 14,782.43
K-9	\$ 500.00
In House Detention	\$ -
City Law Enforcement	\$ _____
Drug Task Force Reimbursement	\$ 445.40
Tobacco Compliance Check	\$ -
Forfeiture Money	\$ 4,000.00
Concessions/Commissary	\$ -
Overtime Pay Reimb-Speedway	\$ _____
Overpayment-\$5 or less	\$ 146.51
Donations - Reserve Deputy	\$ 1,050.00
Inmate Medical Reimbursement	\$ 4,369.91
Motor Vehicle Inspection Fee	\$ 160.00
Miscellaneous Trusts	\$ 241,146.88
C/W Permits to State IDPS	\$ 10,560.00
Condemnations	\$ 38.40
Sheriff's Sale	\$ 947,807.06
Voided Checks outside Date Parameter-Redeposited	\$ 218.11
RECEIPTS TOTAL	\$ 1,661,065.47

DISBURSEMENTS:


County Treasurer Receipts	\$ 461,295.02
Clerk of Courts	\$ 137,025.00
Garnished Funds (other)	\$ -
C/W Permits to IDPS	\$ 10,560.00
Miscellaneous Trusts	\$ 26,620.65
Sheriff's Sales	\$ 947,807.06
MT Disbursed	\$ 82,889.18
Unclaimed fees to Treasurer	\$ -

DISBURSEMENTS TOTAL \$ 1,666,196.91

Balance on Hand Beginning of Year	\$ 13,942.87
Total Receipts	\$ 1,661,065.47
Total Disbursements	\$ 1,666,196.91
Balance on Hand Ending of Year	\$ 8,842.13

I, the undersigned, do hereby certify that the report given above is a correct report of fees and expenses charged, and of collections and disbursements by me as Sheriff during the specified period.

Dated this 30th day of June, 2017.



JOHN R. HALFERTY, Sheriff
Jasper County, Iowa

prepared by Julie P. Dadds

2017 JUL -6 AM 8:53
DENNIS K. PARKER
JASPER COUNTY SHERIFF

STATEMENT OF UNDERSTANDING

FY 2018

According to the Central Iowa Community Services (CICS) 28E (*emphasis added*):

6. STAFF

6.1 Selection process for Regional Administrator Team and CEO

The initial Regional Administrator Team shall consist of the County Central Point of Coordinator (CPC) from each member county and will be called Community Services Director from this point forward (hereinafter referred to as CSDs). The CSDs which make up the Regional Administrator Team shall remain employees of their respective counties. *There will be a statement of understanding between the Governing Board and the individual county Boards of Supervisors that will identify the individual employee, the position to be filled, and the portion of the employee's wages and benefits that will be the responsibility of the Region.* The Regional Administrator Team will present a recommendation for the Chair/CEO to the Governing Board. The Chief Executive Officer (CEO) shall be appointed by the Governing Board. The initial CEO shall be the CPC Administrator from one of the member counties. The CEO shall remain an employee of his or her respective county and shall report to the Region's Governing Board as outlined in the statement of understanding between the Governing Board and his or her member county Board of Supervisors. The CEO is the single point of accountability in the Region. The CEO shall assign the administrative responsibilities to the Regional Administrator Team to assure that each of the required functions are performed.

This document serves as the Statement of Understanding between Jasper County and Central Iowa Community Services for the following positions:

Employee	Position	% of wages and benefits
Jody Eaton	CEO	85% (of 1FTE)

Begin Date 7/1/2017

The costs for the above position, including salary, benefits and other expenses shall be paid using regional funds currently held by Jasper County in their County Fund 10. Beginning 7/1/17 the amount of salary paid from Fund 10 shall not exceed the maximum reimbursement rate for the position, as approved annually by the CICS Governing Board, multiplied by the percentage of the position that is regionally funded. Individuals in the position prior to 7/1/17 shall be grandfathered in at the pay rate they are receiving 7/1/17 and CICS will allow an annual increase for reimbursement for the position not to exceed the percentage increase allowed for the regional pay matrix annually by the CICS Governing Board. These forms shall be updated each fiscal year or as mutually agreed upon.

Signature

Signature

Printed Name
Chair, Jasper County Board of Supervisors

Printed Name
Chair, Central Iowa Community Services

Date

Date

STATEMENT OF UNDERSTANDING

FY 2018

According to the Central Iowa Community Services (CICS) 28E (*emphasis added*):

6. STAFF

6.1 Selection process for Regional Administrator Team and CEO

The initial Regional Administrator Team shall consist of the County Central Point of Coordinator (CPC) from each member county and will be called Community Services Director from this point forward (hereinafter referred to as CSDs). The CSDs which make up the Regional Administrator Team shall remain employees of their respective counties. *There will be a statement of understanding between the Governing Board and the individual county Boards of Supervisors that will identify the individual employee, the position to be filled, and the portion of the employee's wages and benefits that will be the responsibility of the Region.* The Regional Administrator Team will present a recommendation for the Chair/CEO to the Governing Board. The Chief Executive Officer (CEO) shall be appointed by the Governing Board. The initial CEO shall be the CPC Administrator from one of the member counties. The CEO shall remain an employee of his or her respective county and shall report to the Region's Governing Board as outlined in the statement of understanding between the Governing Board and his or her member county Board of Supervisors. The CEO is the single point of accountability in the Region. The CEO shall assign the administrative responsibilities to the Regional Administrator Team to assure that each of the required functions are performed.

This document serves as the Statement of Understanding between Jasper County and Central Iowa Community Services for the following positions:

Employee	Position	% of wages and benefits
Connie McQuiston	Administrative Support	50% (of 1FTE)

Begin Date 7/1/2017

The costs for the above position, including salary, benefits and other expenses shall be paid using regional funds currently held by Jasper County in their County Fund 10. Beginning 7/1/17 the amount of salary paid from Fund 10 shall not exceed the maximum reimbursement rate for the position, as approved annually by the CICS Governing Board, multiplied by the percentage of the position that is regionally funded. Individuals in the position prior to 7/1/17 shall be grandfathered in at the pay rate they are receiving 7/1/17 and CICS will allow an annual increase for reimbursement for the position not to exceed the percentage increase allowed for the regional pay matrix annually by the CICS Governing Board. These forms shall be updated each fiscal year or as mutually agreed upon.

Signature

Printed Name
Chair, Jasper County Board of Supervisors

Date

Signature

Printed Name
Chair, Central Iowa Community Services

Date

STATEMENT OF UNDERSTANDING

FY 2018

According to the Central Iowa Community Services (CICS) 28E (*emphasis added*):

6. STAFF

6.1 Selection process for Regional Administrator Team and CEO

The initial Regional Administrator Team shall consist of the County Central Point of Coordinator (CPC) from each member county and will be called Community Services Director from this point forward (hereinafter referred to as CSDs). The CSDs which make up the Regional Administrator Team shall remain employees of their respective counties. *There will be a statement of understanding between the Governing Board and the individual county Boards of Supervisors that will identify the individual employee, the position to be filled, and the portion of the employee's wages and benefits that will be the responsibility of the Region.* The Regional Administrator Team will present a recommendation for the Chair/CEO to the Governing Board. The Chief Executive Officer (CEO) shall be appointed by the Governing Board. The initial CEO shall be the CPC Administrator from one of the member counties. The CEO shall remain an employee of his or her respective county and shall report to the Region's Governing Board as outlined in the statement of understanding between the Governing Board and his or her member county Board of Supervisors. The CEO is the single point of accountability in the Region. The CEO shall assign the administrative responsibilities to the Regional Administrator Team to assure that each of the required functions are performed.

This document serves as the Statement of Understanding between Jasper County and Central Iowa Community Services for the following positions:

Employee	Position	% of wages and benefits
Jarica White	Service Coordinator	100% (of 1FTE)

Begin Date 7/1/2017

The costs for the above position, including salary, benefits and other expenses shall be paid using regional funds currently held by Jasper County in their County Fund 10. Beginning 7/1/17 the amount of salary paid from Fund 10 shall not exceed the maximum reimbursement rate for the position, as approved annually by the CICS Governing Board, multiplied by the percentage of the position that is regionally funded. Individuals in the position prior to 7/1/17 shall be grandfathered in at the pay rate they are receiving 7/1/17 and CICS will allow an annual increase for reimbursement for the position not to exceed the percentage increase allowed for the regional pay matrix annually by the CICS Governing Board. These forms shall be updated each fiscal year or as mutually agreed upon.

Signature

Printed Name

Chair, Jasper County Board of Supervisors

Date _____

Signature

Printed Name

Chair, Central Iowa Community Services

Date _____

Resolution _____

STATE OF IOWA }
Jasper County }

TRANSFER ORDER

\$191,910.00

Newton, Iowa, June 28, 2017

Doug Bishop, Treasurer, Jasper County, Iowa

Transfer One hundred ninety one thousand nine hundred ten dollars and 00/100** dollars

From: 0001- General Fund

To: Various Funds
(See Below)

xxxx-99-0051-000-81400

xxxx-4-99-0051-904000

Account of: Board Action

By Order of Board of Supervisors.

Auditor

NO. 1378

Teresa Anderson

Deputy

From Fund

0001-General Fund
0001-General Fund

To Fund

1525- Law Enfnt Ctr Cap Proj
1550- Chichaqua Bike Trail

Amount

\$11,910.00
\$180,000.00
\$191,910.00

Resolution _____

STATE OF IOWA }
Jasper County }

TRANSFER ORDER

\$1,106.30

Newton, Iowa, June 28, 2017

Doug Bishop, Treasurer, Jasper County, Iowa

Transfer One thousand one hundred six dollars and 30/100*** dollars

From: 0027-Co Conservation
Land Acq

To: 1580- Mariposa Park
Cap Project Fund

xxxx-99-0051-000-81400

xxxx-4-99-0051-904000

Account of: Board Action

By Order of Board of Supervisors.

Auditor

NO. 1379

Teresa Amador

Deputy

Resolution _____

STATE OF IOWA }
Jasper County }

TRANSFER ORDER

\$3,966.35

Newton, Iowa, June 28, 2017

Doug Bishop, Treasurer, Jasper County, Iowa

Transfer Three thousand nine hundred sixty six dollars and 35/100** dollars

From: 2085- County Home
Debt Service

To: 1520- County Home
Cap Project

xxxx-99-0051-000-81400

xxxx-4-99-0051-904000

Account of: Board Action

By Order of Board of Supervisors.

Auditor

NO. 1380

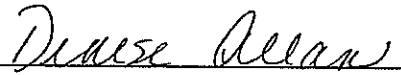
Teresa Anderson

Deputy

RECORDER'S MONTHLY REPORT
STATE OF IOWA, COUNTY OF JASPER

TO THE BOARD OF SUPERVISORS OF JASPER COUNTY:

I, Denise Allan, Recorder of the above named county and state do hereby certify that this is a true and correct statement of the fees collected by me in my office for the period of June 1, 2017 through June 30, 2017, and the same have been paid to the county Treasurer.


Denise Allan, Jasper County Recorder

Date: July 3, 2017

Dennis Parrott, Jasper County Auditor

Recording Fees	0001-1-07-8110-400000	<u>\$9,580.00</u>	
	(+) E-File Recording Fees	<u>\$4,615.00</u>	<u>\$14,195.00</u>
Copies	0001-1-07-8110-400000		<u>\$1.00</u>
Fed Tx Search	0001-1-07-8110-400000		<u>\$0.00</u>
Auditor's Trans	0001-1-07-9010-410000	<u>\$960.00</u>	
	(+) E-File Auditor Trans Fees	<u>\$245.00</u>	<u>\$1,205.00</u>
Co Trans Tax	0001-1-07-8110-404000	<u>\$3,088.93</u>	
	(+) E-File Trans Tax Fees	<u>\$1,088.67</u>	<u>\$4,177.60</u>
Over Payments	0001-4-07-0054-822000		<u>\$106.40</u>
ELSI Co Fees	0001-1-07-8110-403000		<u>\$251.25</u>
Co Boat Title	0001-1-22-6110-412000		<u>\$155.00</u>
Co Boat Lien	0001-1-07-8110-418000		<u>\$40.00</u>
Snow Title/Lien	0001-1-07-8110-401100		<u>\$20.00</u>
ATV/ORV Title/Lien	0001-1-07-8110-401200		<u>\$230.00</u>
Vital Cert Co	0001-1-07-8110-413000		<u>\$968.00</u>
Vital Plain Copy	0001-1-07-8110-408000		<u>\$0.00</u>
Co Marriages	0001-1-07-8110-417000		<u>\$116.00</u>
Int Bank Acct	0001-4-07-0054-600000		<u>\$2.05</u>
Record Mgmt	0024-1-07-8110-414000	<u>\$428.00</u>	
	(+) E-File Record Mgmt Fees	<u>\$214.00</u>	<u>\$642.00</u>
E-Fees	5300-1-77-0500-416000	<u>\$428.00</u>	
	(+) E-File E-Fees	<u>\$214.00</u>	<u>\$642.00</u>
Misc Revenue Fees	0001-1-07-8110-849000		<u> </u>
Total County Fee Collected for <u>June 2017</u>			<u>\$22,751.30</u>

Denise Allan
County Recorder

Account Balance Report
From 6/1/2017 Through 6/30/2017

Jasper County, Iowa
101 1st St N Rm 205 PO Box 665
Newton, IA 50208
(641) 792-5442

Revenue Totals

Charge Payment Totals

Account Number	Account Description	Revenue Totals			Charge Payment Totals			Drawer (1) + (2) + (3)
		Cash/Check (1)	Charge	Other Pay (2)	Sub Total	Cash/Check	Other Pay	
01-01-01	Recording 0001-1-8110-4000-1	\$9,355.00	\$135.00	\$90.00	\$9,580.00	\$0.00	\$0.00	\$9,445.00
01-01-02	Recd Mgmt0024-1-8110-4140-	\$417.00	\$7.00	\$4.00	\$428.00	\$0.00	\$0.00	\$421.00
01-01-03	E-Fee 5300-1-0500-4160-77	\$417.00	\$7.00	\$4.00	\$428.00	\$0.00	\$0.00	\$421.00
01-02-00	Auditors 0001-1-9010-4100-07	\$955.00	\$0.00	\$5.00	\$960.00	\$0.00	\$0.00	\$960.00
01-03-01	Co Tran Tax0001-1-8110-4040	\$3,088.93	\$0.00	\$0.00	\$3,088.93	\$0.00	\$0.00	\$3,088.93
01-03-02	State Tran Tax	\$14,818.27	\$0.00	\$0.00	\$14,818.27	\$0.00	\$0.00	\$14,818.27
01-05-02	Copies 0001-1-8110-4000-07	\$1.00	\$0.00	\$0.00	\$1.00	\$0.00	\$0.00	\$1.00
	***** Account Group 01 Total *****	\$29,052.20	\$149.00	\$103.00	\$29,304.20	\$0.00	\$0.00	\$29,155.20
02-04-01	Marr Co 0001-1-8110-4170-07	\$76.00	\$0.00	\$40.00	\$116.00	\$0.00	\$0.00	\$116.00
02-04-02	Marriage License - State	\$589.00	\$0.00	\$310.00	\$899.00	\$0.00	\$0.00	\$899.00
02-04-03	3 Day Waiver	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
02-04-04	Vitalcertc0001-1-8110-4130-0	\$924.00	\$0.00	\$44.00	\$968.00	\$0.00	\$0.00	\$968.00
02-04-05	Vital Cert State	\$3,696.00	\$0.00	\$176.00	\$3,872.00	\$0.00	\$0.00	\$3,872.00
02-04-06	Vital Pl Copy01-1-8110-4080-0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	***** Account Group 02 Total *****	\$5,285.00	\$0.00	\$570.00	\$5,855.00	\$0.00	\$0.00	\$5,855.00
03-01-01	Passprt Co 0001-1-8110-4150-	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
03-01-02	Passport - Federal	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
03-03-01	Expedite Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	***** Account Group 03 Total *****	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-01-00	Hunting & Fishing/Elsi	\$510.00	\$0.00	\$209.50	\$719.50	\$0.00	\$0.00	\$719.50
05-01-01	H&Fw/Elsi 0001-1-8110-4030-	\$215.50	\$0.00	\$35.75	\$251.25	\$0.00	\$0.00	\$251.25
05-01-04	Boat Registration Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-01-05	Snow & Atv Registration Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-01-06	Boat Title Fee	\$130.00	\$0.00	\$25.00	\$155.00	\$0.00	\$0.00	\$155.00
05-01-07	Boat Lien Fee	\$35.00	\$0.00	\$5.00	\$40.00	\$0.00	\$0.00	\$40.00
05-01-08	Snow Title Fee	\$20.00	\$0.00	\$0.00	\$20.00	\$0.00	\$0.00	\$20.00
05-01-09	Snow Lien Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-01-10	Atv Title Fee	\$165.00	\$0.00	\$20.00	\$185.00	\$0.00	\$0.00	\$185.00
05-01-11	Atv Lien Fee	\$45.00	\$0.00	\$0.00	\$45.00	\$0.00	\$0.00	\$45.00
05-01-12	Rsu Perm/Elsi	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Revenue Totals

Charge Payment Totals

Account Number	Account Description	Cash/Check (1)	Charge	Other Pay (2)	Sub Total	Cash/Check	Other Pay	Sub Total (3)	Drawer (1) + (2) + (3)
05-01-13	Nrohu Perm/Eisi	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-01-14	Nrsu Perm/Eisi	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-02-01	Boal,Write 0001-1-8110-4020-	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-02-03	Sne/Alv WF 0001-1-8110-4010	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-02-04	Alv/Orv T&L Co 0001811040-	\$210.00	\$0.00	\$20.00	\$230.00	\$0.00	\$0.00	\$0.00	\$230.00
05-02-05	Snow T&L Co 001-1-8110-401-	\$20.00	\$0.00	\$0.00	\$20.00	\$0.00	\$0.00	\$0.00	\$20.00
05-02-06	Bl Title Co 001-1-6110-4120-2-	\$130.00	\$0.00	\$25.00	\$155.00	\$0.00	\$0.00	\$0.00	\$155.00
05-02-07	Bl Lien Co 0001-1-8110-4180-	\$35.00	\$0.00	\$5.00	\$40.00	\$0.00	\$0.00	\$0.00	\$40.00
05-03-01	Use Tax	\$966.00	\$0.00	\$0.00	\$966.00	\$0.00	\$0.00	\$0.00	\$966.00
05-03-02	la Sales Tax	\$2,544.54	\$0.00	\$801.00	\$3,345.54	\$0.00	\$0.00	\$0.00	\$3,345.54
05-03-03	Local Option Tax	\$320.34	\$0.00	\$52.50	\$372.84	\$0.00	\$0.00	\$0.00	\$372.84
05-03-04	School Tax	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
05-03-05	Overpaymt 0001-4-0054-8220-	\$106.40	\$0.00	\$0.00	\$106.40	\$0.00	\$0.00	\$0.00	\$106.40
05-03-06	Rvvs	\$2,573.95	\$0.00	\$341.40	\$2,915.35	\$0.00	\$0.00	\$0.00	\$2,915.35
***** Account Group 05 Total *****		\$8,026.73	\$0.00	\$1,540.15	\$9,566.88	\$0.00	\$0.00	\$0.00	\$9,566.88
06-01-01	Balance Brought Forward	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
06-01-02	Payment	\$27.00	\$0.00	\$0.00	\$27.00	\$0.00	\$0.00	\$0.00	\$27.00
***** Account Group 06 Total *****		\$27.00	\$0.00	\$0.00	\$27.00	\$0.00	\$0.00	\$0.00	\$27.00
07-01-01	Ucc Search 0001-1-8110-4000	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
07-01-02	Ucc1/Term 0001-1-8110-4000-	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
07-02-01	Fedtxsearch0001-1-8110-4006	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
07-03-01	Interest On Bank Account	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
***** Account Group 07 Total *****		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
08-01-01	Clrs-Standard Fee	\$0.00	\$0.00	\$4,615.00	\$4,615.00	\$0.00	\$0.00	\$0.00	\$4,615.00
08-01-02	Clrs-Documnt Management I	\$0.00	\$0.00	\$214.00	\$214.00	\$0.00	\$0.00	\$0.00	\$214.00
08-01-03	Clrs-Recording Fee	\$0.00	\$0.00	\$214.00	\$214.00	\$0.00	\$0.00	\$0.00	\$214.00
08-01-04	Clrs-Additional Tran Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
08-01-05	Clrs-Transfer Fee	\$0.00	\$0.00	\$245.00	\$245.00	\$0.00	\$0.00	\$0.00	\$245.00
08-01-06	Clrs-Transfer Tax	\$0.00	\$0.00	\$6,311.20	\$6,311.20	\$0.00	\$0.00	\$0.00	\$6,311.20
***** Account Group 08 Total *****		\$0.00	\$0.00	\$11,599.20	\$11,599.20	\$0.00	\$0.00	\$0.00	\$11,599.20

Denise Allan
County Recorder

Account Balance Report
From 6/1/2017 Through 6/30/2017

Jasper County, Iowa
101 1st St N
Rm 205 PO Box 665
Newton, IA 50208
(641) 792-5442

Revenue Totals

Charge Payment Totals

Account Number	Account Description	Cash/Check (1)	Charge	Other Pay (2)	Sub Total	Cash/Check	Other Pay	Sub Total (3)	Drawer (1) + (2) + (3)
11-66-10	Writing Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	***** Account Group 11 Total *****	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
55-55-55	Federal Duck Stamp	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	***** Account Group 55 Total *****	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Final Totals :	\$42,390.93	\$149.00	\$13,812.35	\$56,352.28	\$0.00	\$0.00	\$0.00	\$56,203.28

Counts/Totals From 6/1/2017 Through 6/30/2017

Cash Total :	\$2,966.05 +
Check Total :	\$39,623.18 +
Other Pay Total:	\$13,812.35 +
Change Total :	\$198.30 -
Subtotal :	\$56,203.28
Charge Total :	\$149.00 +
Grand Total :	\$56,352.28

Number of Cash Payments :	127
Number of Check Payments :	451
Number of Change Payments :	16
Number of Charge Payments :	1
Number of Other Payments :	292
Number of Receipts :	787
Number of Voids :	8

Charge Information

Balance Forward Information	
Number of Payments on Account :	1
Total Paid on Account :	\$27.00

Other Payment Breakdown

Other Payment Method	Total Count	Total Paid
CREDIT CARD	44	\$2,213.15
DIRECT DEPOSIT	246	\$11,599.20
Total :	290	\$13,812.35

June 27, 2017

Tuesday, June 27, 2017 the Jasper County Board of Supervisors met in regular session at 9:30 a.m. with Supervisors Brock, Carpenter and Cupples present and accounted for; Chairman Brock presiding.

Julia Castillo, Executive Director of Heart of Iowa Regional Transit Agency, HIRTA, came before the Board to request their FY2018 operating assistance in the amount of \$34,000 which is an increase of \$1215. Castillo stated that HIRTA had provided 54,000 rides which totaled 14,000 hours and 151,000 miles in the past year. She also wanted the Board to know that HIRTA is not just for elderly and disabled persons. It is a true form of Public Transportation available to all. Castillo was informed by the Board that budget workshops for Jasper County take place in January and February and that the budget is approved in March. Sufficient money had been allocated by the Board for HIRTA to cover the increase. The Board informed Castillo that HIRTA would be asked to attend the Budget workshops for next year and she thanked them in advance for their invitation.

Motion by Carpenter, seconded by Cupples, to approve FY2018 Funding Allocation for HIRTA.

YEA: CUPPLES, CARPENTER, BROCK

Castillo also presented a Lease renewal between HIRTA and Jasper County for a portion of the Jasper County Community Center for the period of 7/1/17-6/30/18. County Attorney Michael Jacobsen stated he thought the lease agreement was fine and he approved.

Motion by Cupples, seconded by Carpenter to approve the Lease agreement in the amount of \$487 per month for the period of 7/1/17-6/30/18 between HIRTA and Jasper County for a portion of the Jasper County Community Center.

YEA: CUPPLES, BROCK, CARPENTER

Chris Bauer and Steve Brase of Shive-Hattery Architecture and Engineering presented the Board with the final draft of their Exterior Foundation Investigation Summary for the Jasper County Annex Building. The scope of their investigation was limited to the 1) Exterior Building Foundation Infiltration and Condition, 2) Exterior Stair Tower and 3) South Building Entrance and Exterior Dock. The Shive-Hattery team observed infiltration issues throughout the basement on the exterior foundation walls on all 4 sides of the building with evidence of previous water penetration and damage to building finishes. Leakage was evident through existing brick foundation walls and isolated areas where leakage could be directly linked to conduit, windows, or other penetrations. The bottoms of the window wells have poured concrete with small area drains. No information is available on these drains and their outlet locations. The condition of the Exterior Stair Tower is good. Stair Tower structural steel was bolted to the building. There is one exterior wall pack light on the stair tower that will require electrical disconnection. The South Entrance and Dock has deteriorated concrete causing trip hazards. The large wood canopy shows signs of rot and deterioration. The canopy has numerous steel column supports that bear on the concrete dock. The concrete piers which extend below the dock and support the concrete dock and steel columns appear to be in poor condition and

their adequate capacity is doubted. Bauer presented a preliminary cost opinion of the Annex Building exterior foundation repairs. Cost estimates range from approximately \$300,000-\$620,000. All 3 Supervisors thanked Bauer and Brase for their investigation into the cost of repairing the exterior of the Annex Building and they will review and get back with them at a later date.

Motion by Cupples, seconded by Carpenter to approve the Supervisors minutes for 6/20/17.

YEA: CUPPLES, CARPENTER, BROCK

Kelli Van Manen, Director of Jasper County Elderly Nutrition presented the Board with a rental agreement between the Colfax Community Senior Citizens Center and Jasper County for the period of 1 year commencing on 7/1/17 through 6/30/18. Jasper County will pay the Colfax Community Senior Citizens Center a monthly fee of \$200 as rent for use of the facility.

Motion by Carpenter, seconded by Cupples, to approve the Rental Agreement between the Colfax Community Senior Citizens Center and Jasper County for 1 year commencing on 7/1/17 through 6/30/18 for the amount of \$200 monthly.

YEA: BROCK, CARPENTER, CUPPLES

Motion by Cupples, seconded by Carpenter to appoint Randall Rusk to the Jasper County Cemetery Commission for a term of 3 years.

YEA: BROCK, CARPENTER, CUPPLES

Motion by Carpenter, seconded by Cupples to appoint Fred Dimon to the Jasper County Veteran's Affairs Commission for a term of 3 years.

YEA: BROCK, CARPENTER, CUPPLES

There were no public comments.

Motion by Carpenter, seconded by Cupples to adjourn the Tuesday, June 27, 2017 meeting of the Jasper County Board of Supervisors.

Tina Mulgrew, Deputy Auditor

Joe Brock, Chairman