

May 17, 2022

NOTICE: Public meetings will be held in-person and also livestreamed for viewing only, as possible. To view meetings remotely, please use the Zoom information listed below.

- 1. 9:00 A.M. Call To Order Courthouse Large Conference Room
- 2. Pledge Of Allegiance
- 3. Approval Of Agenda
- 4. Approval Of Minutes 05/11/22, 05/13/22

Documents:

05-11-22 MINUTES.PDF 05-13-22 MINUTES.PDF

5. Approval Of Claims For Payment - 05/18/22

Documents:

CLAIMS FOR PAYMENT 5.18.22.PDF

6. Consideration Of Timbers Edge Wedding And Event Centre, LLC Class C Liquor License

Documents:

CLASS C LIQUOR LICENSE APPLICATION-TIMBERS EDGE.PDF

7. Consideration Of Headwaters WMA Revised 28E Agreement

Documents:

HEADWATERS WMA 28E FINAL.PDF

8. Consideration Of Receipt Of Animal Feeding Operation Construction Permit

Documents:

- 9. Set Time And Date For Public Hearing-Hardin Buckeye 25, Section 25 Buckeye Township
- 10. Consideration Of SBDC Financial Support
- 11. Change Of Status Secondary Roads

Documents:

CHANGE OF STATUS-SECONDARY ROADS.PDF

12. Change Of Status – Sheriff Department

Documents:

CHANGE OF STATUS-SHERIFF DEPARTMENT.PDF

13. Change Of Status - Conservation

Documents:

CHANGE OF STATUS-CONSERVATION.PDF

- 14. Other Business
- 15. Adjournment/Recess
- 16. 9:30 A.M. Drainage Courthouse Large Conference Room
- 17. 10:30 A.M. Review 28E Agreement With IFADC, Courthouse Large Conference Room

Online: HTTPS://US02WEB.ZOOM.US/J/88530378243

By Phone: 1-312-626-6799 Meeting ID: 885 3037 8243

HARDIN COUNTY BOARD OF SUPERVISORS MINUTES – MAY 11, 2022 WEDNESDAY – 9:00 A.M. COURTHOUSE LARGE CONFERENCE ROOM.

Board Chair BJ Hoffman called the meeting to order. Supervisor Lance Granzow was in attendance, Supervisor Renee McClellan was absent. Also attending were Dave McDaniel, Becca Junker, Darrell Meyer, Taylor Roll, Angela De La Riva, Michael Pearce, Jolene Pieters, and Justin Faiferlick. Attending via Zoom: Connie Mesch, Lori Kadner, Tifani Eisentrager, Jamie Geisler, Curt Groen, Mark Buschkamp, Elaine Loring, Matt Rezab, Pauline Lloyd, Lisa Lawler, Donna Juber, and Julie Duhn.

The Pledge of Allegiance was recited.

Granzow moved, Hoffman seconded to approve the agenda. Motion carried.

Hoffman moved, Granzow seconded to approve the minutes from 05/04/22. Motion carried.

Granzow moved, Hoffman seconded to approve the claims for payment for 05/11/22. Motion carried.

Granzow moved, Hoffman seconded to approve the amendment to Heart of Iowa Communications Utility Permit UT-22-002. Motion carried.

Granzow moved, Hoffman seconded to approve the Iowa Regional Utilities Association Utility Permit UT-22-008. Motion carried.

Granzow moved, Hoffman seconded to approve the Secondary Roads change of status for the resignation of Blaine Bader as Motor Grader Operator. Motion carried.

Granzow moved, Hoffman seconded to approve insurance open enrollment for FY2022/2023. Open enrollment will be 05/23/22 and will be mandatory for all employees to attend due to some changes that have been made. Motion carried.

Angela De La Riva, Economic Development, gave an update on various projects going on in the county and grants that are available.

Justin Faiferlick from Small Business Development Center for the North-Central Iowa Region updated the Board regarding what the center does and how they can be of assistance in Hardin County.

In other business, Engineer Roll stated that the bridge south of New Providence is ready to be painted, cement is being poured for the bike trail north of Eldora, and brush cutting continues in the County. Auditor Pieters stated that the Primary Election is on June 7, 2022 and we are still looking for poll workers. If there are enough poll workers, half shifts may be available.

Granzow moved, Hoffman seconded to adjourn the meeting. Motion carried.

Meeting was adjourned at 9:26 a.m.

HARDIN COUNTY BOARD OF SUPERVISORS MINUTES – MAY 13, 2022 FRIDAY – 12:00 P.M. COURTHOUSE LARGE CONFERENCE ROOM

Board Chair BJ Hoffman called the meeting to order. Supervisor Renee McClellan attended the meeting via telephone. Supervisor Lance Granzow was absent. Also attending was Michael Pearce and Jolene Pieters. Attending via Zoom: Elaine Loring.

The Pledge of Allegiance was recited.

McClellan moved, Hoffman seconded to approve the agenda. Motion carried.

Hoffman moved, McClellan seconded to approve May 31, 2022 at 12:00 p.m. to hold the public hearing for FY 2021/2022 budget amendments in the large conference room in the courthouse. Motion carried.

In other business, Hoffman asked McClellan to send him open dates to hold a meeting with IFADC and Mark Buschkamp. McClellan agreed.

McClellan moved, Hoffman seconded to adjourn the meeting. Motion carried.

Meeting adjourned at 12:05 p.m.



Hardin County

Vendor Publication Report

Payment Date Range: 05/18/2022 - 05/18/2022

Vendor Name	Vendor Number	Payable Description	Total Payments
AgSource Cooperative Services	6022V	MAS000003706-Testing Public Water Call	62.50
AgVantage FS	690V	Eldora Diesel	50,593.50
Alliant Energy	4253V	Engineer's Office Utility	890.46
Angela De La Riva	100411	Mileage-MIGP/Talent/Meal	439.42
Black Hills Energy	4450V	Garden City Utility	145.42
Boeke Funeral Home	834V	Watkins Transfer/Auto Use	440.00
Carstens Plumbing & Heating Co Inc	4814V	Radcliffe shed heater repair	398.59
Central Iowa Distributing Inc	3043V	Custodial Supplies	1,039.00
CenturyLink 2956	4569V	Phone Acct-515 E80-1922	141.62
Cerro Gordo County Treasurer	62488V	ME Services for Benson	50.00
Cintas Corporation-Cincinatti	1545V	Shop First Aid Supplies	360.05
Cintas-Chicago	2475V	Shop Towels & Uniforms	216.23
Connie J Mesch	1020E	Mileage-ICube Training	55.20
Cooley Pumping LLC	61963V	Sanitation Regular Service-Logsdon Park	160.00
Des Moines Stamp Mfg Co	892V	Auditor Self Inking Stamp	55.00
Eldora Hardware	2647V	Rec Supplies- Pine Ridge	21.75
Eric Eugenio	100207	ME-Watkins 5.6.22	328.40
Fareway Food Stores-Eldora	4728V	VA Grocery- Burnett INV28934	84.94
Fillenwarth Beach	2064V	C.Klein Confirmation Deposit 347556.12-	210.00
Franklin Rural Elec Co-Op	1128V	S41 & C73 Intersection Light	15.83
Galls Incorporated	1389V	Uniforms	17.07
GATR Truck Center	100679	#158 wiring harness	243.67
GECRB/AMAZON	2403V	Office Supplies- Label equipment/supplies	428.36
Greenbelt Home Care	61807V	Healthy Aging March 22	1,255.18
Hawkeye West Pest Control	2637V	Engineer's Office Pest Control	64.00
Heart of Iowa	6335V	Phone Acct-1297ISIAFLPD	505.40
Iowa Prison Industries	809V	E911 Address Signs x2	54.20
Iowa's County Conservation System	100900	Membership FY22/23 1st half	1,000.00
Israel Ruiz	101056	End of Contract-Ruiz 5/2021-8/2021 City o	10,888.53
Jasper Construction Services, Inc.	100944	IRT-Steamboat Rock South to Bridge 25- {	193,292.15
Johnson Controls Fire Protection LP	100090	Building Repair and Maint	7,300.57
Keltek Inc	1663V	Radio Equipment	310.50
Ken's Repair	4583V	Chainsaw Repair	83.75
M & G Tire Service	2615V	Tire Repair	22.36
Mary J Swartz	302E	Office Equipment-Wall Files	23.52
McDowell & Sons Contractors, Inc.	62529V	Sanitation	30.00
McKesson Medical Surgical	2735V	Medical Supplies	14.52
Medicap Pharmacy #8095	5729V	Prescriptions	3,336.34
Mid-America Publishing Corp	62056V	Help Wanted Ads Mogo & Intern	520.44
Moler Sanitation	100385	Sanitation Acct-4570	31.97
Murphy Tractor & Equipment Co., Inc	2286V	#212 FLC Controlller Install	1,523.64
NAPA Auto Parts	4290V	#309 filters	189.98
North Iowa Reporting	63851V	State VS Winters II- AGCR312937	37.50
Northern Iowa Construction Products	100418	72", 84", 96" CMP & Bands	45,830.40
Petroblend Corp.	1219V	Oil 15W40 & 5W20	2,271.95
Pitney Bowes Inc-Non-Leasing Supplie		Acct-0012434253 Postage Supplies	113.04
Premier Office Equipment, Inc.	62320V	Equipment Repair and Maint	132.07
Ray O'Herron Co. Inc.	100539	Uniforms	267.03
Reliable1	1102V	ARPA-IWave Install C-Unit Install	23,400.00
Sadler Power Train Inc	5067V	Hose Fittings	1,642.69
Schneider Geospatial LLC	100763	Quarterly Billing FY22	2,325.00
Schumacher Elevator Co.	2130V	Elevator Monthly Maintenance	545.92
Shield Pest Control LLC	63086V	Pest Control-Courthouse/Annex	165.00
Sioux Sales Company	1764V	Vehicle Repair and Maint	594.00
Storey Kenworthy	61798V	Office Supplies	153.45
	0.1001		100.40

Vendor Publication Report

Payment Date Range: 05/18/2022 - 05/18/2022

Vendor Name	Vendor Number	Payable Description	Total Payments
Theisens	6220V	Bridge supplies	395.26
Times Citizen	538V	Assessor Renewal FY22/23	75.00
Truck Center Companies East LLC	100823	Tire Tools	568.62
US Bank Equipment Finance	954V	Equipment Maint	1,260.84
Veridian Credit Union	63561V	Shane Schossow 03/29/22 - 04/28/22	2,108.70
Verizon Connect Nwf, Inc-Dallas	100620	Phone Acct-HARD014	18.19
Wesley Wiese	522E	Phone Reimburse- 852308082 May	40.00
Windstream-Kentucky	84V	Phone Acct-091032137	327.50
		Grand Total: 359,116.22	



State of Iowa

U

Alcoholic Beverages Division

Applicant

	NAME OF LEGAL ENTITY	NAME OF BUSINESS(DBA) BUSINESS	
	Timbers Edge Wedding and Even Centre LLC	nt Timbers Edge	(515) 290-2	158
	ADDRESS OF PREMISES	PREMISES SUITE/APT NU	MBER CITY	COUNTY ZIP
	19493 County Highway S-56		Steamboat Rock	Hardin 50672
	MAILING ADDRESS	CITY	STATE	ZIP
	19138 County Highway S-56	Steamboat Rock	Iowa	50672
C	Contact Person			
	NAME	PHONE	EMAIL	
	Korey DeBerg	(515) 290-2158	kdeberg@g	randjivante.com
Ļ	icense Information			
	LICENSE NUMBER	LICENSE/PERMIT TYPE	TERM	STATUS
	LC0046410	Class C Liquor License	12 Month	Submitted to Local Authority

TENTATIVE EFFECTIVE DATE	TENTATIVE EXPIRATION DATE	LAST DAY OF BUSINESS
June 20, 2022	June 19, 2023	

SUB-PERMITS

Class C Liquor License

APPLICANT

I hereby declare that all information contained in the E-license Application is true and correct. I understand that misrepresentation of material fact in the Application is a serious misdemeanor crime and grounds for denial of the license or permit under Iowa law.

Slidzà pplicant's Signature Date NOTARY State of ARIAL STEFANIE ABKES COMMISSION NUMBER 795178 County of MY COMM PIRES: 2 Signed and sworn to before me on By Print Name of Applicant Signature of Notary

DO NOT WRITE IN THE SPACE ABOVE - RESERVED FOR RECORDER

Prepared by: Leanne Lawrie Harter, County Outreach and Special Projects Manager, 900 6th Street, Nevada, Iowa 50201 515-382-7247 Return to: Leanne Lawrie Harter, 900 6th Street, Nevada, Iowa 50201

Headwaters of the South Skunk River Watershed Management Authority Agreement Between Story County, Hamilton County, Hardin County, City of Ames, City of Story City, City of Roland, City of Randall, City of Jewell, City of Ellsworth, Story County Soil and Water Conservation District, and Hamilton County Soil and Water Conservation District.

This Joint and Cooperative Agreement (hereinafter referred to as the "Agreement") is entered into pursuant to the authority of the *Code of Iowa*, Chapter 28E on this ______day of ______, 2022 by and between Story County, Hamilton County, Hardin County, City of Ames, City of Story City, City of Roland, City of Randall, City of Jewell, City of Ellsworth, Story County Soil and Water Conservation District, and Hamilton County Soil and Water Conservation District. All entities shall be referred to hereinafter as the "Cooperators".

WHEREAS, Iowa Code section 466B authorizes two (2) or more political subdivisions, defined as including cities, counties and/or soil and water conservation districts, all of which must be located within the same United States Geological Survey Hydrologic Unit Code 8 watershed, to enter into agreement under Chapter 28E of the *Code of Iowa* to establish a watershed management authority to enable cooperation in supporting watershed planning and improvements for the mutual advantage of the political subdivisions involved; and

WHEREAS, pursuant to Iowa Code section 466B.23, a watershed management authority may perform all of the following duties:

- 1. Assess the flood risks in the watershed.
- 2. Assess the water quality in the watershed.
- 3. Assess options for reducing flood risk and improving water quality in the watershed.
- 4. Monitor federal flood risk planning and activities.
- 5. Educate residents of the watershed area regarding water quality and flood risks.
- 6. Allocate moneys made available to the authority for purposes of water quality and flood mitigation.
- 7. Make and enter into contracts and agreements and execute all instruments necessary or incidental to the performance of the duties of the authority. A watershed management authority shall not acquire property by eminent domain.

and;

WHEREAS, Story County, Hamilton County, Hardin County, City of Ames, City of Story City, City of Roland, City of Randall, City of Jewell, City of Ellsworth, Story County Soil and Water Conservation District, and Hamilton County Soil and Water Conservation District, all deem establishment of the Headwaters of the South Skunk River Watershed Management Authority (hereinafter referred to as the "Authority"), a watershed management authority encompassing all three Hydrologic Unit Code 10 (HUC 10) watersheds, to be of mutual advantage; and

WHEREAS, it is mutually desired to enter into this Agreement pursuant to *Code of Iowa* Chapter 28E for the purpose of establishing the Headwaters of the South Skunk River Watershed Management Authority to carry out watershed planning and improvements in the Headwaters of the South Skunk River Watershed.

NOW THEREFORE, it is agreed by and between the parties as follows:

SECTION 1. IDENTITY OF THE PARTIES.

1.1 The Counties of Story, Hamilton, and Hardin are each a municipality of the State of Iowa, organized and operating pursuant to Iowa Code section Chapter 331. Their respective addresses are:

Story County 900 Sixth Street Nevada, Iowa 50201

Hamilton County Courthouse 2300 Superior Street, Suite 3 Webster City, Iowa 50595

Hardin County Courthouse 1215 Edgington Ave Eldora, Iowa 50627

1.2 The Cities of Ames, Story City, Roland, Ellsworth, Jewell, and Randall are each a municipality of the State of Iowa, organized and operating pursuant to Iowa Code Chapter 364. Their respective addresses are:

City of Ames 515 Clark Avenue Ames, Iowa 50010 City of Story City 504 Broad Street Story City, Iowa 50248

City of Roland 202 East Ash Street/P.O. Box 288 Roland, Iowa

City of Randall PO Box 36 Randall, Iowa 50231

City of Ellsworth 1528 DeWitt St. Ellsworth, Iowa 50075

City of Jewell 701 Main St. Jewell, Iowa 50130

1.3 The Soil and Water Conservation Districts of Story and Hamilton are each a governmental division of the State of Iowa as defined in Iowa Code section 161A.3(6) and a soil and water conservation district established pursuant to Iowa Code section 161A.5(1). Their respective addresses are:

Story County SWCD 1534 Fawcett Parkway Nevada, Iowa 50201

Hamilton County SWCD 1921 Superior Street Webster City, Iowa 50595-3145

SECTION 2. HEADWATERS OF THE SOUTH SKUNK RIVER WATERSHED BOUNDARY

2.1 The area within this Agreement are those lands draining to the South Skunk River above its confluence with Ioway Creek, and shall be known as the Headwaters of the South Skunk River Watershed Boundary. This Boundary is shown in Attachment A.

SECTION 3. PURPOSE.

- 3.1 The purpose of this Agreement is to provide for the manner in which the parties shall cooperate with one another to successfully encourage, plan for, and implement watershed activities within the Headwaters of the South Skunk River Watershed, including but not limited to the following activities authorized pursuant to Iowa Code section 466B.23:
 - 3.1.1 Assess the flood risks in the watershed.
 - 3.1.2 Assess the water quality in the watershed.
 - 3.1.3 Assess options for reducing flood risk and improving water quality in the watershed.
 - 3.1.4 Monitor state and federal flood risk planning and activities.
 - 3.1.5 Educate residents of the watershed area regarding water quality and flood risks.
 - 3.1.6 Seek and allocate moneys made available to the Authority for purposes of water quality and flood mitigation.
 - 3.1.7 Make and enter into contracts and agreements and execute all instruments necessary or incidental to the performance of the duties of the Authority. The Authority shall not acquire property by eminent domain.

SECTION 4. NO SEPARATE ENTITY CREATED.

- 4.1 It is the intention of this Agreement that there be no new or additional legal or administrative entity created by this Agreement, nor that the inherent governmental powers of any Cooperator be affected in any way beyond the terms of this Agreement.
- 4.2 A joint board of the Cooperators known as the Headwaters of the South Skunk River Watershed Management Authority Board (the Board) shall be responsible for coordinating watershed planning and improvements. The Board shall be comprised of one appointee from each county, city, and district participating in this Agreement. Except as otherwise provided in this Agreement, the actions of the Board shall be the actions of the Authority.
- 4.3 Once established, the Board will develop governing bylaws, and from time-to-time amend such bylaws, along with operating policies and administrative procedures. The passage and/or amendment of governing bylaws, operating procedures, and administrative procedures shall be considered and decided by a 2/3 vote of the Board.
- 4.4 The Board shall comply with the Open Meeting Law (Iowa Code Chapter 21), Open Records Law (Iowa Code Chapter 22) and gender balance requirements (Iowa Code section 69.16A).

SECTION 5. DURATION.

5.1 This Agreement shall be in effect in perpetuity until terminated pursuant to Section 13.

SECTION 6. POWERS AND DUTIES.

- 6.1 The parties to this Agreement shall retain all powers and duties conferred by law but shall work together in the exercise of such powers and the performance of this Agreement. These powers shall not be transferred to the Authority. Each party shall be responsible for:
 - 6.1.1 identifying opportunities for funding and in-kind support for the undertaking of watershed planning and improvements within the Headwaters of the South Skunk River Watershed;
 - 6.1.2 identifying opportunities for infrastructure development and planning capable of assessing and mitigating flood risks in the Headwaters of the South Skunk River Watershed;
 - 6.1.4 participating in educational/outreach programs regarding water quality and flood risks;
 - 6.1.5 identifying opportunities for infrastructure development and planning to assess and mitigate water quality in the Headwaters of the South Skunk River Watershed;
 - 6.1.6 providing support for the administration of any projects, including technical, financial and clerical, as agreed to by the Cooperators;
 - 6.1.7 securing such financing, including grants, loans and the issuance of bonds of loan agreements, as determined by the respective party to be necessary or desirable to achieve the objectives of the agreement;
 - 6.1.8 designing and bidding of projects;
 - 6.1.9 administering contracts; and
 - 6.1.10 observing construction.

SECTION 7. MANNER OF FINANCING.

- 7.1 The Board may solicit, accept and receive donations, endowments, gifts, grants, reimbursements and other such funds as necessary to support work pursuant to this Agreement. It is agreed and understood by the parties hereto that no financial obligations upon any Cooperator are intended to be created hereby.
- 7.2 No action to contribute funds by a Board member of the Authority is binding on the Cooperator that he or she represents without official approval by the governing body of that Cooperator. No Cooperator may be required to contribute funds to the Authority, except to fulfill any obligation previously made by official action by the governing body of the Cooperator.
- 7.3 The Board will review each opportunity for funding or in-kind support. After review of the opportunity, a fiscal agent will be nominated. The fiscal agent would be a Cooperator or other organization meeting the fiscal agent standards outlined in the bylaws. Should no Cooperator or other organization accept the nomination of fiscal agent for the opportunity, the opportunity will not be considered.

SECTION 8. ENTIRE AGREEMENT.

8.1 This Agreement represents the entire understanding among the Cooperators and no Cooperator is relying on any representation or understanding which may have been made by another Cooperator and which is not included in this Agreement.

SECTION 9. SEVERABILITY/INVALIDITY.

9.1 If any term, provision or condition of this Agreement shall be determined to be invalid by a court of law, such invalidity shall in no way effect the validity of any other term, provision or condition of this Agreement, and the remainder of the Agreement shall survive in full force and effect unless to do so would substantially impair the rights and obligations of the Cooperators to this Agreement or substantially frustrate the attainment of the purposes of this Agreement.

SECTION 10. GOVERNING LAW.

10.1 This Agreement shall by governed by and interpreted under the laws of the State of Iowa.

SECTION 11. AMENDMENTS.

- 11.1 This Agreement may be amended at any time by an affirmative vote of the majority of the governing bodies of all Cooperators. Any Cooperator desiring an amendment to this Agreement shall notify the other Cooperators of its desire, and the reasons for the request.
- 11.2 Such a request shall be in writing to the other governing bodies of the Cooperators, and shall be considered by their governing body without unreasonable delay and within no more than ninety (90) days of receipt.
- 11.3 If the request is agreed to by the other Cooperators, each Cooperator shall prepare and submit to the others a certified resolution confirming the affirmative vote of the Cooperator's governing body.
- 11.4 The Amendment shall take effect ten (10) days following receipt of the last such resolution by the other Cooperators. Amendments shall be filled and recorded with the Iowa Secretary of State within thirty (30) days of the effective date of the amendment as required by Iowa Code section 28E.8(1)(b).

SECTION 12. ADDITIONAL COOPERATORS

- 12.1 A City, County, or Soil and Water Conservation District within the Headwaters of the South Skunk River Watershed who is not a Cooperator, may request, in writing to all Cooperators, to become a Cooperator.
- 12.2 Such a request shall be considered and decided by a 2/3 vote of the Board, and shall become effective when the new Party has signed the then-current Agreement pursuant to a resolution of its governing body and requisite filing with the Iowa Secretary of State and/or County Auditor has been accomplished.

SECTION 13. TERMINATION OF AGREEMENT.

13.1 This agreement shall terminate upon the mutual agreement of the governing bodies of all Cooperators in the Authority. Upon termination, all property and money then owned by the Authority shall be distributed equally among its members after payment of all debts. Any funds donated under a stipulation limiting their use shall be dispersed consistent with the owner's direction. The governing body of each jurisdiction may individually terminate their participation in the agreement after providing the Authority a ninety (90) days' prior written notice of intent to terminate. Such termination shall be effective on the expiration of the ninety (90) days.

SECTION 14. EFFECTIVE DATE.

14.1 This Agreement shall take effect upon execution by the Cooperators as required by law, and filing with the Secretary of State in an electronic format.

SECTION 15. NOTICES.

- 15.1 Notices under this Agreement shall be in writing and delivered to the representative of the party to receive notice (identified below) at the address of the party designated to receive notice for each Cooperator as set forth in this Agreement. The effective date of any notice under this Agreement shall be the date of actual delivery of such notice and not the date of dispatch. The preferred means of notice shall be either actual hand delivery, certified US Mail, return receipt requested with postage prepaid thereon, or by recognized overnight delivery service, such as FedEx or UPS.
- 15.2 Notices shall be delivered to the following persons at each Cooperator:

Story County:	Chairperson, Story County Board of Supervisors Story County Administration Building 900 Sixth Street Nevada, Iowa 50201
Hardin County:	Chairperson, Hardin County Board of Supervisors Hardin County Courthouse 1215 Edgington Ave Eldora, Iowa 50627
Hamilton County:	Chairperson, Hamilton County Board of Supervisors Hamilton County Courthouse 2300 Superior Street, Suite 3 Webster City, Iowa 50595
Ames:	Mayor, City of Ames City Hall 515 Clark Avenue Ames, Iowa 50010

Story City:	Mayor, City of Story City 504 Broad Street Story City, Iowa 50248
Roland:	Mayor, City of Roland 202 East Ash Street/P.O. Box 288 Roland, Iowa 50236
Randall:	Mayor, City of Randall PO Box 36 Randall, Iowa 50231
Ellsworth:	Mayor, City of Ellsworth 1528 DeWitt St. Ellsworth, IA 50075
Jewell:	Mayor, City of Jewell 701 Main St. Jewell, IA 50130
Story County Soil and	Water Conservation District: Chairperson, Story County SWCD 1534 Fawcett Parkway Nevada, Iowa 50201
Hamilton County Soil a	and Water Conservation District:

Chairperson, Hamilton County SWCD 1921 Superior Street Webster City, IA 50595-3145

SECTION 16. FILING AND RECORDING.

16.1 It is agreed that Story County will file this Agreement with the Iowa Secretary of State pursuant to the requirements of Iowa Code section 28E.8(1)(a).

SECTION 17. ENTIRE AGREEMENT.

17.1 This Agreement and attachments attached hereto constitute the entire Agreement, among the Cooperators and supersedes or replaces any prior agreements among the Cooperators relating to its subject matter, including but not limited to the 28E agreement filed with the Iowa Secretary of State on October 23, 2018 (Filing No. M511295).

SECTION 18. NO WAIVER.

18.1 The waiver or acceptance by any Cooperator of a breach or violation of any provisions of this Agreement by another cooperator shall not operate as, or be construed to be, a waiver of any subsequent breach.

SECTION 19. NO ASSIGNMENT OR DELEGATION.

19.1 Neither this Agreement, nor any right or obligation under it, may be assigned, transferred or delegated in whole or in part to any outside party without the prior written consent of all the Cooperators.

SECTION 20. AUTHORITY AND AUTHORIZATION.

- 20.1 Each party to this Agreement represents and warrants to the other that it has the right, power and authority to enter into and perform its obligations under this Agreement; and that it has taken all requisite actions necessary to approve the execution, delivery and performance of this Agreement, and that this Agreement constitutes a legal, valid and binding obligation upon itself in accordance with the terms of the Agreement.
- 20.2 Each Cooperator to this Agreement shall supply to the Authority a copy of the resolution by the governing body of each Cooperator as evidence of the power and authority of each Cooperator to enter into this Agreement.

SECTION 21. HEADINGS AND CAPTIONS.

21.1 The paragraph headings and captions set forth in this Agreement are for identification purposes only and do not limit or construe the contents of the paragraphs.

SECTION 22. COUNTERPARTS.

22.1 The Cooperators agree that this Agreement has been or may be executed in several counterparts, each of which shall be deemed an original and all such counterparts shall together constitute one and the same instrument.

SECTION 23. OPERATIONS.

- 23.1 Within its available resources through funding or in-kind support, the Authority may employ one or more staff members.
- 23.2 In addition to other powers and duties, the Authority will oversee the performance of all staff members and in-kind contributions to the Authority of personnel, materials, and equipment.
- 23.3 Within its available resources through funding or in-kind support, the Authority may acquire or lease equipment and supplies necessary to its work, acquire or lease office space, acquire and manage facilities related to its work, and insure against identified risks.
- 23.4 The Authority may enter into cooperative agreements and other contracts with other agencies, entities, and individuals.
- 23.5 The Board may create committees and task forces to support its work and, within its available resources through funding or in-kind support, engage experts and consultants.

SECTION 23. SIGNATURE PAGES

23.1 The Cooperators agree that this Agreement has attached to it signature pages which shall be assembled and filed together with the Agreement and shall together constitute one and the same instrument. A completed copy of the Agreement with executed signature pages shall be sent to each Cooperator.

STORY COUNTY, IOWA

BY:

Board of Supervisors Chair

ATTEST:

County Auditor

HAMILTON COUNTY, IOWA

BY:

Board of Supervisors Chair

ATTEST:

County Auditor

HARDIN COUNTY, IOWA

BY:

Board of Supervisors Chair

ATTEST:

County Auditor

AMES, IOWA

BY:

Mayor

ATTEST:

STORY CITY, IOWA

BY:

Mayor

ATTEST:

ROLAND, IOWA

BY:

Mayor

ATTEST:

RANDALL, IOWA

BY:

Mayor

ATTEST:

JEWELL, IOWA

BY:

Mayor

ATTEST:

ELLSWORTH, IOWA

BY:

Mayor

ATTEST:

STORY COUNTY SOIL AND WATER CONSERVATION DISTRICT STORY COUNTY, IOWA

BY:

Chairperson

ATTEST:

Secretary

HAMILTON COUNTY SOIL AND WATER CONSERVATION DISTRICT HAMILTON COUNTY, IOWA

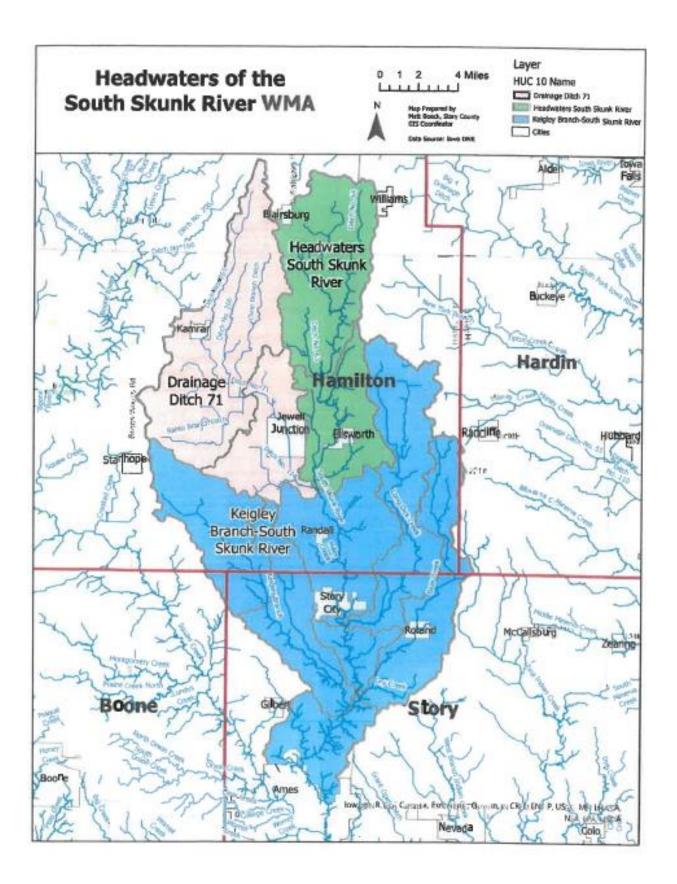
BY:

Chairperson

ATTEST:

Secretary

ATTACHMENT A



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. X A new confinement feeding operation
- 2. An existing confinement feeding operation (answer all of the following questions):
 - a) Facility ID No. (5 digit number):
 - b) Date when the operation was first constructed: Separation distance table used:
 - 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: Hardin Buckeye 25

Location:	SW	SE	25	T88N R22W	Buckeye	Hardin
	(Ya Ya)	(1/4)	(Section)	(Tier & Range)	(Name of Township)	(County)
 C	nformation:	110				
Name: 5	ummit Farms Pork			Title:		
Address:	10640 Co Hwy D2	0, Alden, IA 5	0006			
Telephone	515-854-9820	Fax:		Email:		
C) Person to c	contact with quest	ions about thi	s application	(if different than appli	cant):	
Name: K	ent Krause			Title:		
Address:	620 Country Club	Rd., Iowa Fall	s, IA 50126			
Telephone	641-648-7300	Fax:		Email:		
receptione		102.				

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 have a 10% or more ownership interest in 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:

- Karst Determination: Go to DNR AFO Siting Atlas at http://programs.iowadnr.gov/maps/afo/. Search for your site by either A) 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:
 - X 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.

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:

X 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, constructing or modifying a confinement building that uses an unformed manure storage structure³, or increasing animal units in a confinement building that uses an unformed manure storage structure.
 - 2. X 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. 03/2021 cmc 2

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) 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:

I will be constructing a 2 barn site that will house 4999 head of finishing 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. X 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 <u>1,667 AU or more</u>, 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 for the purpose of determining a qualified operation.
 - 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. X This is not a qualified operation because:
 - a. \mathbf{X} 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 Animal Species	a) Existing AUC (Before permit)			R) = AUC b) Total AUC (After permit)			
	(No. Head)	x (Factor)	= AUC	(No. Head)	x (Factor)	= AUC]
laughter or feeder cattle		1.0			1.0		
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		Note: If the "Existing AUC" (column a) is 500 AU or less,
Gilts		0.4			0.4		enter the "Total proposed
Finished (Market) hogs	0	0.4	0	4999	0.4	1999.6	AUC" (column b) in the "New
Nursery pigs 15 lbs to 55 lbs		0.1			0.1		AU" (column c)
Sheep and lambs	_	0.1		_	0.1		
Goats		0.1			0.1		
Horses		2.0			2.0		-
Turkeys 7 ibs or more		0.018			0.018		
Turkeys less than 7 lbs		0.0085			0.0085	<u> </u>	
Broiler/Layer chickens 3 lbs or more		0.01			0.01		
Broiler/Layer chickens less than 3 lbs		0.0025			0.0025	<u> </u>	
Ducks		0.04			0.04		
Fish 25 grams or more		0.001			0.001		
Fish less than 25 grams		0.00006			0.00006		c) New AU = b) - a):
TOTALS:	a)	Existing AUC:	0	b) Total pr	oposed AUC:	1999.6	1999.6
				(This is the	AUC of the ope	ration)	

8) 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 verage 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

Table z. Annual Weight Capacity (A		(No. neau)				-	
	a) Existing AWC			b) Proposed AWC			
Animal Species	(Be	efore Permit)		(After permit)			
	(No. head) x	avg weight	= AWC	(No. head) x	avg weight	= AWC	
Slaughter or feeder cattle				Ì			1
Immature dairy cattle							1
Mature dairy cattle]
Gestating sows]
Farrowing sows & litter]
Boars]
Gilts]
Finished (Market) hogs]
Nursery pigs 15 lbs to 55 lbs							
Sheep and lambs							
Goats							
Horses							
Turkeys 7lbs or more							
Turkeys less than 7 lbs							
Broiler/Layer chickens 3 lbs or more						1	
Broiler/Layer chickens less than 3 lbs]						
Ducks]						
ish 25 grams or more							
Fish less than 25 grams]						c) New AWC = b) -
TOTALS:	a) E	xisting AWC:		b) Total prop	osed AWC:		
				– (This is the	AWC of the ope	eration)	

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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) X Formed manure storage structures²: The proposed confinement feeding operation structure¹ 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).
 - Other confinement feeding operations with an AUC of 3,000 AU or more. Use Submittal Checklist No. 2 (page 13). 4
 - 5. X 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 structure¹, 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- UTILIZING RURAL WATER SYSTEM FOR WATER SUPPLY

The proposed facility will utilize rural water and the providing rural water system has been notified and is aware of the proposed increase in water use.

ITEM 7 - SIGNATURE:

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

Signature of Applicant(s):

Xa	E)	
Summit	Farms Pork, LLC by	

Eric Peterson, Representative

Date:	5/10/22

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/fieldoffice.

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). 03/2021 cmc 5

ITEM 8

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	
Bruce Rastetter	10640 Co Hwy D20	Alden, IA	50006	
Summit Farms Pork, LLC	10640 Co Hwy D20	Alden, IA	50006	

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

Operation Name	Location (¼ ¼, ¼, Section, Tier, Range, Township, County)	City
None [There are no other	confinements in lowa in which the above listed person(s) has or have an inter-	est].
See Attached		

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

Signature of Applicant(s):

Summit Farms Pork, LLC by Eric Peterson, Representative

Date: 5/10/22

Confined Feeding Operations - Summit Farms 4/15/2022

Site Name	DNR Number	Location (1/4 1/4 Sec, 1/4 Sec, Sec, Twp, Range, County)	City
2.2.2		NE, NE, & SE, NW, 29,& NE, SW, & SE, SW 20, T-89-N,	North Tar
AA Ave	61421	R-22-W, Hardin	Alden
A & W Site	67013	SE, NE, 1, T-93-N, R-33-W, Pocahontas	Mallard
B55 Site	65697	NE, NW, 31, T-95-N, R-32-W, Palo Alto	Mallard
Beaver Bay	65380	NE, NW, 33, T-94-N, R-32-W, Palo Alto	Mallard
Birch Site	67308	NE, SE, 6, T-96-N, R-26-W, Hancock	Wesley
Blairsburg 1	67738	NW ,NW, 1, T-89-N, R-24-W, Hamilton	Blairsburg
Poplar Grove	70467	NE, NE, 21, T-89-N, R-24-W, Hamilton	Blairsburg
Blairsburg 23	70314	NW, NW, 23, T-89-N, R24-W, Hamilton	Blairsburg
Boothill Cattle	64885	NW, NE, 26, T-89-N, R-23-W, Hamilton	Williams
Brannigan Site	67014	NE/NW, NE, 23, T-91-N, R-34-W, Pochahontas	Fonda
Brinks	67351	SW, SE, 32, T-94-N, R-32-W, Palo Alto	Mallard
Buckeye Finisher	58324	NW, SE, 24, T-88-N, R-22-W, Hardin	Alden
Buckeye 21	67918	SE, NE, 21, T-88-N, R-22-W, Hardin	Alden
Buckeye 27	67909	SW, NW, 27, T-88-N, R-22-W, Hardin	Alden
Buffalo 11	70505	SE, SW, 11, T-99-N, R-29-W, Winnebago	Buffalo Cente
Burt 21 E	71743	SE, SE, 21, T-97-N, R-29-W, Kossuth	Lone Rock
Burt 21 W	71732	SE, SW, 21, T-97-N, R-29-W, Kossuth	Lone Rock
Caribou	63820	SW, NW, 7, T-92-N R-20-W, Franklin	Hampton
Concord 25	67909	NW, NE, 25, T-86-N, R-22-W, Hardin	Garden City
County Line Cattle	66728	SE, NE, 5, T-89-N, R-22-W, Hardin	Alden
Crystal 5	70446	SE, NE, 5, T-97-N, R-25-W, Hancock	Crystal Lake
Crystal-Ladd	63984	SE, NE, 35, T-97-N, R-25-W, Hancock	Crystal Lake
Crystal-Maple	63983	SE, NE, 25, T-97-N, R-25-W, Hancock	Crystal Lake
Cummins North	65111	SE, SW, 16, T-93-N, R-33-W, Pocahontas	Havelock
Cummins South	65112	SW, SE, 32, T-93-N, R-33-W, Pocahontas	Havelock
Deer Site	67253	SW, SW, 22, T-97-N, R-26-W, Hancock	Woden
Denmark 13	70131	SW, SE, T-98-N, R-31-W, Emmet	Ringsted
Denmark 18	71635	SE, SE, 18, T-98-N, R-31-W, Emmet	Ringsted
Denmark 24	70513	SE, SE, 24, T-98-N, R-31-W, Emmet	Ringsted
Denmark 20	71610	SE, SW, 20, T-98-N, R-31W, Emmet	Ringsted
Denmark 30	71717	SE, SW, 30, T-98-N, R-31-W, Emmet	Ringsted
Denmark 32	70337	NW, NE, 32, T-98-N, R-31-W, Emmet	Ringsted
Denmark 35	71614	NE, SE, 35, T-98-N, R-31-W, Emmet	Ringsted
Dorweiler Finisher	64651	SE, NW, 04, T-94-N, R-30-W, Kossuth	West Bend
Dreier	57789	SW, SW, 8, T-92-N, R-18-W, Butler	Dumont
E & F Pork	63402	SW, NW, 20, T-100-N, R-21-W, Worth	Northwood
Eagle 1	57826	SW, SE, 11, T-91-N, R-26W, Winnebago	Eagle Grove
Eagle 2	58151	SW, NE, 22, T-92-N, R-22-W, Franklin	Latimer
Eagle 3	59355	NW, NE, 33, T-99-N, R-23-W, Winnebago	Lake Mills
Eagle 5	59515	SW, NW, 35, T-100-N, R-24-W, Winnebago	
Eagle 7	65871		Leland
Eagle 8	65304	SW, NW, 8, T-98-N, R-23-W, Winnebago SE, SW, 15, T-99-N, R-24-W, Winnebago	Forest City Leland
Eagle 9	65916		
Eagle 10	68889	NE, SE, 29, T-99-N, R-23-W, Winnebago	Lake Mills
Eagle 11	66996	NE, NW, 24, T-99-N, R-25W, Winnebago	Thompson
Eagle 12	66997	SE, NE, 32, T-99-N, R-23-W, Winnebago	Lake Mills
Eagle 13	69465	NW, NE, 32, T-99-N, R-23-W, Winnebago	Lake Mills
Eagle 13	71067	SW, SW, 9, T-97-N, R-24-W, Hancock	Forest City
Eagle 15	71616	NE, SW, 7, T-99-N, R-24-W, Winnebago	Thompson
Echo Site	67254	NE, SE, 22, T-100-N, R-24-W, Winnebago	Scarville
Eden 27	50478	SE, SE, 22, T-97-N, R-26-W, Hancock	Woden
Elk Site	64625	SW, SW, 27, T-100-N, R-25-W, Winnebago	Thompson
Ellington	64723	SW, SE, 16, T-89-N, R-22-W, Hardin SE, SE, 9, T-94-N, R-32-W, Palo Alto	Alden
Ellington West	65205		Mallard
Faris	64744	SW, SE, 29, T-94-N, R-32-W, Palo Alto	Mallard
Finch Site		SE, SE, 8, T-86-N, R-20-W, Hardin	New Providence
Freedom 12	59664 71753	SE, SE, 35, T-93-N, R-22-W, Wisner, Franklin	Alexander
	71753	NW, SW, T-96-N, R-32-W, Palo Alto	Emmetsburg
Freedom 34	70385	NW, NW, 34, T-96-N, R-32-W, Palo Alto	Emmetsburg
Fox Site	71379	NW, NE, T-89-N, R-23-W, Hamilton	Williams
Garfield 4	71735	SE, SW, 4, T-94-N, R-30-W, Kossuth	West Bend
Garfield 10	71716	NE, NW, 10, T-94N, R-30-W, Kossuth	West Bend
Garfield-Nash	63982	NE, NW, 7, T-96-N, R-24-W, Hancock	Garner
Great Oak 26	70441	NE, SE, 26, T-95-N, R-33-W, Palo Alto	Curlew

Hardin Site	61516	SW, SE, 21, T-89-N, R-22-W, Hardin	Alden
Himl	64526	SW, SW, 28, T-89-N, R-22-W, Hardin	Alden
Humboldt 23	67815	NW, NE, 23, T-93-N, R-28-W, Humboldt	Livermore
Independence 1	67797	SE/SW, SE, 1, T-88-N, R-25-W, Hamilton	Webster City
Irvington 25	71703	NE, NW, 25, T-95-N, R-28-W, Kossuth	Lu Verne
Irvington 23	65348	NE, SW, 23, T-95-N, R-28-W, Kossuth	Lu Verne
J & M site	61534	NW, SW, 25, T-95-N, R-28-W, Kossuth	Lu Verne
J Ave	63981	NE, SE, 32, T-88-N, R-21-W, Hardin	Hubbard
Jack Creek 23	71663	SE, SE, 23, T-98-N, R-32-W, Emmet	Ringsted
Jack Creek 26	70408	NW/NE, NW, 26, T-98-N, R-32-W, Emmet	Ringsted
Johnson	63778	NW, SW, 21, T- 88-N, R-21-W, Hardin	Buckeye
Kohl South Site	62463	NE, NE, 27, T-88-N, R-24-W, Hamilton	Kamrar
Kurt Wolf Site	58535	SE, SE, 04, T-92-N, R-19-W, Franklin	Hampton
Lake Farm	57791	NW, NE, 32, T-88-N, R-21-W, Hardin	lowa Falls
Lark Site	57744	NE, SE, 11, T-92-N, R-21-W, Franklin	Hampton
Little Wall Site	59222	SW, NE, 23, T-89-N, R-24-W, Hamilton	Blairsburg
Lincoln 36	67737	NE, SE, 36, T-87-N, R-23-W, Hamilton	Radcliffe
Linden 7	71420	SW, SW, 7, T-98-N, R-25-W, Winnebago	Forest City
Luverne 7	65326	SE, SW, 7, T-94-N, R-27-W, Kossuth	Lu Verne
Miller Feedlot	68334	NW, NE, 19, T-89-N, R-22-W, Hardin	Alden
Nevada Site	64724	NE, SE, 33, T-95-N, R-32-W, Palo Alto	Mallard
Nevada 4	50536	SE, NE, 4, T-95-N, R-32W, Palo Alto	Emmetsburg
Cylinder Creek	50536	SE, SW, 11, T-95-N, R-32W, Palo Alto	Emmetsburg
Newton 28	71371	NW, SW, 28, T-99-N, R-24-W, Winnebago	Leland
Norske 1	62918	SE, SE, T-99-N, R-27-W, Kossuth	Buffalo Center
orth Tipton Ridge	65214	NE, NW, 20, T-87-N, R-21-W, Hardin	Hubbard
Norway 10	70306	SW, SW, 10, T-100-N, R-23-W, Winnebago	Lake Mills
Norway 10 East	71744	SW, SE, 10, T-100-N, R-23-W, Winnebago	Lake Mills
Oak Site	65973	SW, NW, 8, T-96-N, R-24-W, Hancock	Gamer
Oakland Site	61420	NE, NE, 32, T-90-N, R-22-W, Franklin	Alden
Oakland 10	67910	SW, NW, 22, T-90-N, R-22-W, Franklin	Dows
Olsen Ave Site	50034	NE, NE, 29, T-89-N, R-24-W, Hamilton	Blairsburg
Pacific Rail	63952	SW, SE, 35, T-88-N, R-22-W, Hardin	Hubbard
Patriot Site	68963	NW, SW, 31, T-90-N, R-22-W, Franklin	
Plum Creek 36	67810	NE, NE, 36, T-96-N, R-28-W, Kossuth	Wesley
Providence 36	68849	SW, NE, 36,T-86-N, R20-W, Hardin	New Providence
Red Barn	61423	NE, NW, 19, T-89-N, R-22-W, Hardin	Alden
Rehm Site	60772	SW, NE, 28, T-90-N, R-21-W, Franklin	Alden
Rouse Site	61525	NW, NW, 10, T-94-N, R-34-W, Palo Alto	Curlew
Robinson Site	67088	SE, SE, 13, T-88-N, R-22-W, Hardin	Alden
Scott 30 Seneca 19	67809	NE, NE, 30, T-94-N, R-18-W, Floyd	Dougherty
Sherman 9	70511	SW, NW, 19, T-98-N, R-30-W, Kossuth	Ringsted
outh Tipton Ridge	71668	NW, SW, 9, T-94-N, R-28-W, Kossuth	Lu Verne
Springfield 13	65215	SW, SE, 20, T-87-N, R-21-W, Hardin	Hubbard
Staley Finishers	71763 59201	SW, SW, 13, T-100N, R-28-W, Kossuth	Ledyard
Sunray Pork 1	58321 65747	SE, SE, 11, T-88-N, R-22-W, Hardin	Alden
Sunray Pork 2	65881	SW, SE, 11, T-93-N, R-21-W, Franklin	Sheffield
Sunray Pork 3	66172	NE,NW, 13, T-94-N, R-23-W, Hancock	Meservey
Sunray Pork 4	66060	NW, NW, 13, T-95-N, R-23-W, Hancock SW, NW, 25, T-91-N, R-21-W, Franklin	Gamer
Sunray Pork 5	66207	NE, NE, 31, T-93-N, R-19-W, Franklin	Hampton Hampton
Sunray Pork 6	65852	SE, SW, 22, T-94-N, R-22-W, Cerro Gordo	Thornton
Swan Lake 34	67654	SE, NE, 34, T-99-N, R-32-W, Emmet	Ringsted
Swea 32 North	70516	NW, NE, 32, T-99-N, R-30-W, Kossuth	Armstrong
Swea 32 South	70593	NW, NE, 32, 1-99-N, R-30-W, Kossuth	Armstrong
Triangle Beef	63324	NW, NW, 27, T-89-N, R-22-W, Hardin	Alden
Vail	64527	NE, NE, 33, T-97-N, R-23-W, Hancock	Gamer
Vernon 2	67759	NW, SW, 2, T-97-N, R-32-W, Palo Alto	Graettinger
Vernon 10	70676	SE, SW, 10, T-97-N, R-32-W, Palo Alto	Graettinger
Vernon 12	70470	NE, NE, 12, T-97-N, R-32-W, Palo Alto	Graettinger
Vernon 12 W	71497	SW, NW, 12, T-97-N, R-32-W, Palo Alto	Graettinger
Vernon 22	70678	SW, NW, 22, T-97-N, R-32-W, Palo Alto	Emmetsburg
Walnut 13	67753	SE, NE, 13, T-97-N, R-33-W, Palo Alto	Emmetsburg
Ward Site	65248	SW, NW, T-92-N, R-33-W, Pocahontas	Pocahontas
Weber Site	64647	SW, SE, 21, T-95-N, R-30-W, Kossuth	Whittemore
Wickman Site	61640	SE, SE, 26, T-94-N, R-32-W, Palo Alto	Rolfe
	70015	NW/NE, NW, 15, T-89-N, R-23-W, Hamilton	Williams
Williams 15			1
Williams 15 Whittemore 23	71736	SE SW, 23, T-95-N, R-30-W, Kossuth	Whittemore
	71736 67282	SE SW, 23, T-95-N, R-30-W, Kossuth SW, SE, 2, T-94-N, R-32-W, Palo Alto	Whittemore Mallard

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Manure Storage Indemnity Fee Form for Construction Permits

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

Credit fees to: Summit Farms Pork, LLC

Name of operation:	Hardin Buckeye 25			
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. <u>Note</u>: 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.
 - <u>Example 1</u>: 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 AU) x (\$ 0.15 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 AU) x (\$ 0.20 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.

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		Poultry		x	\$ 0.04 =	
	2	Other		х	\$ 0.10 =	
	3	Poultry		x	\$ 0.06 =	·
1,000 AU or more to less than 3,000 AU	4	Other	1999.6	х	\$ 0.15 =	299.94
2 000 All or more	5	Poultry		х	\$ 0.08 =	
3,000 AU or more	6	Other		x	\$ 0.20 =	

Indemnity Fee Table:

Filing Fees Form for Construction Permits

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

Credit fees to: Summit Farms Pork, LLC

Name of operation: Hardin Buckeye 25

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)
- 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): \$

\$ _____

SUMMARY:	
- Manure Storage Indemnity Fee (see previous page) to be deposited in the Manure Storage Indemnity Fee Fund (474)	\$ 299.94
- Total filing fees (see item 4 on this page) 'to be deposited in the Animal Agriculture Compliance Fund (473)	\$ 500.00
TOTAL DUE:	\$ 799.94

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 10

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:

Name of operation: Hardin Buckeye 25 Location: SW SE 25 T88N R22W Buckeye Hardin (½ ½) (½) (Section) (Tier & Range) (Name of Township) (County) Documents being submitted to the county: SC 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 structure ¹ and all the separation distances are met, including those claimed for points in the master matrix (if applicable). X Attachment 2 - Statement of design certification, submit any of the following (see Checklist No. 1 or 2): X Construction Design Statement form Professional Engineer (PE) Design Certification form Engineering report, construction plans and technical specifications	that
Image: Construction in the image: Construction in the image: Construction in the image: Construction in the constence in the construction in the constructi	that
 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 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 	that
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 In addition, if proposing an unformed manure storage structure³ or an egg washwater storage structure submit documentation required in Addemdum "A" of this construction application form. Attachment 3 - Manure management plan (MMP). Attachment 4 - Master Matrix (if required). You must include supporting documents (see Checklist No. 1 or 2) 	
Revised Documents: Application CDS Matrix MMP Other	
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 <u>all</u> construction permit applications, including those applications not required to be evaluated with t master matrix and applications in counties not participating in the Master matrix.	he
Counties participating in the master matrix: the county's master matrix evaluation and county's recommendation is required for following cases:	:he
 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 construct permit. 	ion
 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 (459.304. On behalf of the Board of Supervisors for: COUNTY: Hardin NAME: ARCE GEISLER HARDINGEN MAY 1 2 2022 TITLE: ARCE POLYAGE	Code
(Member of the County Board of Supervisors or its designated official/employee) HARDIN COUNTY AUDITO Date:	



Construction Design Statement (CDS)

Instructions:

- 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 6).
- 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 6, as instructed on page 6 and 7. 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 or	peration:	Hardin I	Buckeye 25			Facility ID No.:	N/A
Location:	SW	SE	25	T88N R22W	Buckeye	Hardin	
	(1/4 1/4)	(1/4)	(Section)	(Tier & Range)	(Name of Township)	(County)	

Provide latitude and longitude coordinates of the facility driveway at the right of way (ROW) line. Go to the DNR Siting Atlas and left click (to place a teardrop) at that location. The latitude and longitude coordinates appear in the info box. Print off this page, with the info box open (as shown on sample map on Page 7) and submit with CDS.

Latitude: 42.397796 Longitude (negative value) _93.355380

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, address location of pit fans, if applicable, and address water line entry into buildings. If necessary attach more pages:

Two 101'10" x 193' x 8' deep, below ground, covered, formed concrete manure storage tanks will be built.

No water lines will enter through the concrete manure storage floors and all pit fans will be mounted on top of concrete pump outs

C) Utilizing Rural Water System and Domestic Sewage Disposal

- The proposed facility will utilize rural water and the providing rural water system has been notified and is aware of the proposed increase in water use.
- I understand that no domestic wastewater (toilets, showers, or sinks) or laundry facilities can be discharged to the manure storage structure.
- D) Aerial photos: Aerial photos must be submitted that clearly show the location of all existing and proposed confinement feeding operation structures and show at least a one-mile radius around the structures. The photos must either show roads on the north and south or east and west sides of a section (so that a mile distance is apparent), or include a distance scale.

The photo(s) must show that the proposed structures comply with all statutory minimum required separation distances to the objects listed below:

- Residences (not owned by the permit applicant), churches, businesses, schools, public use areas
- Water wells (depends on type)
- · Major water sources, wellhead or cistern of an agricultural drainage well or known sinkholes
- Water sources (other than major water sources) and surface intakes of an agricultural drainage well
- Designated wetlands
- Road right-of-way

The separation distance to each of the above objects must be noted with a straight line between the proposed structure(s) and the object. If any of the above objects is not located within one mile from the proposed structures, note the fact on the photo(s) or use additional pages. (Example: "No agricultural drainage wells within one mile.")

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.

All separation distances that are not clearly in excess of the required minimum separation distance must be measured according to 567 IAC 65.11(9) using standard survey methods. Go to the DNR Fact Sheet Page on our website and select DNR fact sheet "Distance Requirements for Construction" to find the required separation distances. Or, go directly to the Minimum Separation Distances for Construction or Expansion of Confinement Feeding Operation Structures Form. An example aerial photo can be found on pages 18 to 19 of the AFO Construction Permit Application (DNR Form 542-1428), or at the previously listed link.

Note: If a master matrix is required, the photos must also show that the additional separation distances required for any points claimed in matrix criteria one through ten will be met for the objects listed above. Note the additional separation distance by drawing a straight line between the proposed structures and the matrix item.

E) Karst Determination: Go to DNR AFO Siting Atlas at http://programs.iowadnr.gov/maps/afo/. 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:



X 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).

- F) Alluvial Soils Determination: Go to the AFO Siting Atlas as described above. Make sure the alluvial box is checked on the map layers. 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.
 - 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.

NOTE: You may not be in a flood plain per DNR, however in a County Flood Hazard Area and need a county permit.

Section 2 - Manure management plan:

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

Summit Farms Pork, LLC by	17 -	
Eric Peterson, Representative		5/10/22
Owner's Name (print)	Ówner's Signature	Date

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

- 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 3 for each formed manure storage structure³ that have <u>different</u> dimensions. Complete all of the following information:

Number of buildings: two Building name: swine finisher

	Length	Width	Height or depth	Wall thickness	Diameter (circular tanks only)
Feet	193	101	8	0	N/A
Inches	0	10	0	8	N/A

Dimensions of proposed formed manure storage structure³

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 page 9), 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. X Use Tables D-3 and D-4 (on page 10) 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 10 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

	F	Proposed vertical steel in	walls [see boxes "a" and "b", a	bove]	
Description of reinforcing steel in walls	Walls where vehicles are <u>not</u> 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 <u>not</u> 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	Proposed horizontal stee! in walls (use Table D-5)
Grade 40, No. 4					
Grade 40, No. 5				· · · · · ·	
Grade 60, No. 4			10	9	12
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 <u>aboveground or partially aboveground</u> 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).

Fax:

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

Name of tank manufacturer company:

Address:

Telephone: _____

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) <u>all</u> of the following 15 additional requirements apply. Complete the numbered items 1 to 15 (below).
- If you checked box B.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. Perimeter tiles must be tied into existing tile, day light, or have an operating sump pump installed in tile riser. Perimeter tiles CANNOT dead end at riser or monitoring port.

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 4½ 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 × 6-W1.4 × 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 -½ 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 12). 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 12). 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.
- Concrete forms specifications (check the following box):
 All walls shall be formed with rigid forming systems and shall not be earth-formed. Form ties shall be <u>non</u>-removable.
- 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.
- 4. 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.
- 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 NRCS engineer.
- 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: Hardin Buckeye 25

County: Hardin

Owner's name: Summit Farms Pork, LLC

will be constructed in accordance with these minimum requirements. Included with this certification are:

Page 1-3, for each formed manure storage structure³ that have different dimensions

Pages 4 to 6 (applicable sections)

Other documents (specify):

Brent V Rastetter

(Print name)

Quality Ag, Inc

(Company)

X	1	tin	they	fathe
(Sig	nature)		

15481 Co Hwy D20, Alden, IA 50006

(Address)

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(See page 7 for mailing instructions)

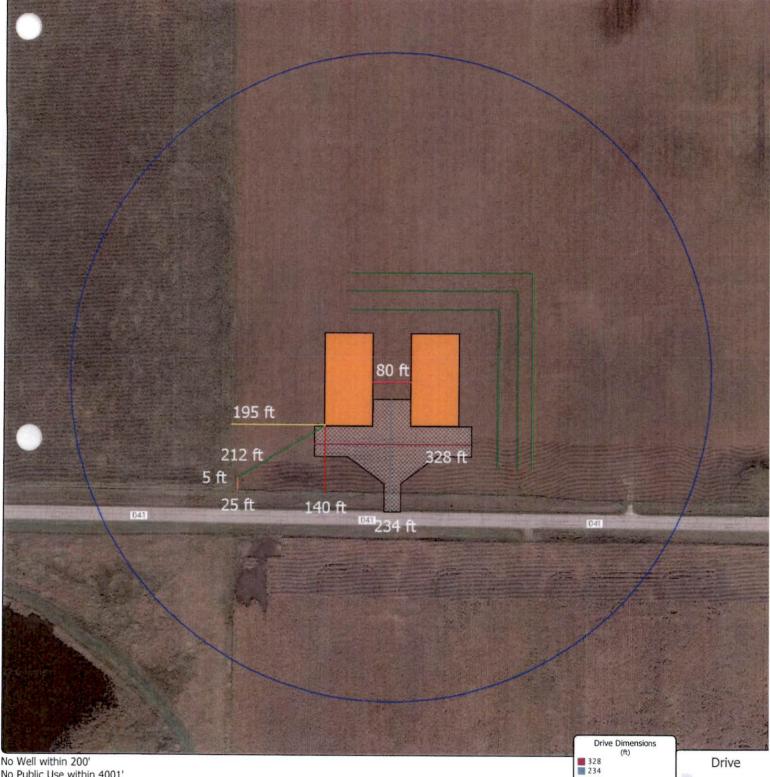
(Date

515-859-7824 ext.11

(Phone No.)

Hardin Buckeye 25

Site Placement



No Well within 200' No Public Use within 4001' No Wetlands within 2500' No HQ & Protected Water within 2000'

Date: 5/4/22 B' e 25 Ha. ____ County, IA Section 25, T88N, R22W

Grower : Buckeye 25 Farm : Site Placement Field : Distances



Distance to Proposed Deep Well (ft)

Trees

Distance Between Barns

(ft)

212 5 25

80

Distance to Fence

(ft)

500 Ft Water Buffe

Feature ID

140

195

Site 📕

Hardin Buckeye 25

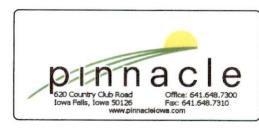
Site Placement

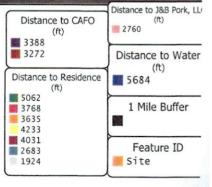


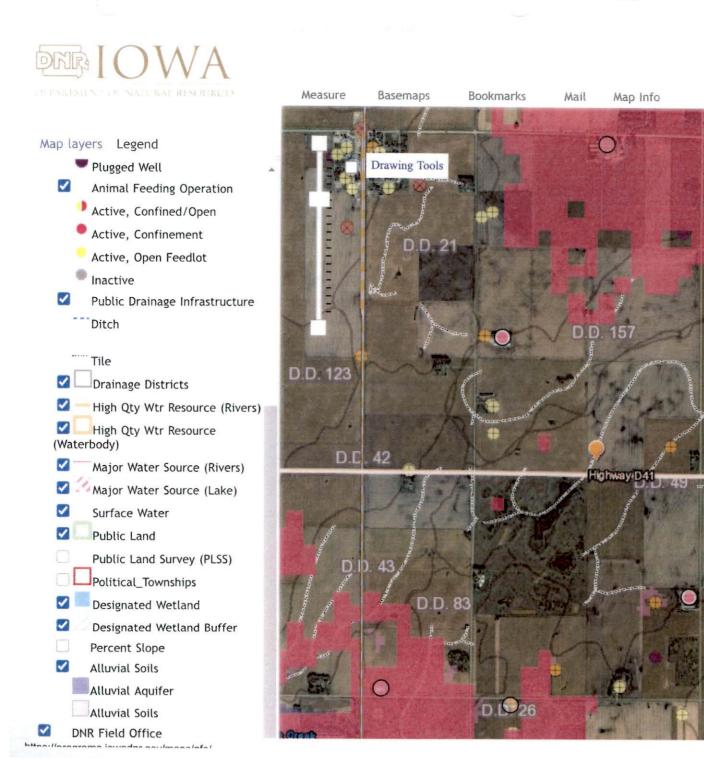
No Well within 200' No Public Use within 4001' No Wetlands within 2500' No HQ & Protected Water within 2000'

Date: 5/4/22 B: re 25 H. County, IA Section 25, T88N, R22W

Grower : Buckeye 25 Farm : Site Placement Field : Distances







Highway/

Map layers Legend < AFO Siting Data Sinkholes (Year added to Atlas) Sinkhole or Potential Karst Ag Drainage Well Wells < Animal Feeding Operation Active, Confined/Open Active, Confinement Active, Open Feedlot Inactive ~ Public Drainage Infrastructure -Ditch Tile Drainage Districts High Qty Wtr Resource (Rivers) High Qty Wtr Resource (Waterbody) Major Water Source (Rivers) Major Water Source (Lake) Surface Water Public Land Public Land Survey (PLSS) Political_Townships Designated Wetland

Designated Wetland Buffer
 Percent Slope



APPENDIX C MASTER MATRIX

Proposed Site Characteristics

The following scoring criteria apply to the site of the proposed confinement feeding operation. Mark <u>one</u> 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,

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* Nursing home, or

 Licensed or registered child care facility. 	0			
1424-1875=49'	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.

2300+ 150= None within 4001	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

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* Commercial enterprise.

2760-1875=885	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.
- Additional separation distance, above minimum requirement of 500 feet, from proposed confinement structure to the closest water source.

5684-500= 5184	Score	Air	Water	Community
250 feet to 500 feet	5		5.00	
501 feet to 750 feet	10	1	10.00	
751 feet to 1,000 feet	15		15.00	i -
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	<u> </u>

"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.

2500+500 = None within	3DIN'	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 distance.

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.

1000+2501= NMU within 3501	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 dair	y 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

1000x2= None within 2000	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/agriculture/manure-management-and-air-guality/feedlots-and-manure-storage/offs et-odor-from-feedlots/. 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 area	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).

<u> </u>				Score	Air	Water	Community
Installation of filter(s)				10	8.00		2.00
TTL		 -	 	· · · · · · · · · · · · · · · · · · ·		·	

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.

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	\$core) Air	Water	Community	
Utilization of Landscaping	20	10.00		10.00	
The design operation and maintenance plan for the landscapi		the constr	uction nor		

application 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	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	1	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

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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	

- (A) Proof of Homestead Tax Exemption is required as part of the construction permit application.
- (B) 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 lowa Code chapter 425A.

	Score	Air	Water	Community
Family Farm Tax Credit qualification	25 ·			25.00

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.

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$4999 \times 4 = 1999.6 AU$	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:
 - (a) At least one confinement feeding operation structure must be constructed on and after May 21, 1998.
 - (b) 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) 1,250 feet for confinement feeding operations having a combined animal unit capacity of less than 1,000 animal units.
 - (2) 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 <u>one</u> 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 in that subsection).

		Score	Air	Water	Community
a.	Bulk dry manure is sold under lowa Code Chapter 200A and surface-applied	15		15.00	
	Bulk dry manure is sold under lowa 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 an approved 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 an approved department manure management plan	30	12.00	12.00	6.00
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 requirements of an approved department 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.

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	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	<u>Community</u>	
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,

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- * 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,

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- * 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.

Soore	Air	Water	Community
(10)			10.00
	(10)	(10)	(10)

(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.
- 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 approved construction permit. The applicant may limit public inspe				

- Added economic value based on quality job development (number of full time equivalent (FTE) positions), and salary equal to or above lowa 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/regionalsites.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.

i	 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		
ĊNMP	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.

	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.

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

Score to pass

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Site: Buckeye 25

Date: 5/4/22

APPENDIX C MASTER MATRIX

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<u>440</u>	<u>53.38</u>	<u>67.75</u>	<u>101.13</u>		
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Hardin Buckeye 25

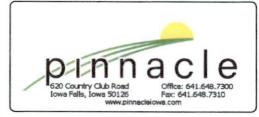
Site Placement



No Well within 200' No Public Use within 4001' No Wetlands within 2500' No HQ & Protected Water within 2000'

Date: 5/4/22 B /e 25 Haram County, IA Section 25, T88N, R22W

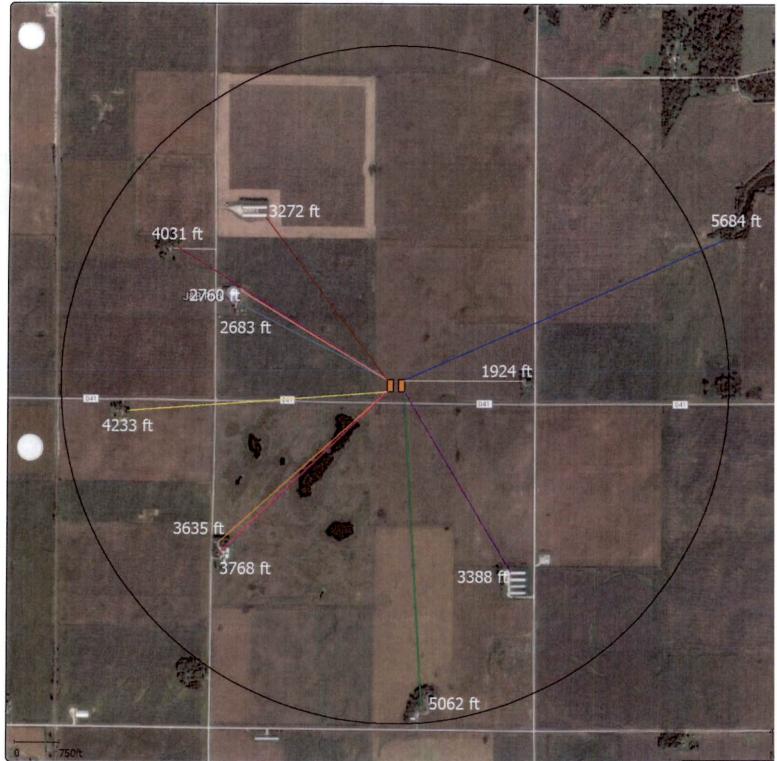
Grower : Buckeye 25 Farm : Site Placement Field : Distances



Drive Dimensions (ft) 328 234	Drive
Distance to Proposed Deep Well (ft) 212 5 25	Distance to Fence (ft) 140 195
Trees	500 Ft Water Buffe
Distance Between Barns (ft) 80	Feature ID

Hardin Buckeye 25

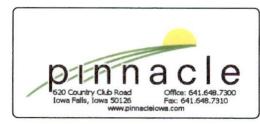
Site Placement



No Well within 200' No Public Use within 4001' No Wetlands within 2500' No HQ & Protected Water within 2000'

Date: 5/4/22 B re 25 H County, IA Section 25, T88N, R22W

Grower : Buckeye 25 Farm : Site Placement Field : Distances



Distance to CAFO (ft)	Distance to J&B Pork, LL((ft) 2760
3388 3272	Distance to Water
Distance to Residence (ft)	5684
5062 3768	1 Mile Buffer
3635	
4233	-
4031	Fasture ID
2683	Feature ID
1924	📕 Site

Design, Operating, & Maintenance Plans & Supporting Documentation

SITE NAME – Hardin Buckeye 25

Master Matrix #2

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The swine 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 swine facility is located at least an additional 885 feet, above the required 1,875 feet, away from the closest Educational Institute, Religious Institution, or Commercial Enterprise. Refer to site map.

Credits of 15 pts have been counted in the Master Matrix for Item 3.

Master Matrix #4

The swine facility is located an additional **5184 feet**, above the required **500 feet**, away from the closest water source. Refer to site map. Credits of **30** pts have been counted in the Master Matrix for Item 4.

Master Matrix #6

The swine 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 #7

The manure storage structure will not be within 200' to the closest "deep", or 400' to the closest "shallow" public and private drinking water well. Credits of **30** points have been counted in the Master Matrix for Item 7

Master Matrix #8

The swine 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 #10

The swine facility is located at lease 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.

<u>Master Matrix #12</u>

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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 will consist 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 Hardin 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.

<u> Master Matrix # 15</u>

Points: We are claiming 20 points because this Site utilizes Landscaping. Iowa Code states that the landscaping design should contain a total of at least three rows of trees and shrubs of both fast and slow-growing species that are well suited for the site. **Design:** The site will have a minimum of **3** rows of trees and shrubs on both the **North** and **East** sides. The "fast growing" varieties may include, but are not limited to Austree Hybrid Willows, Hybrid Poplars, Silver Maples, & Hackberry. "Slow-growing" varieties may include, but are not limited to the Pine, Spruce, Cedar, and Fir families, as well as Oaks, and Walnuts. The Shrubs may include, but will not be limited to Dogwoods, Plums, Lilac and Ninebark. All varieties will be selected for best viability to site and soil conditions using ISU PM 1717, and NRCS Woodland Technical Note 21, as well as other reference guides. This site will have trees positioned on the **North** and on the **East** sides of the site to serve both odor control and aesthetic purposes. The trees help control odor by getting the air to "rise and tumble" as it moves across the site. The tumbling action accelerates the dilution of odor with fresh air as it travels. Trees on the **East** side of the site are used to create a visual screen to the closest neighbors to the **East**.

Operation and Maintenance: Site preparation will happen in the fall before planting. Leveling and weeding are the main goals at that time. Most of the plantings will take place in the spring. Initial concerns immediately after planting are watering and weed control. Supplemental water will be provided depending on species and soil conditions. Mowing between the rows of plants will control competition of weeds. The trees and shrubs will be inspected periodically for diseases, insects, weeds, and other factors that may damage the health of the trees and shrubs. Diseased and dead trees will be removed and replanted in the spring seasons to achieve the desired result.

Credits of 20 pts have been counted in the Master Matrix for Item 15

Master Matrix # 17

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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 if discovered 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

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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 #24

The facility has a capacity of 1 to 2000 animal units. Refer to Construction Permit Application, page 3.

Credits of 20 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 # 26 "e"

All manure will be injected or incorporated on the same date that it is applied. Credits of **30** pts have been counted in the Master Matrix for **Item 26e**.

Master Matrix #35

A separation distance of **400 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 #37

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، مر A worker safety and protection plan is submitted with the construction permit application and was made a condition in the construction permit. The worker safety and protection plan and subsequent records will be kept on site with the manure management plan records.

Credits of 10 pts have been counted in the Master Matrix for Item 37.

Master Matrix #40

An Emergency Action Plan in compliance with the Iowa State University Extension publication PM 1859 was submitted with the construction permit application and was made a condition in the construction permit. The emergency action plan and subsequent records will be kept on site with the manure management plan records. Credits of 5 pts have been counted in the Master Matrix for Item 40.

Master Matrix #41

THIS CLOSURE PLAN MUST BE KEPT ON SITE WITH ALL OTHER MMP DOCUMENTS. Closure Plan as of 5/11/2022. This plan has been written in accordance with NRCS Conservation Practice Standard "Closure of Waste Impoundments". The closure plan is based on NRCS Code #360. This also meets the standards and requirements, which are set forth by the Iowa DNR. The closure shall comply with all federal, State of Iowa, local, and tribal laws, rules and regulations that are in place at the time of the closure. Summit Farms Pork, LLC will notify the DNR Filed office of their intent to close the structures on this farm which consists of two 8' deep pit barns, subsequent to six (6) months of the structure being empty of livestock. Applicant will follow any closure rules that may be established at that time that is more stringent than this closure plan. Summit Farms Pork, LLC and the DNR will establish a time line of completion for the closure plan.

- 1. Manure should be well agitated to try to remove as much manure as possible. The effluent, solids and any sludge will have an analysis for both nitrogen and phosphorus. This analysis will be used in determining the amount of material to be applied on a per acre basis according to the Manure Management Plan.
- 2. Non-concrete construction material should be removed and disposed of following DNR guidelines.
- 3. Slats should be removed for pit cleaning. Slates can be broken and added back after the pit is clean and walls have been knocked in.
- 4. All solids left in concrete containment shall be removed and field applied using agronomic rates.
- 5. After concrete containment is cleaned, applicant shall contact the DNR Field Office for visual inspection if DNR so advises. If DNR determines containment is clean enough to no create environmental impact, applicant may proceed to the next step.
- 6. Floor of containment shall be broken up so as to not impound water. Sub drain tile may be removed. Containment walls will be broken up and pulled into pit area. Demolished building materials shall be placed on top of concrete if not disposed of in another way.

- 7. Materials are to be covered with soil to a settled depth of one foot, and the backfill be sufficiently mounded such that runoff will be diverted from the site after the backfill settles.
- 8. Measures shall be taken during the construction to minimize site erosion and pollution of downstream water resources. This may include such items as silt fences, hag able barriers, temporary vegetation, and mulching.

Credits of 5 pts have been taken for Item 41.

Master Matrix #42

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An Environmental Management System (EMS) is submitted with the construction permit application and was made a condition in the construction permit. Credits of 15 pts have been counted in the Master Matrix for Item 42.

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

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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.

	Experiment One (summer)		Experiment Two	
	Dry	_Wet/dry	Swing	Nipple
Per pig j	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*	7.0 kg (15.4 lb)	4.9 kq (10.8 lb)	3.9 kg (8.6 lb)	4.5 kg (9.9 lb)
Per 1000) kg bodyw	eight		
Mass	109 kg (240 lb)	76 kg (167 lb)	61 kg (134 lb)	70 kg (154 lb)

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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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Swine Employee Safety & Protection Plan

If, at any time, you feel you cannot do a job safely, stop and discuss it with us and we will work together to fix the problem.

Work clothes

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You are expected to come to work dressed in suitable clothes that do not pose a safety risk. Suitable clothes include:

- sturdy work boots with non-slip soles for general work on-farm;
- tough overalls or long, washable trousers;
- a comfortable shirt long sleeves should be either buttoned at the wrist or rolled up so that no loose ends can be caught in machinery or on protruding materials, the shirt should also be tucked into your trousers for the same reason;
- a broad-brimmed hat for outdoor work; and
- wet weather gear.

You are expected to wash your work clothes daily, particularly after working with chemicals.

<u>Hygiene</u>

Attention to personal hygiene is essential. It is in the interests of your health and our business. If you are a smoker, we will support your attempts to quit, as smoking in a rural environment poses a fire risk.

You must:

- ensure your skin, especially your hands, are kept clean and washed with soapy water after working;
- wash your work clothes daily;
- keep up to date with your tetanus vaccinations;
- not be in possession of, consume or be suffering the effects of alcohol or illicit drugs;
- promptly report skin infections to the owner/manager;
- not smoke in the barns or any other farm buildings; and
- advise the owner/manager of any prescription medicines you may need to take during working hours this is particularly important if you use asthma medication.

Use of protective clothing and equipment (PPE)

Protective clothing and equipment is provided for your personal protection while you work with us. All personal protection equipment (PPE) should be used as instructed, cleaned properly after use and kept in good order.

Let the owner/manager know if PPE is damaged or unavailable, or if you are having difficulty using the equipment provided.

The PPE includes:

- rubber boots;
- protective gloves for handling cleaning agents;
- hearing protection when noise is a problem;
- protective gloves, face masks, coveralls and respirators for handling chemicals;
- sunscreen when working in direct sunlight;
- goggles or safety glasses for eye protection; and

Handling chemicals

The chemicals used on-farm include detergents and other chemicals used to control insects, weeds, fungal diseases, mice and rats.

- Only use chemicals if you have been trained in their use and are authorised to do so.
- Anyone handling farm chemicals must comply with the instructions on the label and the Material Safety Data Sheet (MSDS). The MSDSs are located in the site office
- If you cannot understand the label or the MSDS, or have difficulty reading them, ask for help before continuing.
- The recommended personal protection equipment (PPE) should be worn during chemical mixing, application and clean up.

- Always have clean water available for washing down and clean clothes when using chemicals.
- When you have finished you job, the equipment should be washed down and the chemicals locked away in the chemical storage area.

Equipment operation and maintenance

- Make sure you have received instruction and training, or have been assessed before you operate any equipment for the first time.
- Become familiar with the operator's manual for all the machinery you operate.
- Read, understand and comply with all the safety warnings on machinery and equipment, and in the operator's manual.
- Ensure the power has been isolated before removing the guards on any machinery for maintenance or testing.
- As soon as the job in finished, always replace a guard that has been removed for machine maintenance or to clear a blockage.
- Tell the owner/manager about guards that have been damaged or exposed moving parts on machinery that may present the risk of injury.
- Keys must be removed from machinery after use and placed in the key cupboard.

Being ready for emergencies

- All accidents and injuries must be reported to the owner/manager.
- Before setting out each day, ensure you have enough water to keep you well hydrated.
- Always let someone know where you plan to be on the farm, particularly if you are on your own. If no one is about, write it down and leave a note in a conspicuous place.
- First aid kits are located in the office
- Make sure the emergency telephone numbers are posted in the office

Buckeye 25 Co Hwy D41 Hubbard, IA 50122

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Environmental Management System

Purpose

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The purpose of the Environmental Management System (EMS) and its components is to implement management practices that improve financial, social and environmental sustainability of an animal feeding operation.

Key Components to the EMS

<u>Construction and Permitting of the Site:</u> Site Location is crucial to the community and site owners. Prior to construction the site is planned out and mapped to avoid any areas of concern and to make sure the DNR distance requirements are met. The site is inspected to make sure that it is not on Karst soils or in a flood plain. Measurements are taken within one mile around the site to residences, water, other CAFOS, businesses and public use areas to confirm separation distances. The site owner works with a contractor and has submitted a Construction Design Statement to prove quality of concrete in the pit. DNR will be or has been called and notified on first pour of concrete for inspection. After construction and before pigs are placed in barn the construction certification has been filled out and submitted to DNR.

<u>Manure Management Plan</u>: A manure management plan is updated and filed each year with lowa DNR according to the 567 lowa Administrative Code 65.16 (1). Manure is applied to fields that have been scored using the lowa Phosphorus Index. The lowa Phosphorus Index takes into account soil type, erosion potential, slope, distance to nearest water as well as phosphorus levels in the soil. Rates are then calculated from a manure sample that is taken yearly. Calculated rates do not exceed the nitrogen use levels necessary to obtain optimum crop yields. Field acres are sufficient to apply all manure in the MMP to and all have written consent forms with land owners to apply manure to their fields.

<u>Manure Storage</u>: Manure storage is crucial to the hog operation. Manure is collected in a pit under each building. With the use of wet dry feeders, pits have a capacity to hold 12 months of storage in an 8ft pit. This allows for producer flexibility on timing of manure application.

<u>Application of Manure</u>: Application takes place either in the Spring or Fall. Before application rates are calculated and pits are agitated to make the manure more consistent. Certified applicators are hired by the site owner and manure is injected onto fields in the Manure Management Plan (MMP). Injection of the manure is beneficial to the producer as it reduces nitrogen volatility, reduces odor and reduces nutrient loss. Manure that is injected has a Nitrogen application loss factor of 0.98 compared to surface application with a factor of 0.75. The injection of manure applies nutrients in the soil directly where it is needed so crops can utilize them.

<u>Spill Response:</u> Site has implemented a response and cleanup plan in case of spills during the transportation and hauling of manure. If a spill takes place DNR will be contacted as well as contacts for hauling equipment, pumping equipment and the MMP service provider. An emergency action plan is in place and on site with all contacts and numbers needed for a spill. Manure will be contained and cleaned up to DNR requirements.

<u>Mortality Disposal</u>: There are two main kinds of mortality disposal, rendering and composting. Both are good ways to dispose of any mortalities.

Rendering is a practice that converts dead animals to value added product such as protein feed. Hog mortalities are placed in secure containers to prevent access to wildlife. Mortalities are picked up weekly by a rendering company. In the event of a catastrophic loss due to disease or weather event owner will provide labor and trucking assistance to the rendering facility.

Composting is a practice that converts dead animals into compost to then be applied to fields as a fertilizer. Mortalities are placed in bins and covered with material such as corn stover as well as other organic material. Mortalities then break down naturally and are applied to fields as a soil amendment. Compost piles are checked daily to make sure all mortalities are covered properly.

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Emergency Action Plans

Emergency action plans provide detailed information on what to do if you have an accident or emergency at your livestock facility, such as a manure spill. While Emergency Action Plans are not required, it is a good idea to keep a copy of the plan with your manure management plan or records, production records, or somewhere that is easily located by you, family members, or employees. A well-designed and implemented emergency action plan can reduce the severity of emergencies, the risk to humans and animals, the economic losses, and the potential of environmental pollution.

This fact sheet is designed to address emergency action plans in the event of a manure leak or spill. In addition to developing an emergency action plan to address manure management, you might consider developing additional plans to address mass animal mortalities; weather-related emergencies; or electrical, plumbing, or other mechanical failures.

An emergency action plan should contain four items:

- 1) a plan of action to prevent the release of manure or prevent environmental contamination
- 2) a detailed map of the site and application fields
- a list of contact names and numbers included with the plan and posted near the phone
- 4) a clean-up plan

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This fact sheet is not designed to be a "fill-in-the-blank" form. It is designed to give you the basic information needed to prepare an emergency action plan. The plan you design will be specific to your livestock facility and your management practices. You may want to work with your local emergency management coordinator when developing your emergency action plan. The coordinator can help you identify resources and file any necessary notifications needed in the response of an accident or spill.

PLAN OF ACTION

A plan of action should be developed for each livestock facility. Review the plan of action every six months and make sure all personnel involved with the livestock facility are familiar with the plan. Items to consider for a plan of action include:

- Assess the situation, know what factors are at risk (human health, animal welfare, the environment, livestock structures)
- · Reduce risk through implementation of planned steps
 - Prevent spills or discharges by maintaining equipment and following plans
 - Eliminate the source of manure if spill or discharge occur
 - Contain the spill
- Contact appropriate authorities to report emergencies or accidents
- · Assess damages

In the event of a manure spill or leak, every effort possible should be made to prevent movement of manure off-site. If necessary, contact neighbors or nearby contractors with earth-moving equipment available to assist with containment. If tile intakes are present, have devices on hand to prevent manure from entering the tile lines. Contact neighbors with manure handling equipment to land apply the manure. Prevent manure from entering bodies of water or other environmentally sensitive areas, such as sinkholes and ag drainage wells. For assistance, contact your local sheriffs department or other emergency response personnel in your county. State law requires that you report manure spills or leaks to the Iowa Department of Natural Resources as soon as possible, but not later than 6 hours from onset or discovery of the problem (see Contact Names and Numbers).

IOWA STATE UNIVERSITY University Extension Emergency Action Plans

SITE MAP

A good planning tool for emergency action plans is a site map of the livestock facility. A site map can be of assistance to new employees, delivery personnel, and emergency response personnel. A site map should include the following information:

- Facility address and location (including e911 address)
- Building locations
- · Electrical service boxes
- Water main connections and shut-off valves
- Identification of the manure storage structure with associated pump-out ports, valves, pumps, etc...
- · Location of wellheads
- Identification of nearby tile intakes, sinkholes, ag drainage wells, streams, lakes or other environmentally sensitive areas
- · Drainage and water movement indications
- · Identification of property boundaries
- · First aid kit

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• Fire extinguisher(s)

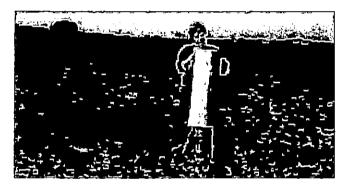
In addition to a site map for livestock facilities, copies of maps of fields for land application of manure should be included. If you already have these maps filed with your manure management plans, an extra set could be filed with your emergency action plan. These maps should include manure application setback distances, designated areas, watercourses, and property boundaries. It is also helpful to include the location of field access roads and gates. You may wish to file a site map with your DNR regional field office.

CONTACT NAMES AND NUMBERS

See attached sheets.

CLEAN-UP PLAN

A clean-up plan should include methods of proper manure removal and land application of manure at agronomic rates. Manure applications from a spill should also be recorded in your manure management plan if you are required to have one. You should consult DNR field staff for appropriate clean-up methods. You may be required to file a report following a manure spill, leak or other incident.



This fact sheet was developed by the Iowa Manure Management Action Group (IMMAG). Special thanks to Don Peterson and Paul Miller, NRCS; Karen Grimes and Kathie Lee, IDNR staff; and Jeff Lorimor and Angela Rieck-Hinz, ISU; for development of this material. Members of IMMAG include: Natural Resource Conservation Service (NRCS), Iowa Environmental Council, Agribusiness Association of Iowa, Iowa Farm Bureau, Iowa Pork Producers Association, Iowa Cattlemen's Association, Iowa Poultry Association, Conservation Districts of Iowa, Farm Credit Services of America, Iowa Department of Natural Resources (IDNR), Division of Soil Conservation of the Iowa Department of Agriculture and Land Stewardship (DSC-DALS), Iowa Beef Center, Iowa Pork Industry Center and Iowa State University Extension, and the College of Agriculture.

A special thanks to the IDNR field staff, Extension field staff, and State Emergency Response personnel for assistance.

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Stanley R. Johnson, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.

> PM 1859 January 2001 File: Environmental Quality 4-1 (A)

IOWA STATE UNIVERSITY University Extension

Contact Names and Numbers

A list of contact names and numbers should be filed with the emergency action plan and a copy posted by the phone for emergencies.

Site Name

Buckeye 25

Owner/Operator

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1.)

Name: Summit Pork III, UP Phone: 515-854-9820

Site Address (including e911 address)

Co fluy Dyl Hubbaurd, 1A 50122

Specific Directions to the Site

see Attached

HUMAN INJURY

Explain that self-contained breathing apparatus may be required if someone has been overcome by gases.

Rescue Unit/Ambulance
Phone:

Doctor or Physician

Name: Hanson Family Hospital Phone: 641-648-7000

Hospital or Medical Clinic

Name: Hansen Family Hospital Phone: (041- 648-7000

Fire Department

Phone: 911

County Sheriff Name: Hardin County Sheriff Phone: 641-939-8189

County Health Official Name: Hardin County Public Health Phone: 641-939-8444

Poison Control Center

Phone: 1-800-222-1222

Others

Name: Hurdin County Environmental Heatth Phone: 641-849-7572

Name: _____

Phone: ____

Post by the telephone for reference.

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Buckeye Township

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- Carles 1
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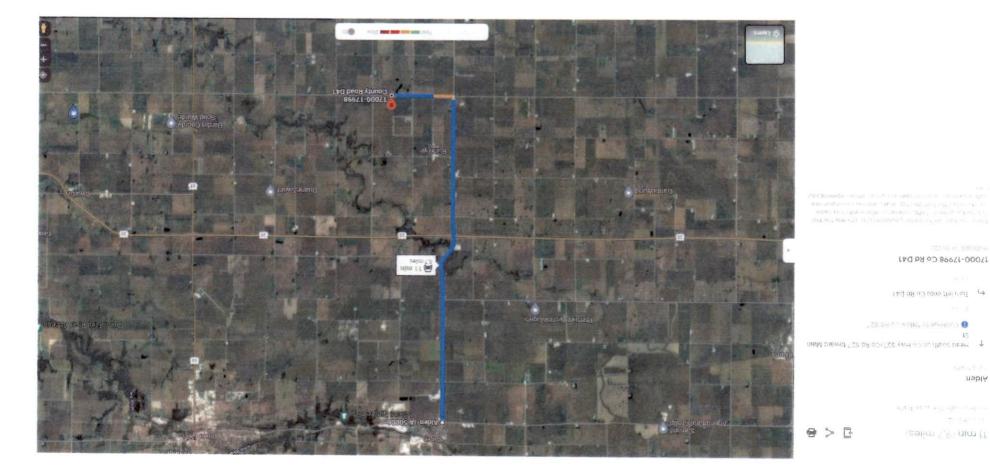
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IOWA STATE UNIVERSITY University Extension

Contact Names and Numbers

Manure Leaks or Spills

IOWA DEPARTMENT OF NATURAL RESOURCES FIELD OFFICE

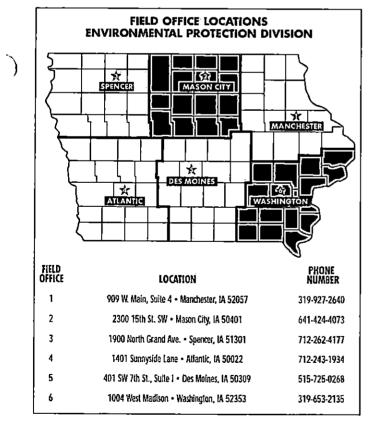
State law requires that you report manure spills or leaks to the Iowa Department of Natural Resources as soon as possible, but not later than 6 hours from onset or discovery of the problem (see *Contact Names and Numbers*).

Work Days 8 a.m. - 4:30 p.m. 641-424-4073 Phone:

Weekends, Holidays, and After Business Hours Phone: (515) 281-8694

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COUNTY SHERIFF

Name:	Hardin	County	Sheriff	
Phone:	641-939	7-8189		

CONTRACTOR

Earth Moving
Name: Summit Agricultural Group
Phone: 515-854-9820
Pumping Equipment
Name: Summit Agricultural Group
Phone: 515-854-9820
Hauling Equipment
Name: Summit Agricultural Group
Phone: 515-854-9820
Equipment Owners
Name: Summit Agricultural Group
Phone: 515-854-9820
County Engineer
Name: Hardin County Engineer
Phone: 641-858-5058
Others
Name:
Phone:

IOWA STATE UNIVERSITY University Extension

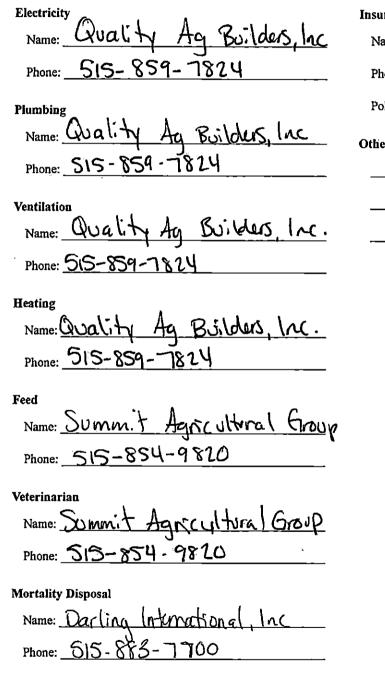
Contact Names and Numbers

PARTIAL SYSTEM FAILURE

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Equipment suppliers and technicians:



insurance		- 1		
Name: _	hlest	Field		
Phone: _	1-800-	243-0	210	
Policy:				
Other				

Emergency Action Plan

- 1) A plan of action to prevent the release of manure or prevent environmental contamination.
 - The building will be designed with cup waters, wet/dry feeders, or swinging nipple waters which will result in a significant reduction in annual manure production.
 - There will be a Caretaker on site and in the barns daily, and will visually inspect and monitor manure levels.
 - During the manure removal process, it will be our plan to cap any agitation pumps and never leave any loading pumps with load stands unattended.
- 2) A detailed map of the site and application fields.
 - > A map of the proposed site layout is attached.
 - > A plat map of the application fields is attached.
- 3) A list of contact names and numbers included with the plan and posted near the phone.
 - Attached

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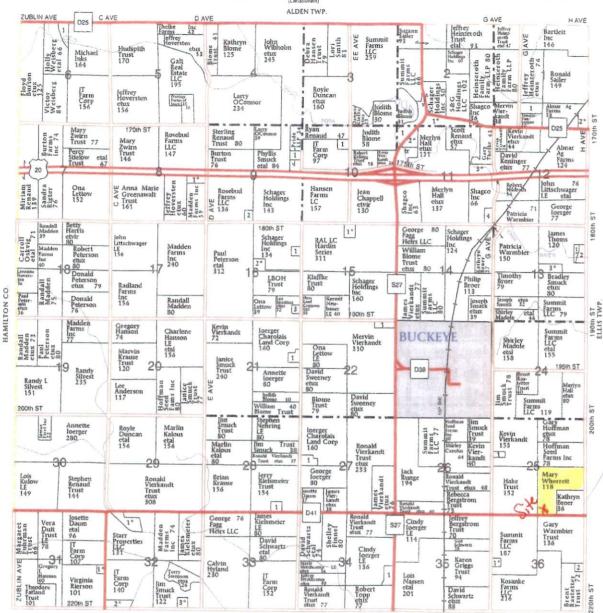
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4) A clean-up plan

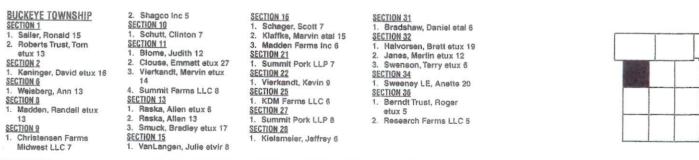
In the event of a manure spill we will use any appropriate means to prevent the manure from leaving the site, or reaching any water. Contained liquids will be sucked up using pump and applied as a slurry according to the MMP. Wood chips or straw will be used as a final drying agent where possible, and then will also be applied per the MMP. T-88-N

BUCKEYE PLAT

R-22-W



SHERMAN TWP





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Jeffrey T. Obrecht

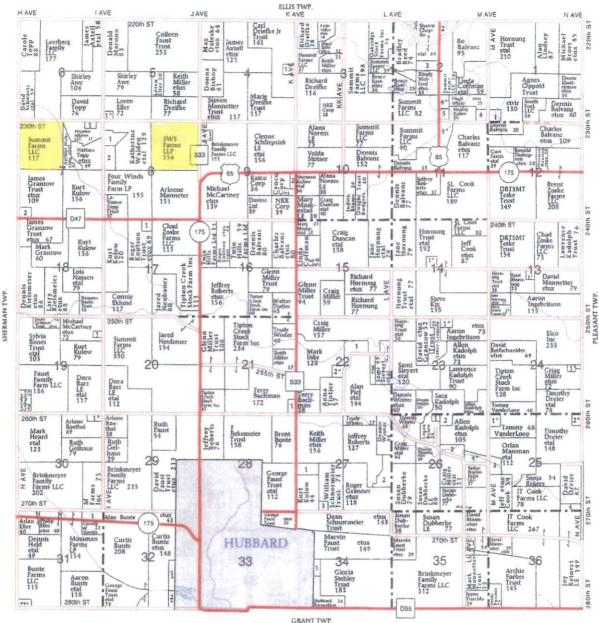
615 Washington Avenue

Iowa Falls, Iowa 50126

Fax: (641) 648-5066 www.TheDirtDealer.com

Jeff@TheDirtDealer.com

TIPTON PLAT



TIPTON TOWNSHIP

- SECTION 1 1. County of Hardin 10 SECTION 2 Tidman, Janet etal 7 2. County of Hardin 9 Rieks, David 14 3. 4 Wildeboer, Kelly etal 9 5. Ross, Eric 8 6. Moreno, Osiel 9 SECTION 4 1. Miller, Clint 7 SECTION 5 1. Nehring, Stephen etux 5 **SECTION 7** Woodford Creek Farms **LLP 12** 2. Granzow, Mark 10
- SECTION 8
- 1. Stiller, Karen 14 2. Nehring, Richard 12
- SECTION 9 1. Henricks, Erica etvir 5 Kulow, Stanley 7 SECTION 11 1. Heikens Trust, Marvin etal 25 SECTION 13 1. Hollingsworth, Kirk etux SECTION 14 1. Steiner, Martin etux 6 SECTION 17 1 Knutson, Isaac 9 **SECTION 19** Dodge, Monica 5 SECTION 21
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 - Birks, Clyde etal 10

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SECTION 23

- 1. Duncan, Eric etux 7
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- M Farms Inc 10
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- **SECTION 32**
- Blome, Harold etux 10 2. Ingebritson, Aaron etux
- SECTION 34 1. Tipton Creek Stock Farm Inc 7
- SECTION 35 1. Mannetter, David 12
- 2. Mannetter, David 6

- 2. Below, Logan 22

Certified Diesel Mechanics Tires **Truck Repairs** Brakes **Trailer Repairs** Batteries **Engine Overhauls** 100 N State St • Hubbard, IA

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Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

.**Astructions:** 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.

			n-Corn N-Rate (A)			
		(identify this app	olication	scenario by letter)		
Method to determine of	otimum crop yield ^g	USDA Iowa Ag Statistics County yields	-	Timing of application Sp	oring/Fall	
Method of application	Knifed in or soil injec	tion of liquid manure	-	Application loss factor	0.98	
If spray irrigation is used	l, identify method ⁱ		contemport			

Table 2. Manure nutrient concentration

Manure Nutrient	Conte	nt (lbs/100	Ogal or	lbs/ton) ^j	
Total N	58		P ₂ O ₅	40	
%TN Available 1st year ^k	90%	2nd year	0%	3rd year	0%
Available N 1st year	51.2	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	0.72
Alfalfa	50	13
Other crop 👻	0	0

Page 2

*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 ^g	bu or ton/acre	219	219	219	219
3	P ₂ O ₅ removed with crop by harvest ^q	lb/acre	70.1	70.1	70.1	70.1
4	Crop N utilization ^r	lb/acre	263	263	263	263
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 "	lb/acre	0	0.0	0.0	0.0
6	Remaining crop N need ^v	lb/acre	263	263	263	263
7	Manure rate to supply remaining N *	gal/acre	5137	5137	5137	5137
8	P_2O_5 applied with N-based rate ^x	lb/acre	205	205	205	205

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 ²	gal/acre	1752	1752	1752	1752
11	Manure rate for P based plan aa	gal/acre	1752	1752	1752	1752
12	Manure N applied with P-based plan ^{bb}	lb/acree	90	90	90	90

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

13 Planned manure application rate ^{cc}	l/acre 5137	5137	5137	5137
--	-------------	------	------	------

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.

42872107P2000 - Hakbarth



Grower : Buckeye 25

Farm : Fields

Field: 42872107P2000 - Hakbarth

Latitude : 42.36160403

Longitude : -93.34504562



Feature ID Total Acres(107.4 ac)

42872108P1000 - Blome



Grower : Buckeye 25

Farm : Fields

Field: 42872108P1000 - Blome

Latitude : 42.36125634

Longitude : -93.31946017



Feature ID Total Acres(153.6 ac)

42882225P4000 - Wherrett



Grower : Buckeye 25

Farm : Fields

Field : 42882225P4000 - Wherrett

Latitude: 42.40135099

Longitude : -93.35613049



Feature ID Total Acres(109.5 ac)

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Manure Management Plan Form

Year by Year Manure Management Plan Summary

Page 3

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 <u>identical</u> 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

Crop year(s): 2022-2025

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1	2	3	4	5	6		8	9	10	11
Field Designation ^{ee}	Field Location 1/4 of the1/4 Sec T R Townsip Name, County Name	Mgt	Planned Crop	Acres receiving manure ^{ss}	Own, rent, agreement (include length of agreement) hh	P index value ¹¹	HEL (Y/N) ^{JI}	Planned /	Application gal/field ^{kk}	Correct Soil Test for P ^{II} (Yes or No)
	NW, 7, 87, 21, Tipton, Hardin	Α	Corn	107.4	Owned	0.77	N	5137	551714	Yes
	NE, 8, 87, 21, Tipton, Hardin	Α	Corn	153.6	Owned	0.57	N	5137	789043	Yes
	N1/2 & SW, 25, 88, 22, Buckeye, Hardin	A	Corn	109.5	Owned	0.79	N	5137	562502	Yes
									0	
									0	
									0	
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	· · ·								90	
<u> </u>	Tratal a super assella bit. f								0	
	Total acres available for manu	re apr	Dication	370.5	Total gallor	is that c	could b	e applied	1,903,259	

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RUSLE2 Profile Erosion Calculation Record

Info: 42872107P2000

File: profiles\default

Inputs:

Location: USA\Iowa\Hardin County Soil: SSURGO\Hardin County, Iowa\L638C2 Clarion-Storden complex, Bemis moraine, 6 to 10 percent slopes, moderately eroded\Clarion Loam Bemis moraine, moderately eroded 45% Slope length (horiz): 130 ft Avg. slope steepness: 8.0 %

Management	Vegetation	Yield units	# yield units, #/ac
managements\CMZ 04\c.Other Local Mgt Records*CC North	vegetations\Corn, grain, high yield	bushels	200.00

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: 2.4 t/ac/yr Detachment on slope: 2.4 t/ac/yr Soil loss for cons. plan: 2.4 t/ac/yr Sediment delivery: 2.4 t/ac/yr

Crit. slope length: 130 ft Surf. cover after planting: 62 % Avg. ann. total biomass removal: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
<u>11/1/0</u>	Manure injector, liquid high disturb.30 inch		87
11/2/0	Chisel, st. pt.		64
4/12/1	Cultivator, field 6-12 in sweeps		60
4/1 <u>5/</u> 1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	62
10/20/1	Harvest, killing crop 50pct standing stubble		88





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lowa Phosphorus Index

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

Field Number	. <u> </u>			Erosion				+		Run	off			ikourfees D		
42872107P2000	Gross Erosion x 2,40	Sediment Trap Factor x 1,00	SDR >	Buffer Factor 1.00	Enrichment <u>x Factor x</u> 1.10	STP Factor 0.86	Erosion = Pi 0.20	F	RCN actor x (1,53	STP	РАрр	Runoff = Pl 0.50	Flow	STP STP Factor = 0.07	Tile/Sub	= <u>Overall</u> P Index 0.77



RUSLE2 Profile Erosion Calculation Record

Info: 42872108P1000

File: profiles\default

Inputs:

Location: USA\Iowa\Hardin County Soil: SSURGO\Hardin County, Iowa\L138B Clarion Ioam, Bemis moraine, 2 to 6 percent slopes\Clarion Loam Bemis moraine 85% Slope length (horiz): 130 ft Avg. slope steepness: 3.0 %

Management	Vegetation	Yield units	# yield units, #/ac	
managements\CMZ 04\c.Other Local Mgt Records*CC North	vegetations\Corn, grain, high yield	bushels	221.00	

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: 0.74 t/ac/yr Detachment on slope: 0.74 t/ac/yr Soil loss for cons. plan: 0.74 t/ac/yr Sediment delivery: 0.74 t/ac/yr

Crit. slope length: 130 ft Surf. cover after planting: 65 % Avg. ann. total biomass removal: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
11/1/0	Manure injector, liquid high disturb.30 inch		<u> </u>
11/2/0	Chisel, st. pt.		67
4/12/1	Cultivator, field 6-12 in sweeps		63
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	65
10/20/1	Harvest, killing crop 50pct standing stubble		90

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Iowa Phosphorus Index

v. 1/22/2007

Credits: Iowa State University USDA National Soli Tiith Laboratory USDA Natural Resource Conservation Service

Field Number				Erosion				+	Runo	off		F Tile / Su	iheurfana B		- •
42872108P1000-	Gross Erosion x 0.74	Sediment Trap Factor x 1.00	SDR x	Buffer Factor 1.00	Enrichment x Factor x 1.10	STP Factor = 0.83	Erosion Pl 0.05	RCN Factor 1.53	STP x (Factor + 0.20	P App Factor) 0.09	Runoff = Pl 0.44	Flow	STP <u>Factor</u> = 0.07	Tile/Sub	= Overall P Index 0.57





Info: 42882225P4000

File: profiles\default

Inputs: Location: USA\Iowa\Hardin County Soil: SSURGO\Hardin County, Iowa\L138B Clarion Ioam, Bemis moraine, 2 to 6 percent slopes\Clarion Loam Bemis moraine 85% Slope length (horiz): 130 ft Avg. slope steepness: 3.0 %

Management	Vegetation	Yield units	# yield units, #/ac	
managements\CMZ 04\c.Other Local Mgt Records*CC North	vegetations\Corn, grain, high yield	bushels	221.00	

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: 0.74 t/ac/yr Detachment on slope: 0.74 t/ac/yr Soil loss for cons. plan: 0.74 t/ac/yr Sediment delivery: 0.74 t/ac/yr

Crit. slope length: 130 ft Surf. cover after planting: 65 % Avg. ann. total biomass removal: 0 lb/ac

Date	Operation	Vegetation	Surf. res. cov. after op, %
11/1/0	Manure injector, liquid high disturb.30 inch		<u> </u>
11/2/0	Chisel, st. pt.		03
4/12/1	Cultivator, field 6-12 in sweeps		07
4/15/1	Planter, double disk opnr w/fluted coulter	Corn, grain, high yield	03
10/20/1	Harvest, killing crop 50pct standing stubble		65
			90



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lowa Phosphorus Index

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v. 1/22/2007

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

Fleid Number				Erosion			-	+	Run	off		The (Co	.		
	Gross	Sediment		Buffer	Enrichment	STP	Erosion	RCN	STP					lecharge	≈ <u>Overati</u>
<u> </u>	Erosion x	Trap Factor	X SDR >	Factor	x Factor x	Factor ≓	PI	Factor x		P App	Runoff	Flow	STP	Tile/Sub	8
42882225P4000 -	0.74	1.00	0.06	1.00	1.10	0.95	0.05	1.53		Factor)	<u>= Pl</u>		Factor =	PI	Index
						0.00	0.05	1.55	0.35	0.09	0.67	1.00	0.07	0.07	0.79

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Manure Management Plan Form

Appendix A8:		tistics County Co	lowa Ag Statistics County Corn and Soybean Yield Averages, 2016-2020	Yield Averages	, 2016-2020	Page 7
		Corn			Soybeans	
	5-yr. avg.	5-yr. ave.	Avg. yield	5-yr. avg.	5-yr. ave.	Avg. yield
	yield	yield + 10%	of 4 highest	yield	yield + 10%	of 4 highest
County	(bu/ac)	(bu/ac)	(bu/ac)	(bu/ac)	(bu/ac)	(bu/ac)
Adair	172	189	178	52	57	53
Adams	181	199	183	55	60	55
Allamakee	196	215	198	55	61	56
Appanoose	162	178	167	47	52	49
Audubon	197	217	203	56	61	58
Benton	195	214	207	59	. 65	59
Black Hawk	200	219	207	57	63	58
Boone	190	209	197	55	60	56
Bremer	207	228	212	57	63	58
Buchanan	208	229	213	57	63	57
Buena Vista	192	211	193	56	62	57
Butler	207	227	210	56	62	57
Calhoun	191	210	199	55	60	57
Carroll	199	219	211	58	64	59
Cass	188	207	193	55	60	57
Cedar	202	222	213	60	66	46
Cerro Gordo	192	212	195	55	61	56
Cherokee	206	227	211	62	68	64
Chickasaw	199	218	202	54	59	55
Clarke	153	168	159	47	51	47
Clay	182	201	188	54	60	56
Clayton	203	223	206	59	65	60
Clinton	203	223	209	59	65	59
Crawford	213	235	221	60	67	62
Dallas	180	198	190	53	58	55
Davis	161	177	174	48	53	51
Decatur	159	175	167	48	53	49
Delaware	208	229	212	61	68	63
Des Moines	195	214	199	60	66	61
Dickinson	180	198	184	54	59	55
Dubuque	211	232	214	59	65	60
Emmet	189	207	197	55	60	57
Fayette	198	218	203	57	63	58
Floyd	195	215	198	54	59	55
Franklin	200	220	204	57	63	58
Fremont	193	212	196	54	60	55
Greene	193	212	203	56	61	57
Grundy	207	228	213	61	67	63
Guthrie	187	206	196	54	59	56
Aamilton	192	211	198	54	59	55
Hancock	194	214	199	56	62	58
Hardin	199	219	210	57	63	58

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Manure Management Plan Form

Appendix A8: Iowa Ag Statistics County Corn and Soybean Yield Averages, 2016-2020

(continued)

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Page 8

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		Corn			Soybeans	
	5-yr. avg.	5-yr. ave.	Avg. yield	5-yr. avg.	5-yr. ave.	Avg. yield
. .	yield	yield + 10%	of 4 highest	yield	yield + 10%	of 4 highest
County	(bu/ac)	(bu/ac)	(bu/ac)	(bu/ac)	(bu/ac)	(bu/ac)
Harrison	193	212	197	54	60	55
Непгу	185	203	190	58	64	59
Howard	195	214	197	53	5 9	54
Humboldt	192	211	199	56	62	57
Ida	211	232	216	61	67	62
lowa	196	216	207	54	60	56
Jackson	196	215	198	57	63	58
Jasper	205	225	212	59	65	60
Jefferson	178	196	182	54	59	56
Johnson	192	211	199	56	61	57
Jones	201	221	208	57	63	58
Keokuk	186	204	191	55	60	56
Kossuth	196	216	200	59	65	60
Lee	184	203	187	57	63	59
Linn	205	225	214	57	63	58
Louisa	194	214	199	56	62	57
Lucas	150	165	155	46	51	47
Lyon	201	221	204	61	67	63
Madison	175	193	177	53	58	53
Mahaska	192	211	196	57	62	57
Marion	184	203	188	55	61 ,	56
Marshall	212	233	220	61	67	62
Mills	192	211	195	53	58	54
Mitchell	201	221	203	56	61	57
Monona	189	208	191	56	61	56
Monroe	167	184	170	52	57	54
Montgomery	193	213	195	54	60	56
Muscatine	193	213	198	59	64	60
O'Brien	206	227	208	61	67	62
Osceola	193	212	196	56	61	57
Page	188	207	190	54	60	55
Palo Alto	186	205	193	56	61	57
Plymouth	202	222	208	59	65	61
ocahontas	191	210	194	55	61	57
olk	187	205	196	53	58	54
ottawattamie	198	217	203	55	61	57
oweshiek	197	217	212	56	61	57
inggold	170	187	174	51	56	51
ac	201	221	211	57	63	51 60
cott	204	225	210	62	69	63
helby	204	225 、 224	208	62 57	63	59
	2.UH	<u> </u>	700	77	CD	~~

Manure Management Plan Form Appendix A8: Iowa Ag Statistics County Corn and Soybean Yield Averages, 2016-2020 (continued)

)		(con	tinued)	d)		
		Corn		_	Soybeans	
County	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	189	207	198	54	59	55
Tama	198	218	215	58	64	60
Taylor	164	180	166	51	56	52
Union	167	184	172	51	56	52
Van Buren	165	181	174	49	54	52
Wapello	175	192	180	54	59	56
Warren	171	188	175	51	57	52
Washington	202	222	207	57	63	58
Wayne	159	175	167	49	54	50
Webster	193	212	197	53	59	54
Winnebago	199	219	204	58	63	59
Winneshiek	198	217	202	55	60	55
Woodbury	207	227	210	58	64	59
Worth	195	214	198	55	60	56
Wright	194	214	198	56	61	56

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Nucrients in Animal Manuer 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 short-term and longterm impacts on crop nutrient supply and soil resources.

IOWA STATE UNIVERSITY

Extension and Outreach

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 forms; 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 at 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 agitation 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

PMR 1003 Revised May 2016

recommendations. Those 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 ISU 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 Mutrient 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 its 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 application 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 tougher to degrade)



Using Manace Nutrients for Crop Production

Using Manure Nutrients for Crop Production

organic materials due to bedding and 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 fertilizer or manure and seasonlong supply of nutrients. Significant amounts of plant usable forms of nutrients in both fertilizer and manure might be lost and became 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 for short or long periods of time into forms not usable by plants through processes such as immobilization to organic materials for N and retention by soil mineral constituents for P. Nutrient loss issues are not as pertinent for P and K as for N in lowa soils as long as there is little soil erosion and surface runoff.

The immediate or long-term fate of plant usable nutrients in soil can be similar for manure and fertilizer. However, variation in manure nutrient concentration, application rate, and application distribution affect nutrient supply and contribute to increased uncertainty with manure management. Application rate and distribution uncertainties affect all applied nutrient sources but are more difficult to manage with manure than with fertilizer. With careful manure sampling, pre-application nutrient analysis, study of nutrient analysis history, and calibration of application equipment, reasonable manute nutrient application rates can be achieved. Due to material characteristics, and sampling and analysis variability, field distribution and application rate variability often is greater for dry manure sources.

These supply issues can be important for N, P and K, although typically are of greater concern with N. There are several reasons, including manure usually is applied for corn production where N supply is critical, many lowa soils have optimum or higher P and K test levels where need for and response to P and K is much less than: with N, and crop deficiency symptoms and yield loss resulting from nutrient supply problems are more obvious for N.

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 availabilities 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 season-long nutrient supply when either manure or fertilizer is used. These tools include commonly used pre-plant soil testing for P and K, estimates of N application rate need based on response trial data (such as the Com 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.

Manuse Nutrient Application Becommandations -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.

First-Year Availability Estimates

Table 1. First-year nutrient availability for different animal manure sources.

of other nutrients.

Manure Source	Nitrogen ¹	Phosphorus ¹	Potassium ²		
	Percent of Total Nutrient Applied				
Beel cartle (solid or hquid)	3 <u>0</u> –50	80-100	90~100		
Dairy (solid or liquid)	30-50	80-100	90-100		
Liquid swine (anaerobic pit)	90100	90-100	90–100		
Liquid swine (anacrobic lagoon)	90-100 ³	90-100	90-100		
Poultry (all species)	50-60	90-100	90-100		

nutrient application requirements,

The estimates for N availability do not account for potential volatile N insees during and after land application. Correction lactors for volatile loss are given in Table 2. The ranges are provided to account for variation in the projection of animolium N (and for poultry mamire also uric acid), bedding type and amount, and both sampling and analysis

The 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 rest 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 Il insufficient P or K is applied and a reasonable buildup is desirable. Use 100% when manure is applied to maintain suff-test P and K in the Optimum soil test category, when the probability of a yield response is small.

Pratues apply for the liquid portion of swine mature in lagoona; the N and P availability will be tess and difficult to estimate with settled solids.

- Q (An additional consideration is what Manuac Natrient 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 In these cases, use of fertilizers in addition to manure application is necessary to appropriately meet all

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. The ranges in nutrient availability are provided to account for variation in the proportion of organic and inorganic N and P forms, bedding type and amount, manure sampling and analysis variation, and application importance at different P and K soil test levels. See the footnote in Table 1 for further information on variability in manure nutrient availability.

Using Manure Nutrients for Crop Production

Second- and Third-Year Availability Estimates

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 some of the N is in difficult to degrade organic forms (recalcitrant) and will become part of the soil organic matter. For some manure sources, such as with bedded systems, not all of the manure N should be accounted for in manure plans over multiple years and the first-, second-, or third-year availability may not add up to 100 percent.

Animal manure that has considerable organic material can have some residual-N availability in the second or third year after application. The second-year N availability esumate for beef cattle and dairy manure is 10 percent. and 5 percent for the third year. Other manures that have similar organic N and bedding could have similar second- and third-year N availability. Manure sources that have low organic N will not have second-year crop available N. These include liquid systems like swine manure stored in under-building pits and above-ground tanks, and anaerobic lagoons. Poultry manure, since it has considerable organic material, has some but low secondyear (O-10 percent) availability and no third-year N availability

Using Manure Muriceus for Crop Production

The P and K contained in animal manure are estimated at 100 percent crop available over a long term. Residual effects of P and K not used in the year of application will be reflected in soil tests and crop use, just like fertilizer P and K applied for one year or for multiple years.



Adjusting for Manure Nitrogen Volatilization The estimates for manure N availability in Table 1 do not consider potential volatile N losses during or after application. Losses are from various volatile N compounds in manure, such as ammonia, and ammonia that is produced when urea, uric acid, or other compounds convert to ammonium. These are similar losses that can occur from some N fertilizers such as anhydrous ammonia, urea, and urea-ammonium nitrate (UAN) solutions. If manure is left on the soil surface, losses may occur until N is moved into the soil with rainfall or incorporated with tillage. Many factors affect the rate and amount of volatile loss, such as temperature, humidity, rainfall, soil moisture, soil pH, surface residue cover, and days to incorporation. Volatile losses at or after application often are difficult to predict accurately. However, losses can be significant. and, therefore, it is important to make an adjustment for volatile N losses from applied manure and for manure management planning purposes. Values given in Table 2 provide guidance on potential volatile losses. The correction factors in Table 2 do not account for N losses during storage and handling (time from excretion to sampling for analysis) and assume a reasonable time period from sampling to land application so that the manure analysis represents the manure being applied. To estimate manure N remaining in soil after application.

multiply the applied manure N rate by the appropriate correction factor.

Using Manure Matrients for Crop Production

Table 2. Correction factors to account for N volatilization losses during and after land application of animal manure.¹

Application Method	Incorporation	Volatilization Correction Factor	
Direct injection	_	0.98-1.00	
Broadcası (liquid/solid)	Immediate incorporation	0.95-0.99	
Broadcası (liquid)	No incorporation	0.75-0.90	
Broadcast (solid)	No incorporation	0.70-0.85	
Irrigation	No incorporation	0.60-0.75	

Adapted from Midwest Plan Service MWPS-18, Third Edition Nitrogen losses during and within four days of application

⁴Multiply the manure total N rate applied times the volatilization correction factor to determine the portion of total manure N remaining one-iderations for Time of ammonium and therefore more contains a large portion of N

potential nitrate loss through leach-

ing or denitrification with excessively

wet spring conditions. This is a more

important issue for manure with large

ammonium-N concentration, such as

liquid swine manure. Coarse-textured

soils, with high permeability, are the

most likely to have leaching losses.

Fine- and moderately fine-textured

soils, prone to excess wetness are

most likely to have denitrification

has less time for organic N and P

mineralization before crop uptake.

Delayed mineralization can be an

organic matter content, especially

in cold springs. With manure that

important issue for manure with high

losses. Manure applied in the spring

Considerations for Time of Application

The time of application influences nutrient availability and potential manure and nutrient loss from soil. Fall applications allow more time for organic N and P portions of manure to mineralize so they are available for plant uptake the next crop season. This is more important for N in manures with high organic matter content, such as bedded systems. Iowa research has shown that fall versus springtime P and K application usually is not an agronomic issue for fertilizers or manure. The increased time for organic N mineralization with fall application also allows for nitrification



contains a large portion of N as ammonium, spring application allows for better timing of nitrification to nitrate and subsequent crop use, and less chance of N loss.

As a general rule, do not apply manure in the fall unless the soil temperature is 50° F and cooling at the four-inch soil depth. This will slow the mineralization and nitrification processes and is an especially important consideration for manure containing a large portion of N as ammonium.

Broadcasting manure onto frozen, snow-covered, water-saturated soils increases the potential for nutrient losses with rainfall or snowmelt runoff to surface water systems. If manure must be applied in these conditions, it should be applied on relatively flat land, slopes less than 5 percent, and well away from streams and waterways (see lowa Department of Natural Resources rules on setback distances).

Using Manure Nutrients for Crop Production

Example Calculation of Manure Application Rates

Note: The N, P and K fertilization requirements in these examples are determined from appropriate extension publications and Web-based tools listed at the right.

Example 1

Manure source: liquid swine manure, finishing under-building pit

Manure analysis: 40 lb N/1,000 gal, 25 lb P₂O₅/1,000 gal, 35 lb K₂O/1,000 gal

Intended crop. corn in a corn-soybean rotation,

Soil tests: 19 ppm Bray P-1 (Optimum), 165 ppm Ammonium Acetate K (Optimum).

Crop yield and P and K removal for determining nutrient rates needed to maintain the Optimum soil test category 200 hu/acre corn yield. 75 lb PjOy/acre and 60 lb KyO removal.

Manure rate: based on corn N fertilization requirement at 125 lb N/acre.

Manure application injected late fall.

Manure numerit availability 100 percent for N, P, and K.

Manure N volatilization correction factor 0.98

Manure rate: 125 lb N/acre + (40 lb N/ 1,000 gal \times 0.98) = 3,200 gal/acre.

Manure available P and K nutrients applied: 3,200 gal/acre × (25 lb P₂O₅/ 1,000 gal × 1.00) = 80 lb P₂O₃/acre; and 3,200 gal/acre × (35 lb K₂O/1,000 gal × 1.00) = 112 lb K₂O/acre.

Phosphorus and K applied with the manure are adequate for P (slightly more than expected corn removal) and will supply more than needed K. The extra P and K can be used by the next crop and should be accounted for. However, additional P and K will need to be applied for the following supbean crop.

Manure source: solid layer manure. Manure analysis: 72 lb N/ton, 09 lb

Example 2

P₂O₅/ton, 54 lb K₂O/ton. Intended crop. corn-soybean rotation.

Soil tests: 18 ppm Bray P-1 (Optimum), 120 ppm Ammonium Acetate K (Low)

Manure rate based on P requirement for the crop rotation at 120 lb P₂O₅/acre.

Manure application: late fall, incorporated after four days. Manure nutrient availability: 55 percent

for N, 100 percent for P and K. Manure N volatilization correction factor

0.80. Manure rate: 120 lb P3Os/acre + (69 lb

P2O5Aon × 1.00) = 1.7 ton/acre. Manure available N and K nutrients

applied 1.7 ton/acre × (72 lb N/ton × 0.60 × 0.80) = 60 lb N/acre, and 1.7 ton/acre × (34 lb K₂O/ton × 1.00) = 92 lb K₂O/acre

Corn N lerilization need and K needed for the corn and soybean crops with a Low soil test category. 130 lb N/acre and 172 lb Ksc//acre.

Crop available N and K applied with manure is not adequate for N, need additional 70 lb ferilitzer N/acre (130 lb N/acre = 60 lb N/acre); and applied K is not adequate for the corn and soybcan crops, need additional 80 lb K₃O/acre (172 – 92 lb K₃O/acre) from ferilitzer Additional Resources CROP 3073 Nitrogen use in Iowa Crop Production

PM 1688 A General Guide for Crop Nutrient and Limestone 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 1584 Cornstalk Testing to Evaluate Nitrogen Management

PM 1588 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://cnrc.agron.lastate.edu/

Using Manure Mutrients 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 snowcovered, frozen, or water-saturated sloping ground to reduce risk of nutrient loss and water quality impairment. Prepared by John E. Sawyer and Antonio P. Mallarino, professors of agronomy and extension soil ferrility specialists, lowa State University.

This publication was peen reviewed by three independent reviewers using a double-blind process.

... and justice for all

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Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914 in cooperation with the U.S. Department of Agriculture. Cathann A. Kress director, Cooperative Extension Service, Iowa State University of Science and Technology, Amex, Iowa.







HARDIN COUNTY COURTHOUSE 1215 EDGINGTON AVE. ELDORA, IA 50627

HARDIN COUNTY Employee Change of Status Report

Please enter the following	ng change(s) as of _	05/18/2022 Date	-	
Name: Austin Day			-	Secondary Roads
Address: 23475 00 A	venue		Position: Mo	otor Grader Operator
Eldora	IA	50627		y Rate: \$21.50/hr
City	State	Zip Code		
Fund: 20000 - Secon	dary Road Fund		_	
Status: 🔀 Full-time	Permaner	nt Part-time	Temporary/Seas	onal Part-time
Reason of Change: Hired Promotion Demotion Pay Increase Leave of Absence Other: _25 cent per ho	 Resignation Retirement Layoff Discharge Dates Dur raise after 6 m	onth probatic	- onary period	
Dates of Employment:	05/18/2022 to	То	Last Day of (if applicab	Work
Beyond the last day of w	vork, the following	vacation time v	vas (or will be paid): _	to From To
Authorized by:	Elected Official or	Department Head		5-16-22 Date
Authorized by:	Board of S	upervisors		Date

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HARDIN COUNTY

HARDIN COUNTY COURTHOUSE 1215 EDGINGTON AVE. ELDORA, IA 50627

HARDIN COUNTY Employee Change of Status Report

Please enter the followi	ng change(s) as of	05/23/2022		
		Date		
Name: Brayton Died	Irich		Department:	Secondary Roads
Address: 25460 Co H	Hwy S21		Position: Se	asonal Laborer
Radcliffe	IA	50230	Salary/Hourly	Rate: \$14/hour
City	State	Zip Code		
Fund: 20000 - Secon	ndary Road Fund		_	
Status: 🗌 Full-time	e 🗌 Permaner	nt Part-time	Temporary/Seaso	onal Part-time
Reason of Change:				
X Hired	Resignation			
Promotion	Retirement			
Demotion	🗌 Layoff			
Pay Increase	Discharge			
Leave of Absence				
	Dates			
Other: Employee wil	I be on an on-call/	seasonal bas	is	
	an			
			1.00	
	E (22) (2022			
Dates of Employment:		То	Last Day of V (if applicable	Work
Beyond the last day of v	work, the following	vacation time w	vas (or will be paid):	to
\cap	1/1	5/		
		N		5-16-22
Authorized by:	El stal Official a	Department Hood		Date
	Elected Utilicial of	r Department Head		Dale
Authorized by:				
	Board of S	upervisors		Date



HARDIN COUNTY

Courthouse

HARDIN COUNTY COURTHOUSE 1215 EDGINGTON AVE. ELDORA, IA 50627

HARDIN COUNTY Employee Change of Status Report

Name: Diane Rash Department: Sheriff Address: 1074 Jessup Ave Position: Part time jailer Union Iowa 50258 Salary/Hourly Rate: \$18.90 City State Zip Code Salary/Hourly Rate: \$18.90 Fund:	Please enter the following change(s) as of	-
Union Iowa 50258 Salary/Hourly Rate: \$18.90 City State Zip Code	Name: Diane Rash	Department: Sheriff
City State Zip Code	Address: 1074 Jessup Ave	Position: Part time jailer
Fund:		Salary/Hourly Rate:\$18.90
	City State Zip Code	
Status: 🗍 Full-time 🔀 Permanent Part-time 🗍 Temporary/Seasonal Part-time	Fund:	-
	Status: 🗍 Full-time 🕅 Permanent Part-time	Temporary/Seasonal Part-time
Reason of Change:	Reason of Change:	
Hired Resignation	Hired Resignation	
Promotion		
Demotion Layoff	Demotion Layoff	
Pay Increase Discharge	Pay Increase Discharge	
Leave of Absence		-
Other:		
Other	Other	
Dates of Employment: 8/1/1981 to 8/31/2021 Last Day of Work 8/31/2021	Dates of Employment: 8/1/1981 to 8/31/2021	Last Day of Work 8/31/2021
		(it up/incubic)
Beyond the last day of work, the following vacation time was (or will be paid): to	Beyond the last day of work, the following vacation time w	vas (or will be paid): to
		FIOIR
Authorized by: Comes D. Ho mes O5 · 16 · 20 22 Elected Official or Department Head Date	Authorized by: CINNER D. Horized Discial or Department Head	05 · /6 · 20 2 2 Date
Authorized by:	Authorized by:	
Board of Supervisors Date	Board of Supervisors	Date

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HARDIN COUNTY

Employee Change of Status Report

Please enter the following change(s) as	of: <u>May 20, 2022</u>
Name: <u>Krienert, Michael</u>	
Address: <u>Traer, IA</u>	
Department: <u>Sheriff's Office</u> Fund Gross	Position: Correctional Officer
Salary or Hourly Rate: <u>\$18.90/hr</u>	
STATUS ()Full-time (X)Pe	ermanent Part-time () Temporary/Seasonal Part-time
() Promotion() R() Demotion() L	esignation etirement ayoff ischarge
() Other:	
Dates of Employment: From: To Last day of work will be:	
Beyond the last day of work, the employ	ee was (or will be) paid for:
Vacation: Comp:	
Authorized by:	Date: 05-12-2022
Approved by: Appropriate Board (If	Date:



HARDIN COUNTY Employee Change of Status Report

Please enter the following cha	nge(s) as of	5-16-22 Date	-		
Name: Josh Hefflefinger	r		_ Department: Co	nservation	
Address: 912 Stevens St	t		Position: Summ	ner Intern	
	owa	50126		te: \$11/Hr	
City S	State	Zip Code			
Fund: 0001-22-6120-00	0-10108		_		
Status: 🗌 Full-time	Permanen	t Part-time	X Temporary/Seasonal	Part-time	
Reason of Change:					
Promotion	Resignation Retirement Layoff				
	Discharge				
Leave of Absence	Dates		_		
Other: Josh will be work		ns for the s	ummer.		
Dates of Employment:	to	То	Last Day of Worl (if applicable)	k	
Beyond the last day of work, t					
bejond the last day of work, t				From	То
Authorized by: W.sol	Le CLICA Elected Official or I	Department Head		5-17-20 Date	122
Authorized by:	Board of Su			Date	

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