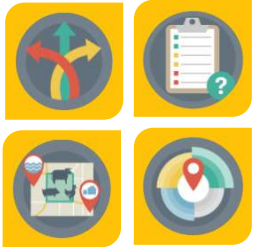



Models & Tools To Improve Manure Management
May 19, 2023



NEBRASKA AG SITE PLANNER
AgSitePlanner.unl.edu

N AMY MILLMIER SCHMIDT
BIOLOGICAL SYSTEMS ENGINEERING
UNIVERSITY OF NEBRASKA-LINCOLN

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LIVESTOCK INDUSTRY EXPANSION IN NEBRASKA

LINCOLN PREMIUM POULTRY was established in 2016 as a collaboration with Costco to supply broilers to a new processing plant in Fremont, NE.



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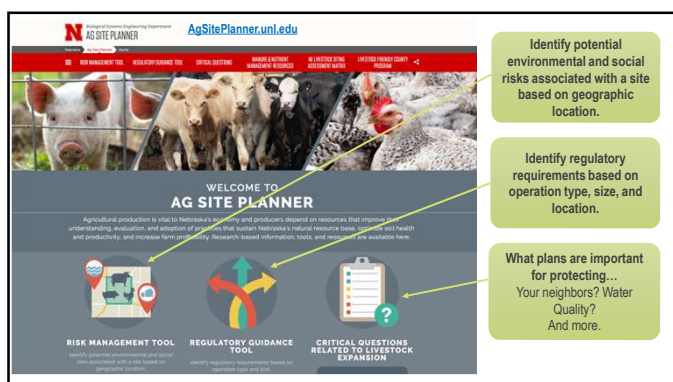
NEEDS IDENTIFIED:

- EVALUATING SUITABILITY OF POTENTIAL LIVESTOCK PRODUCTION SITES
- UNDERSTANDING & SATISFYING REGULATORY REQUIREMENTS FOR LIVESTOCK OPERATIONS
- SUPPORTING ENGAGEMENT AMONG FARMERS AND COMMUNITY MEMBERS

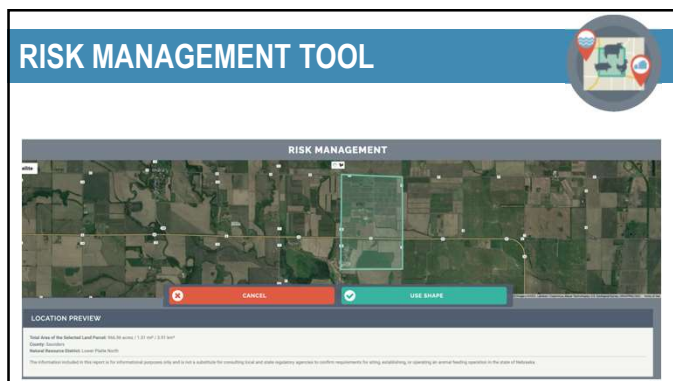
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RISK MANAGEMENT TOOL

SITE INFORMATION

Legal Land Description

Local Regulations & Ordinances

Proximity to "sensitive areas":
Population, public parks, schools, other permitted livestock operations

Hydrologic Information:
Registered wells, wetlands, groundwater level, impaired water bodies

Climatic Data:
Seasonal wind roses, precipitation

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REGULATORY GUIDANCE TOOL

What species of livestock do you plan to raise?

BEEF
 DAIRY CATTLE
 SWINE
 SHEEP OR LAMBS
 HORSES
 POULTRY

Swine Wean-to-Finish No Water Contact

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How many animals are in your operation?

Animal Count: 2530

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REGULATORY GUIDANCE TOOL

Based on your selections, this operation is a **Large CAFO**

? Calculated Animal Units: 1012

Saunders County LIVESTOCK FRIENDLY DESIGNATION: YES

COUNTY ADMINISTRATOR:
 County Administrator
 County Manager
 County Clerk
 400 W. 1st Street SE
 SAUNDERS COUNTY, IA 52585
 319.338.3131
 saunderscountyia.gov
 saunderscountyia.com

LARGE CAFO INFORMATION

Large Concentrated Animal Feeding Operation (CAFO)

The operation you described is considered a large CAFO because you have 1000 or more head animal units. Because the operation you described is considered a large CAFO, if you do not already have a NPDES permit, construction approval, bonding permit or construction and operating permit, you have not met the minimum requirements for a large CAFO. The NPDES permit is required to be issued by the Iowa Department of Natural Resources (IDNR) and the construction approval is required to be issued by the Iowa Department of Transportation (IDOT). The bonding permit is required to be issued by the Iowa Department of Transportation (IDOT). The construction and operating permit is required to be issued by the Iowa Department of Natural Resources (IDNR).

1. Required Animal Feeding Operations (AFO) and existing operations planning to expand must obtain an initial inspection prior to starting construction. After conducting an initial inspection, NDES may require a Construction and Operating Permit and/or a National Pollution Discharge Elimination System (NPDES) permit. Applications for these permits should be filed with the appropriate agency. For more information, visit www.idnr.gov.

2. In addition to the NPDES permit, applications for a construction and operating permit from NDES should also be submitted to the Iowa Department of Transportation (IDOT) for a construction and operating permit. For more information, visit www.idot.gov.

3. In addition to the NPDES permit, applications for a construction and operating permit from NDES should also be submitted to the Iowa Department of Transportation (IDOT) for a construction and operating permit. For more information, visit www.idot.gov.

4. For more information on construction and operating permit requirements, visit www.idnr.gov.

The information included in this report is for informational purposes only and is not a substitute for consulting local and state regulatory agencies to confirm requirements for siting, establishing, or operating an animal feeding operation in the state of Iowa. The Livestock Waste Control Regulations for the state of Iowa can be found at www.idnr.gov.

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CRITICAL QUESTIONS



Evaluating Potential Production Sites

- Protecting Water Quality
- Protecting Neighbors
- Protecting Your Animals
- Protecting Your Business
- Local Infrastructure



Starting Operations on a Preferred Site

- Communicating with County
- Communicating with Community
- Communicating with NDEQ
- Identifying Positive Behaviors & Messages
- Animal Industry Advocacy Connections



Staying Engaged with the Community

- Can I Enhance Facility Appearance?
- Can I Enhance Neighbor Relations?


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ODOR FOOTPRINT TOOL

Project Title: Site Capacity Number and Type of animal:

Description of this Evaluation or Comparison:

Site Location:



Location for Weather Data:

Select Location:

- Albion, Neb. (North-central Neb.)
- Albion, Neb. (West Pastureland)
- Beaumont, Neb. (Southwest Neb.)**
- Grand Island, Neb. (North-central Neb.)
- Lynch, Neb. (East Plains)
- North, Neb. (Northwest Neb.)
- North Platte, Neb. (Southwest Neb.)
- Scottsbluff, Neb. (N. Platte River Valley)

Type of Facility:

Select Facility Type:

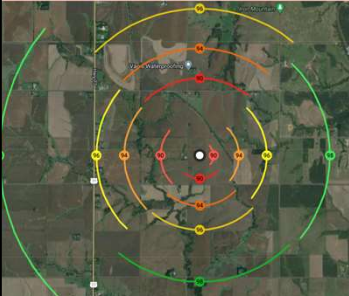
Number of Sites:

Alternate Plan:

Search for a location or right click to select a location.

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ODOR FOOTPRINT TOOL



Odor Annoyance-Free Frequency	Separation Distance (miles)			
	North	East	South	West
99%	4.61	3.27	3.16	4.21
98%	2.84	1.4	1.36	2.16
96%	1.58	0.72	0.8	1.11
94%	1.15	0.42	0.54	0.81
90%	0.83	0.15	0.25	0.42

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ADDITIONAL RESOURCES

- Nebraska Animal Manure Management Team Website
- Manure Land Application Training Events Website
- Online Land Application Training Module
- Nebraska Livestock Siting Assessment Matrix
- Livestock Friendly County Program

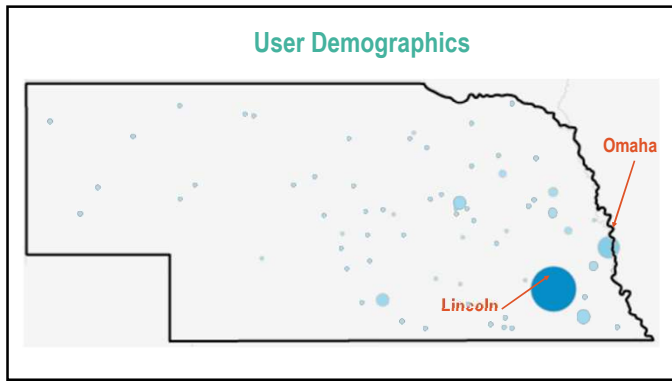
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Outcomes and Impacts

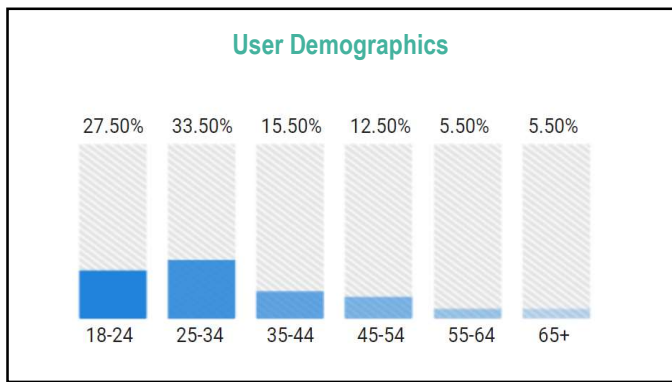
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Regulatory Guidance Tool				
Operation Characteristics				AFO/CAFO
Beef (60%) Swine (26%) Poultry (11%)	Breeding (27%) Replacement (37%) Finishing (36%)	Wean-Finish (61%) Sows (29%) Nursery (8%)	Broilers (89%) Layers (8%)	Small (34%) Medium (53%) Large (13%)

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The Manure Lady
Engineer, Professor, Mom, Empowerer

Thank You!

Amy Millmier Schmidt
aschmidt@unl.edu

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