

Sully County Rural Development Site Analysis

A Study by
Central South Dakota Enhancement District

Funded by the South Dakota Value Added Agriculture Subfund

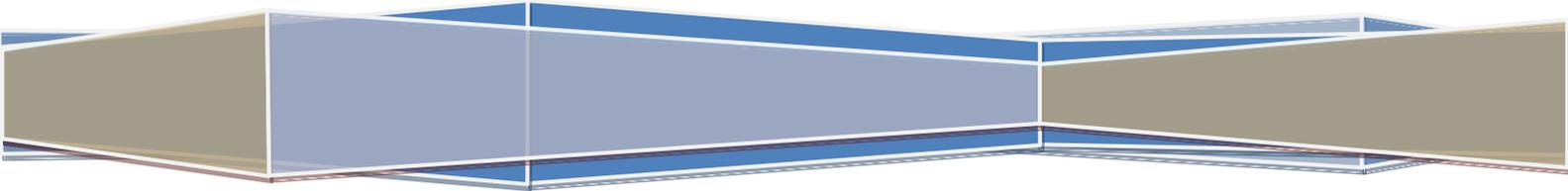


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Summary

Program History

As part of the South Dakota Department of Agriculture's (SDDA) efforts to enhance economic development opportunities and better support local control of development, the County Site Analysis Program (Program) was developed in the summer of 2013. The Program assists participating counties in identifying potential rural properties with site development opportunities. The analysis and subsequent report will provide local leaders with information and research-based resources to foster well informed decisions regarding the future of their respective regions. It also helps identify and plan for potential challenges that may arise should those opportunities be pursued.

In implementing the Program, SDDA is working closely with South Dakota's Planning and Development Districts. The First District Association of Local Governments (First District) and Planning and Development District III (District III) developed a methodology for a feasibility analysis that focuses on identifying locations for rural economic development. The methodology addresses the feasibility of locations for the development of concentrated animal feeding operations, agricultural processing and storage facilities, and other agriculturally-related commercial/industrial development. The analysis takes into consideration local zoning and state permitting requirements along with the availability of infrastructure necessary to accommodate certain rural economic development projects.

The identification of each prospective site's relative advantages and constraints provides decision-makers with useful information for assessing the development potential of each site. The information contained herein has the potential to streamline the marketing process thereby reducing timelines, financial expenditures and labor costs. Local governments, landowners, economic development groups and state agencies such as the Department of Agriculture or Governor's Office of Economic Development all benefit from the rural site development analysis. These entities now have access to a marketing tool based on proactive planning efforts. In addition, the report may assist local governments in updating their comprehensive plans, zoning ordinances and permitting procedures while also increasing local awareness of potential development opportunities.

Methodology

The analysis methodology developed for this study utilized an established set of criteria deemed critical to further development of the subject properties, while specifically addressing the suitability of a site for either a concentrated animal feeding operation (CAFO), or an agriculturally-related industrial development (AID). **Table 1** lists the site assessment criteria identified as being necessary in order to conduct analysis of the potential sites. Minimum thresholds for each criterion were utilized to establish a hierarchy classification of "Good", "Better" and "Best" sites. Those sites designated as "Best" sites were those not limited by any of the criteria considered. Sites not meeting the minimum criteria required of the "Best" sites were subsequently identified as "Good" or "Better".

Specific information regarding the Site Assessment Criteria and methodology utilized for developing the "Good", "Better", and "Best" hierarchy may be found in **Appendix I and II**, respectively.

Table 1: Site Assessment Criteria

CAFO/AID Criteria
Access to County and State Road Network
Proximity to Three-phase Electricity Supply
Proximity to Rural Water System
Capacity of Rural Water System
Location of Shallow Aquifer
Existing Zoning Districts/Land Use Plans
Buildable Parcel
County CAFO Zoning Setback Requirements (If applicable) *
Proximity to Rural Residences* & Communities
Proximity to Rail**

*CAFO Assessment Criteria Only

** AID Assessment Criteria Only

Limiting Factors

While this report focuses on specific sites matching the assessment criteria standards, it became apparent that each site also possesses its own unique set of site characteristics, which presents advantages and constraints.

The analysis found that the primary limiting factor(s) in reviewing the development potential of properties within Sully County for a “Better” or “Best” CAFO site development is the availability of quality and quantity of potable water. The same is true with AID developments which also require a reliable source of not only high quality but also large quantities of potable water. Access to a centralized water source such as a rural water system was a key criterion in the site analysis process. Rural water systems noted that if a significant water user would locate in the county; they would explore ways to provide water to the proposed development. Therefore, the analysis does not make the claim that the only sites for CAFO/AID development in Sully County be relegated to the specific sites identified herein.

In addition to the availability of potable water, other factors such as access to county and state road networks, 3-Phase power lines, railways, and the county’s existing setbacks requirements limited the number of potential AID and CAFO sites.

The site assessment process was limited in scope to include undeveloped parcels and did not consider expansion of existing CAFOs or commercial/industrial uses. In addition to this limited scope, minimum values were utilized in ranking each site with regards to zoning requirements and infrastructure demands. No attempt was made to rank each site within the three identified classifications. The uniqueness of each criterion identified in Table 1 warrants a comprehensive review of the potential impact each may have upon a subject property. This study is intended as the first step of a multi-faceted development process potentially leading to more specific site evaluations such as Phase 1 Environmental Site Assessments (ESA), engineering plans, development cost analysis, etc.

Results

Identifying and evaluating potential sites for development is the first step in planning for economic development in rural Sully County. The findings of this report will assist in determining the potential role each site may play in supporting economic development and should be considered when planning for future projects within Sully County.

Utilizing Geographic Information System (GIS) technology, the Central South Dakota Enhancement District (CSDDED) identified 45 sites within Sully County that meet the minimum site assessment standards of the CAFO analysis, shown in **Table 2**. A total of 20 sites meet the minimum standards of the AID analysis, shown in **Table 3**. These sites comply with local zoning ordinances and are in close proximity to the infrastructure necessary to support the previously identified economic development activities.

The CAFO and AID analysis further detail High Water Use (HWU) and Low Water Use (LWU) for these development sites. HWU CAFO sites are those locations which require 150,000 gallons of water per day. This amount of water is necessary to support, for example, a 3,000 head dairy operation. For clarification, other livestock operations such as beef that are relative to Sully County will be classified with dairy. LWU CAFO sites are those locations which require 30,000 gallons of water per day, a volume necessary to support a 5,000 head sow operation. HWU AID sites are those locations which require water at levels necessary to support high water uses such as food processing or ethanol production. The water requirement for a HWU AID site is 410,000 gallons of water per day, and is currently supported on a very limited basis by the rural water system. Therefore, no sites were found to be acceptable for HWU AID or HWU CAFO in Sully County. LWU AID sites are those locations which require water at levels necessary to support most agriculturally-related commercial/industrial development, 30,000 gallons per day. The analysis identified **0 HWU and 45 LWU CAFO** sites. Whereas, there were **0 HWU and 20 LWU AID** sites. The following maps provide information at a township level regarding the number of “Good”, “Better” and “Best” CAFO and AID sites.

**Table 2:
Sully County CAFO Sites by Hierarchy Classification**

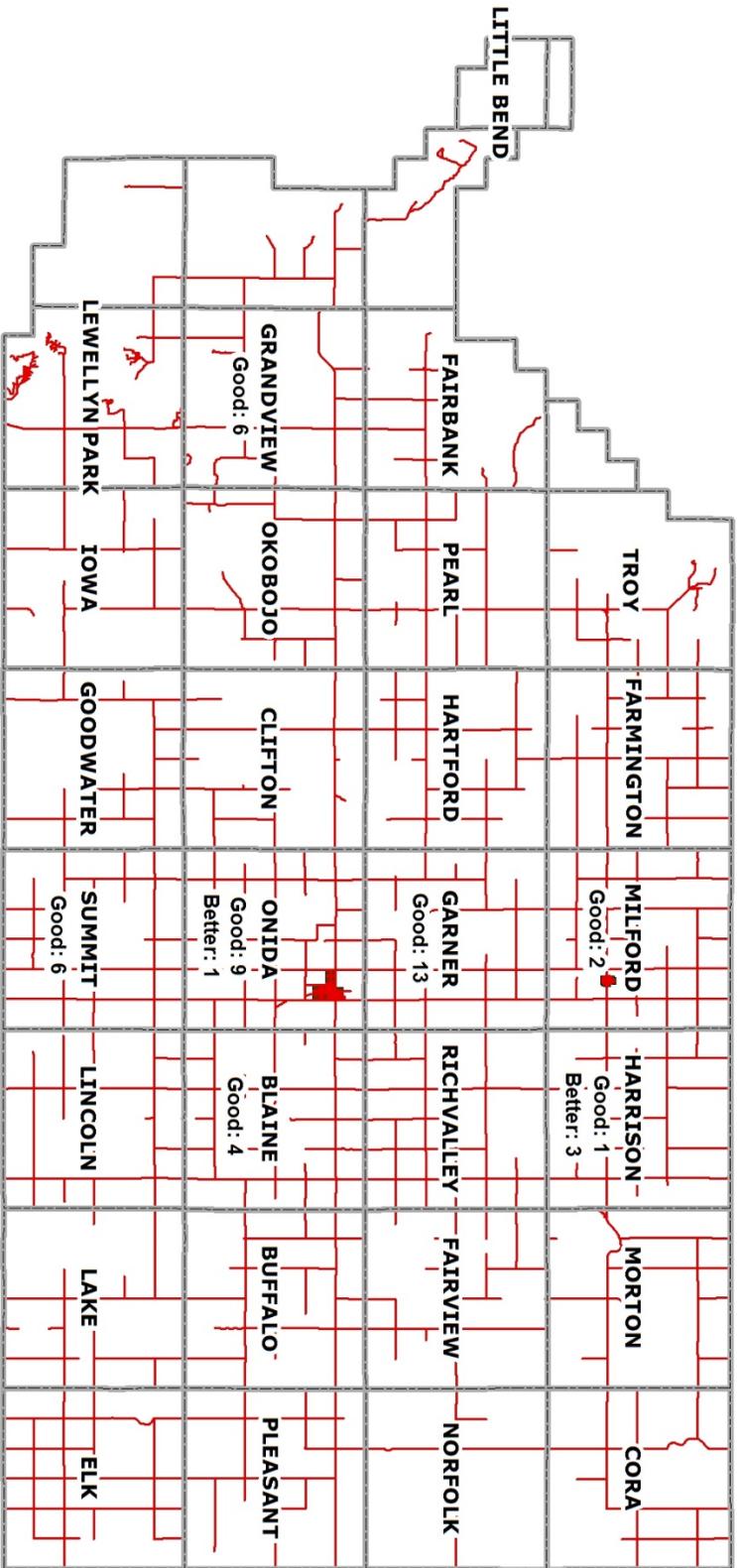
CAFO Site Classification	Good Sites	Better Sites	Best Sites
Low Water CAFO	41	4	0
High Water CAFO	0	0	0

**Table 3:
Sully County AID Sites by Hierarchy Classification**

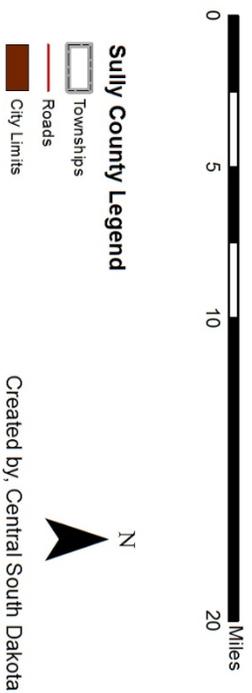
AID Site Classification	Good Sites	Better Sites	Best Sites
Low Water AID	12	8	0
High Water AID	0	0	0

No High Water CAFO Map – Page Left Blank Intentionally

Sully County Low Water Use CAFO Development Sites 2016

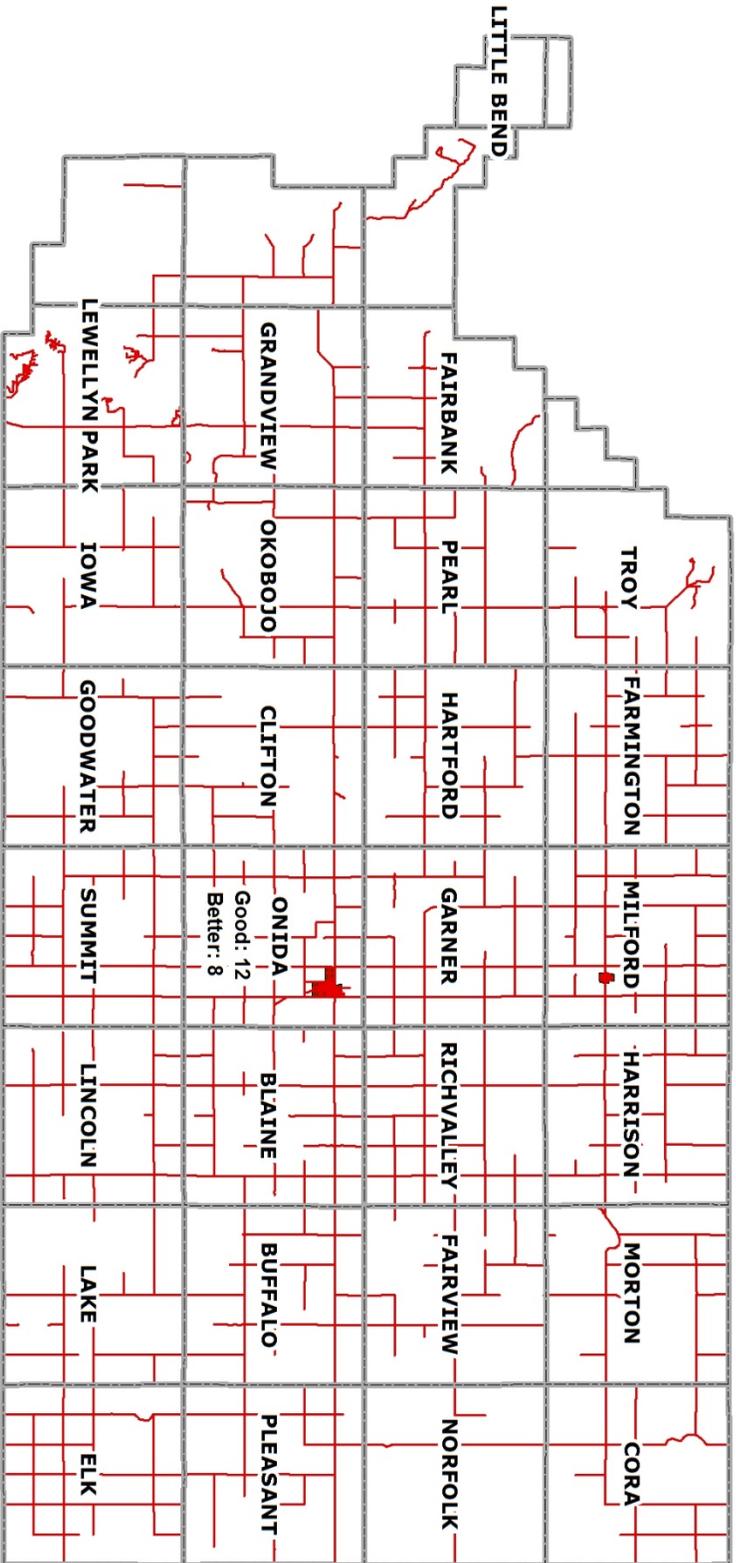


Township	Best	Better	Good	Township	Best	Better	Good	Township	Best	Better	Good
Blaine			4	Grandview			6	Morton			
Buffalo				Harrison		3	1	Norfolk			
Clifton				Hartford				Okobojo			
Cora				Iowa				Onida			1
Elk				Lake				Pearl			9
Fairbank				Lewellyn Park				Pleasant			
Farmington				Lincoln				Rich Valley			
Garner			13	Little Bend				Summit			6
Goodwater				Milford			2	Troy			



No High Water AID Map – Page Left Blank Intentionally

Sully County Low Water Use AID Development Sites 2016



Township	Best	Better	Good	Township	Best	Better	Good	Township	Best	Better	Good
Blaine				Grandview				Morton			
Buffalo				Harrison				Norfolk			
Clifton				Hartford				Okobojo			
Cora				Iowa				Onida		8	12
Elk				Lake				Pearl			
Fairbank				Lewellyn Park				Pleasant			
Farmington				Lincoln				Rich Valley			
Garner				Little Bend				Summit			
Goodwater				Millford				Troy			

0 5 10 20 Miles

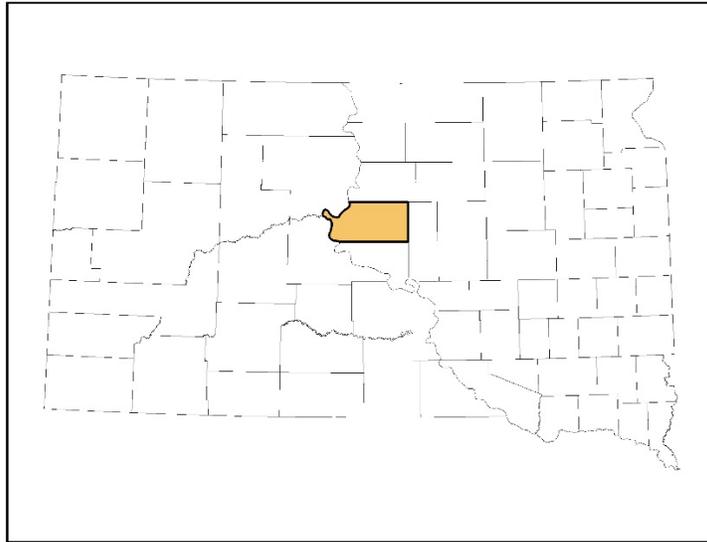
Sully County Legend

- Townships
- Roads
- City Limits

Created by, Central South Dakota Enhancement District

APPENDIX I: SITE ASSESSMENT CRITERIA

Sully County Location Map



The developed methodology for this site analysis was carefully assembled using an established set of criteria regarded as crucial to further the development of subsequent properties, while specifically addressing the suitability of either a CAFO or an AID site.

Sites possessing all of the criteria identified as critical within the analysis will be those most sought out by potential developers. The occurrence of these sites may be somewhat rare. Therefore, sites under consideration for either a CAFO or AID site may meet the majority of criteria, but may also be lacking in a critically specific area. Any sites not meeting all the criteria may be burdened with a limitation, thus requiring more specific analysis. In these cases, the feasibility of developing the site is highly dependent upon the identified limitation(s).

A limiting condition could be the availability of water volume at an identified potential CAFO site. For example, the water condition for a 3,000 head dairy, versus the needs of a 5,000 head sow operation is approximately five times greater, but both could be subject to similar zoning regulations. In this situation, the lack of water at a volume necessary for a dairy led potential site are more likely identified as a swine facility location.

It should be noted that neither this example nor the analysis explores potential alternatives to the absence of adequate rural water volume such as upsizing water distribution infrastructure or securing an alternative water source. These issues hold the potential to mitigate this constraint, thereby, facilitating the proposed development. Rather, the analysis recognizes upgrading infrastructure identified as necessary to support rural economic development projects may increase the number of developable sites within Sully County. In other cases, failure to meet certain criteria, such as access to a quality road network, may result in a situation where development of the site becomes economically unfeasible.

The site assessment criteria, depending upon whether or not the site is for a CAFO or AID project, have been divided into the four major categories of Land Use Regulations, Zoning, Environmental Constraints, and Infrastructure.

LAND USE REGULATIONS

Economic development planning in Sully County must be conducted collectively with Sully County's overall economic development goals. All development activities, including those specifically related to agriculture need to be accomplished within the parameters set forth in local and regional planning documents. Land use or development guidance is traditionally provided via local documents such as comprehensive plans, zoning ordinances, policies, mission statements, and other local economic development plans and initiatives. The analysis reviewed said documents to determine compliance with potential CAFO and AID development. The following is a synopsis of Sully County's policies regarding CAFO and AID development.

Comprehensive Land Use Plan

Sully County's most recent Comprehensive Plan was developed in 2002, and serves as a tool for future development. The plan does not specifically address agricultural development such as animal feeding or agricultural product processing activities but does include policies regarding environmental protection and economic development. Chapter II of the Sully County Comprehensive Plan provides land use, economic development, and riverfront protection goals that specify a list of objectives. Sully County recognizes the importance of agriculture and livestock as part of the county's local economy and labor sources. The goals for agriculture pertaining to land use and economic development are as follows:

Land Use Goals and Objectives

- ❖ It is the goal of Sully County to establish compatible uses of properties that meet the projected needs of agriculture, residential, commercial, industrial, public facilities, recreation, and government in a manner which preserves and enhances the natural beauty and environment of the area.
 - Promote efficient and orderly growth that discourages leapfrog and sprawl development.
 - Encourage and require preservation of the natural environment, intelligent development, and use and conservation of water resources.
 - Limit development in natural hazard areas such as slide areas and flood plains through appropriate zoning.

Economic Development Goals and Objectives

- ❖ It is the goal of Sully County to maintain, enhance, and promote agriculture as the primary land use and economic base of the county while promoting land use practices which minimize detrimental effects, such as erosion, soil/salt accumulation, contamination of waters, drainage ways, air quality and noise pollution while promoting economic development through alternative appropriate land use.
 - Enhance and encourage the development of agriculturally based commercial enterprises.
 - Reserve an adequate supply of developable land to accommodate future commercial and industrial growth.

- Continuously strive to improve the levels of commercial, cultural and recreational facilities and activities of the area, while prohibiting commercial and industrial development in areas of incompatible land uses.
- Encourage commercial and industrial development in cohesive areas.
- Discourage commercial and industrial strip zoning except in areas where other adjacent uses make strip zoning the logical and wise use of the land.

Zoning

Ideally, economic developers seek sites that are zoned and eligible for specific uses. The need to pursue a zoning change or conditional use permit introduces an additional step in the development process; thus, increasing development timeframes and costs. These steps or requirements also increase the uncertainty of approval given zoning changes are referable. Another contention is the super majority voting requirement necessary for a County's Board of Adjustment to approve a conditional use permit.

While the rural areas of Sully County are reserved for agricultural uses, some may require a case by case review. Generally speaking, concentrated animal feeding operations are one of the aforementioned uses. It is important to emphasize that agricultural producers must maintain flexibility in their operations. Sully County's leadership recognizes a diverse agricultural industry, which relies on cash crops and animal agriculture. Thereby, promoting a sustainable, balanced agricultural economy. CAFO sites furthers these goals as they create a demand for crops grown in the area, provide fertilizer for surrounding land, and yield a raw product which is, in some cases, directly sold to local residents. Zoning regulations pertaining to concentrated animal feeding operations can be seen in Sully County's Zoning Ordinances.

General CAFO Policies and Setbacks in the Sully County Zoning Ordinance

1. Confinement or commercial feeding operations with more than 400 animal units.
 - a. Application for a conditional use permit for a confinement feeding operation shall include the following requirements.
 1. Notification of adjacent property owners by certified mail living within one mile of the confinement site in an established dwelling.
 2. Number of animal units; density of confinement, (housed lot) to be a maximum of .2 of 1 acre per animal unit.
 3. The general permit from the South Dakota Department of Environment & Natural Resources (SD DENR) is required for all livestock confinement facilities.
 4. Annual statement of compliance to conditions of the conditional use permits and the general permit issued by the SD DENR to the Sully County Commission.
 5. Site-plan of operations with a minimum of 300' setback from adjacent property lines or any on-site living quarters from any confinement structure or lagoon.

6. Housed poultry confinement or commercial feedlot operations of 400 animal units or more shall comply with all requirements of the SD DENR.

Sully County administers two separate zoning districts for agricultural purposes. According to Sully County zoning requirements, the needs of a 3,000 head dairy operation or 5,000 head sow CAFO site, do not meet zoning requirements for Agricultural District B. Agricultural District B declares CAFOs with more than 400 animals as incompatible to nearby land uses. However, a CAFO with more than 400 animal units are permitted in Agricultural District A, after a finding by the Board of Adjustment that their mode of conduct and location will not hinder the enjoyment and use of nearby properties and will not disrupt the appropriate use of land and resources of the county.

An application for a conditional use permit is required for all CAFOs in areas of Agricultural District A, and must meet the setback and lot area requirements. All **45** CAFO sites in this analysis are currently zoned in Agricultural District A and each of the individual identified sites meet a minimum 300-foot setback from adjacent property lines from any on-site living quarters, confinement structures or lagoons.

Commercial/Industrial Development

There is very little concentrated or clustered commercial/industrial activity at the county level. Sully County's commercial and industrial properties are generally singular and adjacent to county and state hard surface roads. Commercial and industrial activities located in rural areas are generally not conducive to municipal or populated locales.

Buildable Parcel

One criterion deemed necessary to facilitate development of either a CAFO or an AID was land area. A parcel of forty buildable acres was set as the minimum for consideration within the analysis. In order to be considered, the property must consist of forty contiguous acres and the ability to support development upon all forty acres. Parcels without forty buildable acres were not considered in the final analysis.

Proximity to Communities

The AID analysis considered sites within one mile of a community or at specific locations identified by Sully County. This was done because many communities and counties have established growth plans for economic development within certain proximities of communities or at locations with existing infrastructure such as paved roads. Also, since the parameters of the original AID analysis excluded all AID sites within counties without access to rail, the criterion of "proximity to a community" was determined to be an adequate alternative for counties without rail facilities to identify potential AID sites.

ENVIRONMENTAL

If available, the location of shallow aquifers in relation to potential development sites was included in the analysis. In reviewing shallow aquifers, it is critical to note that they are included in the analysis for two distinct and very different reasons. Shallow aquifers may be utilized as a potential water source to support development. These same aquifers are also vulnerable to pollution due to their proximity to the surface and may be required to be protected via setbacks and development limitations.

At present there is limited information regarding the occurrence and location of shallow aquifers in Sully County. Further, Sully County has not enacted nor currently enforces aquifer protection or surface water regulations more restrictive than the State of South Dakota. Therefore, all sites within the county were considered eligible for development.

Prior to or contingent upon acquiring a parcel for development it is assumed other environmental factors potentially affecting the property would be addressed via a Phase I Environmental Assessment or similar process. It is recommended that developers consider undertaking such an inquiry prior to executing a major commitment to a particular location.

A CAFO site defined by SD DENR is a lot or facility that stables or confines, and feeds or maintains animals for a total of 45 days or more in a 12-month period. SD DENR has the authority to issue a general permit, which contains standard conditions and is required by state or federal law. Codified laws state the applicant must follow the permitting rules and specific interests to CAFOs in Sections 74:52:01:05; 74:52:02:22; 74:52:02:23; 74:52:02:24; 74:52:02:25; 74:52:02:26; 74:52:02:27; 74:52:02:28; 74:52:02:29; 74:52:02:30; and 74:52:10:01.

INFRASTRUCTURE

The term infrastructure is broad in the context of property development includes essential services such as water, sewer, electrical, telecommunications, and roads. With regards to the rural site analysis process; access to quality roads, electrical capacity and water supply were deemed essential and identified as site selection criteria.

Transportation

Access to quality roads was identified as critical to determining the development potential of a parcel. The proximity of a potential development site to either a state or county road was established as one of the parameters in conducting the rural site analysis. In addition to utilizing the South Dakota Department of Transportation's road layer to identify roads and surface types, local experts were consulted to assist in identifying the road network. CSDED requested the Sully County Highway Superintendent to identify segments of the county road system inadequate to support a CAFO or AID site. Sites accessed only by township roads that were located further than one mile from the intersection of a county/state hard surface road network were eliminated from the analysis.

A potential development site's proximity to certain road types impacted its designation. Those parcels abutting hard surface roads were ranked higher than those served by gravel roads. In reviewing CAFO and AID sites, parcels adjacent to a county or state hard surface road were designated "Better" or "Best" for transportation resources. Parcels adjacent to county gravel roads or within one mile of an intersection with a county/state road network were designated "Good" for CAFO sites. Parcels within one mile of an intersection with a county/state hard surface road network were designated "Good" for CAFO sites.

Access to rail was also considered to be an important factor in locating an AID site. Parcels adjacent to rail facilities were designated "Best". Parcels within one-half mile of rail were designated "Better" and those parcels within one mile of rail were designated "Good". In addition, the analysis also considered sites within one mile of a community or at locations identified by the county, with or without rail. Those parcels within one mile of a municipality or at locations identified by the county that met necessary requirements, except access to rail, were designated as "Good" and "Better".

Electric Supply

Access to 3-phase power was designated as a site characteristic criterion for both CAFO and AID development. CSDED contacted Oahe Electric to obtain the location and capacity of the 3-Phase infrastructure within the county. Oahe Electric the primary provider of electricity in the rural area of the county. All parcels whether for CAFO or AID sites, development adjacent to a 3-phase power line were designated “Best” for electricity resources. Whereas, parcels within one mile of a three-phase power line were designated “Better” and those within two miles of a 3-phase power line were designated “Good”.

Water Supply

The ability to secure specific information regarding a rural water system’s operations to include storage, distribution, and capacities proved to be the most complex and difficult component of the infrastructure analysis. Due to this, water resources were evaluated differently than transportation and electric infrastructure. While transportation and electric infrastructure were classified based primarily upon location and availability of three-phase power, the analysis of rural water systems first required the evaluation of the water system, specifically, each system’s supply and distribution capacities.

Development sites were then selected upon the proximity to water service. The classifications with regards to water supply and their respective criteria are as follows:

1. “Best” Classification

a. CAFO

- i. High Water Use CAFO Site- If the site was adjacent to or within an area where a rural water system had sufficient supply ***and*** distribution capacity to provide 150,000 gallons per day, the site area was designated as “Best” for water resources.
- ii. Low Water Use CAFO Site - If the site was adjacent to or within an area where a rural water system had sufficient supply ***and*** distribution capacity to provide 30,000 gallons per day, the site area was designated as “Best” for water resources.

b. AID

- i. High Water Use AID Site- If the site was adjacent to or within an area where a rural water system had sufficient supply ***and*** distribution capacity to provide 410,000 gallons per day, the site area was designated as “Best” for water resources.
- ii. Low Water Use AID Site- If the site was adjacent to or within an area where a rural water system had sufficient supply ***and*** distribution capacity to capacity to provide 30,000 gallons per day, the site area was designated as “Best” for water resources.

2. “Better” Classification

a. CAFO

- i. High Water Use CAFO Site- If the site was within an area where a rural water system had either a sufficient supply or distribution capacity to provide 150,000 gallons per day, the site area was designated as “Better” for water resources.
- ii. Low Water Use CAFO Site- If the site was within an area where a rural water system had either a sufficient supply or distribution capacity to provide thirty thousand 30,000 gallons per day, the site area was designated as “Better” for water resources.

b. AID

- i. High Water Use AID Site- If the site was within an area where a rural water system had sufficient supply or distribution capacity to provide 410,000 gallons per day, the site area was designated as “Better” for water resources.
- ii. Low Water Use AID Site- If the site was within an area where a rural water system had sufficient supply or distribution capacity to provide 30,000 gallons per day, the site area was designated as “Better” for water resources.

3. “Good” Classification

- a. In the event the Rural Water System has neither supply nor distribution capacity to serve either a Low or High Water Use CAFO or Low Water Use AID as defined above, the site area was designated as “Good” for water resources if it was located within **2 miles** of a river, stream or lake designated by SD DENR Administrative Rule 74:51:02 and 74:51:03 which assigns the following uses to rivers streams and lakes – domestic water supply, stock watering waters, irrigation waters, commerce and industry waters, cold water and warm water permanent fish life propagation waters. The analysis does not make any conclusions regarding the quantity or quality of the water source identified in SD DENR Administrative Rule 74:51:02 and 74:51:03. Only that the potential for a water source may exist. The designation as “Good” for water resources was not applied to High Water Use AID sites due to the water volume requirements of High Water Use AID sites and the lack of available data regarding the capacity of shallow aquifers. Therefore, High Water Use AID sites without a water resource designation of “Better” or “Best” were deemed unusable for the purpose of the analysis.

The site analysis sought to address whether or not the Rural Water System serving the region had excess water treatment capacity (supply) and their ability to serve potential properties (distribution). In order to address the issue of supply, CSDED requested location and capacity information from Mid-Dakota Rural Water System (RWS), the only rural water provider within Sully County. Mid-Dakota RWS was asked to notate on maps those geographic areas where distribution capacity existed which could provide water volumes at 30,000, 150,000, and 410,000 gallons per day, respectively.

Sully County is entirely under the service of Mid-Dakota RWS. Mid-Dakota RWS stated that they would work with potential high water users in their supply area to determine the capabilities of delivering water to a particular site. Mid-Dakota RWS was confident that they could provide water to HWU CAFO sites along certain waterlines in the southern area of the county, notably in township 113N 80W, along with township 113N 77W. These two waterline locations could meet the minimum HWU CAFO “Best” requirement of 150,000 gallons per day, with no or only minor improvements needed to their system.

Mid-Dakota RWS was very confident that they could provide water to LWU CAFO sites located along waterlines in central Sully County with little improvements needed to their system. This waterline covered a larger extent along, or near Highway 83, which could meet the minimum LWU CAFO “Best” requirement of 30,000 gallons per day. Mid-Dakota RWS also identified areas within the system that presently could not meet the CAFO or AID water requirements without the system being evaluated by their engineer and improvements being made.

APPENDIX 2: RESEARCH AND METHODOLOGY

This section describes the methodology utilized to evaluate the suitability of potential CAFO or AID development sites.

Step 1: Identification of Site Assessment Criteria

Table A1 lists the site assessment criteria identified as being necessary to conduct an analysis of potential sites. Utilizing these criteria as a guide, a variety of research methods were employed to compile GIS data sets utilized within the analysis. Research efforts included the examination of local, regional, and state planning documents along with existing GIS data layers.

Table A1: Site Assessment Criteria

CAFO Criteria	AID Criteria
Access to County and State Road Network	Access to County and State Road Network
Proximity to Three-Phase Electricity Supply	Proximity to Three-Phase Electricity Supply
Proximity to Rural Water System	Proximity to Rural Water System
Capacity of Rural Water System	Capacity of Rural Water System
Location of Shallow Aquifer	Location of Shallow Aquifer
Buildable Parcel	Buildable Parcel
Existing Zoning Districts/Land Use Plans	Existing Zoning Districts/Land Use Plans
Proximity to Rural Residences & Communities	Proximity to Communities
County CAFO Zoning Setback Requirements	Proximity to Rail

Step 2: Evaluation of Site Assessment Criteria

After developing the data sets in **Table A1**, the analysis identified those site locations that:

1. Complied with zoning guidelines;
2. Were in close proximity to infrastructure necessary to support either CAFO or AID development.

Concentrated Animal Feeding Operation (CAFO) Analysis

The GIS analysis removed all parcels within Sully County from consideration that:

1. Were not within 1 mile of a county or state road;
2. Were not within 2 miles of three-phase electric power;
3. Did not meet the minimum standards for available water;
4. Did not meet zoning requirements;
5. Did not contain a buildable footprint of at least 40 acres.

After applying the buildable footprint requirement to each site, the availability of necessary infrastructure was incorporated into the analysis. The general location of available water, electric and road infrastructure was applied to the remaining sites to establish “Good”, “Better” and “Best” hierarchy of potential development sites. **Table A2** exhibits the minimum requirements necessary for a site to be classified as “Good”, “Better” or “Best” for **CAFO development**.

Table A2: CAFO Hierarchy Classification Requirements

Location Criteria	Description	Good	Better	Best
Roads	Site is <u>adjacent</u> to County/State hard surface road		X	X
	Site is within <u>1 mile</u> of a County/State road	X		
Water	Site is <u>adjacent</u> to rural water system area that has both supply <u>and</u> distribution capacity to provide 410,000 gallons per day or 30,000 gallons per day			X
	Site is <u>adjacent</u> to or within rural water system area that has either supply <u>or</u> distribution capacity to serve either 410,000 gallons per day or 30,000 gallons per day		X	
	Site is within <u>two (2) miles</u> of a river, stream or lake designated by SD DENR Administrative Rule 74:51:02 and 74:51:03 which assigns the following uses to rivers streams and lakes – domestic water supply, stock watering waters, irrigation waters, commerce and industry waters, cold water and warm water permanent fish life propagation waters	X		
Electricity	Site is <u>adjacent</u> to three-phase power			X
	Site is within <u>1 mile</u> of three-phase power		X	
	Site is within <u>2 miles</u> of three-phase power	X		
Zoning	Site meets county zoning setback requirements	X	X	X
Buildable Parcel	Site contains buildable area of at least <u>40 acres</u>	X	X	X

Agriculturally-related Industrial Development (AID)

The GIS analysis removed all parcels within Sully County from consideration that:

1. Were not within 1 mile of a county or state hard surface road;
2. Were not within 2 miles of three-phase electric power;
3. Were not within 1 mile of rail, if applicable;
4. Were not within 1 mile of a community or at locations identified by the county;
5. Did not meet the minimum standards for available water;
6. Did not contain a buildable footprint of at least 40 acres.

After applying the required location based site assessment criteria to each site, the availability of necessary infrastructure was incorporated into the analysis. The general location of available water, electric, rail and road infrastructure was applied to the remaining sites to establish “Good”, “Better” and “Best” hierarchy of potential development sites. **Table A3** exhibits the minimum requirements necessary for a site to be classified as “Good”, “Better” or “Best” for **AID development**.

Table A3: AID Hierarchy Classification Requirements

Location Criteria	Description	Good	Better	Best
Roads	Site is <u>adjacent</u> to County/State hard surface road		X	X
	Site is within <u>1 mile</u> of a County/State hard surface road	X		
Rail	Site is <u>adjacent</u> to rail facility			X
	Site is within <u>½ mile</u> of rail facility		X	
	Site is within <u>1 mile</u> of rail facility	X		
Water	Site is <u>adjacent</u> to rural water system area that has both supply and distribution capacity to provide 410,000 gallons per day or 30,000 gallons per day			X
	Site is <u>adjacent</u> to or within rural water system area that has either supply <u>or</u> distribution capacity to serve either 410,000 gallons per day or 30,000 gallons per day		X	
	S Site is within <u>two (2) miles</u> of a river, stream or lake designated by SD DENR Administrative Rule 74:51:02 and 74:51:03 which assigns the following uses to rivers streams and lakes – domestic water supply, stock watering waters, irrigation waters, commerce and industry waters, cold water and warm water permanent fish life propagation waters **	X		
Electricity	Site is <u>adjacent</u> to three-phase power			X
	Site is within <u>1 mile</u> of three-phase power		X	
	Site is within <u>2 miles</u> of three-phase power	X		
Zoning	Site is zoned for commercial/industrial development			X
	Site is identified in land use plan for commercial/industrial development		X	
	Site is neither identified or zoned for commercial/industrial development	X		
Proximity to Community	Site is within <u>1 mile</u> of community	X	X	
Buildable Parcel	Site contains buildable area of at least <u>40 acres</u>	X	X	X

**Rivers, streams, and lakes designated by SD DENR Administrative Rule 74:51:02 and 74:51:03 are not used for High Water Use AID sites as they require specific Rural Water System Supply and Distribution Capacities

Step 3: Site Development Recommendations

Based on the analysis, **45** sites were classified as “Good” or “Better” for CAFO development (**Table A4**) and **20** sites were classified as Good or Better for AID development (**Table A5**).

While this study only identifies those sites that met the required criteria for the analysis, it should be noted that other sites within the county may be satisfactory for CAFO and AID development. Sites not within the specified distance of a hard surfaced county or state road, which does not have desired infrastructure (rail, water, power) within close proximity does not necessarily negate its development potential.

**Table A4:
Sully County CAFO Sites by Hierarchy Classification**

CAFO Site Classification	Good Sites	Better Sites	Best Sites
Low Water CAFO	41	4	0
High Water CAFO	0	0	0

**Table A5:
Sully County AID Sites by Hierarchy Classification**

AID Site Classification	Good Sites	Better Sites	Best Sites
Low Water AID	12	8	0
High Water AID	0	0	0

APPENDIX 3: CONTACT INFORMATION

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