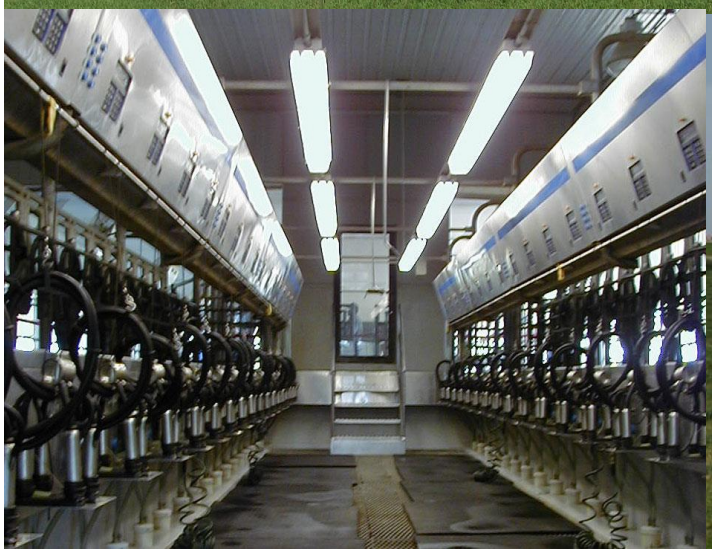
Charles Mix County
Rural Development
Site Analysis

A Study by
Planning and Development District III

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 the specific sites matching the site assessment criteria standards, it became apparent that each site also possesses its own unique set of site characteristics which present both advantages and constraints. For example, since Charles Mix County does not currently have zoning regulations, there were few restrictions on potential CAFO or AID development sites, however many of those sites lacked the necessary infrastructure.

The analysis found that the primary limiting factor(s) in reviewing the development potential of properties within Charles Mix County for a "Better" or "Best" CAFO site development is the availability of quality potable water. The same is true with AID developments which also require a reliable source of not only high quality but also large quantities. Access to a centralized water source such as rural water was a key criterion in the site analysis process. While access to rural water quality water was identified as an impediment, the 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 Charles Mix County be relegated to the specific sites identified herein.

In addition to the availability of quality potable water, additional limiting factors such as access to County and State road networks, 3-Phase power, rail, and the county's existing CAFO setback 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 Assessments, 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 Charles Mix 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 Charles Mix County.

Utilizing Geographic Information System (GIS) technology, the Planning and Development District III identified **624** sites within Charles Mix County that met the minimum site assessment standards of the CAFO analysis, **Table 2** and **92** sites that met the minimum standards of the AID analysis, **Table 3.** These sites complied with local zoning ordinances and were in close proximity to infrastructure necessary to support the previously identified economic development activities.

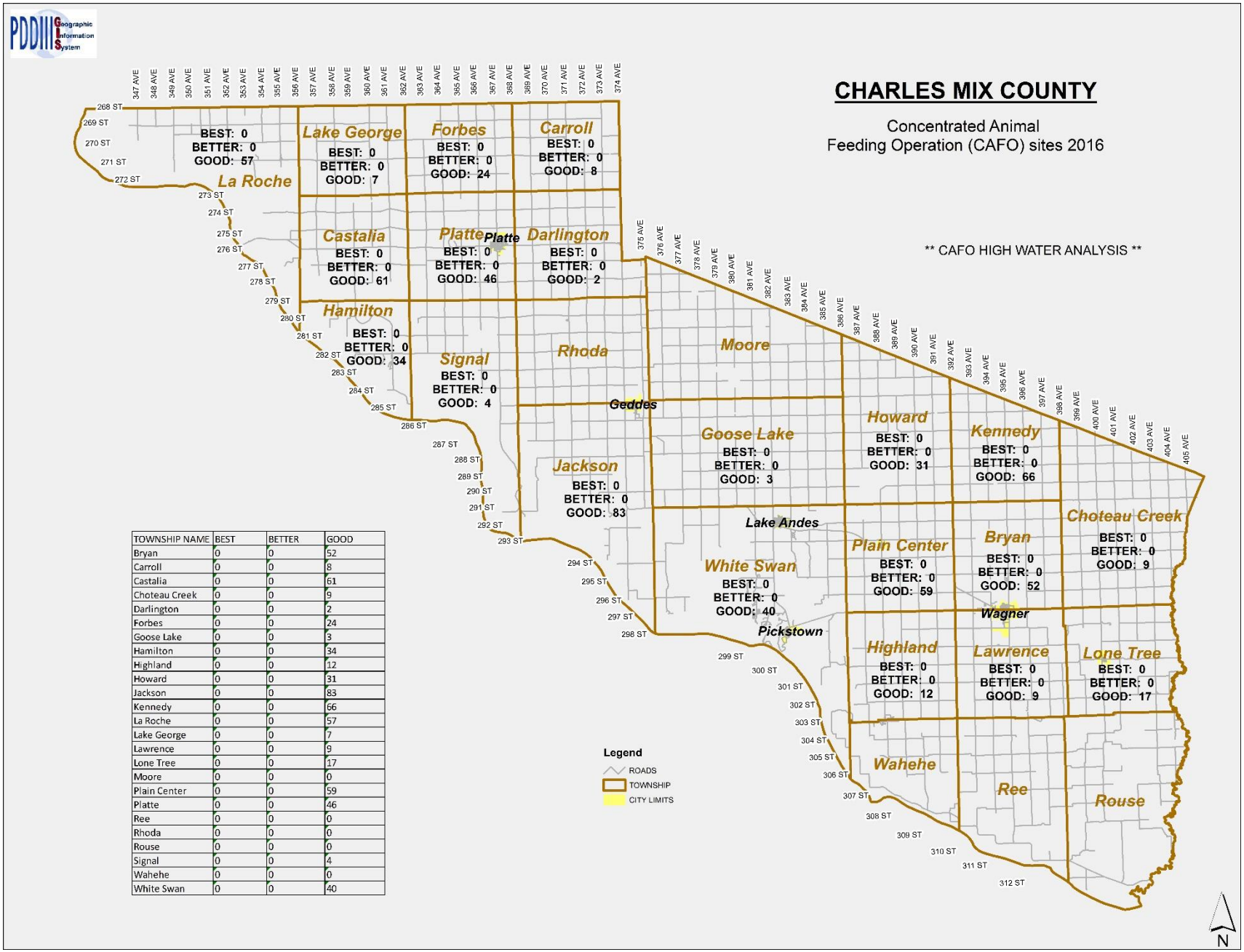
The CAFO and AID Analysis Maps further detail High Water Use (HWU) and Low Water Use (LWU) CAFO and AID sites. HWU CAFO sites are those locations which require 150,000 gallons of water per day. This amount of water is necessary to support, for example, a 3,000 head dairy. LWU CAFO sites are those locations which require 30,000 gallons of water per day, a volume necessary to support either a 600 head dairy or 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. This high water use is currently unable to be supported by the rural water system. Therefore, no sites were found to be acceptable for HWU AID. 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 624 High Water Use and 624 Low Water Use CAFO sites. Whereas, there were 0 High Water Use and 92 Low Water Use AID. The following maps provide information at a township level regarding the number of “Good”, “Better” and “Best” CAFO and AID sites.

Table 2:
Charles Mix County CAFO Sites by Hierarchy Classification

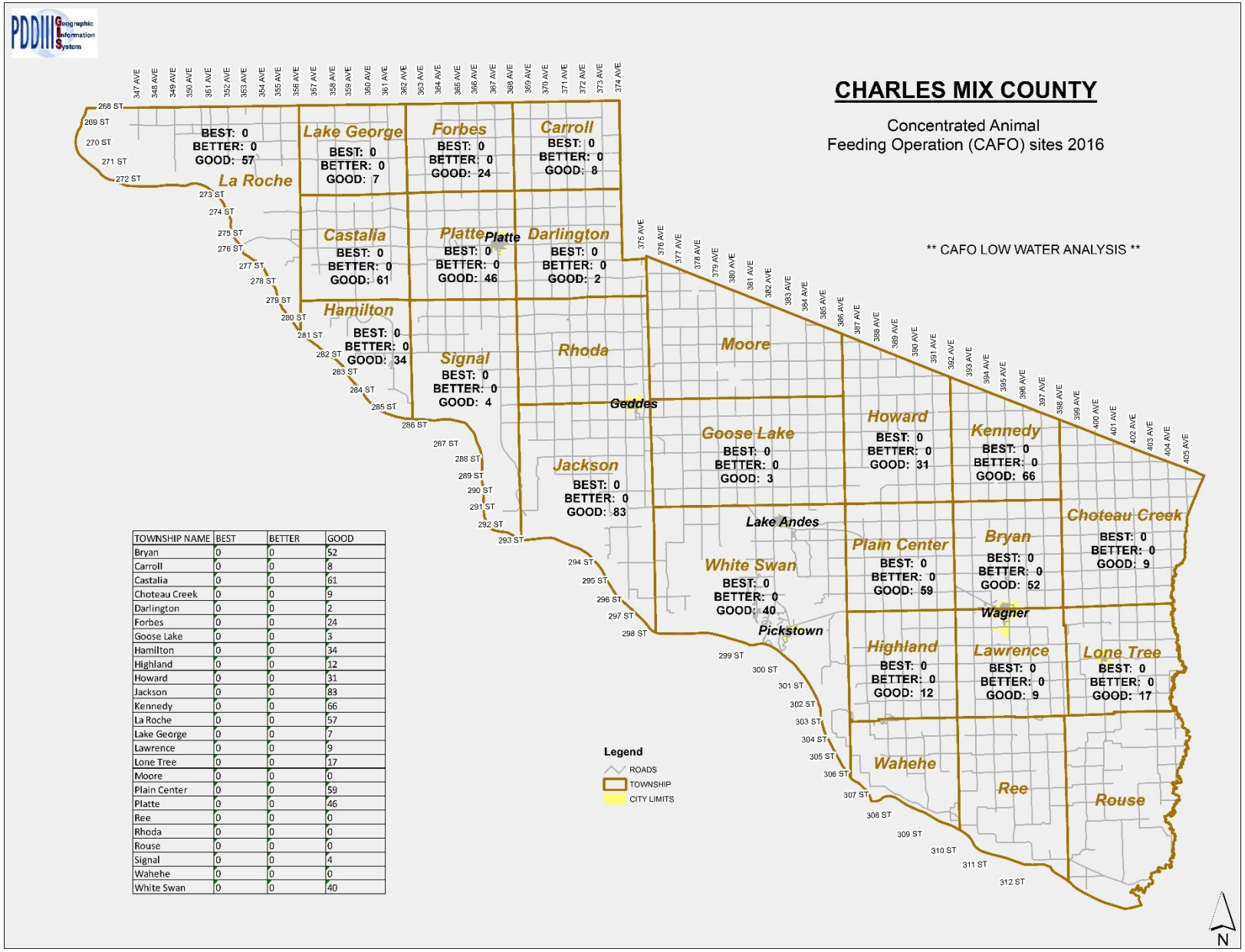
CAFO Site Classification	Good Sites	Better Sites	Best Sites
Low Water CAFO	624	0	0
High Water CAFO	624	0	0

Table 3:
Charles Mix County AID Sites by Hierarchy Classification

AID Site Classification	Good Sites	Better Sites	Best Sites
Low Water AID	92	0	0
High Water AID	0	0	0



TOWNSHIP NAME	BEST	BETTER	GOOD
Bryan	0	0	52
Carroll	0	0	8
Castalia	0	0	61
Choteau Creek	0	0	9
Darlington	0	0	2
Forbes	0	0	24
Goose Lake	0	0	3
Hamilton	0	0	34
Highland	0	0	12
Howard	0	0	31
Jackson	0	0	83
Kennedy	0	0	66
La Roche	0	0	57
Lake George	0	0	7
Lawrence	0	0	9
Lone Tree	0	0	17
Moore	0	0	0
Plain Center	0	0	59
Platte	0	0	46
Ree	0	0	0
Rhoda	0	0	0
Rouse	0	0	0
Signal	0	0	4
Wahehe	0	0	0
White Swan	0	0	40



TOWNSHIP NAME	BEST	BETTER	GOOD
Bryan	0	0	52
Carroll	0	0	8
Castalia	0	0	61
Choteau Creek	0	0	9
Darlington	0	0	2
Forbes	0	0	24
Goose Lake	0	0	3
Hamilton	0	0	34
Highland	0	0	12
Howard	0	0	31
Jackson	0	0	83
Kennedy	0	0	66
La Roche	0	0	57
Lake George	0	0	7
Lawrence	0	0	9
Lone Tree	0	0	17
Moore	0	0	0
Plain Center	0	0	59
Platte	0	0	46
Ree	0	0	0
Rhoda	0	0	0
Rouse	0	0	0
Signal	0	0	4
Wahehe	0	0	0
White Swan	0	0	40

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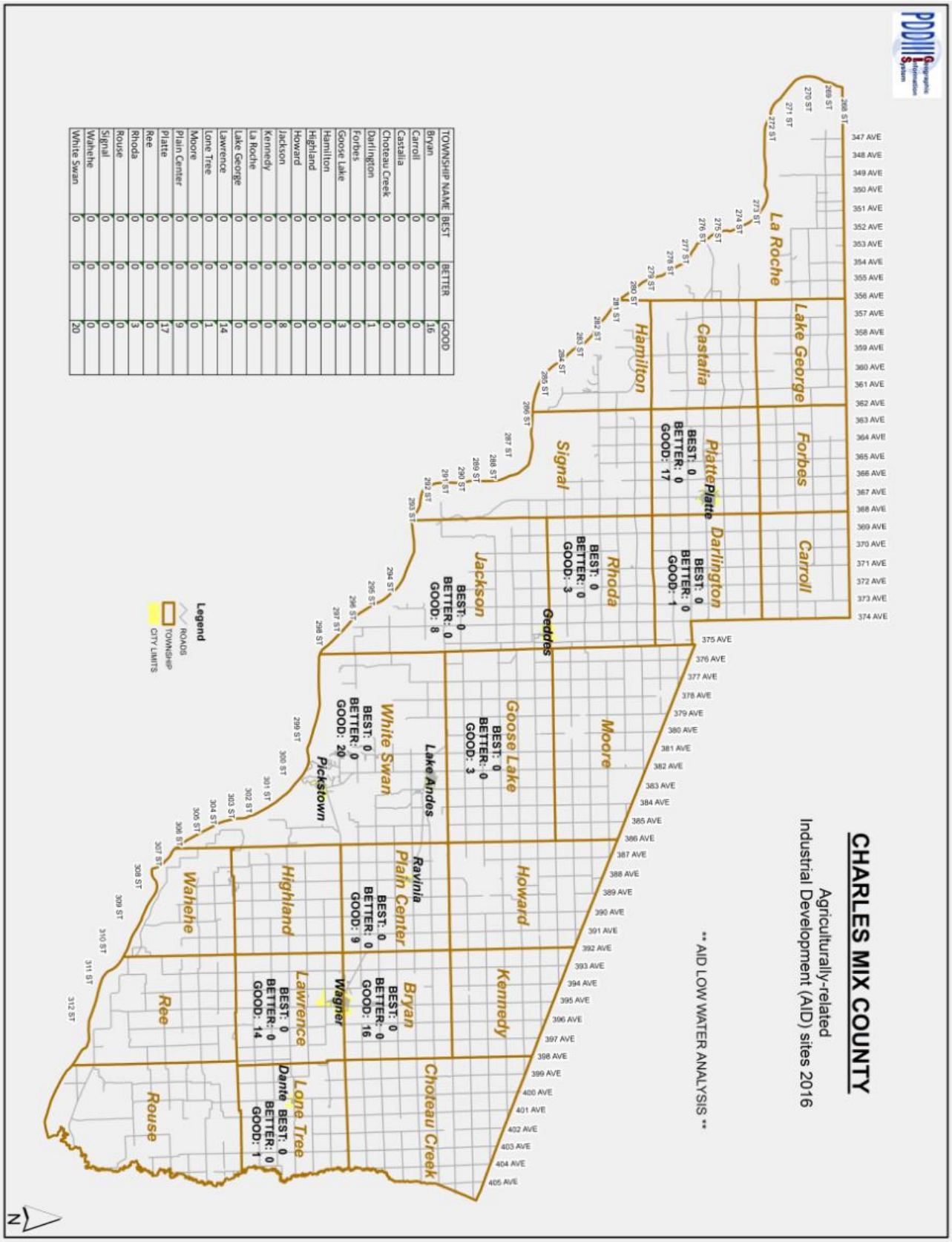
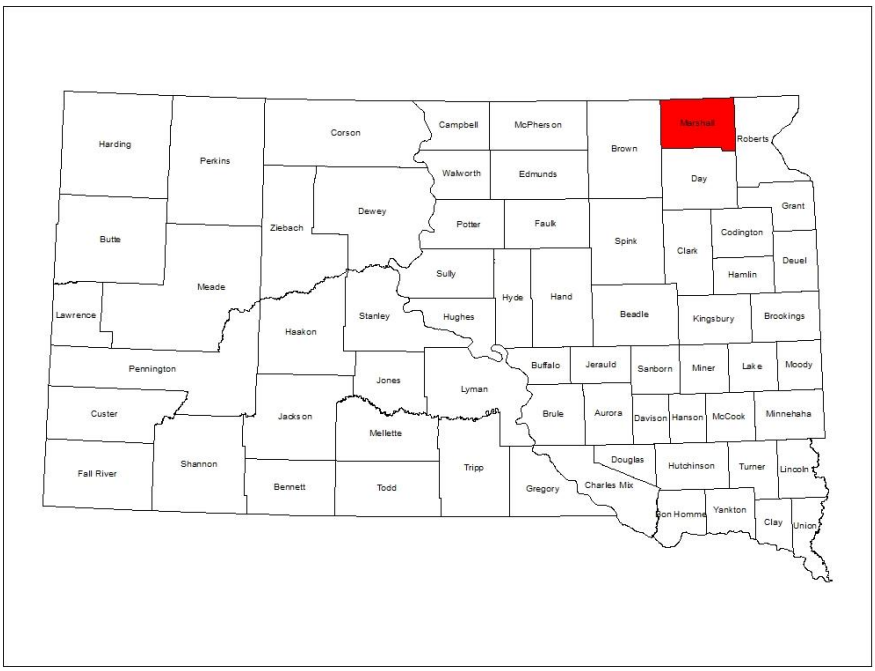


TOWNSHIP NAME	BEST	BETTER	GOOD
Bryan	0	0	16
Carroll	0	0	0
Castalia	0	0	0
Choteau Creek	0	0	0
Darlington	0	0	1
Forbes	0	0	0
Goose Lake	0	0	3
Hamilton	0	0	0
Highland	0	0	0
Howard	0	0	0
Jackson	0	0	8
Kennedy	0	0	0
La Roche	0	0	0
Lake George	0	0	0
Lawrence	0	0	14
Lone Tree	0	0	1
Moore	0	0	0
Plain Center	0	0	9
Platte	0	0	17
Ree	0	0	0
Rhoda	0	3	0
Rouse	0	0	0
Signal	0	0	0
Wahehe	0	0	0
White Swan	0	0	20

APPENDIX I: SITE ASSESSMENT CRITERIA

Charles Mix County Location Map



The methodology developed for this study utilized an established set of criteria deemed critical to further the development of the subject properties while specifically addressing the suitability of a site for either a CAFO or an AID.

Sites possessing all of the criteria identified as critical within the analysis will be those most sought by potential developers. The occurrence of these sites may be somewhat rare. Therefore sites under consideration for either a CAFO or AID may meet the majority of criteria, but may also be lacking in several specific areas. 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 demand for a 3,000 head dairy is approximately five times greater than the needs of a 5,000 head sow operation even though each operation could generally be subject to similar zoning regulations. In this situation, the lack of water at a volume necessary for a dairy may lend the site to be more likely identified as a possible location for a swine facility.

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, all of which 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 the 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 three major categories of **Land Use Regulations**; **Environmental Constraints**; and **Infrastructure**.

LAND USE REGULATIONS

Economic development planning in Charles Mix County must be conducted in concert with the 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. If available, the analysis reviewed said documents in order to determine compliance with proposed CAFO and AID development. The following is a synopsis of County policies regarding CAFO and AID development.

Comprehensive Land Use Plan/Zoning Regulations

Ideally, economic developers seek sites that are zoned and eligible for specific uses. Currently, Charles Mix County does not have a comprehensive land use plan or associated zoning regulations due to these being repealed via a referendum process in the mid 1990's. Planning documents such as those previously identified generally provide guiding policies regarding the promotion or restriction of specific land use activities. Without zoning regulations, which may restrict the location of CAFO or AID sites, the analysis focused its efforts on identifying those sites that met necessary criteria.

Buildable Parcel

One criterion deemed necessary to facilitate development of either a CAFO or an AID was land area. A parcel of 40 buildable acres was set as the minimum for consideration within the analysis. In order to be considered, the property must have consisted of 40 contiguous acres and be able to support development upon all 40 acres. Parcels without 40 buildable acres were not considered in the final analysis.

Proximity to Communities

The AID analysis also considered sites within one mile of a community or at specific locations identified by the 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

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.

While the potential exists for individuals to protest CAFO and AID developments locating over aquifers, Charles Mix County has not enacted nor currently enforces aquifer protection regulations more restrictive than the State of South Dakota. Therefore, sites situated over the shallow aquifer 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.

INFRASTRUCTURE

The term infrastructure is broad though in the context of property development the term 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 indentified 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. District III requested the Charles Mix County Highway Superintendent to identify segments of the county road system inadequate to support a CAFO or AID. Sites accessed only by township roads that were located further than one mile from the intersection of a County or 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 consistently 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. However, there are no rail facilities in Charles Mix County. To compensate for lack of rail facilities the analysis removed the rail requirement and considered sites within one mile of a community or at locations identified by the County. Without rail, there are no "Best" sites. However, those parcels within one mile of a municipality or at locations identified by the County are designated as "Good" and "Better".

Electric Supply

Access to 3-phase power was designated as a site characteristics criterion for both CAFO and AID development. Planning and Development District III contacted Charles Mix Electric Cooperative to obtain the location and capacity of the 3-Phase infrastructure within the county. Charles Mix Electric Cooperative is the primary provider of electricity in the rural area of the county. All parcels whether for CAFO or AID 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 three-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 the Planning and Development District III contacted and requested location and capacity information from the rural water provider within Charles Mix County. Randall Community Water District is the primary rural water system for the entire county. This system was requested to provide information regarding their available treated water capacity. Also, the system 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.

Randall Community Water District did not respond to either of the two requests for information, the analysis was conducted where proximity to an aquifer was the sole determining factor for water availability. Therefore, at this time the only classification assigned to a potential CAFO or AID site in Charles Mix County was "Good". Although Randall Community Water District did not provide information necessary for this analysis, it is assumed that Randall Community Water District may be in position to provide service and all requests will be reviewed at the time of application for service and considered on a case by case basis.

APPENDIX II: 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 the 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; and
2. Were in close proximity to infrastructure necessary to support either CAFO or AID development.

<u>Concentrated Animal Feeding Operation (CAFO) Analysis</u>

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

1. Were not within one mile of a County or State road;
2. Were not within two miles of three-phase electric power;
3. Did not meet the minimum standards for available water;
4. 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 adjacent to County/State hard surface road		X	X
	Site is within one (1) mile of a County/State road	X		
Water	Site is adjacent to rural water system area that has both supply and distribution capacity to provide 150,000 gallons per day or 30,000 gallons per day			X
	Site is adjacent to or within rural water system area that has either supply or distribution capacity to serve either 150,000 gallons per day or 30,000 gallons per day		X	
	Site is within two (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	X		
Electricity	Site is adjacent to three-phase power			X
	Site is within one (1) mile of three-phase power		X	
	Site is within two (2) miles of three-phase power	X		
Buildable Parcel	Site contains buildable area of at least forty (40) acres	X	X	X

Agriculturally-related Industrial Development (AID)

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

1. Were not within one mile of a County or State hard surface road;
2. Were not within two miles of three-phase electric power;
3. Were not within one mile of rail, if applicable;
4. Were not within one 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 adjacent to County/State hard surface road		X	X
	Site is within one (1) mile of a County/State hard surface road	X		
Rail	Site is adjacent to rail facility			X
	Site is within one half ½ mile of rail facility		X	
	Site is within one (1) mile of rail facility	X		
Water	Site is adjacent 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 adjacent to or within rural water system area that has either supply or distribution capacity to serve either 410,000 gallons per day or 30,000 gallons per day		X	
	Site is within two (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 *	X		
Electricity	Site is adjacent to three-phase power			X
	Site is within one (1) mile of three-phase power		X	
	Site is within two (2) miles of three-phase power	X		
Proximity to Community	Site is within one (1) mile of community	X	X	
Buildable Parcel	Site contains buildable area of at least forty (40) acres	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 site analysis as they require specific Rural Water System Supply and Distribution Capacities

Step 3: Site Development Recommendations

Based on the analysis, **624** sites were classified as Good, Better, or Best for CAFO development **(Table A4)** and **92** sites were classified as Good, Better, or Best 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 or does not have desired infrastructure (rail, water, power) within close proximity does not necessarily negate its development potential.

Table A4:
Charles Mix County CAFO Sites by Hierarchy Classification

CAFO Site Classification	Good Sites	Better Sites	Best Sites
Low Water CAFO	624	0	0
High Water CAFO	624	0	0

Table A5:
Charles Mix County AID Sites by Hierarchy Classification

AID Site Classification	Good Sites	Better Sites	Best Sites
Low Water AID	92	0	0
High Water AID	0	0	0

APPENDIX III: CONTACT INFORMATION

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GIS: Noreen Strid
Phone: (605) 487-6184
Highway Superintendent: Douglas Kniffen
Phone: (605) 487-7161

Rural Water Systems

Randall Community Water District
Scott Pick
Email: scott.pick@rcwd.org
Phone: (605) 487-7823

Electric Providers

Charles Mix Electric Cooperative
Russell A Gall
Email: cme@cme.coop
Phone: (605) 487-7321

NorthWestern Energy
Brian Kemnitz
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Phone: (605) 668-4615

Other Resources - Aquifer

First Occurrence of Aquifer Materials in Charles Mix County, South Dakota
Department of Environment and Natural Resources
Division of Financial and Technical Assistance
Geological Survey Aquifer Materials Map 29
Anne R. Jensen, 2008
http://www.sdgs.usd.edu/pubs/pdf/AM-29_20080515.pdf