BRULE COUNTY PLANNING DOCUMENTS

Comprehensive Plan

Zoning Manual

Image Credit: John Andrews, South Dakota Magazine, 2015

BRULE COUNTY
COMPREHENSIVE PLAN
2020-2040

Image Credit: John Andrews, South Dakota Magazine, 2015

Prepared by Planning & Development District III

For the

Brule County Planning Commission

And the

Brule County Commission

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BRULE COUNTY COMMISSION

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Gary Dozark

Greg Mairose

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BRULE COUNTY AUDITOR

Pamela Petrak

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James Nesladek (County Commission Representative)

BRULE COUNTY ZONING ADMINISTRATOR

Clint Soulek

NOTICE OF PUBLIC HEARING

HEREBY TAKE NOTICE, the Brule County Planning Commission, County of Brule, State of South Dakota, is proposing a Comprehensive Plan be adopted by the Brule County Commission.

The Planning Commission will hold a public hearing and take testimony of the proposed Comprehensive Plan on **Tuesday, October 13th at 7:00 P.M.** in the Meeting Room in the Brule County Courthouse in Chamberlain, SD.

The complete Comprehensive Plan referred to above is on file with the Brule County Planning and Zoning Office and may be inspected, reviewed, or examined by any interested party by contacting Clint Soulek, Director of Equalization/Planning and Zoning Administrator at (605) 234-4432.

Written comments may be submitted to the Finance Officer by **3:00 P.M. October 13, 2020.**

Clint Soulek
Brule County Planning and Zoning Administrator

Note: To be published in the Central Dakota Times during the weeks of September 28th and October 5th, 2020

NOTICE OF ADOPTION

BRULE COUNTY COMPREHENSIVE DEVELOPMENT PLAN

HEREBY TAKE NOTICE that on the 17th day of November, 2020, the Brule County Commission, County of Brule, State of South Dakota, pursuant to SDCL: 7-18A, has duly adopted a comprehensive development plan which include the adoption of current and future land use maps, comprehensive development plan, and other official documents which measures are more fully shown in the document entitled:

AN ORDINANCE ESTABLISHING A COMPREHENSIVE DEVELOPMENT PLAN FOR THE BRULE COUNTY, SD, AND PROVIDING FOR THE ADMINISTRATION AND AMENDMENT THEREOF, IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 11-2 SDCL, AND FOR THE REPEAL OF ALL DOCUMENTS IN CONFLICT THEREWITH.

The complete comprehensive plan referred to above is on file with the Brule County Auditor and may be inspected, reviewed or examined by any interested party by contacting the office at 605-234-4430.

Pursuant to SDCL 7-18A-5 a summary and notice of adoption is published in lieu of publishing the entire comprehensive plan since said document adopts comprehensive regulations.

Dated this 17th of November, 2020.

_____

Pamela Petrak, Auditor

Publish twice: November 25 and December 2, 2020 at the approximate cost:

BRULE COUNTY, SD
PLANNING COMMISSION
COMPREHENSIVE PLAN
RESOLUTION OF ADOPTION

WHEREAS, The Brule County Planning Commission has developed and proposes the adoption of a Comprehensive Development Plan; and

WHEREAS, Brule County is required by South Dakota Codified Law to adopt a Comprehensive Plan prior to amending or adopting a zoning ordinance; and

WHEREAS, The Brule County Planning Commission has held the required public hearing pursuant to SDCL 11-2-18 and 11-2-19 and will provide the State's Attorney with a copy of the document for review; and

WHEREAS, The proposed plan will enable the Planning Commission and the Brule County Commission to guide the future land use in Brule County and allow for the enforcement and amendment of other land use regulations;

NOW THEREFORE, BE IT RESOLVED, that the Brule County Planning Commission hereby recommends adoption of the City of Brule County Comprehensive Plan with suggested changes pursuant to SDCL 11-2 and calls for the Brule County Commission to act upon the same.

Dated this 13 day of October, 2020.

Chairman, Brule County Planning Commission

SEAL

Attest

BRULE COUNTY COMPREHENSIVE PLAN

RESOLUTION OF ADOPTION

WHEREAS, the Brule County Commission, through a cooperative effort with the Brule County Planning Commission has developed and proposes to adopt a Comprehensive Development Plan; and

WHEREAS, Brule County is required by South Dakota Codified Law to adopt a Comprehensive Plan prior to amending or adopting a zoning ordinance; and

WHEREAS, Brule County has certified the accuracy of the proposed document with the States Attorney prior to proceeding with the adoption proceedings; and

WHEREAS, proposed plan will enable the Planning Commission and the County Commission to guide the future land use within the boundaries of, and extraterritorial areas as allowed by SDCL 11-2, in the County and allow for the enforcement and amendment of other land use regulations.

NOW THEREFORE BE IT RESOLVED, that the Brule County Commission hereby adopts the Brule County Comprehensive Plan pursuant to SDCL 11-2 and calls for the publication of a summary and notice of adoption pursuant to SDCL7-18A.

Dated this 17th day of November, 2020.

James Neslaček, Chairman

ATTEST:

Pamela Petrak, Auditor

CHAPTER I
INTRODUCTION

AUTHORITY AND PURPOSE

Chapter 11-2 of South Dakota Codified Laws (SDCL) provides for the preparation of a Comprehensive Plan, as outlined in SDCL 11-2-12, this Comprehensive Plan is intended to:

- Protect and guide the physical, social, economic, and environmental development of the County;
- Protect the tax base;
- Encourage a distribution of population or mode of land utilization that will facilitate the economical, and adequate provisions of transportation, roads, water supply, drainage, sanitation, education, recreation, or other public requirements;
- Lessen governmental expenditure;
- Prevent the overcrowding of land; and
- Conserve and develop natural resources.

Brule County shall implement this plan through whatever ordinances, policies, or controls as may be necessary. Implementation measures will change over time as conditions warrant.

PRIMARY ISSUES

Although this document pertains to the general development of Brule County, there are several issues that merit special attention. Current social and economic conditions, revisions to environmental protection laws, and changing agriculture production practices have contributed to making the following issues of primary importance:

- The investment of public and private capital in real estate and infrastructure;
- Orderly growth of a variety of housing types;
- Preservation of the current agricultural practices as viable economic activities;
- Environmental protection; and
- Balancing the cost-benefit ratio in providing government services.

In addressing these issues, Brule County will seek to:

1) Adhere to planning requirements in accordance with South Dakota Codified Law;
2) Provide data and analysis to support conclusions as to potential land uses and development of time frames;
3) Identify planning challenges;

4) Draft policy recommendations, goals, and specific development policies; and
5) Influence development activity within the residential and rural areas of the County as well as those lands adjacent to the municipalities.

STRUCTURE

This document establishes the foundation for county planning initiatives by:

1. Providing pertinent historical and contemporary data;
2. Describing significant trends and conditions;
3. Proposing development challenges and policy recommendations; and
4. Identifying development goals and objectives.

The plan also outlines, where appropriate, specific activities or resources that may help Brule County achieve its goals.

Brule County with its proximity to the Missouri River provides an avenue for uniqueness. The County has a potential for diversity of development to include residential, commercial, recreational, and agricultural. As such, it is subject to a wide range of social, economic, and environmental influences, which are constantly changing. A Comprehensive Plan cannot adequately describe or anticipate every development factor or problem. However, it does establish a base line of information and a systematic process that may be used to evaluate and guide future issues.

This plan is designed to be both concise and thorough. In drafting the plan, the Brule County Planning Commission and Board of Commissioners utilized background research, survey instruments, detailed inventories, numerous assessments, and public input via formal and informal processes. Certain data are presented in comparison to ten counties some of which abut while others provide a cross state representation. At times municipal, statewide, and national statistics were also utilized.

The County may modify its goals as progress is made or situations change. Modifications to the Comprehensive Plan shall be accomplished in accordance with SDCL 11-2 as amended to include recommendations from the Planning Commission to the Board of County Commissioners.

The majority of goals will pertain to those areas of the county lying outside of municipal boundaries or extraterritorial jurisdictional areas as established by previous resolutions. There may be issues and areas of mutual interest where the County and City governments will cooperate.

Brule County may use a variety of methods to implement the goals and objectives of the Comprehensive Plan. Many counties utilize a zoning ordinance to promote orderly growth. Subdivision ordinances, building codes, or other long range planning documents can also serve as implementation tools.

The Comprehensive Plan should be periodically updated. Revisions in background data would be appropriate after each decennial census or as significant information becomes available. The entire plan should be updated every 10 to 15 years.

The process of providing quality and consistent data is sometimes limited by external factors. As a matter of record, all data sets were formulated by utilizing a single source per table whenever possible. At those times, it became necessary multiple data sources were used in preparing a table. Either way, the sources for each table have been cited to ensure a high level of accuracy and accountability. The accuracy of the data cannot be guaranteed due to the nature of compiling the original data by the recording agency. Every effort was made to represent the most accurate data available at the time of authorship.

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CHAPTER II
BACKGROUND INFORMATION

GEOGRAPHY

Brule County is located along in central South Dakota, bordered by the Missouri River to the west. The physical area comprises 819 square miles of land or 524,190 acres. The County's population density in the year 2000 was 6.5 persons per square mile. This density decreases to approximately 4.13 (3,370/817) when accounting for the 3,370 people residing within the three municipalities lying completely within the County. **Figure 1** shows the location of Brule County within the State of South Dakota along with its geographic relationship to comparable counties within the state.

In further describing the geographic site and situation of Brule County, the following three classifications or categories provide additional detail: agricultural, climatic, and physical.

- ✓ Agriculturally, the County is situated near the central margin of the Winter Wheat Belt, the far western margin of the Corn Belt, and the central to eastern margin of the Cattle Range.

- ✓ Climatically, Brule County is very close to the boundary dividing the humid and dry regions of the continent, delineated by a north-south line and the warm and cool summer continental climates, an east-west boundary.

- ✓ Physically, the County is also unique in the location and relation to the subdivision of the interior plains within North America. This boundary dividing the Great Plains from the Central Lowlands falls either within or just outside the County's boundaries.

All of the above mentioned boundaries may be related to the climatic differences of the arid western regions and more humid regions lying to the east. The location of Brule County between these two distinct regions results in cyclical weather patterns and difficulty in supporting more intense industrial and agricultural development.

The constant fluctuation of the boundary classifications and subsequent differences are both a strength and weakness. The drought conditions associated with the arid regions of the west require a long term vision in terms of development whereas the more humid weather patterns of the east provide an opportunity of expansion and enhanced profitability. This cyclical nature forces any development or expansion plans to be well researched and structured for both long and short term returns on the initial investment.

The categories discussed in the earlier paragraphs are evident in the population distribution of the State and region. The physical location of an area is important when examining long range planning goals and objectives. The relative distances to South Dakota's larger cities are illustrated in **Figure 2**. Major metropolitan areas and travel distances are shown in **Figure 3.**

FIGURE 1
Location of Brule County in Relationship to Comparable Counties

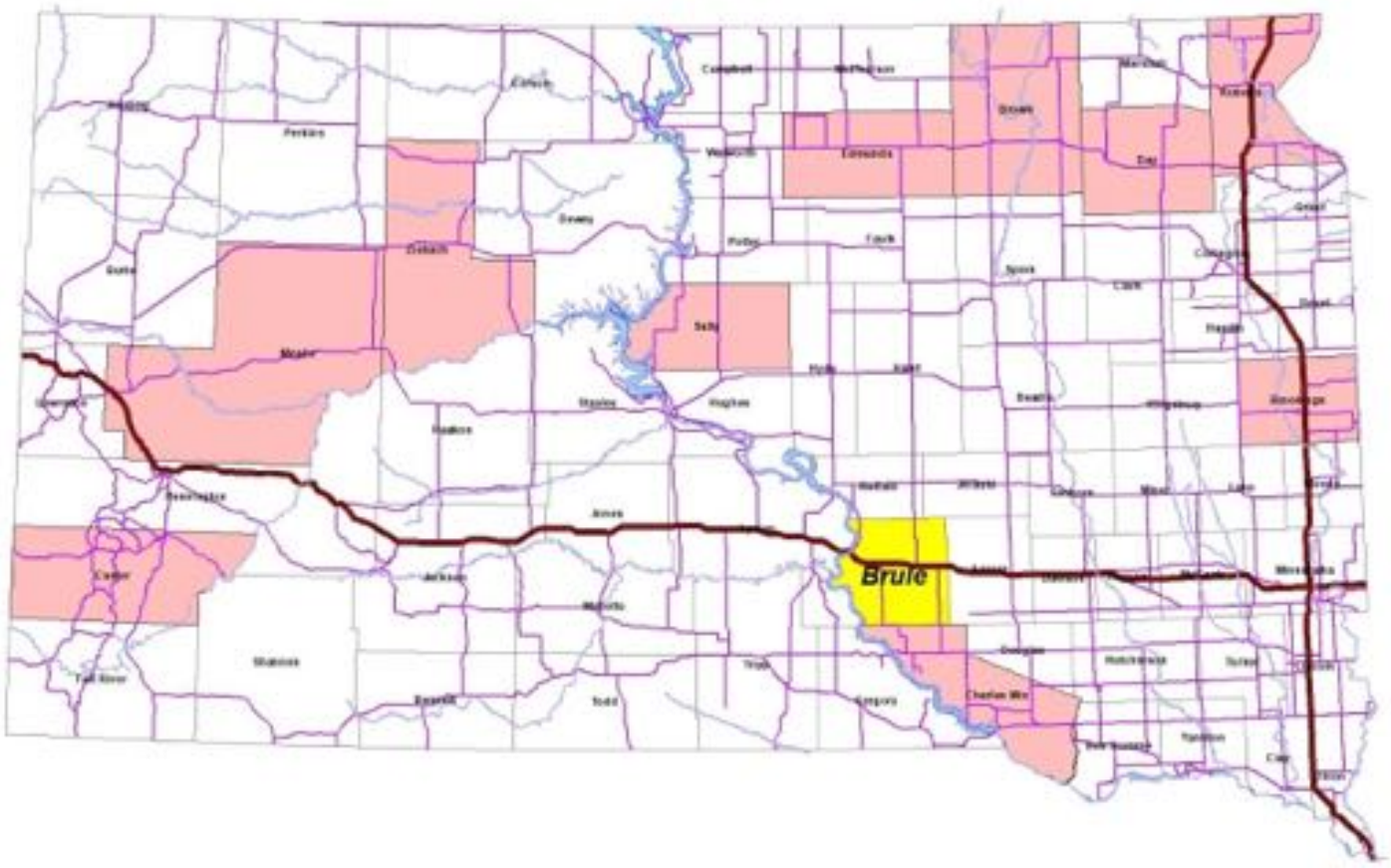


FIGURE 2
Distances to South Dakota Cities

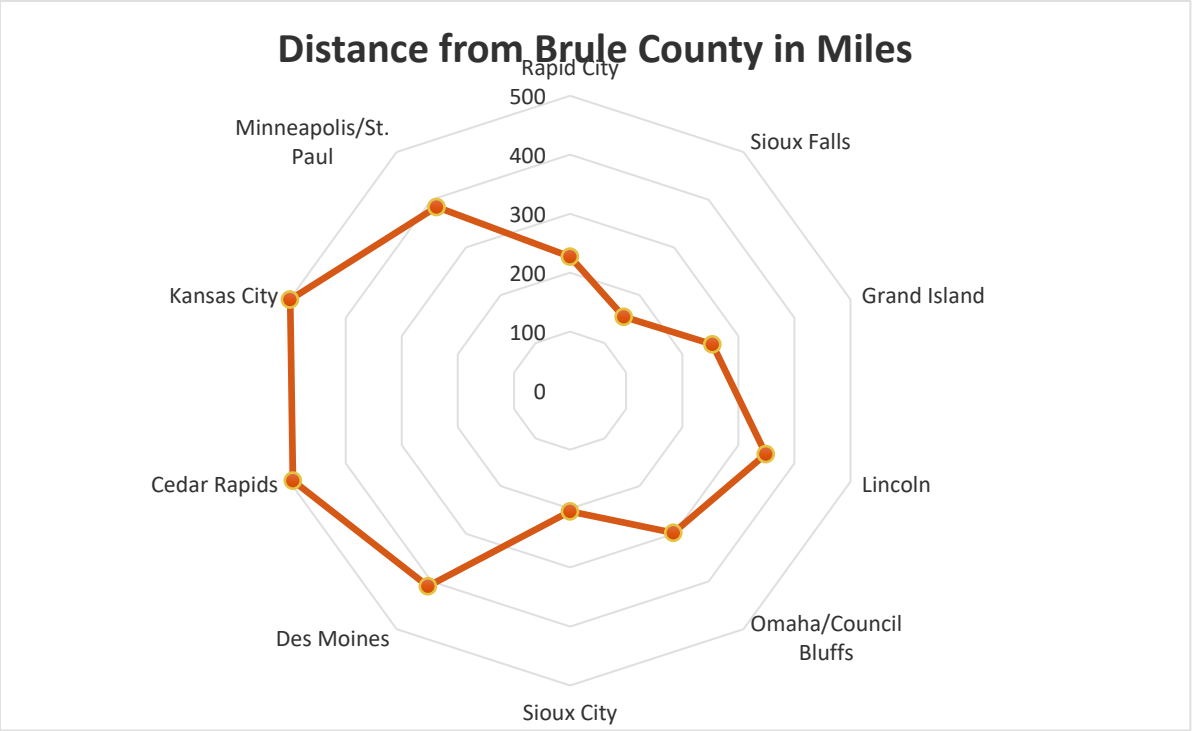
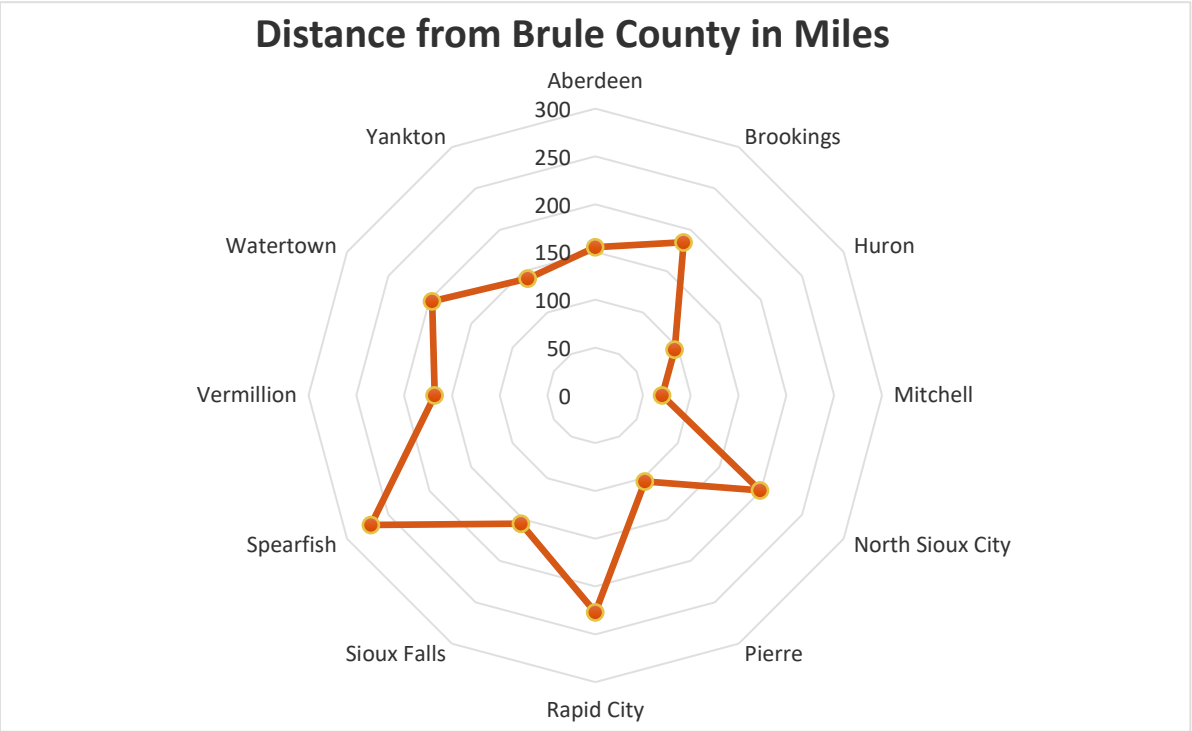


FIGURE 3
Distances to Metropolitan Areas



SOILS

An examination of the soils within Brule County assists in illustrating those areas best and least suited for different uses or development. Soils can be described as belonging to a "soil association." A soil association is a unique natural landscape that has a distinct pattern of soils, relief, and drainage. Typically, a soil association consists of one or more major soils and some minor soils.

The soils map shown in **Figure 4** illustrates the soil types in the County. Each soil type has special properties. This plan will present only a brief, general discussion of applicable soils in the Brule County area. More specific information is available in the Soil Survey of Brule and Buffalo Counties, South Dakota, published by the U.S. Department of Agriculture, Soil Conservation Service.

The following soil associations are most prominent within Brule County:

1. **Oahe-Delmont Association:** Occupies a minority of land area (1%) within the County. Generally found on outwash plains and terraces. The slopes generally are undulating to rolling but are nearly level in places. In most places the drainage pattern is well defined.
2. **Lowry-Sully Association:** An association on uplands characterized by smooth, nearly level to steep slopes. The drainage patter is poorly defined in the nearly level level areas and well defined in the steeper areas.
3. **Uly Association:** This association is on uplands characterized by smooth slopes. The slopes generally are nearly level and gently sloping but are moderately sloping in places. IN most areas the drainage pattern is well defined, but it is poorly defined in some of the nearly level areas.
4. **Highmore-Mobridge:** Located on uplands characterized by gentle rises and many shallow swales. Slopes generally are nearly level to undulating but are gently rolling sin some areas. The drainage pattern is poorly defined in areas where drainageways terminate in small depressions. A few scattered small stones are on the surface in some areas of the Highmore soils.
5. **Highmore-Java-Glenham Association:** Occupies uplands characterized by gentle rises, swales, and depressions. The drainage pattern is well defined in most areas but is poorly defined in those areas where the drainage ways terminate in small depressions. Scattered stones are on the surface in some areas.
6. **Eakin-DeGrey Association:** This association is on uplands characterized by gentle rises, slight swales, and depressions. In most areas the drainage pattern is poorly defined, but it is well defined along the larger drainage ways. Scattered stones are on the surface in most areas.
7. **Beadle-Plankinton-Eakin:** This association is on uplands characterized by many scattered depressions. The drainage pattern is poorly defined and most of the runoff accumulates in closed depressions
8. **Glenham-Java-Highmore Association:** An association found on uplands characterized by numerous swales and depressions. The drainage pattern is well defined in most areas, but it is poorly defined in those areas where drainage ways terminate in small depressions.
9. **Durrstein-Egas Association:** Found on the flood plains along some of the drainage ways. It generally is dissected be meandering channels. The drainage pattern is poorly defined in all areas, except for those near the channels.

10. **Betts-Java Association:** This association is dominantly on ridges, hills and the sides of drainage ways. Slopes dominantly are strongly sloping or moderately steep but are steep in some areas. The drainage pattern is well defined**.**
11. **Sansarc-Opal-Chantier Association:** Generally located upon uplands characterized by steep slopes and deeply entrenched drainage ways. The soils generally are strongly sloping to steep but are less sloping on some side slopes. The drainage pattern is well defined.
12. **Okaton Association:** This association consists primarily of the area known as the Bijou Hills, in the southern part of the County. The slopes generally are steep but are moderately steep in places. The drainage pattern is well defined.
13. **Opal, Saline-Promise Association:** This association is on uplands characterized by smooth slopes. The soils generally are nearly level and undulating but are moderately sloping and strongly sloping in some areas. The drainage pattern is well defined.
14. **Promise-Opal Association:** Located upon uplands characterized by long, smooth slopes. The soils generally are nearly level and gently sloping but are strongly sloping in some areas. The drainage pattern is well defined.

The soil data in **Figure 4** is presented via two methods, color and abbreviations of the individual soil type. The following information in **Table 1** ties the various abbreviations to one of the eight soil associations identified above.

TABLE 1
Soil Associations in Brule County

Identified Association #	Series/Soils	Abbreviation(s)
1	Oahe	Oa, OdB
1	Delmont	DeD
2	Lowry	LoA, LoB, LvA, LvB
2	Sully	SdF, SoC, SoE, SsE,
3	Uly	UaA, UaB, UaC
4	Highmore	HgB, HgC, HmA
4	Mobridge	MoA, Mp
5	Java	JbE, JgC,
5	Glenham	GhA, GkB
6	Eakin	EaA,
6	DeGrey	DaA
7	Beadle	BeB, BeC, BgB
7	Plankinton	Pa
7	Eakin	EaA
9	Durrstein	Du
9	Egas	Eg, Ew
10	Betts	BmF,
11	Sansarc	SaE, SaF
11	Opal	OmB, OmC
11	Chantier	CsD
12	Okaton	OeF
13	Saline-Promise	PrA, PrB
14	Promise	PrA, PrB

Due to the vast number of soil types in the county **Table 2** illustrates the properties of the first type of soil in each association**.** Properties listed for each soil discussed are slope, corn suitability, sanitary facilities (septic tanks and absorption fields), dwellings, commercial buildings, and roads. For sanitary facilities, dwellings, commercial buildings, and roads the soil properties are listed for their suitability for each activity. The potential may be listed as slight, moderate, or severe.

TABLE 2
Soil Properties in Brule County

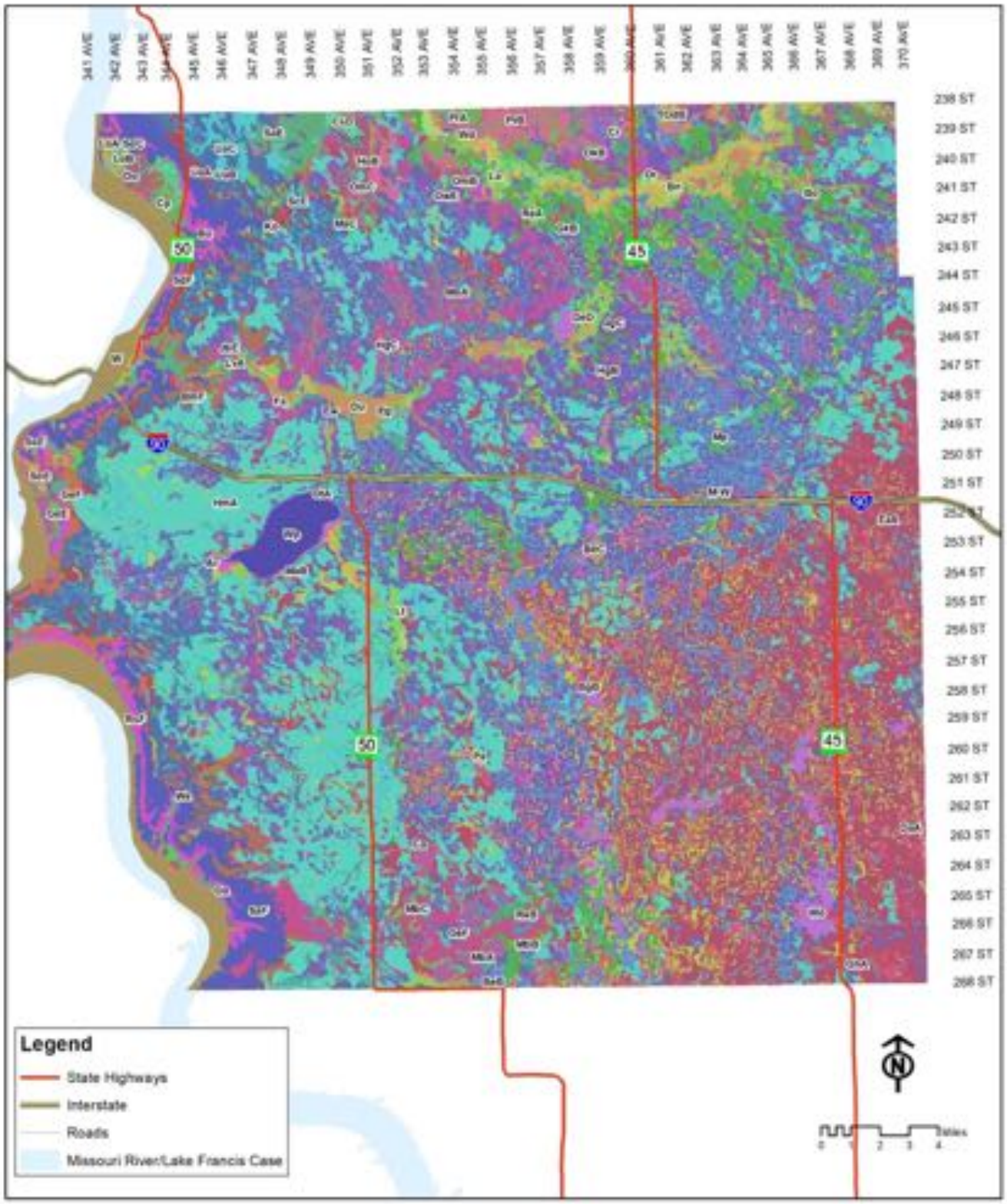
Soil Type	Slope (%)	Corn Suitability (Bu/Ac)	Dwellings (No Basements)	Dwellings (Basements)	Commercial Buildings	Roads and Streets
Oahe	0-6	30	Slight	Slight	Slight	Slight
Lowry	0-6	43	Slight	Slight	Slight	Moderate
Uly	0-9	48	Slight	Slight	Slight	Severe: LS
Highmore	0-9	35-56	Moderate: S/S	Moderate: S/S	Moderate: S/S	Severe: LS
Java	2-25	27	Moderate: S/S	Moderate: S/S	Severe: S	Severe: LS
Eakin	0-3	38	Moderate: S/S	Moderate: S/S	Moderate: S/S	Severe: LS
Beadle	1-9	33-38	Severe: S/S	Moderate: S/S	Severe: S/S	Severe: LS
Glenham	0-9	39	Moderate: S/S	Moderate: S/S	Moderate: S/S	Severe: LS
Durrstein	<1	N/A	Severe: F,S/S,W	Severe: F,S/S,W	Severe: F,S/S,W	Severe: F,LS,W
Betts	9-40	N/A	Severe: S	Severe: S	Severe: S	Severe: LS,S
Sansarc	6-40	N/A	Severe: S,S/S	Severe: S,S/S	Severe: S,S/S	Severe: S,S/S,LS
Okaton	15-40	N/A	Severe: S	Severe: DR,S	Severe: S	Severe: LS,S
Opal	1-25	24-25	Severe: S/S	Severe: S/S	Severe: S/S	Severe: S/S,LS
Promise	0-6	31-33	Severe: S/S	Severe: S/S	Severe: S/S	Severe: S/S, LS

Note: S/S = Shrink Swell, F = Flooding, S = Slope, LS = Low Strength, W = Wetness, DR = Depth to Rock, N/A=Not Applicable
Source: USDA-SCS Soil Survey of Brule County South Dakota

Shrink/swell potential is the potential for volume change in a soil with a loss or gain in moisture. If the shrink/swell potential is rated moderate to very high, shrinking and swelling can cause damage to buildings, roads, and other structures. Special design is often needed. Severe shrink/swell means the soil properties are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance is required. Special feasibility studies may be required where the soil limitations are severe.

Some soil types should be closely studied prior to building homes and other occupied structures. An area with a high water table or poorly drained soil will not adequately support a septic tank. A high water table will allow unfiltered septic tank effluent to contaminate the local ground water. The specific soil type in the development area should be evaluated before development is allowed. Building on inappropriate soils may result in environmental damage and additional public and private expense.

FIGURE 4
Brule County Soils

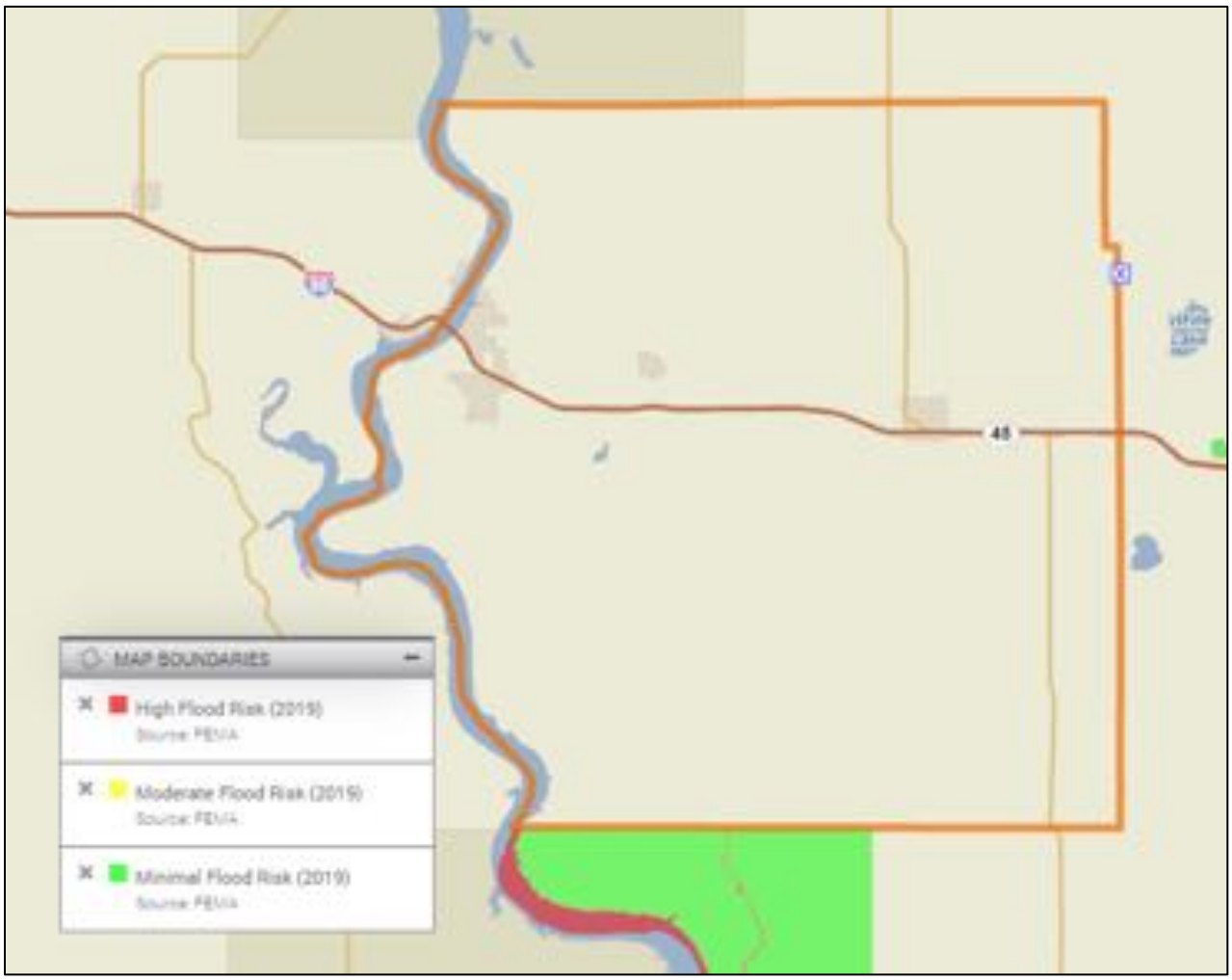


Besides soil properties, other environmental issues such as flood hazards and topography should be considered when determining new areas for development. **Figure 5** illustrates the risk areas for potential flooding. Flood risk is based upon Federal Emergency Management Agency data and includes four zones or classifications:

Zone A:	The approximate 100-year flood zone
Zone AE:	The detailed 100-year flood zone
Zone ANI:	Are area not included
Zone X500:	The 500-year flood zone

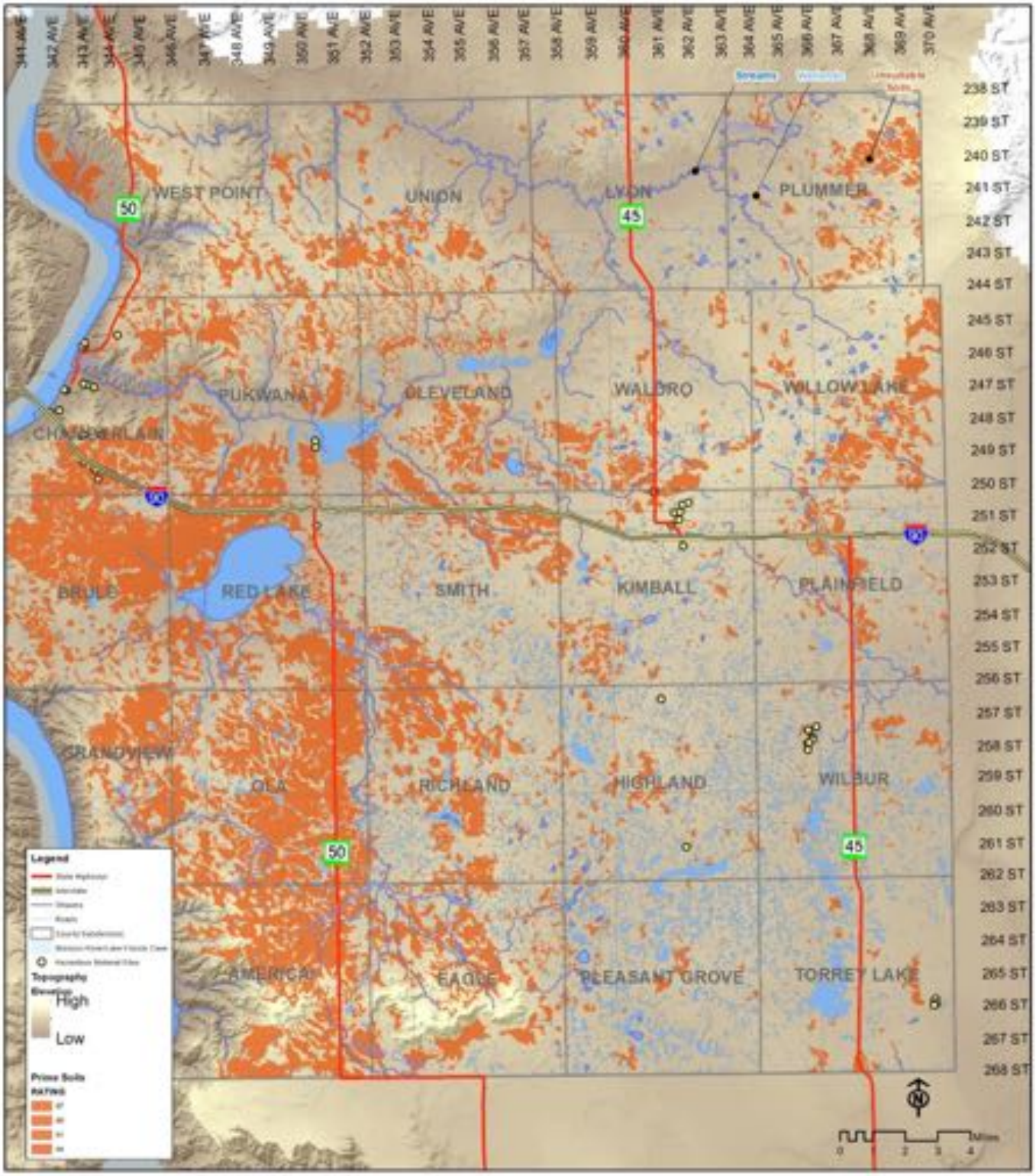
Figure 5 shows that there are no areas of minimal to high flood risk within Brule County. However, areas exist immediately south of Brule County in the northern section of Charles Mix County.

FIGURE 5
Flood Hazard Risks



The wetland data is based upon the United States Fish and Wildlife Service National Wetlands' Inventory. Brule County terrain includes slopes from each of the identified ranges. Slope data is based upon the vertical rise in relation to the run or horizontal distance. A 10% slope is equal to a 10 foot rise in elevation in a distance of 100 feet. **Figure 6** illustrates the various environmental constraints in Brule County including wetlands, flood plains prime farm soils and slopes.

FIGURE 6
Environmental Constraints



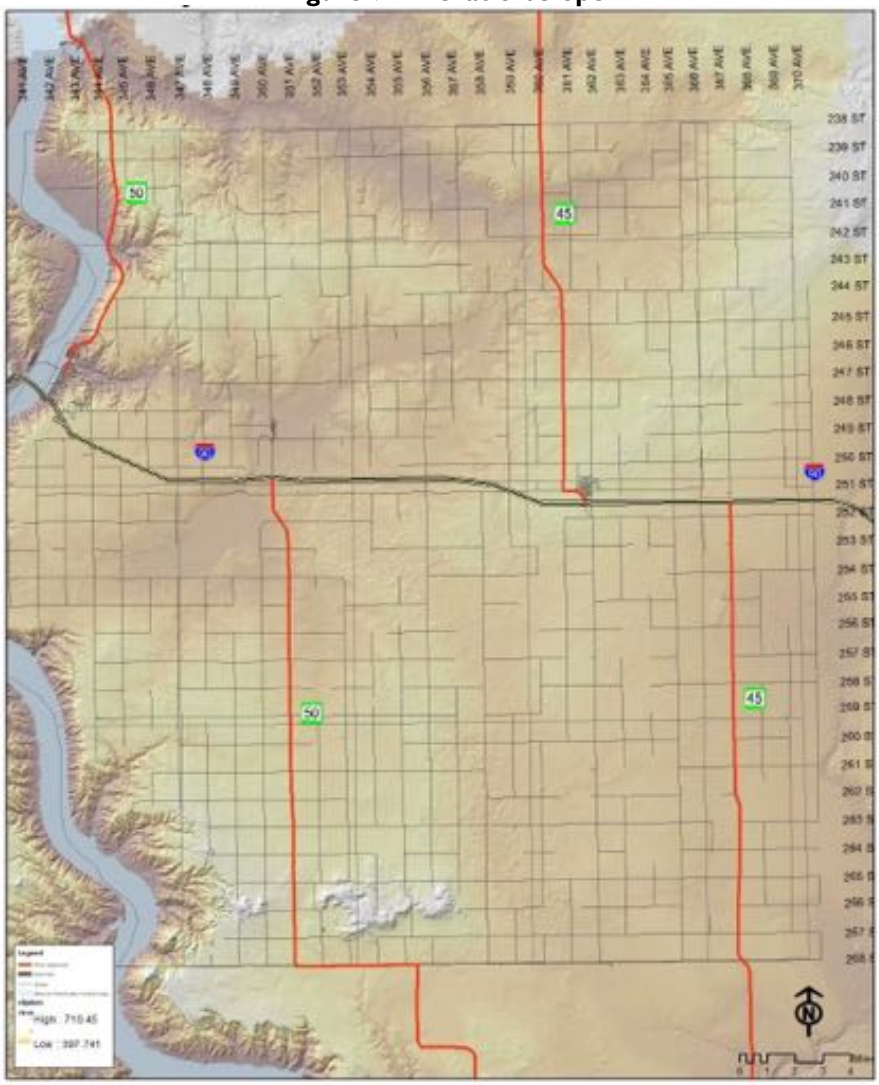
SLOPE CATEGORIES

The slope of an area or location may dictate which type of activities or development can reasonably be expected to "perform" well. Planning the Built Environment by Larz T. Anderson provides guidelines for developing upon the variety of slopes identified within **Figure 7**.

Under ½% Slope:

Almost no land uses are feasible because of the problems associated with surface drainage of rain. Some exceptions would include: rice paddies, flooded orchards, and flood control basins.

Figure 7 – Elevation/Slope



½ to 1% Slope:

Conducive to large-scale, linear industrial production uses and for recreation uses such as picnics and informal, small-group field sports. Generally not conducive for commerce, residences, roads, and airports due to drainage problems. Can be dangerous due to standing water, fog, and ice.

1 to 3% Slope:

Generally good and favorable for all types of development due to good drainage, easy slopes and easy truck and auto access. May need a 2% minimum grade in areas where ground frost is probable.

3 to 5% Slope:

Small-scale industry and commerce, trucking access becomes difficult and parking areas must be terraced. Roads, airports, and railroads must run parallel or diagonal to the contours. Suitable for playgrounds, playfields, picnic areas, informal field sports, camping, golf courses, nature trails, hiking areas, and general farming practices.

5 to 10% Slope:

Industry and Commerce: Intensive, small-scale industry and commerce possible with truck access becoming difficult and expensive over 7%.

Residential: Detached, single-family, townhouses, and multifamily residences are all feasible, but parking lots must be terraced, or parking garages provided.

Roads: Truck and high-speed roads must run parallel with or diagonal to the contours. Road routing is dictated by the terrain in areas over 8%, and can create access problems due to cutting and filling of the roadway.

Airports: Usually economically impractical, unless there is a long ridge top that parallels the prevailing wind direction, and can be leveled without excessive expense.

Railroads: Must run virtually parallel with the contours, but even then creates serious embankment problems and high costs.

Recreation: Suitable for golf course, picnicking, camping, and hiking. Large level fields may be expensive to construct and environmentally damaging.

Agriculture: General farming but care must be taken for erosion control.

10 to 15% Slope:

Industry: Economically impractical.

Commerce: Economically impractical, except for unusual, specialized shopping areas to serve "planned unit developments." Parking areas must be terraced or in structures.

Residential: Hillside subdivision for single-family homes which take special design if terrain is not graded to form building pads. Townhouse construction is economically impractical. Apartment construction is often feasible, especially when a "cluster design" is utilized.

Roads: Any road design takes special care in this terrain. All types of roads can be constructed, but at greater economic and ecological cost.

Railroads: Same as in category 5 to 10%, more severe problems.

Airports: Economically impractical.

Recreation: Suitable for hiking, camping, and picnicking but sports which require level playing fields are economically impractical. Golf courses are unplayable.

Agriculture: Pastures and forests are most appropriate. Cultivation should be avoided due to erosion problems.

15 to 30% Slope:

Industry: Economically impractical.

Commerce: Economically impractical.

Residential: Single-family home subdivisions are possible with special care in the design of access roads and location of septic tanks. Townhouse construction is usually economically impractical, and apartments are possible on special sites only if access roads, parking areas, water, and sewer is carefully planned (usually expensive).

Roads: Similar to the 10 to 15% slope, except problems with cutting and filling are more extreme. May be so extensive that it would be damaging to the local ecology.

Recreation: Trails and camping only. No uses which require a level playing field or concentration of people are possible.

Agriculture: Pasture, forest, and vineyards that do not involve substantial grading are suitable.

Over 30%:

Urban uses: All urban uses which require the construction of roads and the provision of utilities are both prohibitively expensive and extremely damaging to the terrain. As a general rule, land with a slope over 30% should not be disturbed. If it is determined that development is necessary, the project must be planned with extreme care.

Recreation: Trails are suitable, but too steep for camping.

Agriculture: Uncultivated pastures and forests.

CLIMATE

Climate conditions can affect local development in a variety of ways. The amount of insulation required for houses and buildings is affected by temperature extremes. The amount of rainfall dictates the size of drainage pipes and culverts needed to prevent flooding. Prevailing wind patterns should be taken into consideration when developing industry that may emit smoke and/or odors. **Table 3** presents the average temperature and precipitation for Brule County.

TABLE 3
Temperatures and Precipitation

	Avg. Monthly Temp. (in degrees)						Total Precipitation (in inches)		
	1987		1997		2007		1987	1997	2007
	Max	Min	Max	Min	Max	Min			
January	37	15	20	1	30	10	0.37	0.81	0.15
February	44	23	33	15	25	6	1.33	1.00	0.96
March	43	24	47	22	54	29	4.95	0.20	2.49
April	66	36	54	30	56	32	1.23	2.86	2.56
May	77	50	66	42	76	49	1.96	3.54	5.61
June	87	56	81	57	81	58	3.51	3.95	4.09
July	92	62	85	62	92	63	3.73	3.10	0.24
August	82	57	83	59	85	60	3.52	2.58	8.87
September	77	48	79	51	80	51	1.15	1.62	1.59
October	60	33	66	38	65	39	0.57	3.57	5.43
November	48	29	44	21	50	25	1.23	0.23	0.02
December	36	18	39	21	32	11	0.80	0.12	0.59
Annual Average	62.4	37.6	58.1	34.9	60.5	36.1	2.03	1.97	2.72

Sources: SD Climate and Weather Information Website, SDSU (http://climate.sdstate.edu/climate_site/archivedata.htm)

When reviewing climatic data, historical trends need to be reviewed to offer the broadest perspective and identify the cyclical weather patterns faced by an area's population. Brule County experiences a wide range in temperatures from summer to winter and in daily maximum and minimum temperatures during most of the year. Temperatures on some occasions rise to more than 100 degrees in summer and fall to minus 21 degrees or lower in winter.

The level of precipitation and weather patterns a region receives impacts the local economy, infrastructure development, and demographic. The growing season is best explained as a period between April and September and is further defined by the dates of "killing" freezes. This season within Brule County is limited by the last spring freeze which generally occurs before April 25th and the first fall freeze that usually occurs after October 12th.

The importance of reviewing historical trends versus a snap shot or single year becomes evident in presenting annual growing season precipitation in Brule County. In 2001 the County received between 18.0 and 20.9 inches of precipitation. A historical analysis of the same months over a twenty nine year period (1961-1990) found that the County received between 17.0 and 18.9 inches.

Wind direction and intensity can vary within short distances as a result of terrain, vegetation, and buildings. Wind speed and direction can also change greatly during the day and shifts with the seasons of the year. Mean values for wind direction show the prevailing winds to be from the northwest in winter (November through April) and from the south in summer (May through October).

PLANNING CONSIDERATIONS

County Planning Challenges

The following environmental related challenges are expected to be encountered by Brule County over the next 10 years:

- ✓ Development pressures in areas with environmental limitations such as steep slopes, poor drainage, and flood hazard potential; and
- ✓ A continued emphasis on "water oriented" development (views or access) which could present conflicts with recreational or agricultural land uses.

Policy Recommendations

In addressing the challenges, the Brule County Commission should consider the following recommendations.

1) Development should be discouraged from areas having obvious environmental limitations;
2) State and federal agencies should be utilized for their expertise in protecting environmental resources whenever a development proposal has the potential for conflict; and
3) County environmental assets should be clearly identified and monitored to better inform the public and developers about sensitive areas.

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CHAPTER III
COMMUNITY FACILITIES

LOCAL GOVERNMENT

Brule County utilizes the customary form of government as provided for in South Dakota Codified Law (SDCL) Title 7. These state statutes describe the election process and requirements for all elected county officials. Brule County has a five member commission with all members elected. The county instituted a process where three commission seats are elected in the same year as the Governor of South Dakota with the remaining two seats filled at the time of the United States presidential election.

Brule County's land area of 837 square miles. The geographic size of an area does not necessarily dictate the variety, number, or type of further subdivisions. As of August 2018, there were 23entities with taxing authority within Brule County **(Tables 4A-4C)**.

TABLE 4A: Municipal Property Tax, 2018

Municipality	Total Valuation	City Levy	County Levy	School Total AG	School Total OO	School Total OTH	Total Tax Rate AG	Total Tax Rate OO	Total Tax Rate OTH	Grand Total
Chamberlain	130,287,132	7.406	2.465	5.449	7.314	10.92	15.32	17.185	20.791	$2,460,113.81
Kimball	27,057,165	6.806	2.278	3.486	5.351	8.957	12.57	14.435	18.041	$422,711.33
Pukwana	8,176,536	6.235	2.231	5.449	7.314	10.92	13.915	15.78	19.386	$137,004.23

Source: South Dakota Department of Revenue

Table 4B Township Levies, 2018

Name	Value	Levy	Annual Revenues
America Township *	$33,721,588	0.129	$4,350.07
Brule Township *	$49,115,022	0.311	$15,274.54
Chamberlain Township	$31,124,171	0.500	15,562.12
Cleveland Township *	$39,293,251		
Eagle Township *	$35,828,991	0.120	$4,299.55
GrandviewTownship *	$14,926,635		
Highland Township *	$40,161,685	0.012	$481.97
Kimball Township *	$36,835,955		
LyonTownship *	$30,936,231	0.036	$1,113.74
Ola Township *	$45,165,685	0.100	$4,516.52
Plainfield Township *	$39,442,685	0.145	$5,718.64
Pleasant Grove Township *	$37,934,174	0.185	$7,017.84
Plummer Township *	$31,131,931		
Pukwana Township *	$40,524,575		
Red Lake Township *	$35,521,162	0.250	$8,880.29
Richland Township *	$40,976,416	0.073	$2,991.37
Smith Township *	$40,370,111		
Torrey Lake Township	$43,550,814	0.095	$4,137.39
Union Township	$34,711,273	0.043	$1,492.51
Waldro Township*	$37,676,448		
WestpointTownship	$35,839,458		
Wilbur Township *	$44,049,617		
Willow Lake Township	$41,867,446		

Source: South Dakota Department of Revenue

Table 4B School District Taxes, 2018

School District	AG VALUE	OWNER OCCUPIED VALUE	OTHER NON-AG VALUE	CENTRALLY ASSESSED VALUE	AG LEVY	OO LEVY	OTH LEVY	TOTAL SCHOOL TAXES
CHAMBERLAIN	$267,239,857	$113,581,712	$74,493,081	$2,190,819	5.449	7.314	10.920	$3,124,314.81
KIMBALL	$438,371,517	$33,163,000	$19,294,737	$700,386	3.486	5.351	8.957	$1,884,714.64
PLATTE - GEDDES	$61,385,327	$3,795,349	$905,209	$0	5.142	7.007	10.613	$351,844.35
WESSINGTON SPRINGS	$729,530	$0	$0	$0	3.709	5.574	9.180	$2,705.83
WHITE LAKE	$9,711,516	$454,899	$196,886	$11,868	5.535	8.055	12.926	$60,115.81

Source: South Dakota Department of Revenue

Table 4-C County Summary, 2018

DESCRIPTION	VALUATION	AMOUNT OF TAX
AG PROPERTY - OUTSIDE CORP. LIMITS	$763,612,869	$5,335,658.58
OWNER-OCCUPIED - OUTSIDE CORP. LIMITS	$60,808,830	$581,727.34
MANUF. HOMES - W/O CORP. LIMITS	$676,620	$8,815.10
MANUF. HOMES - W/O CORP. LIMITS - OWN. OCC	$3,041,808	$28,742.76
OTHER PROPERTY - OUTSIDE CORP. LIMITS	$41,818,368	$367,128.56
AG PROPERTY - W/I CORP. LIMITS	$2,982,226	$40,083.02
OWNER-OCCUPIED - W/I CORP. LIMITS	$86,876,037	$1,469,993.34
MANUF. HOME - W/I CORP. LIMITS	$922,873	$18,680.68
MANUF. HOMES - W/I CORP. LIMITS - OWN. OCC	$1,796,929	$29,778.72
OTHER PROPERTY - W/I CORP. LIMITS	$76,221,324	$1,724,268.87
TOTAL REAL PROPERTY	**$1,038,757,884**	**$9,604,876.97**
DESCRIPTION	**VALUATION**	**AMOUNT OF TAX**
RAILROAD	$0	$0.00
ELECTRIC, LIGHT, GAS, WATER, ETC.	$3,005,554	$57,411.00
TELEPHONE - W/I CORP. LIMITS	$1,253	$24.42
TELEPHONE - W/O CORP. LIMITS	$2,211	$16.08
SPECIAL ASSESSMENTS		$6,354.23
TOTAL REAL PROPERTY PLUS UTILITIES	**$1,041,764,691**	**$9,662,312.39**
TOTAL TAXES IN COUNTY		**$9,668,682.70**

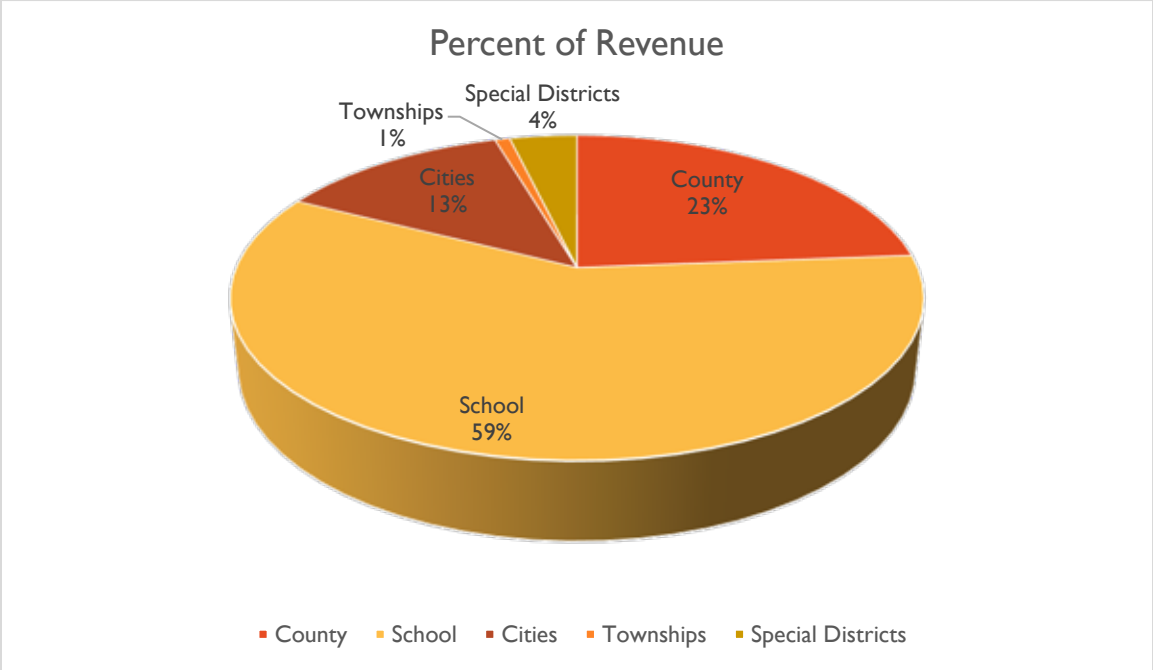
Source: South Dakota Department of Revenue

DESCRIPTION	VALUATION	LEVY	AMOUNT OF TAX
COUNTY GENERAL	$1,027,263,391	1.890	$1,941,535.47
LIBRARY	$0	0.000	$0.00
SNOW REMOVAL		0.000	$0.00
ROAD AND BRIDGE RESERVE		0.305	$300,420.71
COURTHOUSE		0.000	$0.00
AG BUILDING		0.000	$0.00
HOSPITAL		0.000	$0.00
BONDS		0.000	$0.00
SUBTOTAL	$1,027,263,391	2.195	**$2,241,956.18**
DESCRIPTION	**VALUATION**	**LEVY**	**AMOUNT OF TAX**
SECONDARY ROAD	$0	0.000	$0.00
FIREFIGHTING	$1,027,263,391	0.053	$54,329.68
RAILROAD AUTHORITY			
AIRPORT AUTHORITY			
TELEPHONE - WITHOUT CORP. LIMITS	$2,211	7.271	$16.08
TOTAL TAXES - COUNTY PURPOSE			**$2,296,301.94**
OTHER ENTITIES			
WATER DISTRICTS	$1,027,263,391		$32,872.24
RURAL_FIRE	$43,114,918		$11,252.99
Ambulance			$125,463.53
TIF			$185,586.47
SPECIAL ASSESSMENTS			$6,354.23

Source: South Dakota Department of Revenue

Figure 8 illustrates the taxing entities in Brule County and their share of total revenue in the County. The figure shows the importance of school districts in terms of raising tax revenue.

Figure 8
Sources of Tax Revenue Generated in Brule County



TRANSPORTATION

The primary transportation element within Brule County is the road network. The network includes roads maintained by numerous entities including:

- State of South Dakota;
- Brule County;
- Organized Townships;
- Municipalities; and
- Private Individuals.

The County has received requests to have additional roads added to the governmental or public grid for maintenance. In addition to these requests, the County has also been asked to upgrade specific roads by widening and hard surfacing. A point of discussion revolves around the County's refusal to add any new roads to the county grid since 1989. This issue is further complicated by the significant increase in rural residences over the past 10-20 years and their impact on the existing system.

The issue of roads is complex and requires an understanding of basic terminology. One of the first steps in reviewing a road network is to break the system into subcategories. These groups identify the role of each road section and the impact upon the overall grid. For the purposes of this plan, an overview of the county's system will be undertaken by focusing on a rural system versus small or large urban systems and shall be further divided into four classifications:

- Rural Principal Arterial System - Provide corridor movement with trip length and density suitable for substantial statewide or interstate travel and will carry the majority of traffic movements between virtually all urban areas with populations over 50,000 and a large majority of those with populations over 25,000;

- Rural Minor Arterial System - Serve as a linkage of cities, larger towns, and other traffic generators such as major resort or recreation areas that are capable of attracting travel over similarly long distances;

- Rural Collector System - Serve as primary intra-county rather than statewide travel and constitute those routes on which predominant travel distances are shorter than on arterial routes; and

- Rural Local Road System - Primarily provides access to the collector network and serves travel over relatively short distances. All roads not meeting the criteria of the first three are placed in this category.

The existing road network and identification of jurisdictional ownership or responsibility is illustrated in **Figure 9**. The functional classification, as described above, of roads within the County is illustrated in **Figure 10.** A secondary township road includes roads within unorganized townships.

The Brule County Commission may consider establishing a committee to review the County's road network. The committee would work with the County Highway Department and County Commission to review the existing policies with regards to the county road network. The committee's efforts may also include facilitation of a "Traffic Needs Study".

The elements of a traffic needs study include the following data:

- Examination of the road system;
- Comparison of the existing system to an estimated future demand;
- Traffic counts;
- Traffic inventories;
- Trip generation models and calculations; and
- Preservation of road corridors.

A process of addressing and providing for a future road network may be completed in conjunction with a detailed traffic study or through establishment of road corridor preservation regulations within a zoning or subdivision ordinance. Road preservation corridors are generally sited on the full, one quarter (1/4) and one sixteenth (1/16) lines within township sections. Preserving these corridors protects the governmental body from inflated expenditures such as road realignments or utility relocation, condemnation of buildings, or purchase of lands. The road preservation language within an ordinance may prohibit development, construction, or other improvements on a sixty six (66) foot strip centered on these lines. There are areas within the County that may never see an additional road constructed due to geography, topography, and/or population density. Yet, the preservation of transportation corridors enables the County to review construction activities within these designated areas and consider the proposed project's potential impact upon the County and master road plan or comprehensive plan.

When preparing a road development, improvement, or maintenance plan one of the initial steps includes a review of the following data:

- Map of the Existing Road System;
- Identification of Ownership or Responsibility;
- Delineation of Functional Classification; and
- Average Daily Traffic Counts.

FIGURE 9
Road Base Layer with Jurisdictional Control

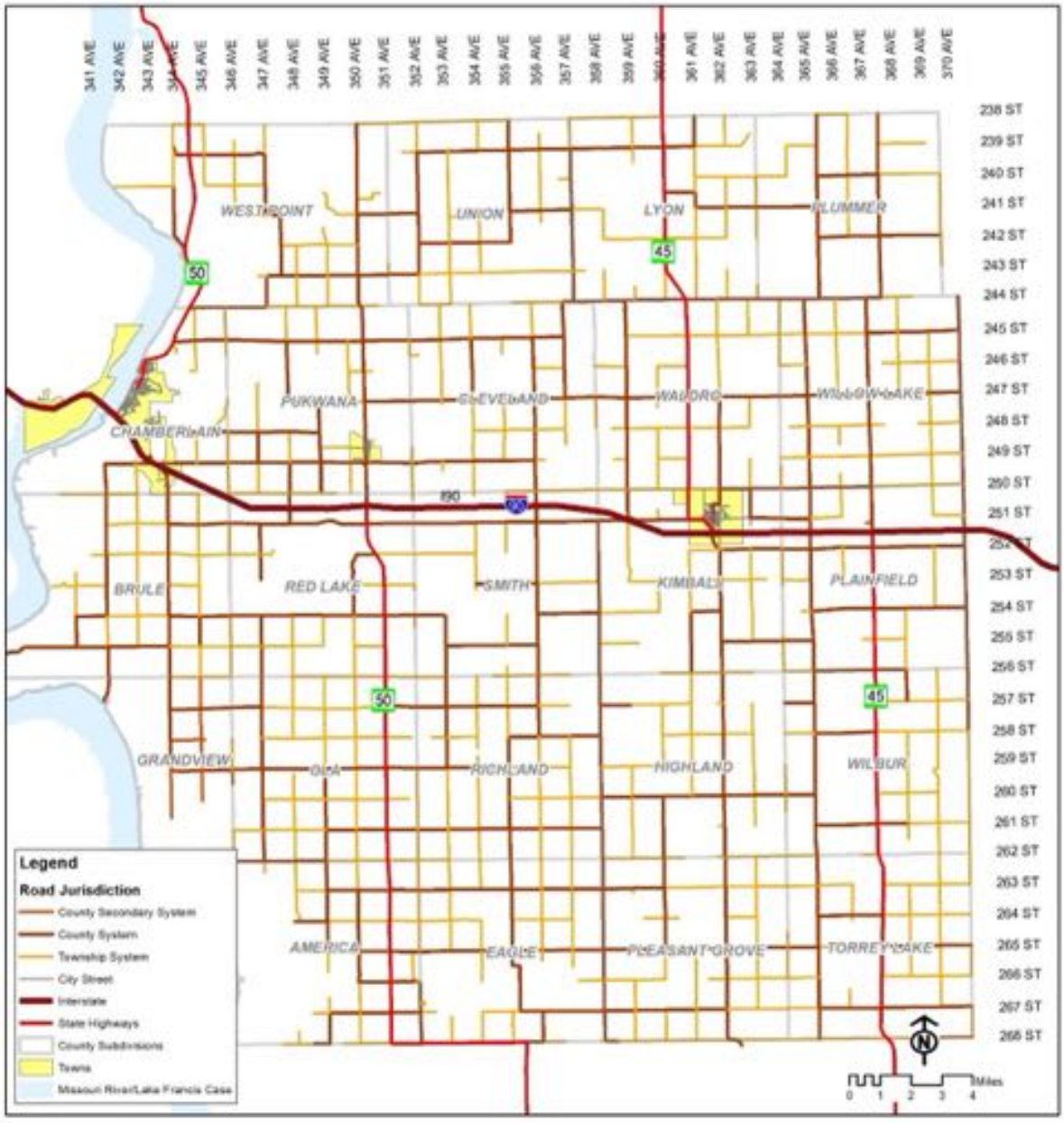


FIGURE 10
Functional Classification

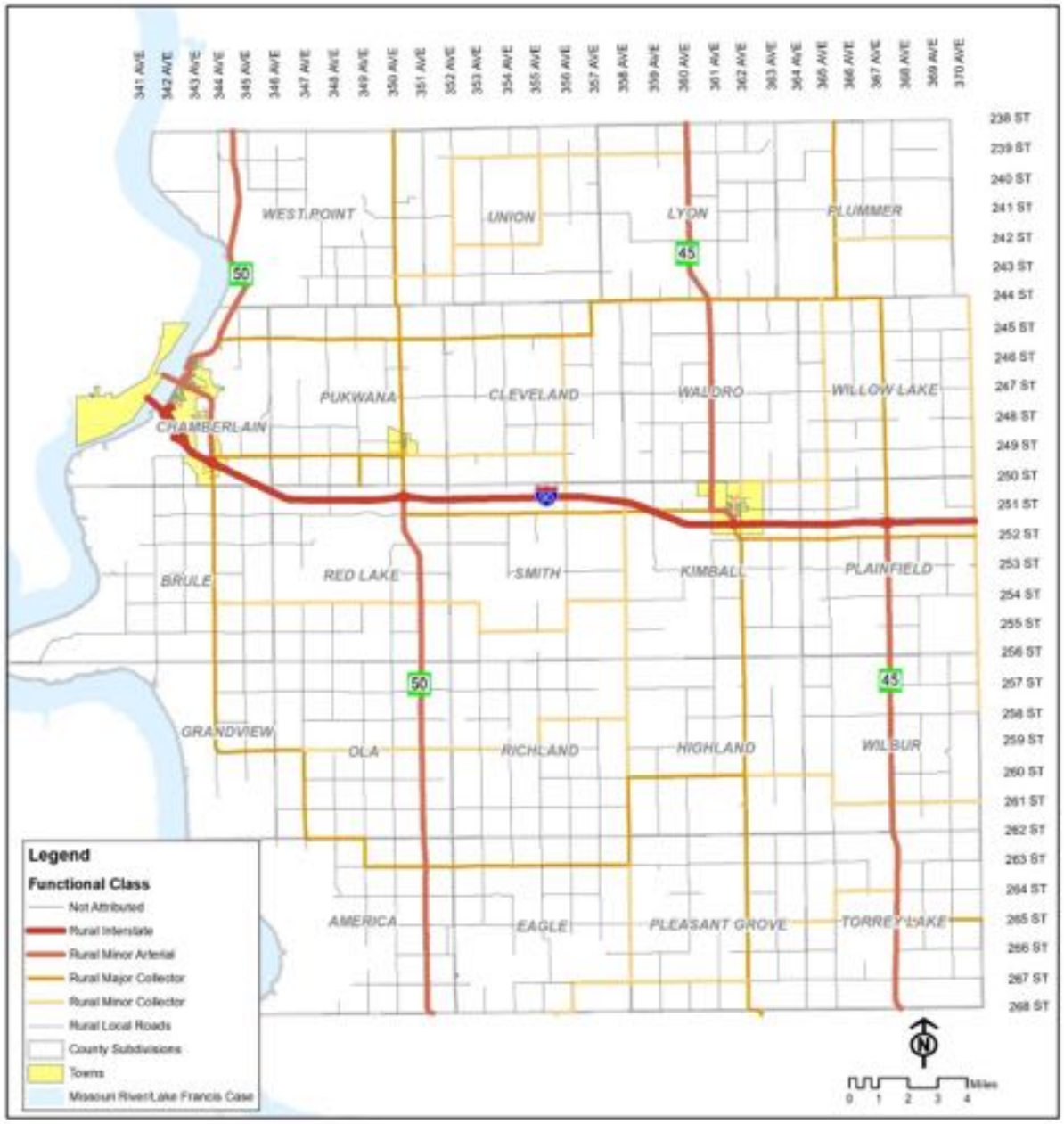
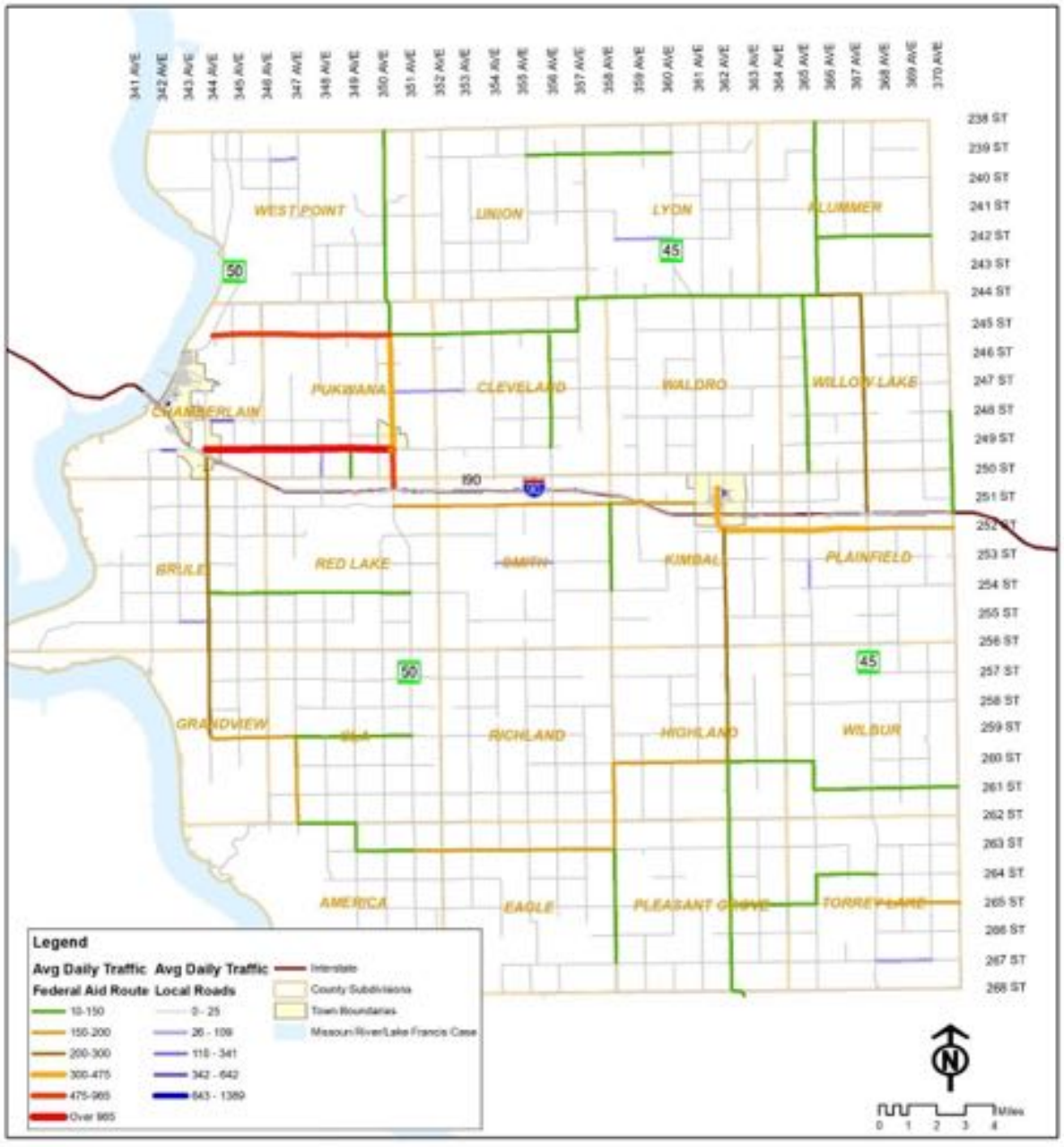


Figure 11
Average Daily Traffic



While these items may provide a starting place there are times or conditions when it may be necessary to further subdivide the four base items into more specific categories. Some of these subcategories may include:

- Road Surface Type: Dirt – Gravel – Asphalt – Concrete;
- Road Width: Driving Surface – Shoulders – Ditch;
- Road Condition: Smooth – Rough – Pot Holes;
- Service Area: Residential – Commercial – Agricultural; and
- Expected Traffic Flows: Trip Generation Modeling – Land Development Potential.

Illustration of the four base items is found within **Figures 9** and **11**. Most crashes that occur in Brule County happen along Interstate 90, as shown in **Figure 12. Table 5** shows that most of the crashes are caused by a collision with an animal.

Figure 12
Brule County Crash Locations: 2016-2020

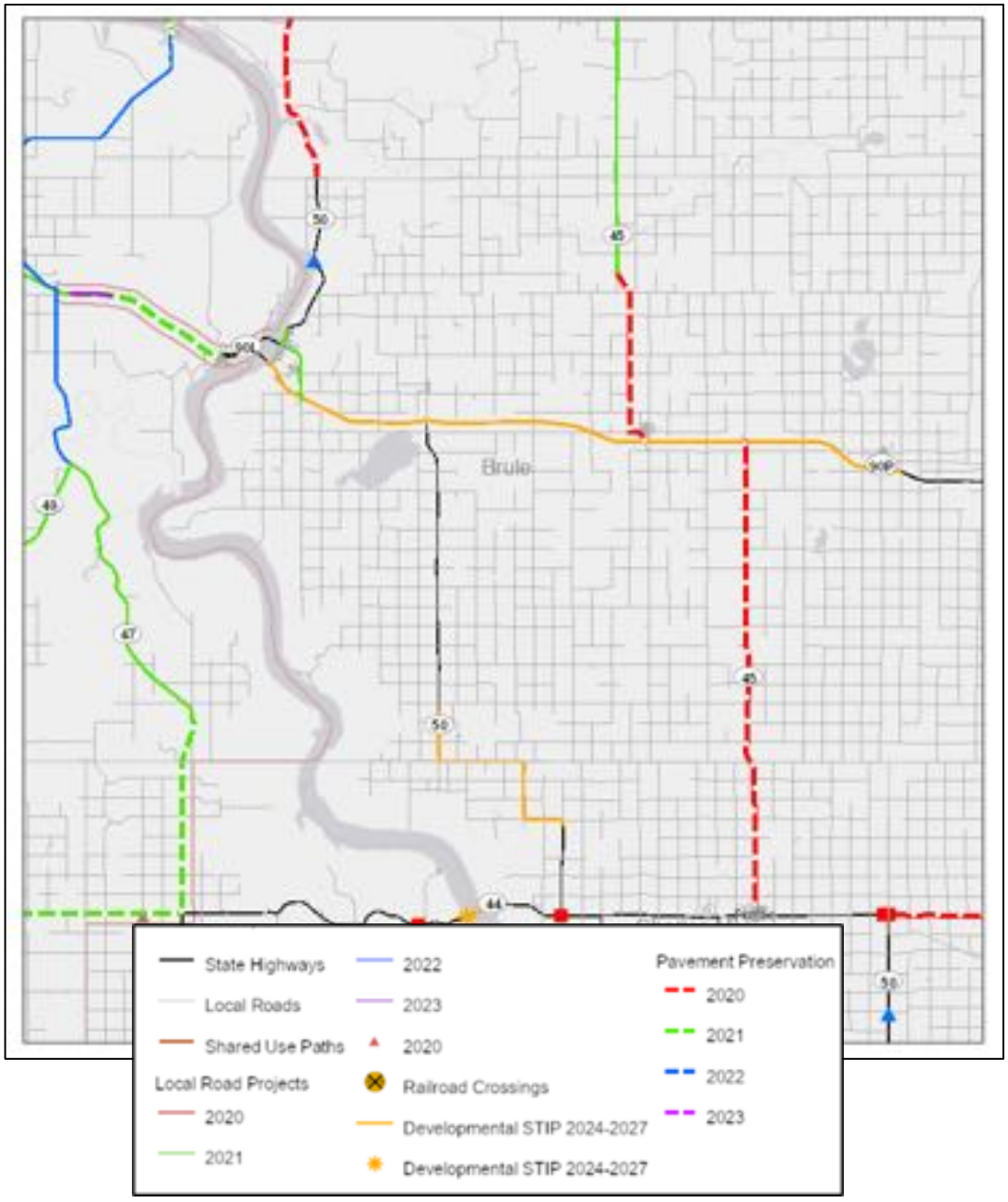
Table 5; Brule County Crash Data

Head-on	Rear	Sideswipe	Fatalities	Incapacitating	No Injuries	Animal Hit
4	18	13	1	25	168	163

Source: SD Dept of Transportation

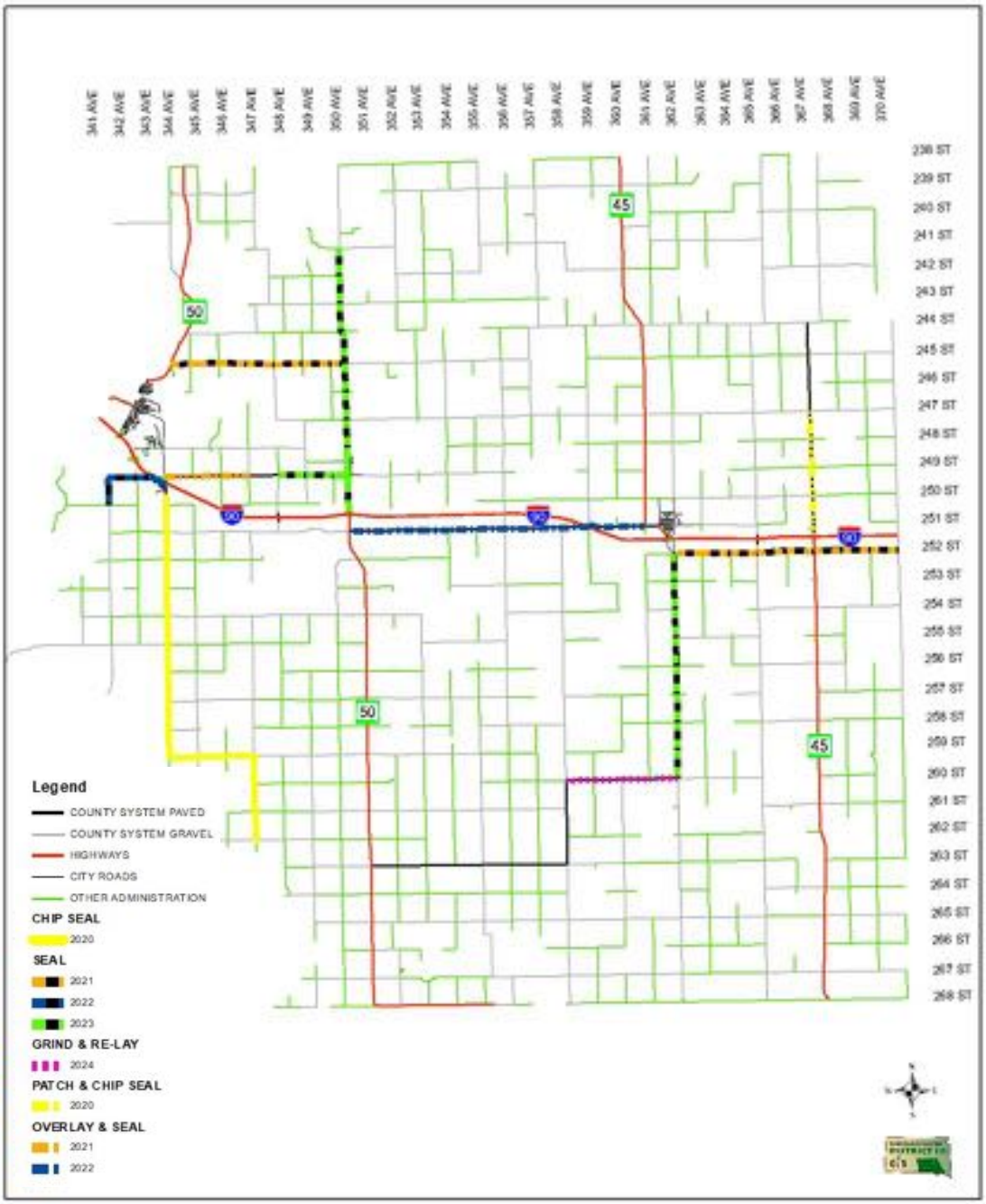
The South Dakota Department of Transportation drafts and presents an annual Statewide Transportation Improvement Program (STIP). The STIP identifies the proposed transportation improvements for the next five years. As stated earlier, the State drafts a five year plan, yet updates the document annually. An annual revision is needed to account for the frequent changes in priority and revenues. While the STIP examines air, rail, surface, and public transit, a county plan will usually focus on surface or road improvements. The County Highway Department's current road maintenance and improvement schedule will provide the foundation for developing a county long-range plan.

Figure 13
Statewide Transportation Improvement Plan Items for Brule County



Once completed, this document can be incorporated into the County's Master Road Plan. Any road plan will be further enhanced by the work on road corridor, 1/16th line preservation, as previously mentioned and possibly road construction standards. The County's Director of Equalization is currently utilizing a GIS system on which the DOT road layer and other information has been loaded for daily activities and future planning or policy decisions. All of these elements will provide the County with a detailed road database on which it will be able to develop policies. **Figure 14** highlights proposed road upgrades, improvements, and existing roadways of concern within the County.

FIGURE 14
Road Improvements and Areas of Concern



Bus Service:

Commercial intra or interstate bus service is currently available in Brule County via a stop in Oacoma. Jefferson Lines provides service seven days a week from their stop at Arby's Restaurant. Limited Specialized transportation needs addressed throughout the county by ROCS and Veteran's Services.

Air Service/Airport:

There are two public airports in Brule County. The Chamberlain airport is classified as a (A&B II 12,500 lbs< 100%) whereas the airstrip in Kimball is a secondary field with less than the minimum runway standards.

The South Dakota Department of Transportation Office of Aeronautics utilizes seven categories in classifying the public airports within the state with "Air Carrier" being the highest and "Secondary Less Than Minimum Runway Standards" the lowest. The classification of Chamberlain is broken out as follows:

- Aircraft with approach speeds less than 91 knots (A);
- Aircraft with approach speeds of 91 to 121 knots (B);
- Wingspan of up to but not including 79 feet (II);
- Aircraft of less than 12,500 pounds; and
- Facility can accommodate 100% of aircraft meeting the above criteria.

Airports in Aberdeen, Brookings, Huron, Mitchell, Pierre, Rapid City, Sioux Falls, Watertown, and Yankton are home to one of nine "Air Carrier" airports in South Dakota. In addition to the physical elements defining the airports within the State, there are economic factors. The airports in Aberdeen, Pierre, Rapid City, and Sioux Falls are eligible for direct federal assistance due to their annual usage. These airports enplane or pick-up a minimum of 10,000 passengers a year, which qualifies them for direct funding status. In fiscal year 2007, these airports received the following amount of federal funds:

- Aberdeen $1,000,000
- Pierre $1,000,000
- Rapid City $2,049,705
- Sioux Falls $2,937,580

Since the Chamberlain and Kimball Airports do not qualify for direct federal funding, they must compete with the remaining 64 public use airports within the State for financial assistance. In addition to the direct or entitlement funding, the federal government with some State assistance provides grants for up to 90% of the total project costs.

Rail Freight Service:

The State of South Dakota experienced a decrease of over 50% in "rail miles" during the late 1970's to early 1980's. A majority of factors are attributed to this significant decrease though the key influences were international embargos and an overall reduction in service areas by the major railroad companies. The period following saw the State of South Dakota invest in the rail infrastructure by purchasing lines and leasing the track rights to various rail companies. These actions assisted in reestablishing service to 1,848 of the original 4,420 track miles that were operational in the mid 1970's. As part of the State's investment, a rating or ranking system was established that identified lines as "Essential Core System" and "Local Option Lines". A core system line provides access from the larger grain production areas to the primary grain markets in the Pacific Northwest, Minneapolis, Duluth, and the Gulf of Mexico. A local option line was designated a feeder line thereby providing smaller terminals and markets access to the core lines and a larger marketplace.

There is a single rail line existing in Brule County which is not operational at the time of writing this document. The working line is designated a "Local Option" line owned by the State of South Dakota and leased to the Mitchell Rapid City (MRC) Regional Railroad Authority who in turn leases the operational rights to Dakota Southern Railroad. This is primarily an East-West line and follows the route described below:

- Rapid City - East through Creston – Scenic – Interior - Kadoka;
- Kadoka – East through Belvidere – Okaton - Murdo;
- Murdo – East through Draper – Vivian – Presho;
- Presho - East through Kennebec – Reliance – Oacoma - Chamberlain;
- Chamberlain – East through Pukwana – Kimball – White Lake - Plankinton; and
- Plankinton – East through Mount Vernon – Betts - Mitchell.

As stated earlier, the line is currently non-operational. There are ongoing discussions with regards to reopening the rail line between Murdo or Presho and Mitchell as sections of line lying between these two western communities and Rapid City have been abandoned.

WATER SUPPLY

While the municipality of Chamberlain operates a fully developed water treatment and distribution systems, residents of Pukwana and Kimball as well as rural residents must rely on the Aurora Brule Rural Water System or individual wells. The availability of a central water source is an essential development element. The ABRWS system is in the process of replacing its raw water intake to increase its stability and pumping capabilities. **Figure 15** identifies the ABRWS mains existing within Brule County and range from 1 1/2" to 24" in size. As of today, there are rural taps available within the county, dependent on location. Property adjacent to or in close proximity of a municipality may be able to obtain city service. While there is available capacity within the City of Chamberlain's system, there are no formal plans to expand service to properties outside the City's corporate limits.

SANITARY SEWER

There is very little central sanitary sewer service in the county, other than those systems within communities. The remainder of the County consists of farmsteads, small commercial properties, and rural residential homes of varying types and sizes. This type of scattered development does not make a central sewer system cost effective thus the reliance on septic systems. The impact of these systems upon neighboring properties, environment, and water quality is unknown. The issue is not the number of systems but rather the concentration of many systems within certain areas of the County.

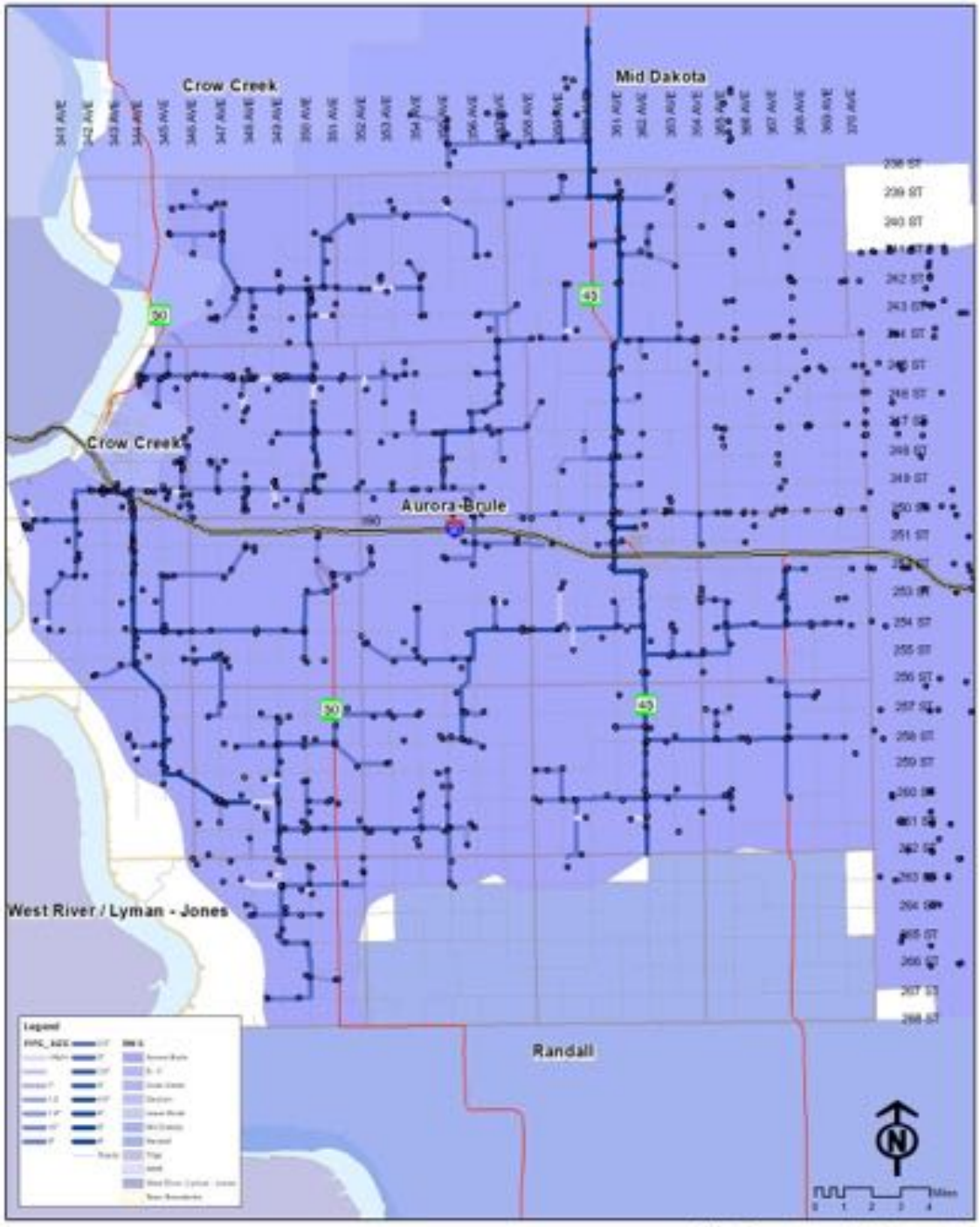
SOLID WASTE

Brule County and its respective communities became subject to federal solid waste regulations, under Subtitle D of the Resource Conservation and Recovery Act (P.L. 94-580) as amended on January 1, 1992. These regulations required the closure of "dumps". As a result of "Subtitle D" and the accompanying environmental protection language, the dump or landfill business became extremely regulated and much more costly to operate. In response to these regulations, a joint powers agreement to operate a solid waste disposal facility near Pukwana was drafted with Aurora, Brule, Buffalo, Jerauld, Jones, Lyman, and Tripp Counties and their respective municipalities as well as the Crow Creek and Lower Brule Sioux Tribes.

The new facility was designed to comply with the provisions of the federal law. As part of this new agreement, the communities within Brule and the other member counties closed their individual dumps and began transporting their solid waste to the "Tri-County facility". The facility currently receives an average of 14,000 tons of municipal solid waste a year and has an estimated life expectancy of 40 years remaining within the current property. There is a verbal commitment for another 120 acres which will extend the life span by 150 years at current tonnage estimates.

The City of Kimball operates a Restricted Use Site located ¼ mile east of town. The site can receive Construction and demolition debris, Trees and untreated wood, White goods/metals, Waste tires, Miscellaneous wastes, Ash, and yard wastes

FIGURE 15
Water Supply Lines



Water Systems and Infrastructure

Recycling Facilities

Lakeview Sinclair in Chamberlain takes used oil (used oil from private individuals only). PC Salvage north of Pukwana takes automobiles, farm iron/machinery tin, appliances (drained of freon), aluminum, copper, brass, lead acid batteries, e-scrap, and catalytic converters.

As of September 2009, the South Dakota Department of Environment and Natural Resources has issued two permits for "solid waste" or "restricted use" sites within the County which include one single use and one multiple use permit. These permits include the Tri County Landfill facility near the City of Pukwana and a Restricted Use Site near the City of Kimball. The Kimball facility is permitted to accept construction and demolition material for disposal, compost yard waste, tree branches, and metal for recycling.

At the onset of the Subtitle D regulations, there was a strong emphasis placed on reducing the waste stream through recycling. Few markets for recyclables have proven to be stable or profitable. The initial demand for developing comprehensive recycling efforts or reduction in waste volume was mandated by the South Dakota Legislature and included the following requirements:

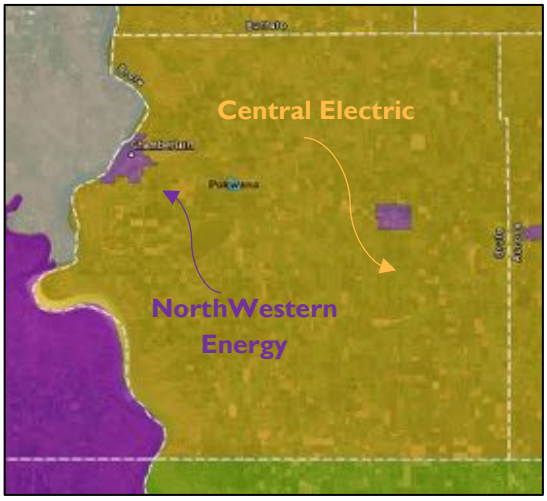
- Beginning on January 1, 1995, all yard wastes shall be eliminated from landfill wastes;
- Beginning July 1, 1995, all lead acid batteries and waste motor oil shall be eliminated from landfill wastes;
- Beginning on January 1, 1996, all white good appliances shall be eliminated from landfill wastes;
- Beginning on July 1, 1996, all office and computer paper shall be eliminated from landfill wastes;
- Beginning on January 1, 1997, all printed paper products, corrugated paper or other cardboard paper shall be eliminated from landfill wastes; and
- Beginning on July 1, 1997, all containers made from glass, plastic, aluminum or steel shall be eliminated from landfill wastes.

By the time the above reduction goals were suspended during the 1998 Legislative Session, most communities within the State had opted out of the requirements, due to the high expense ratio of recycling to landfilling. The 1999 Legislature repealed all recycling mandates. Even though these were repealed, certain provisions have remained in effect for Brule County residents such as the bans on yard waste, lead acid batteries, waste oil, and white goods from the waste stream.

ELECTRICAL SERVICE

Northwestern Energy provides electrical service to the Cities of Chamberlain and Kimball. Pukwana operates a municipal electric system. The majority of the County's rural population or those properties outside of the municipalities are provided electrical power by Central Electric Cooperative. Central Electric Cooperative, Inc. is a Touchstone Energy Cooperative and provides electric power to over 4,800 farm, residential and commercial consumer-members in southeastern South Dakota including Aurora, Brule, Buffalo, Davison, Hanson, Jerauld, Miner and Sanborn counties. **Figure 16** shows the service areas of electric service providers in Brule County.

FIGURE 16
Electric Service Providers



Brule County lies immediately south of a hydropower facility at Big Bend Dam; the electricity generated by the dam is "owned" by the Western Area Power Administration (WAPA) and marketed to member organizations or companies for distribution throughout the central and western United States power grid. In addition to hydropower, alternative energy proposals such as wind energy systems have taken hold in Brule County with a small facility north of Chamberlain and other developments are in discussion.

Energy and Power Generation

Renewable resources supply about seven-tenths of the electricity generated in South Dakota, almost all of it from hydroelectric power and wind energy. More generation comes from hydroelectric power than from any other source. In 2019, hydroelectric power provided two-thirds of the state's electricity net generation from renewable resources. South Dakota also has some of the best onshore wind resources in the nation, and it ranks among the top five states in the share of its in-state electricity generation provided by wind. In 2019, South Dakota had more than 800 wind turbines statewide at 19 active wind farms with a combined total of more than 1,500 megawatts of installed generating capacity. Several additional areas of the state are being considered for further wind energy development

South Dakota has other renewable energy resources including geothermal energy, solar energy, and biomass. Geothermal energy has been used in direct heat applications for district heating, geothermal heat pumps, and for heating spas, swimming pools, residences, barns, and other buildings. South Dakota also has abundant biomass resources from forest waste and from agricultural activities. However, there is no utility-scale electricity generation from geothermal energy or biomass in the state. South Dakota does have two wood pellet manufacturing plants that have a combined production capacity of 76 tons per year. Wood pellets can be used for electricity generation and space heating. Moderate solar PV potential exists across most of South Dakota, with the greatest solar potential in the state's southwestern corner. However, South Dakota has only small amounts of solar photovoltaic

(PV) electricity generation, much of it from small-scale, customer-sited installations, such as rooftop solar panels.

FIGURE 17
Electric Power Generation

In February 2008, South Dakota's legislature established a voluntary renewable portfolio objective. Renewable and recycled energy resources, and later energy conservation, were to provide 10% of all electricity retail sales by 2015. Many of the state's electricity providers met the goal, but other providers noted barriers that limited their ability to do so. Those barriers included lack of transmission capacity for renewable projects, intermittent supply, competition from natural gas, and physical locations away from transmission lines and markets. South Dakota does have state and utility policies, financial incentives, and technical resources that encourage energy efficiency and renewable electricity generation. The state also has interconnection standards, but no net metering rules, and interconnection costs are usually paid by the generating system owner.

The **PrairieWinds SD1 Wind Project**, located in Jerauld, Aurora and Brule counties, has 101, 1.5-MW turbines and has a generating capacity of 151.5 MW of wind energy. The project was developed by Basin Electric Power Cooperative and includes one turbine owned by Mitchell Technical Institute. The turbine is used in conjunction with MTI's Wind Turbine Technology Program. PrairieWinds SD1 began operation in February 2011 and the energy produced is also purchased by Basin Electric.

The **Brule Wind Farm**, located in Brule County, began operations in October of 2018. It has a total of nine turbines with a combined capacity of 20 MWs. Energy generated by the project, which is owned and operated by Consolidated Edison Development, is contracted to NorthWestern Energy.

TELECOMMUNICATION SYSTEMS

Midstate Communications, Inc. provides telecommunications service to both rural residents and those residing within the municipalities of the County. Midstate services are primarily local and are "hardwire" or landline (not wireless at this time). Long distance service is provided by numerous companies. The long distance market is an ever evolving market; therefore an attempt to identify all individual providers would be difficult.

In accordance with the Federal Communications Commission (FCC) regulations, there are only two cellular or digital service licensees or providers allowed per market. The immediate region including Brule County is served by Alltel and Verizon Wireless Communications. Service providers are currently in flux as the national market consolidates providers. The next generation of wireless communications is Personal Communication Systems or PCS. Prior to auctioning off the licenses for PCS service, the FCC established six licenses per market area. While there are no PCS service providers currently operating within the county, additional tower construction will be an ongoing issue as additional providers and services are introduced to the market place.

Midstate Communications and Qwest Communications offer high speed broadband and dial-up internet service.

MEDICAL SERVICES

Brule County residents have access to extensive health care options via the Sanford and Avera Medical networks. Each of these networks operates a clinic within Chamberlain. In addition to the local facilities comprehensive hospitals and more diverse medical communities to include hospitals along with the accompanying support facilities are located in Mitchell and Pierre. An attempt to compare the region's ease of access to extensive medical care to similarly sized counties or cities would be difficult, at best due to the current level of services available to the region's residents. The South Dakota Medical Facilities Report of 2007 data as published in February of 2008 details the current levels of medical service within the County. Personnel data was derived from each facility's web site. Data on both facilities and personnel are detailed below:

Hospitals:
Sanford Mid-Dakota Hospital (Critical Access Hospital) – 25 Beds

Clinics:
Sanford Clinic
Kimball Medical Clinic

Long-term Care Nursing Facilities:
Sanford Mid-Dakota Care Center – 44 Beds

Assisted Living Facilities:
Prairie View Assisted Living Center – 16 Beds
Regency Retirement Assisted Living – 36 Beds

Home Health Care Providers:
Sanford Visiting Nurses Association

The various health and longer term care providers identified above include what may be described as primary caregivers versus non-primary or secondary. The County is also home to dentists, chiropractors, physical and occupational therapists, optometrists, physician assistants, nurse practitioners, counselors, and various alternative medicine providers. These professionals are in addition to the pool of medical support staff employed within the County. The importance of medical care to the community and region extends beyond health care. Economic development and housing opportunities are linked to both the quality and variety of medical service. Business investment and retirement decisions are based, in part, on medical resources.

EMERGENCY SERVICES

Law Enforcement:

There are three local law enforcement agencies operating within the County; the Brule County Sheriff's Office and the Cities of Chamberlain and Kimball Police Departments. While the agencies do operate independent of each other, they cooperate in sharing resources such as dispatching, office space, and detention facilities. The Brule County Sheriff's Office fulfills law enforcement duties for the rural areas of the County and the Town of Pukwana.

Figure 18 – Law Enforcement

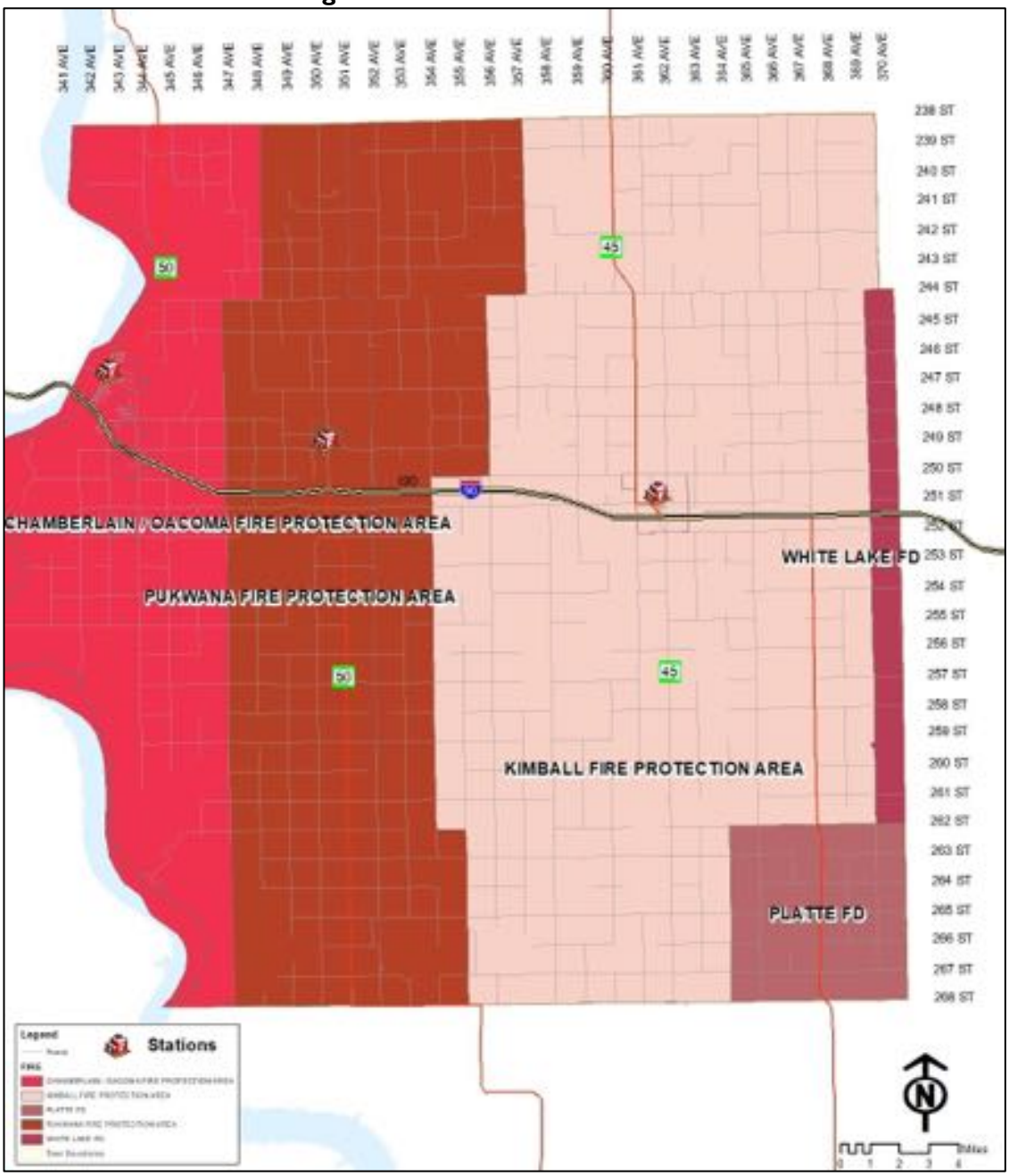
The Brule County Jail has four full time Correction Officers that oversee all inmates housed at the jail. The jail holds inmates for Brule, Buffalo, Lyman, Aurora, B.I.A. and other counties. Currently

neither the County nor City has the capability of housing juveniles for more than a short term basis and must transport any juvenile offenders needing longer term holding to an appropriate juvenile detention center. The County primarily utilizes the Juvenile Detention Center in Sioux Falls of which the County is a member or the Turning Point facility sponsored by the Volunteers of America.

Fire Protection:

Brule County is served by volunteer fire departments in Chamberlain, Pukwana and Kimball. Torrey Lake Township pays a tax to the Platte Fire District for fire response by the Platte Fire Department. A map illustrating fire protection areas is shown in **Figure 19**.

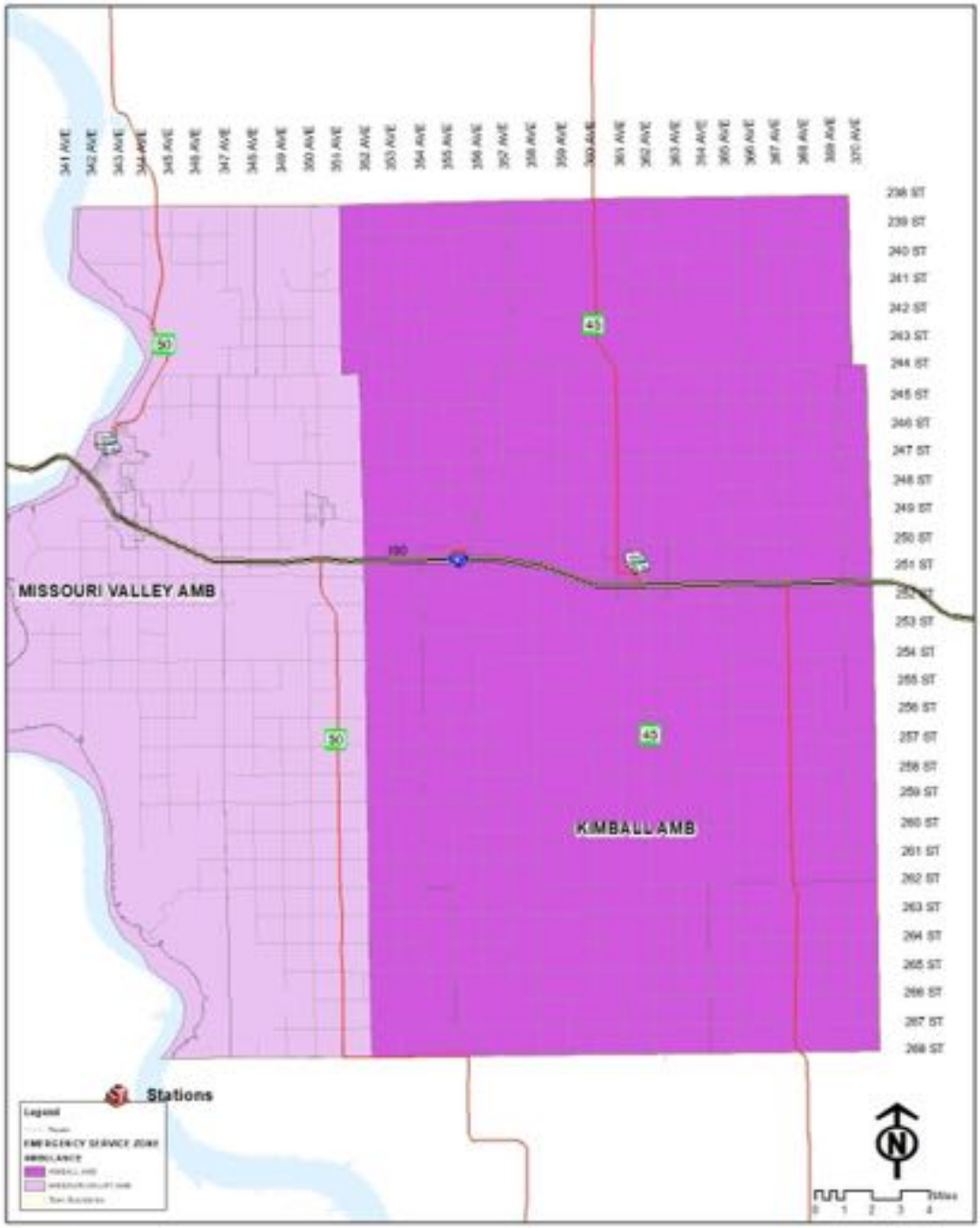
Figure 19 – Fire Protection Areas



Ambulance Services:

Brule County provides regular or ground ambulance service to the county's residents while fixed wing and helicopter air transport is provided by Avera McKennan and Sanford in Sioux Falls. The Missouri Valley Ambulance is staffed with paramedics volunteer emergency medical technicians ranging in qualifications from Basic to Intermediate and Paramedic. Kimball also has 18 certified EMT's at its ambulance service. Ambulance coverage is shown in **Figure 20**.

Figure 20 – Ambulance Coverage



CULTURAL AMENITIES

The county's residents are offered a diverse array of "cultural" events. There is a very active arts association as well as theatre, dance, and music groups within the County. These entities offer both local shows along with national and international entertainment. Cultural amenities in Brule County include twenty-five churches, a senior citizen's center, three libraries, and one museum.

Those individuals who seek additional cultural enrichment are able to travel to larger venues with ease. The Washington Pavilion and Arena in Sioux Falls or the Tyson Events Center and Orpheum Theater in Sioux City are less than ninety miles away while Omaha is a two and one half drive; Fargo is four, with Minneapolis about a five hour drive.

RECREATIONAL OPPORTUNITIES

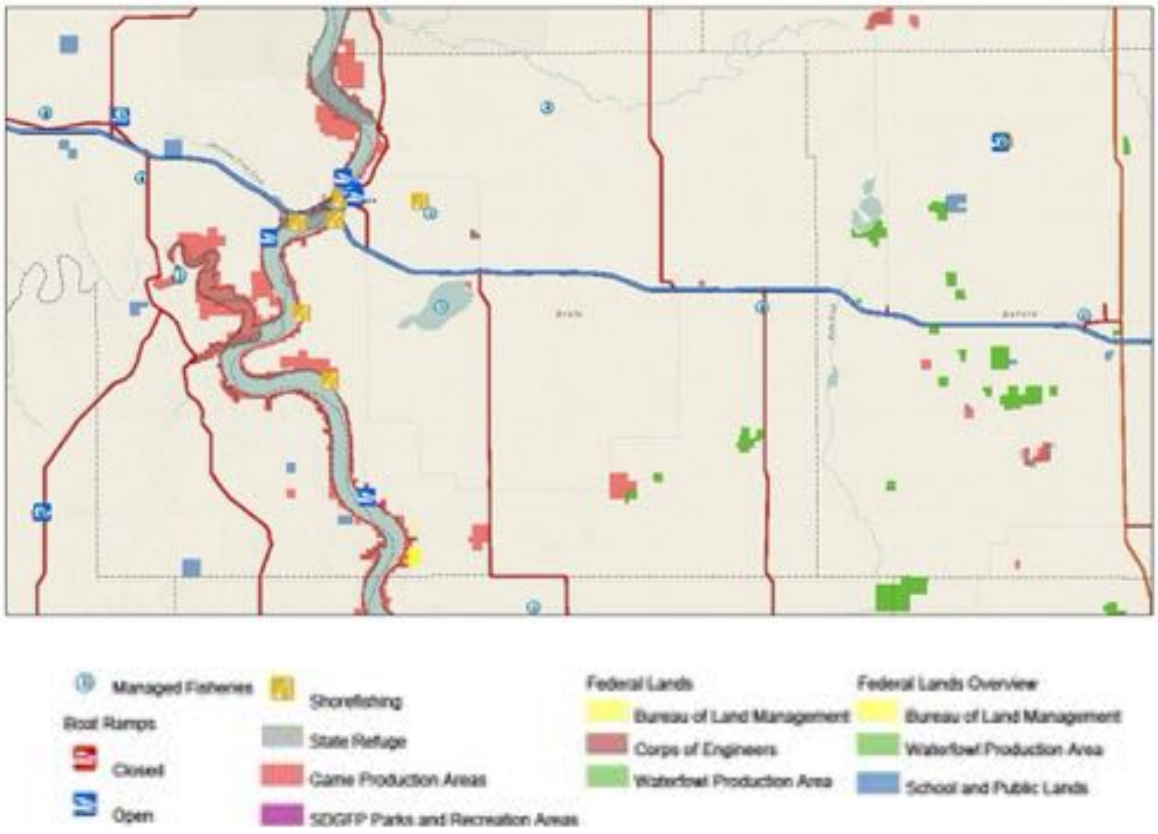
Brule County excels in offering quality recreational outlets. The recreational resources include the Missouri River and its impoundments, Lake Francis Case. The vast amount of water provides excellent opportunities for fishing, paddling, sailing, and boating activities and is home to one of the region's best fisheries and water based recreation areas. These venues regularly host visitors from western Iowa, Eastern Nebraska, and the State of South Dakota with many families making the area their weekend destination numerous times throughout the season. Those not seeking water based recreation can choose from the following list of venues within the Cities of Chamberlain and Kimball alone:

- Parks
- Golf Courses
- Indoor Pools
- Outdoor Pools
- Baseball Diamonds
- Softball Diamonds
- Skateboard Park
- Hiking/Walking Trails
- Basketball Courts
- Tennis Courts
- Bike Trails

As mentioned earlier, Brule County is home to abundant water resources. The County also provides excellent hunting opportunities for upland game, waterfowl, turkey, dove, and deer.

The South Dakota Department of Game, Fish and Parks conducts a regional recreation survey every few years. The survey was conducted to provide input to the update of the State's Comprehensive Outdoor Recreation Plan (SCORP); a copy of which is available for public review at most Game, Fish, and Parks offices.

FIGURE 21
Outdoor Recreation Resources



PLANNING CONSIDERATIONS

County Planning Challenges

The following community facility related challenges are expected to be encountered by Brule County over the next 10 years.

- ✓ Continued pressure to increase public services, without raising taxes or fees;
- ✓ Increasing trend toward special purpose taxing entities (example: road districts) which could further complicate service relationships and lower county revenues;
- ✓ Perceived availability of additional rural water service capacity throughout the county, without consideration of specific project areas and cost factors;
- ✓ Establishment of a road plan that considers both financial limitations and county system needs;
- ✓ Identification of alternative sources of support which will enhance public air service;
- ✓ Controlling the location of telecommunication and power generation facilities to minimize negative impacts;
- ✓ Coordinating county-wide law enforcement, ambulance, and disaster response services in a cost effective manner; and
- ✓ Maintaining the integrity of the watersheds in the County.

Policy Recommendations

In addressing the challenges, the Brule County Commission should consider the following recommendations.

1) Include the consideration of public facility impacts in evaluating development proposals;
2) Discourage development proposals that would significantly strain or exceed infrastructure capacities;
3) Encourage development proposals that comply with or exceed public facility design standards;
4) Reconsider road construction and maintenance policies and practices with regards to current development situations and future growth expectations;
5) Ensure that public rights of way are protected and represented in development proposals;
6) Seek additional information from utility companies about their energy service plans and system capacities; and
7) Continue to explore multi-jurisdictional approaches in delivering emergency services.

CHAPTER IV
DEMOGRAPHIC INFORMATION

POPULATION OVERVIEW

The concept of comparison groups was introduced in the first chapter. Certain data will be presented in comparison to five adjacent counties: Aurora, Buffalo, Charles Mix, Jerauld, and Lyman along with three other regional counties to include Davison, Hughes, and Stanley. In addition, data from the two largest counties, Minnehaha and Pennington, have been included for comparative values. Municipal, statewide, and national statistics are utilized, when appropriate. The statistics for individual communities within comparison counties may point to different conclusions than the overall county numbers.

Table 6 contains the historical growth rate for the control group along with Brule County. The 2010 Census data showed Brule County with a population of 5,255 persons. When compared to a population of 6,070 in 1950, the County experienced a 13.4% (815) decrease in population. This may also be represented as an average decrease of 135 persons per decade. The towns in Brule County have fared differently over the past sixty years. Chamberlain's population has grown by 30% between 1950 and 2010, while Kimball has lost nearly 40% of its population and Pukwana has decreased by 10% over the same timeframe.

TABLE 6
Population Data - 1950 - 2017

Area	1950	1960	1970	1980	1990	2000	2010	% of Change 1950-2010
Aurora	5,020	4,749	4,183	3,628	3,135	3,058	2,710	-45.0%
Buffalo	1,615	1,547	1,739	1,795	1,759	2,032	1,912	27.1%
Charles Mix	15,558	11,785	9,994	9,680	9,131	9,350	9,129	-39.9%
Davison	16,522	16,681	17,319	17,820	17,503	18,741	19,504	20.5%
Hughes	8,111	12,725	11,632	14,220	14,817	16,481	17,022	117.2%
Jerauld	4,476	4,048	3,310	2,929	2,425	2,295	2,071	-54.7%
Lyman	4,572	4,428	4,060	3,864	3,638	3,895	3,755	-15.4%
Minnehaha	70,910	86,575	95,209	109,435	123,809	148,281	169,468	163.4%
Pennington	34,053	58,195	59,349	70,361	81,343	88,565	100,948	221.0%
Stanley	2,055	4,085	2,457	2,533	2,453	2,772	2,966	45.8%
Brule	6,070	6,319	5,870	5,245	5,485	5,364	5,255	-13.4%
Average	7,111	7,374	6,729	6,857	6,705	7,110	7,147	2.9%
Chamberlain	1,912	2,598	2,626	2,258	2,347	2,338	2,387	30.0%
Kimball	952	912	825	752	743	745	703	-39.9%
Pukwana	302	247	208	234	263	287	285	-10.3%
South Dakota	652,740	680,514	666,257	690,768	696,004	754,844	814,180	32.4%
USA *	151,326,000	179,323,000	203,302,000	226,543,000	248,718,000	274,634,000	308,746,000	113.4%

Note: * United States numbers are rounded to nearest thousand
Sources: 1950, 1960, 1970, 1980, 1990, 2000 Census of Population, 2010 American Community Survey

A method of identifying population trends is to limit the review to a more recent time frame while still including the cyclical nature of economics, weather, and historical events. A smaller time frame including the aforementioned factors is presented in Table 7. This data set provides an overview of County populations within a 30-year period from 1980 to 2010, with calculations as to 10-year population changes and growth percentages.

TABLE 7
Population Comparison - 1980 - 2010

Entity			*Difference*		*Difference*		*Difference*	Percent of Population Difference			
	1980	1990	*1980 - 1990*	2000	*1990 - 2000*	2010	*2000 - 2010*	1980-2010	AGR* 1980-2010	2000-2010	AGR 2000-2010
Aurora	3,628	3,135	*493*	3,058	*-77*	2,710	*-348*	-25.3%	-0.84%	-11.4%	-1.14%
Buffalo	1,795	1,759	*36*	2,032	*273*	1,912	*-120*	6.5%	0.22%	-5.9%	-0.59%
Charles Mix	9,680	9,131	*549*	9,350	*219*	9,129	*-221*	-5.7%	-0.19%	-2.4%	-0.24%
Davison	17,820	17,503	*317*	18,741	*1,238*	19,504	*763*	9.5%	0.32%	4.1%	0.41%
Hughes	14,220	14,817	*597*	16,481	*1,664*	17,022	*541*	19.7%	0.66%	3.3%	0.33%
Jerauld	2,929	2,425	*504*	2,295	*-130*	2,071	*-224*	-29.3%	-0.98%	-9.8%	-0.98%
Lyman	3,864	3,638	*226*	3,895	*257*	3,755	*-140*	-2.8%	-0.09%	-3.6%	-0.36%
Minnehaha	109,435	123,809	*14,374*	148,281	*24,472*	169,468	*21,187*	54.9%	1.83%	14.3%	1.43%
Pennington	70,361	81,343	*10,982*	88,565	*7,222*	100,948	*12,383*	43.5%	1.45%	14.0%	1.40%
Stanley	2,533	2,453	*80*	2,772	*316*	2,966	*194*	17.1%	0.57%	7.0%	0.70%
Brule	5,245	5,485	*240*	5,364	*-121*	5,255	*-109*	0.2%	0.01%	-2.0%	-0.20%
Chamberlain	2,258	2,347	*89*	2,338	*-9*	2,387	*49*	5.7%	0.19%	2.1%	0.21%
Kimball	752	743	*9*	745	*2*	703	*-42*	-6.5%	-0.22%	-5.6%	-0.56%
Pukwana	234	263	*29*	287	*24*	285	*-2*	21.8%	0.73%	-0.7%	-0.07%
South Dakota	690,768	696,004	*5,236*	754,844	*58,840*	814,180	*59,336*	17.9%	0.60%	7.9%	0.79%

* AGR=Annual Growth Rate

Sources: 1980, 1990, 2000 Census of Population, 2010 American Community Survey

When comparing the percentage of growth within Brule County and across differing time periods an accurate perspective may be established through division of the growth percentage by the number of years within the defined period; thereby calculating the annual growth rate. In summarizing the data within Tables 6 and 7, the following total and annual growth rates were calculated:

Long term growth rate (60 year): 1950 – 2010

Total growth/loss: -13.4% or a *decrease* of 815 persons total

Annual growth/loss: -0.22% or a *decrease* of 68 persons per year

Medium term growth rate (30 year): 1980 – 2010

Total growth/loss: 0.2% or an *increase* of 10 persons total

Annual growth/loss: 0.01%% or an *increase* of 1/3 persons per year

Short term growth rate (10 year): 2000 – 2010

Total growth/loss: -2.0% or a *decrease* of 109 persons total

Annual growth/loss: -0.20% or a *decrease* of 11 persons per year

Whereas the sixty year population trend within Brule County was a 13.4% decrease, a review of the same data for a thirty year period (1980-2010) saw the rate increase at 0.2%. The trend toward a slower rate of decline is supported by the most recent full decade between 2000 and 2010.

A quick review of the growth rate for the other entities will provide an estimate of their annual growth rate when compared to the long, medium, and short term rates of Brule County. An exact rate may be found by completing the same calculations for each identified area.

Analysis of recent annual trends may provide the most accurate view of the changing population base. Brule County's population decreased by 109 people between 2000 and 2010; the question then arises as to the cause of this decrease in population. **Table 8** presents the annual populations for the period of 2011-2017. The County has experienced a slight increase in population; eight people. This represents an annual increase of 0.02%.

TABLE 8
Annual Populations – 2011-2017

Entity	2011	2012	2013	2014	2015	2016	2017	% Change 2011-2017	*AGR*
Aurora	2,716	2,762	2,715	2,743	2,744	2,764	2,769	**1.95%**	*0.28%*
Buffalo	1,978	2,016	2,025	2,086	2,098	2,030	2,013	**1.77%**	*0.25%*
Charles Mix	9,190	9,196	9,187	9,239	9,360	9,358	9,404	**2.33%**	*0.33%*
Davison	19,720	19,952	19,941	19,967	19,916	20,011	19,870	**0.76%**	*0.11%*
Hughes	17,310	17,435	17,428	17,627	17,555	17,604	17,670	**2.08%**	*0.30%*
Jerauld	2,074	2,054	2,070	2,040	2,018	2,008	2,024	**-2.41%**	*-0.34%*
Lyman	3,810	3,777	3,848	3,858	3,881	3,900	3,876	**1.73%**	*0.25%*
Minnehaha	171,452	174,766	177,981	180,822	183,439	186,268	189,538	**10.55%**	*1.51%*
Pennington	102,404	104,232	105,919	107,510	108,088	109,111	110,503	**7.91%**	*1.13%*
Stanley	2,978	2,976	2,979	2,979	2,974	3,012	2,986	**0.27%**	*0.04%*
Brule	5,296	5,293	5,359	5,280	5,243	5,216	5,304	**0.15%**	*0.02%*
Chamberlain	2,774	2,783	2,875	2,660	2,582	2,662	2,653	**-4.36%**	*-0.62%*
Kimball	646	668	606	522	549	574	551	**-14.71%**	*-2.10%*
Pukwana	254	264	262	250	235	241	261	**2.76%**	*0.39%*
South Dakota	807,697	815,871	825,198	834,708	843,190	851,058	855,444	**5.91%**	*0.84%*
United States*	306,603,722	309,138,711	311,536,594	314,107,084	316,515,021	318,558,162	321,004,407	**4.70%**	*0.67%*

Source: 2011-2017 American Community Survey

The term population encompasses numerous subsections, divisions, groups, etc. One of these divisions is race. In comparing the racial data within the control group, there are very subtle differences between counties. The data within Table 9 identifies racial demographics. The data provides a picture of the racial diversity or lack thereof in certain areas of the State.

TABLE 9

Specified Racial Population Data

Entity	White	Black	American Indian	Asian	Native Hawaiian & Other Pacific Islander	Some Other Race	Two or More Races	Total Population
Aurora	2,577	11	40	18	0	50	14	2,710
Buffalo	283	4	1,607	1	0	0	17	1,912
Charles Mix	5,930	9	2,893	19	0	27	251	9,129
Davison	18,421	82	490	93	13	100	305	19,504
Hughes	14,593	84	1,779	91	1	82	392	17,022
Jerauld	2,009	1	5	4	3	34	15	2,071
Lyman	2,191	3	1,436	10	1	5	109	3,755
Minnehaha	149,220	6,407	4,197	2509	133	3,114	3,888	169,468
Pennington	84,350	1,050	9,748	1052	80	813	3,855	100,948
Stanley	2,670	9	196	4	0	5	82	2,966
Brule	4,646	12	445	9	1	14	128	5,255
Chamberlain	2,087	0	471	13	0	4	78	2,653
Kimball	517	0	2	4	0	0	28	551
Pukwana	229	0	19	0	0	0	13	261
South Dakota	699,392	10,207	71,817	7610	394	7,477	17,283	814,180
United States *	223,553,265	38,929,219	2,932,218	14674252	54,0013	19,107,368	9,009,073	308,745,538

Note: United States Population in 1,000's
Source: American Community Survey

The minority population within Brule County (11.6%) is 17% less than the State of South Dakota. The racial demographics of a county are dependent on multiple factors. Racial diversity within South Dakota is defined by the location of a county in relation to a reservation, major educational institution, government facility, or larger overall population base.

While general population data is useful in addressing general issues facing the County, it is necessary to group the 5,255 county residents into smaller divisions in order to evaluate service needs. The previous tables show that Brule County's population is declining but additional questions remain such as how, why, and where.

An area of concern in South Dakota is the loss of youth, coupled with an increasing average age of residents. This trend is not a new issue, but one that affects some regions at a much greater rate than others. There are many reasons for these concerns including labor force, stability, services, and dependency to name a few. **Tables 10 and 11** contain a thirty year trend of youth and aged populations.

TABLE 10

Youth Population – Under Age 18 - 1980 - 2010

Entity	1980	1990		2000		2010		Population Difference 1980 - 2010
Aurora	1,114	921	-17.32%	843	-8.47%	725	-14.00%	-34.92%
Buffalo	826	786	-4.84%	840	6.87%	750	-10.71%	-9.20%
Charles Mix	3,256	2,928	-10.07%	2,990	2.12%	2,705	-9.53%	-16.92%
Davison	4,990	4,822	-3.37%	4,753	-1.43%	4,585	-3.53%	-8.12%
Hughes	4,535	4,424	-2.45%	4,583	3.59%	4,037	-11.91%	-10.98%
Jerauld	842	636	-24.47%	492	-22.64%	435	-11.59%	-48.34%
Lyman	1,366	1,214	-11.13%	1,250	2.97%	1,106	-11.52%	-19.03%
Minnehaha	31,444	33,447	6.37%	38,796	15.99%	42,563	9.71%	35.36%
Pennington	21,113	23,781	12.64%	23,565	-0.91%	24,837	5.40%	17.64%
Stanley	863	774	-10.31%	750	-3.10%	721	-3.87%	-16.45%
Brule	1,649	1,816	10.13%	1,636	-9.91%	1,358	-16.99%	-17.65%
Chamberlain	655	691	5.50%	629	-8.97%	541	-13.99%	-17.40%
Kimball	204	213	4.41%	208	-2.35%	160	-23.08%	-21.57%
Pukwana	78	83	6.41%	83	0.00%	63	-24.10%	-19.23%
South Dakota	205,606	198,973	-3.23%	202,649	1.85%	193,343	-4.59%	-5.96%

Sources: 1980, 1990, 2000 Census of Population, 2010 American Community Survey

The potential impacts of an aging population are shown through the negative percentages for persons under the age of eighteen in all but the “urban counties” (Minnehaha and Pennington) within the control group for the decades of 1980-2010.

The recent trend in Brule County is less than promising when compared to the control group and state figures. In the previous decade, 1990-2000, the youth population decreased by 9.9% versus a 1.8% increase for the state as a whole. In the same period, there was only one of the comparison counties with a more significant decrease. Jerauld County has witnessed a decrease in its youth population of almost 50 percent. Aurora County has lost over one third (33%) of its youth population.

Data within Table 11 focuses on that segment of the population base age 65 and older. Throughout the past 30 years, the segment of the population age 65 and older has increased in most parts of the state. There were two of the 11 counties in the study area that experienced a decrease in their aged population; though the variations are insignificant.

TABLE 11

Aged Population - Age 65 or Older - 1970 - 2000

Area name	1980	1990		2000		2010		Population Difference 1980 - 2010
Aurora	650	681	4.77%	661	-2.94%	539	-18.46%	-17.08%
Buffalo	107	132	23.36%	133	0.76%	137	3.01%	28.04%
Charles Mix	1,507	1,607	6.64%	1,619	0.75%	1,619	0.00%	7.43%
Davison	2,764	3,044	10.13%	3,042	-0.07%	3,300	8.48%	19.39%
Hughes	1,384	1,763	27.38%	2,252	27.74%	2,285	1.47%	65.10%
Jerauld	587	588	0.17%	588	0.00%	519	-11.73%	-11.58%
Lyman	469	486	3.62%	528	8.64%	548	3.79%	16.84%
Minnehaha	11,596	14,393	24.12%	16,313	13.34%	18,843	15.51%	62.50%
Pennington	5,921	8,133	37.36%	10,451	28.50%	13,617	30.29%	129.98%
Stanley	250	266	6.40%	305	14.66%	469	53.77%	87.60%
Brule	762	910	19.42%	905	-0.55%	914	0.99%	19.95%
Chamberlain	321	411	28.04%	410	-0.24%	325	-20.73%	1.25%
Kimball	192	193	0.52%	171	-11.40%	192	12.28%	0.00%
Pukwana	50	44	-12.00%	32	-27.27%	38	18.75%	-24.00%
South Dakota	91,019	102,331	12.43%	108,131	5.67%	116,581	7.81%	28.08%

Sources: 1980, 1990, 2000 Census of Population, 2010 American Community Survey

Data as presented in percentile form provides a method of comparison between different entities. A review of the data in Table 11 helps to illustrate that in the year 2000 Brule County's population included 30.5% persons age 18 and younger versus 26.8% for the state. Application of the same methodology for the age 65 and older group shows Brule County with 16.9% and the state with 14.3%.

The previous tables identified and detailed two population bases, those age 18 and younger and persons age 65 and older. Table 12 complements this information by providing a quick overview of the entire Brule County population. The information is presented by age classification for the 40 year period of 1970-2010.

TABLE 12

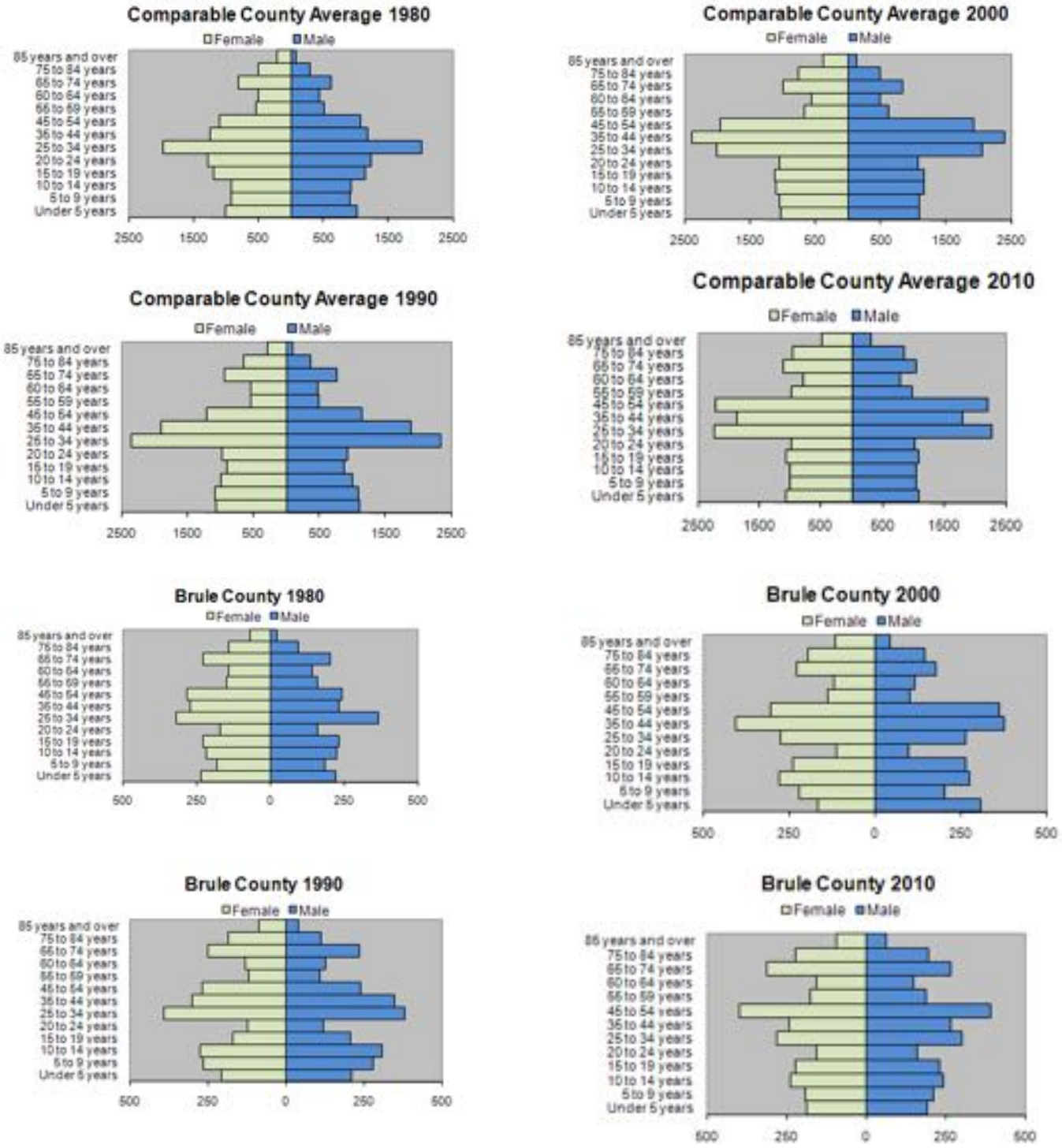
Detailed Population Base by Age Distribution, Brule County - 1970 - 2010

	<18	18-44	45-64	65+	Totals
1970	2,257	1,588	1,271	754	5,870
1980	1,649	1,702	1,132	762	5,245
1990	1,826	1,778	983	898	5,485
2000	1,636	1,686	1,137	905	5,364
2010	1,358	1,504	1,479	914	5,255
Percent Change	*-39.8%*	*-5.3%*	*16.4%*	*21.2%*	*-10.5%*

Sources: South Dakota Community Abstracts and U.S. Census

One graphic utilized to present population data is a population pyramid. These pyramids offer a quick view of population dispersion through a variation of a traditional bar graph. **Figure 22** displays the population of Brule County and an average of the comparison counties for the years 1980, 1990, 2000, and 2010.

FIGURE 22
POPULATION PYRAMIDS



There are certain terms utilized when discussing statistics with two being the most common, median and mean. The term mean is synonymous with average and is calculated by addition of all the values in a data set and dividing by the number of values. In the case of calculating a mean age for a county, all of the ages reported would be added together and then divided by the number of ages reported. The mean value is not commonly utilized due to the ease in which the final result can be influenced by an abnormality in the reported values. Whereas, a median calculation is more prevalent in calculating items such as age and income since the final result is not as easily compromised by significant variations in the data set being analyzed. A median value as illustrated in Table 13 is derived by dividing the data set into two equal parts and identifying the number falling between the two sets. In calculating the median age for Brule County, the total population, 5,364, and their respective ages were divided in half with an equal number of people falling above and below the median age.

TABLE 13
Median Ages by Entity - 1970 - 2010

Entity	1970	1980	1990	2000	2010	Percent Change in Median Age 1970 - 2010
Aurora	31.1	34.2	38.6	40.6	43.2	38.9%
Buffalo	19.9	20.3	22.1	22.3	25.0	25.6%
Charles Mix	29.9	30.4	33.9	35.7	38.2	27.8%
Davison	28.5	29.5	33.6	36.0	37.8	32.6%
Hughes	26.6	29.1	33.3	37.5	39.8	49.6%
Jerauld	35.5	35.9	40.4	46.3	48.6	36.9%
Lyman	27.6	27.7	31.4	34.5	36.1	30.8%
Minnehaha	25.9	28.1	31.4	33.5	34.5	33.2%
Pennington	24.1	26.3	30.1	35.0	36.8	52.7%
Stanley	26.9	30.5	32.6	37.6	41.9	55.8%
Brule	30.0	31.3	32.6	36.9	41.3	37.7%
Chamberlain	28.7	31.8	34.0	38.1	41.8	45.6%
Kimball	38.7	41.5	37.1	39.7	43.0	11.1%
Pukwana	39.4	32.5	32.4	36.2	41.5	5.3%
Comparative County Average	27.8	29.4	32.7	36.0	38.2	37.4%
South Dakota	27.4	28.9	32.4	35.6	36.9	34.7%

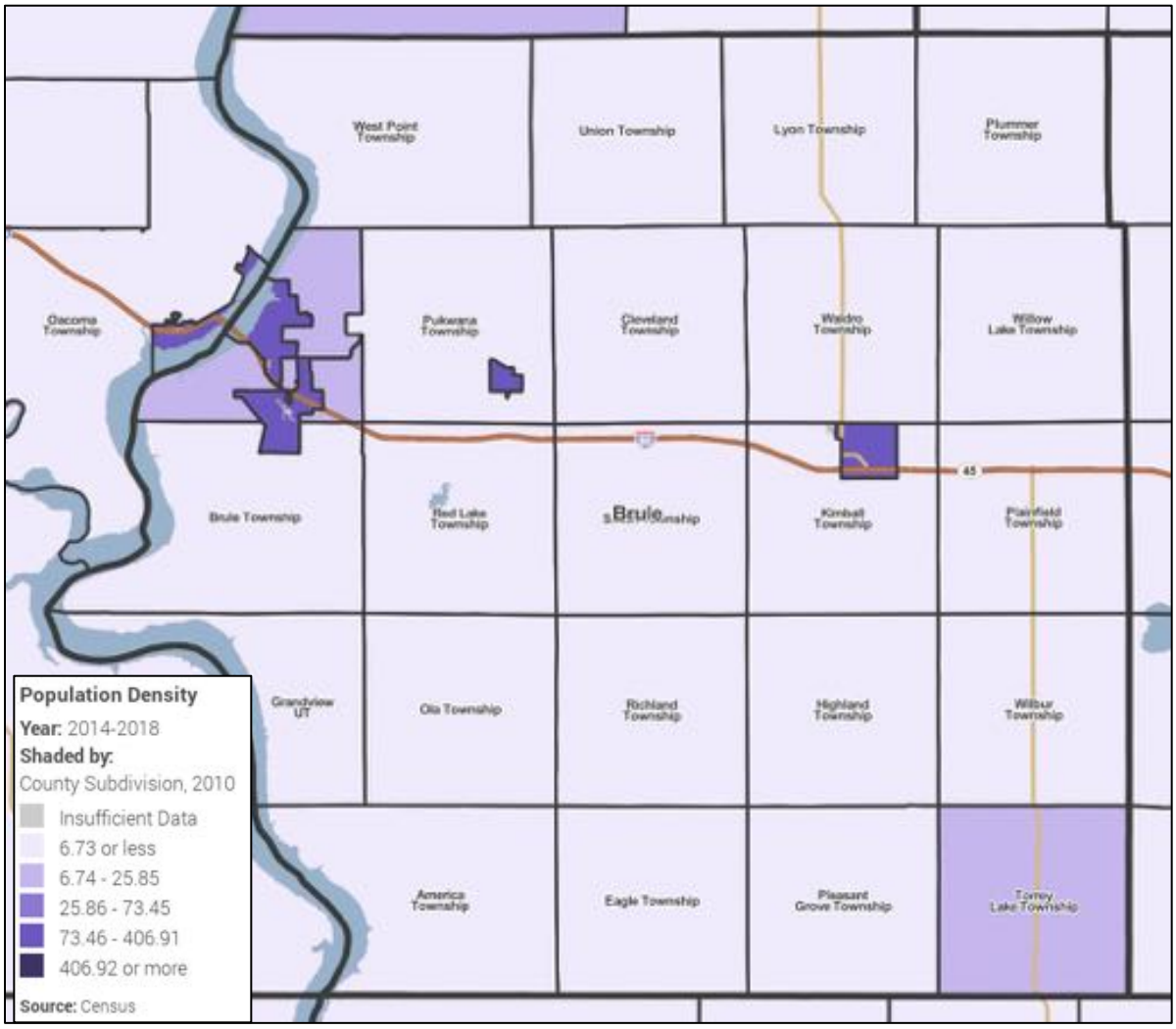
Sources: 1970, 1980, 1990, 2000 Census of Population, 2010 American Community Survey

The terms are similar and are mistakenly interchanged when discussing data, though the end result is generally different. In the year 2010, the median age of persons residing within Brule County was 41.3. This is the age at which one-half the population is older and the other half is younger. In comparing the County's median age to the control groups, three have a greater median age and seven are less. The other figure to examine is the increase of the County's median age. The lower the

number, the slower the County is aging or may be less likely to experience severe growing pains thereby viewed as a stable population base.

Another way to display population is by calculating population densities and displaying these upon a map. A population density map is offered as **Figure 23**. The density was determined by the number of residents living in a county subdivision and dividing the population by the area, in square miles, of the subdivision.

FIGURE 23
Brule County Population Densities



Source: PolicyMap.com

A population base is affected by many variables, one of which is natural progression. Table 14 illustrates the birth and death rates over a 10-year period for Brule, the comparative counties (including an average), and the State.

TABLE 14

Vital Statistics by Entity - 2010 – 2016

Entity	2010-2011		2012-2013		2014-2015		2016	
	Births	Deaths	Births	Deaths	Births	Deaths	Births	Deaths
Aurora	68	55	70	61	75	52	49	20
Buffalo	106	34	105	34	95	38	52	33
Charles Mix	313	200	312	165	330	224	164	113
Davison	520	395	526	392	513	451	257	224
Hughes	462	283	485	262	478	295	233	148
Jerauld	53	59	47	56	48	53	81	37
Lyman	148	74	129	66	145	73	82	39
Minnehaha	5,528	2,596	5,674	2,513	5,993	2,716	2,936	1,394
Pennington	3,051	1,583	3,128	1,559	3,076	1,736	1,470	909
Stanley	84	40	71	31	84	46	42	23
Brule	143	106	154	119	146	110	71	60
Totals	10,476	5,425	10,701	5,258	10,983	5,794	5,437	3,000
Averages	952	493	973	478	998	527	494	273
South Dakota	23,629	14,516	24,335	14,515	24,604	15,387	12,270	7,897

Sources: South Dakota Department of Health, Pierre South Dakota

Table 15 presents the concept of migration. Natural migration is based solely on the birth and death rates of an area. Actual migration considers natural migration in addition to the movement of persons.

TABLE 15

Natural and Actual Migration Rates – 2000-2010

COUNTY	2000 POPULATION	2010 POPULATION	BIRTHS	DEATHS	NATURAL MIGRATION	2010 POTENTIAL	ACTUAL MIGRATION	MIGRATION PERCENT
Aurora	3,058	2,710	337	383	-46	3,012	-302	-9.9%
Buffalo	2,032	1,912	587	207	308	2,340	-428	-21.1%
Charles Mix	9,350	9,129	1,722	1,121	601	9,951	-822	-8.8%
Davison	18,741	19,504	2,986	2,086	900	19,641	-137	-0.73%
Hughes	16,481	17,022	2,385	1,611	774	17,255	-233	-1.4%
Jerauld	2,295	2,071	267	315	-48	2,247	-176	-7.7%
Lyman	3,895	3,755	744	333	411	4,306	-551	-14.1%
Minnehaha	148,281	169,468	28,437	12,654	15,783	164,064	5,404	3.6%
Pennington	88,565	100,948	16,630	7,538	9,092	97,657	3291	3.7%
Stanley	2,772	2,966	426	196	230	3,002	-36	-1.3%
Brule	5,364	5,255	738	582	156	5,520	-265	-4.9%
South Dakota	754,844	814,180	119,028	76,273	42,755	797,599	16,581	2.2%

Sources: American Community Survey Estimates, 2000 - 2010

Population Projections and Trends

Tables 16-18 illustrate the population projections for Brule and the comparative counties. Projection data was obtained from the State Data Center in.

TABLE 16

General Population Figures and Projections by Entity - 2020 - 2040

Entity	2020	2025	2030	2035	2040	2020 – 2040 Change	% Change
Aurora	2,425	2,294	2,170	2,052	1,941	-484	-20.0%
Buffalo	2,001	2,047	2,094	2,142	2,191	190	9.5%
Charles Mix	8,691	8,480	8,274	8,074	7,878	-813	-9.4%
Davison	20,131	20,453	20,779	21,110	21,447	1,316	6.5%
Hughes	18,124	18,702	19,297	19,912	20,547	2,423	13.4%
Jerauld	1,814	1,698	1,589	1,487	1,392	-422	-23.3%
Lyman	3,640	3,584	3,529	3,474	3,421	-219	-6.0%
Minnehaha	193,907	207,417	221,869	237,328	253,865	59,958	30.9%
Pennington	112,861	119,335	126,180	133,418	141,071	28,210	25.0%
Stanley	2,848	2,791	2,734	2,679	2,626	-222	-7.8%
Brule	5,072	4,983	4,895	4,810	4,725	-347	-6.8%
Chamberlain	2,432	2,455	2,478	2,501	2,525	93	3.8%
Kimball	688	680	673	665	658	-30	-4.4%
Pukwana	305	315	326	337	349	44	14.4%
South Dakota	845,386	861,085	877,076	893,365	909,955	64,569	7.6%

Source: South Dakota Rural Census Data Center, SDSU

TABLE 17

Population Figures and Projections by Age - 18 or Younger - 2020 - 2040

Entity	2020	2025	2030	2035	2040	*2020-2040% Change*
Aurora	602	549	500	456	415	*-24.41%*
Buffalo	761	766	771	777	782	*2.09%*
Charles Mix	2,406	2,269	2,140	2,018	1,904	*-16.09%*
Davison	4,330	4,208	4,090	3,974	3,862	*-8.22%*
Hughes	3,846	3,754	3,665	3,577	3,492	*-6.98%*
Jerauld	340	300	265	234	207	*-31.00%*
Lyman	1,000	950	903	859	816	*-14.11%*
Minnehaha	44,895	46,109	47,355	48,635	49,950	*8.33%*
Pennington	25,212	25,402	25,593	25,785	25,979	*2.27%*
Stanley	609	559	514	472	433	*-22.54%*
Brule	1,213	1,146	1,083	1,024	968	*-15.53%*
Chamberlain	510	494	480	466	452	*-8.50%*
Kimball	145	138	131	124	118	*-14.49%*
Pukwana	59	58	56	54	53	*-8.62%*
South Dakota	193,250	188,646	184,152	179,765	175,483	*-6.98%*

Source: South Dakota Rural Census Data Center, SDSU

TABLE 18

Population Figures and Projections by Age - 65 or Older - 2020 - 2040

Entity	2020	2025	2030	2035	2040	*2020-2040 % Change*
Aurora	518	512	505	499	492	*-3.91%*
Buffalo	146	151	156	161	167	*10.60%*
Charles Mix	1,730	1,788	1,848	1,910	1,974	*10.40%*
Davison	3,592	3,748	3,910	4,079	4,256	*13.55%*
Hughes	2,736	2,994	3,276	3,585	3,922	*31.00%*
Jerauld	508	502	497	492	487	*-2.99%*
Lyman	573	585	599	512	626	*7.01%*
Minnehaha	22,410	24,439	26,651	29,064	31,696	*29.69%*
Pennington	18,071	20,817	23,981	27,626	31,825	*52.88%*
Stanley	573	633	700	773	854	*34.91%*
Brule	961	986	1,011	1,037	1,064	*7.91%*
Chamberlain	333	337	340	344	348	*3.26%*
Kimball	193	193	194	194	195	*1.04%*
Pukwana	35	34	33	32	31	*-8.82%*
South Dakota	128,599	135,065	141,857	148,989	156,480	*15.86%*

Source: South Dakota Rural Census Data Center, SDSU

The data in Tables 16-18 estimate the County's population trends for a twenty year period, 2020-2040. During this time the population base within the County is expected to shift in the following areas:

- Brule County's general population is projected to *decrease* by 6.8%, or approximately 0.34% annually, from 2020 – 2040.
- Chamberlain may experience marginal *growth*, a total of 3.4%, between 2020 and 2040.
- Kimball's population may *decline* by 4.4% in the twenty year planning period.
- Pukwana could *grow* by 14.4% by 2040 to a population of nearly 350.
- Persons age 18 or younger, is projected to *decrease* by 15.53% from 2020-2040; and
- Persons, age 65 and above are expected to *increase* by nearly 8% during the same period.

Additional information on population characteristics may be obtained from the South Dakota State Data Center (Vermillion) or Planning and Development District III (Yankton). Both these sources have state and federal statistics.

PLANNING CONSIDERATIONS

County Planning Challenges

The following social challenges will be addressed by the County over the next 20 years.

- ✓ Continued population growth, especially among higher service "dependent" groups such as residents over 65 years of age;
- ✓ Continued population growth around Chamberlain and its immediate vicinity;
- ✓ Pukwana's growth, which will come primarily from the "working age" group; and
- ✓ Increases in the present minority population.

Policy Recommendations

In addressing the challenges, the Brule County Commission should consider the following recommendations.

1) Development proposals that build upon or complement health care or social services should be encouraged;
2) The county should explore new partnerships and regional cooperation in supporting social services; and
3) Public accessibility should be considered in evaluating development proposals.

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CHAPTER V
HOUSING

The condition of housing may be evaluated by several factors, including type, age, quality, and affordability. Brule County contains a wide range of housing units. **Table 19** identifies the variety of housing options in 2000. The table shows 2,272 total housing units in the County of which 1,545 were single family units, or 68% of the housing stock.

TABLE 19
Detailed Housing Units by Type - 2000

Entity	1 Unit Detached	1 Unit Attached	2 Units	3 – 4 Units	5 – 9 Units	10 – 20+ Units	Mobile and Misc.	Total Units
Aurora	1,145	7	17	41	15	0	73	1,298
Buffalo	742	13	16	13	8	19	61	602
Charles Mix	3,066	75	121	59	120	104	308	3,853
Davison	5,381	61	267	348	392	1,079	565	8,093
Hughes	4,012	55	232	255	521	867	1,113	7,055
Jerauld	958	15	2	16	32	48	96	1,167
Lyman	1,180	31	11	33	37	17	327	1,636
Minnehaha	36,903	1,741	1,916	2,556	2,866	10,343	3,912	60,237
Pennington	22,352	1,203	1,338	1,284	1,219	4,197	5,656	37,249
Stanley	801	15	6	34	15	68	338	1,277
Brule	1,545	41	54	78	106	91	357	2,272
County Averages	7,074	296	362	429	485	1,530	1,164	11,339
Chamberlain	626	8	36	42	100	90	161	1,063
Kimball	262	6	10	20	0	0	49	347
Pukwana	85	0	3	0	6	1	41	136
South Dakota	217,681	7,381	8,572	11,998	11,463	29,115	36,998	323,208

Source: 2000 US Census Table DP-1

A more current "snapshot" of housing stock is provided in **Table 20**. The data shows Brule County's housing stock decreased by 192 units during the 10 year period of 2000-2010. In towns like Kimball, it is interesting to note that the number of housing units increased between 2000 and 2010, but the population decreased during the same period.

TABLE 20
Detailed Housing Units by Type - 2010

Entity	1 Unit Detached	1 Unit Attached	2 Units	3 – 4 Units	5 – 9 Units	10 – 19 Units	Mobile and Misc.	Total Units
Aurora	885	7	16	30	9	0	80	1,027
Buffalo	413	0	21	10	7	18	34	503
Charles Mix	2,721	71	32	49	110	172	168	3,323
Davison	5,620	202	210	299	388	930	437	8,086
Hughes	4,317	149	43	228	448	825	1,109	7,119
Jerauld	715	4	3	29	45	53	54	903
Lyman	1,168	4	52	20	57	0	148	1,449
Minnehaha	42,681	3,011	1,571	2,357	2,553	10,539	2,815	65,527
Pennington	25,202	1,558	1,398	1,318	1,118	4,513	4,793	39,900
Stanley	754	1	12	43	0	37	313	1,160
Brule	1,508	19	73	48	54	118	260	2,080
County Averages	7,817	457	312	403	439	1,564	928	11,916
Chamberlain	743	12	61	19	50	80	126	1,091
Kimball	305	0	11	24	0	10	33	383
Pukwana	95	0	0	0	3	0	32	130
South Dakota	220,828	10,095	6,309	10,410	10,726	30,285	26,815	315,468

Source: U.S. Census Bureau, 2006-2010 American Community Survey

The decrease in housing units from 2000-2010 equates to an 8.5% loss, or around 19 units per year. **Table 21** provides the vacancy rate and ownership data of all housing units within the county. The numbers show Brule County with a relatively high vacancy rate of 12.2%. However, the percent of vacant units in Kimball and Pukwana (18.5% and 26.9%, respectively) warrants further investigation into the reasons for the high vacancy rates. Are the units dilapidated? Do the owners of the vacant units live elsewhere? Is the local housing market deflated?

TABLE 21
Housing Units by Occupancy - Ownership - Rental - 2010

Entity	Total Housing Units	Total Occupied Units	Percent Vacant	Owner Occupied Units	Renter Occupied Units
Aurora	1,324	1,102	16.8%	842	260
Buffalo	609	532	12.6%	251	281
Charles Mix	3,849	3,249	15.6%	2,234	1,015
Davison	8,852	8,296	6.3%	5,130	3,166
Hughes	7,623	7,066	7.3%	4,711	2,355
Jerauld	1,070	870	18.7%	624	246
Lyman	1,704	1,392	18.3%	955	437
Minnehaha	71,557	67,028	6.3%	43,567	23,461
Pennington	44,945	41,247	8.2%	26,792	14,459
Stanley	1,387	1,228	11.5%	957	271
Brule	2,433	2,136	12.2%	1,509	627
County Averages	3,206	2,875	13.3%	1,913	962
Chamberlain	1,142	1040	8.9%	625	415
Kimball	383	312	18.5%	255	57
Pukwana	130	95	26.9%	72	23
South Dakota	363,442	322,286	11.3%	219,558	102,724

Source: 2010 US Census Data

Table 22 identifies the value of homes within the County and the comparative entities for the year 2010. The table also provides the median housing value for each entity, which means that one half of the owner occupied housing units are valued less than the median and one half are valued greater. Home values within the county are represented within all ranges except the highest; yet the majority of homes are valued between $50,000 and $99,999 as reported to the U.S. Census Bureau.

TABLE 22
Value of Owner Occupied Housing Units - 2010

Entity	<$50,000	$50,000 - $99,999	$100,000 - $149,000	$150,000 - $199,999	$200,000 - $299,999	$300,000 - $499,999	$500,000 - $999,999	1 Million +	Median
Aurora	294	251	80	91	47	19	4	19	$63,100
Buffalo	33	87	13	0	5	0	6	0	$67,500
Charles Mix	793	766	329	169	97	49	3	19	$67,700
Davison	638	1,664	1,168	791	544	238	31	23	$108,800
Hughes	707	784	1,374	902	752	306	65	26	$133,200
Gregory	618	436	175	85	90	23	8	9	$56,100
Jerauld	260	212	79	25	40	14	0	0	$62,200
Lyman	324	303	113	60	7	54	14	2	$64,900
Minnehaha	3,165	6,505	7,383	9,378	6,714	2,957	848	172	$144,900
Pennington	3,189	3,168	6,998	5,998	4,107	2,349	646	170	$149,700
Stanley	174	203	169	114	99	84	34	6	$113,700
Brule	288	582	337	141	86	37	32	0	$87,300
County Averages	413	529	376	238	178	82	20	10	$82,500
Chamberlain	122	245	169	88	67	0	9	0	$97,500
Kimball	74	141	38	2	0	0	0	0	$65,200
Pukwana	14	42	6	3	0	7	0	0	$75,800
South Dakota	38,511	47,440	48,868	36,044	27,038	13,716	4,12	1,543	$122,200

Note: County Average Does Not Include Minnehaha and Pennington Counties
Source: 2006-2010 American Community Survey 5-Year Estimates

The preceding table shows the highest amount of the County's owner-occupied housing units fall between $50,000 and $99,999 in value. This "fact" may not be completely accurate for a number of reasons. One factor that may contribute to the questionable values is that many homeowners may be using their assessed values when completing the census surveys and not "full and true" or "market" values. An adjustment of the values to the next highest range would still leave 80.3% of the County's owner occupied single family housing stock at less than $150,00 and 57.9% below $100,000.

There were key issues or influences which affect housing stock identified at the onset of this section. Many times these items are not autonomous but have a correlation to each other either directly or indirectly. Price is directly related to quality, age, and location demand. Quality and age share a more indirect relationship. The data presented in **Table 23** examines the age of structures. Brule County

was one of the earlier settled areas of the region and this situation is reflected in the fact that approximately one-fourth (603) of its 2,443 housing units were built on or before 1939.

TABLE 23

Years of Construction - Housing Units - Through 2016

Entity	<1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2016
Aurora	562	80	101	106	131	76	92	134	22
Buffalo	50	19	16	65	149	102	121	74	14
Charles Mix	1,298	240	386	286	545	370	448	229	47
Davison	2,083	552	847	1,109	1,603	627	935	1,179	55
Gregory	729	287	283	288	323	210	197	181	3
Hughes	974	206	949	838	1,836	904	1,021	873	110
Jerauld	486	63	113	20	125	78	89	97	12
Lyman	305	62	128	196	418	156	245	193	11
Minnehaha	8,437	4,174	7,024	6,532	12,381	8,845	12,088	12,444	1,671
Pennington	3,277	1,850	5,797	4,500	9,752	6,105	5,781	8,038	677
Stanley	200	51	66	103	331	98	301	229	29
Brule	603	132	331	294	335	222	309	213	6
County Averages	729	169	322	331	580	284	376	340	31
Chamberlain	225	54	197	167	119	81	168	101	0
Kimball	129	15	38	34	54	25	17	23	0
Pukwana	74	4	19	8	22	23	9	9	0
South Dakota	69,828	19,718	34,335	33,022	63,377	37,526	48,368	56,722	6,290

Note: County Average Does Not Include Minnehaha and Pennington Counties
Source: U.S. Census Bureau, 2011-2016 American Community Survey 5-Year Estimates

There are 2,433 total housing units within Brule County of which 2,136 were occupied. The information in the following tables deal with households in occupied housing units. The age ranges will most likely identify widows or widowers, younger families, and retired couples. The average household size assists in identifying the number of young families as well as providing an explanation to population growth questions. One point of local discussion is the lack of population growth in relation to the number of homes being constructed. A possibility is that with an average household size in Brule County of 2.49 in 2000, for every new house constructed there will be an increase in population of less than two and one-half persons. The common perception seems to be of an average household more in the range of 4-5 persons versus the actual number. **Table 24** provides a detailed breakdown of this data.

TABLE 24

Households by Type - 2010

Entity	Total	Families	Married Couple	Female Head	Non-Family	Single	Single 65>	Persons <18	Persons 65>	Average Size
Aurora	1,102	736	634	59	366	330	154	312	357	2.37
Buffalo	532	407	176	176	125	101	30	296	107	3.59
Charles Mix	2,234	2,222	1,625	420	1,027	941	455	1,096	1,066	2.63
Davison	8,296	4,892	3,864	703	3,404	2,846	1,149	2,334	2,276	2.26
Hughes	7,066	4,435	3,500	664	2,631	2,283	726	2,137	1,597	2.30
Jerauld	870	564	479	54	306	269	150	176	337	2.18
Lyman	1,392	967	655	212	425	378	152	496	407	2.67
Minnehaha	67,028	42,052	31,988	7,060	24,976	19,631	5,868	21,913	13,175	2.43
Pennington	41,251	26,323	19,421	4,846	14,928	5,551	3,938	13,001	9,546	2.38
Stanley	1,228	857	696	104	371	322	115	378	327	2.42
Brule	2,136	1,375	1,111	184	761	651	292	647	631	2.40
County Averages	2,762	1,828	1,416	286	1,046	902	358	875	789	2.54
Chamberlain	1,090	662	540	117	428	354	115	325	237	2.13
Kimball	312	216	171	25	96	96	76	82	144	2.20
Pukwana	95	58	41	9	37	36	21	36	32	2.23
South Dakota	322,822	206,964	161,617	31,114	115,318	94,638	35,145	100,118	25,270	2.42

Note: County Average Does Not Include Minnehaha and Pennington Counties
Source: 2010 Census of Population and Housing

The information in **Table 24** is a combination of numerous data sources selected for importance and applicability to Brule County. The first six columns of information identify the number of the different household types according to U.S. Census parameters. The issue of household type was first visited in discussing income when considering family versus household income. Columns 7-9 identify the number of these households with occupants that are children or seniors while the final column provides the average household size.

Table 25 identifies housing and income variables which warrant special attention and consideration. The importance of income keeping pace with housing values and rental rates is reflected within the 30% factor.

TABLE 25

Cost Burdened Households

Percent Paying Less Than 19% and Over 30% of Income for Shelter - 2010

AREA	Median Value Of Housing Stock	Median Income	% of Households Paying Over 30% of Income	% of Households Paying Less Than 19% of Their Income For Monthly Housing
Brule County	$87,300	$48,277	20.8%	52.7%
South Dakota	$122,200	$46,369	25.0%	47.8%

Source: U.S. Census Bureau, 2006-2010 American Community Survey

The South Dakota Housing Development Authority's 2018 "Consolidated Plan" for the 5 year period of 2018-2022 recognizes the need for a multi-faceted approach to rural housing development. The Authority identified the following as needs: preservation of existing rental housing stock; new construction of affordable rental housing in areas of market demand; rental assistance for extremely low-income, cost burdened households (households whose incomes are below 30 percent of median income and who pay more than 30 percent of their income toward housing); coordinated homeless housing and supportive services such as support for the chronic homeless and housing with intensive services; development of affordable housing units for low to moderate income homebuyers; and development of workforce housing. Some small communities within more populated areas are often faced with the problem of high occupancy rates, due to commuting workers looking for a bedroom community.

Planning Considerations

County Planning Challenges

The following housing challenges will be addressed by the County over the next 10 years.

- ✓ Controlled development of small rural subdivisions and scattered single family homes;
- ✓ Maintaining a range of affordable housing options; and
- ✓ Encouraging the use of housing lots with access to existing infrastructure.

Policy Recommendations

In addressing the challenges, the Brule County Commission should consider the following recommendations.

1) Housing should be developed in locations that minimize potential land use and environmental conflicts;
2) Existing housing lots, whether they are located in rural areas (example: farmsteads) or within small communities should be a development priority;
3) The provision of public services and public safety should be considered in evaluating housing proposals; and
4) Affordable housing opportunities should be encouraged.
5) Investigate the "tiny house," or "pocket neighborhood" housing option as well as long term recreational vehicles and develop regulations and policies to manage their location, placement, and taxation.

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CHAPTER VI
EDUCATION

Education may be reviewed from three perspectives:

1) Educational attainment;
2) Overall status of the existing systems; and
3) Opportunities for residents.

There are factors which may be difficult to quantify yet are related to education, such as: on-the-job training, specific professional development opportunities, military training, and work experience. Since comprehensive and accurate data addressing these activities are not readily available, they will not be addressed.

The level of traditional educational attainment is presented in **Tables 26 and 27** for the years 2000 and 2010 respectively.

TABLE 26
Educational Attainment - 2000

Entity	< 9th	9-12 No Diploma	High School Graduate	Some College	A.A or A.S.	B.A. or B.S.	MA or PHD	% High School Plus	% B.A./B.S. Plus
Aurora	13.8	6.8	36.0	22.2	8.6	10.0	2.7	79.5	12.7
Buffalo	9.1	27.0	33.6	21.4	3.5	4.2	1.2	63.9	5.4
Charles Mix	13.4	12.0	34.6	18.1	7.9	10.8	3.3	74.7	14.1
Davison	6.9	9.2	33.9	21.4	8.5	14.6	5.6	83.9	20.2
Hughes	5.2	5.4	27.5	22.5	7.4	24.1	7.9	89.5	32.0
Jerauld	13.3	7.1	40.6	21.4	5.3	9.0	3.3	79.6	12.3
Lyman	7.1	11.8	40.8	20.7	3.8	11.8	4.1	81.2	15.9
Minnehaha	4.4	7.1	30.8	24.0	7.7	19.2	6.8	88.5	26.0
Pennington	4.0	8.2	29.3	25.6	7.9	17.0	8.0	87.8	25.0
Stanley	5.7	6.6	34.9	23.0	7.6	16.3	5.8	87.6	22.1
Brule	11.1	7.8	31.7	20.9	8.0	16.2	4.4	81.2	20.6
Average	8.5	9.9	34.0	21.9	6.9	13.9	4.8	81.6	18.8
South Dakota	7.5	8.0	32.9	23.0	7.1	15.5	6.0	84.6	21.5
United States	10.0	9.6	28.6	21.0	6.3	15.5	8.9	81.7	23.0

Source: 2000 Census, Summary File 3

TABLE 27

Educational Attainment - 2010

Entity	< 9th	9-12 No Diploma	High School Graduate	Some College	A.A or A.S.	B.A. or B.S.	MA or PHD	% High School Plus	% B.A./B.S. Plus
Aurora	12.2	2.5	44.7	17.7	10.8	9.6	2.6	85.3	12.2
Buffalo	2.8	20.7	38.7	21.2	8.3	4.5	3.8	76.5	8.3
Charles Mix	11.9	7.4	36.9	19.0	9.2	11.6	3.9	80.7	15.5
Davison	5.8	6.3	31.5	21.9	13.0	16.1	5.4	87.8	21.5
Hughes	3.8	2.9	28.5	23.1	8.3	24.9	8.4	93.3	33.3
Jerauld	9.0	8.5	43.7	24.0	3.8	7.6	3.4	82.6	11.0
Lyman	5.6	9.0	41.0	18.8	5.9	14.1	5.6	85.5	19.8
Minnehaha	3.5	5.6	29.7	22.1	10.3	20.4	8.5	90.9	28.9
Pennington	2.2	6.4	28.4	25.5	9.8	18.2	9.6	91.4	27.8
Stanley	2.8	6.1	40.3	13.9	9.1	15.8	12.0	91.1	27.7
Brule	7.4	4.9	34.2	20.5	7.9	19.7	5.4	87.7	25.2
Average	6.1	7.3	36.1	20.7	8.8	14.8	6.2	86.6	21.0
South Dakota	4.9	5.8	32.7	21.7	9.5	18.0	7.3	89.3	25.3
United States	6.2	8.7	29.0	20.6	7.5	17.6	10.3	85.0	27.9

Source: U.S. Census Bureau, 2006-2010 American Community Survey

Brule County residents fall below the State average in 2010 for the percent of population who are high school graduates; however, they exceed the National average in both 2000 and 2010. This relative position is different with regards to associates degrees as in the year 2000 the county's residents exceeded the state and national averages for AS/AD degrees as well as bachelors' degrees. The remaining classifications reflect similar results. In comparing Brule County to the selected counties throughout the State for the year 2010, six counties had a higher percentage of high school graduates. This number decreases to two as to bachelors' degrees and increases to five for a MA or PHD.

Figures 24 and 25 illustrate similar information in another format. The primary difference is that averages of the comparison counties are used for illustrative purposes.

FIGURE 24

Educational Attainment - 2000

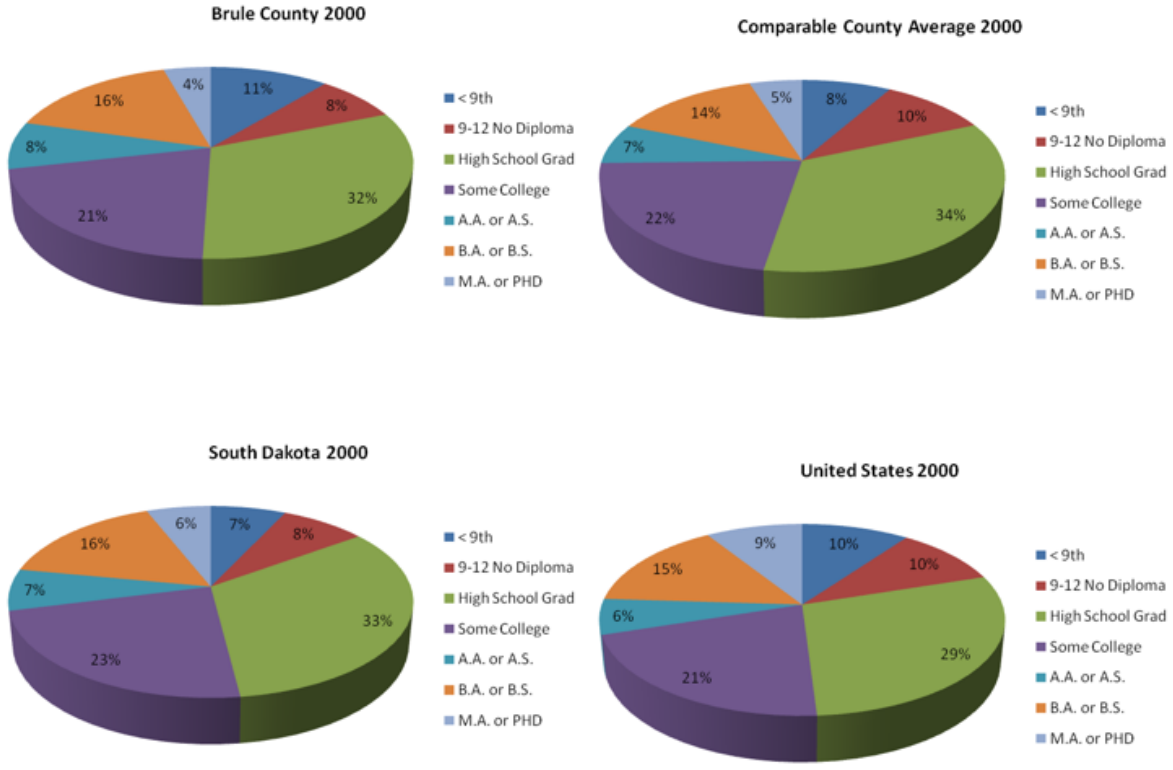
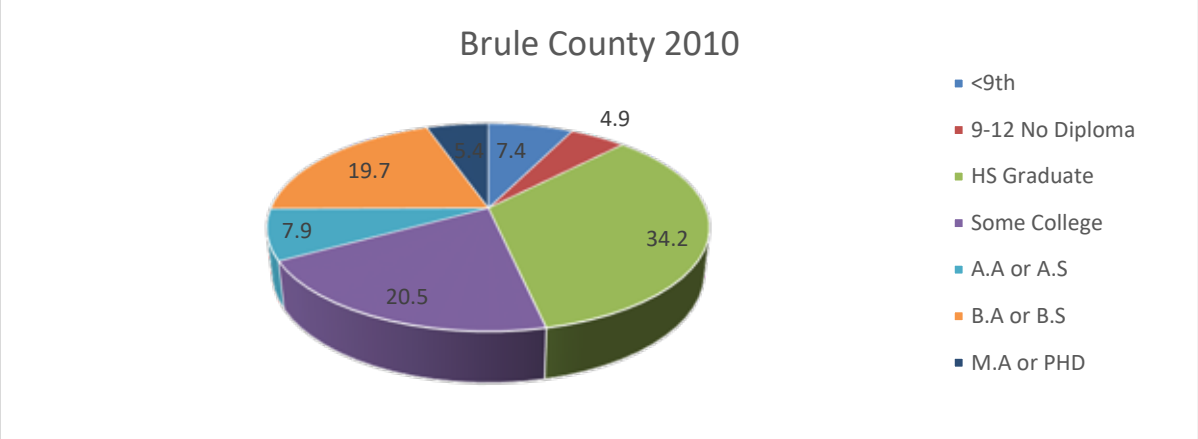
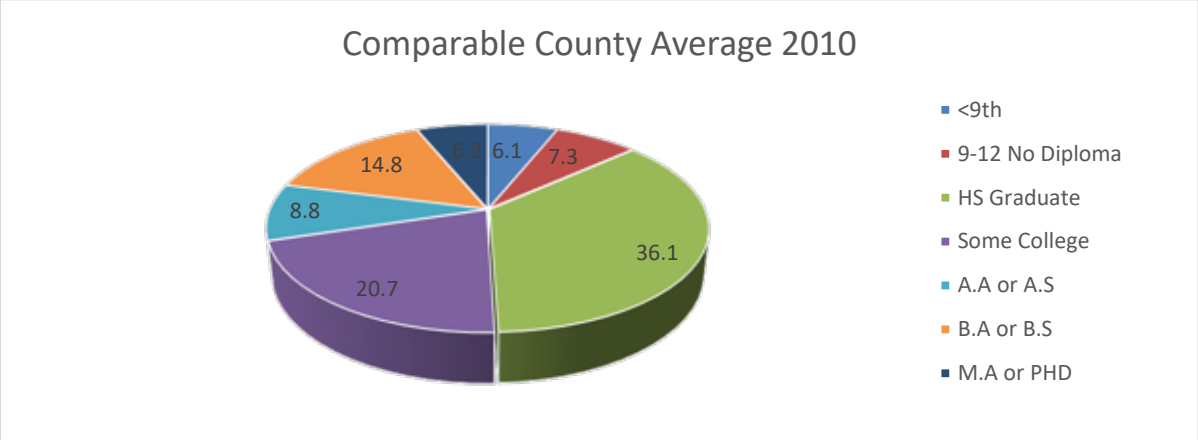
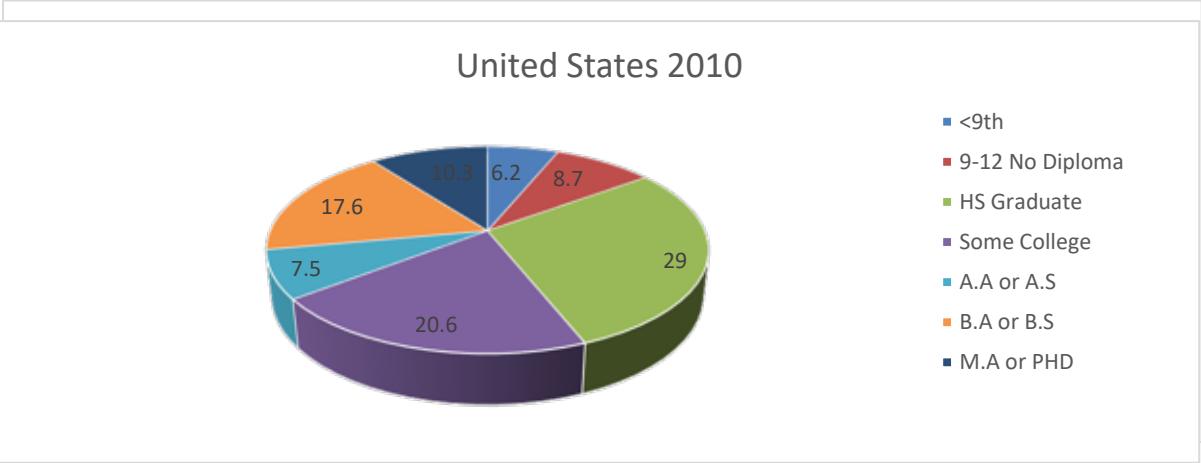


FIGURE 25

Educational Attainment - 2010







The County meets and/or exceeds the regional, state, and national trends for educational attainment.

A second issue to consider in reviewing education is the status of existing educational systems. Please note the change in comparative entities. In discussing the data in previous chapters, the comparative entities were chosen for two reasons:

- They shared borders with Brule County; and
- They offered an outside or larger "community "perspective.

This same group would not have provided "fair" comparisons, thus the revision to include the region's school districts to include all districts within Brule County, as well as districts abutting the County, and the State.

Figure 26 illustrates the boundaries of the school districts within Brule County.

FIGURE 26
Brule County School Districts

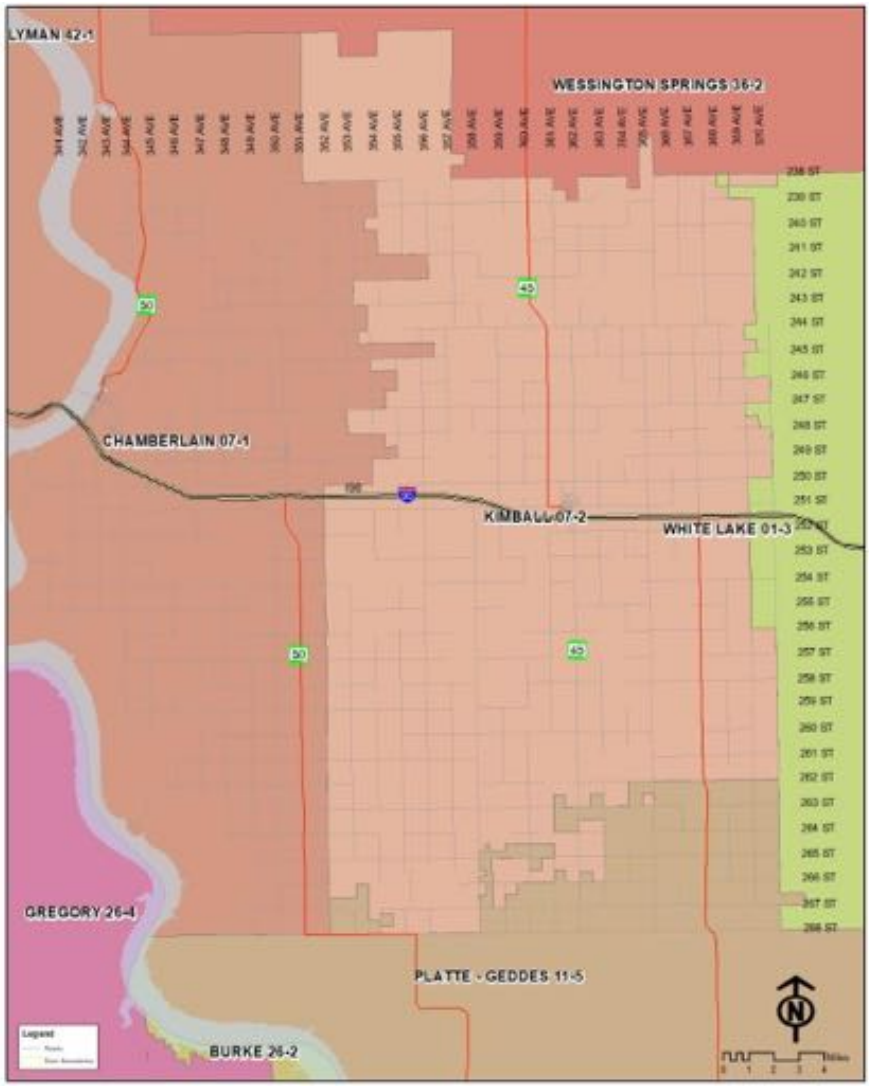


Table 28 provides a statistical overview of the aforementioned school districts. The acronym A.D.M. represents "average daily membership" or enrollment, which is calculated by the South Dakota Department of Education in an effort to establish a baseline for state financial assistance.

TABLE 28
School District Profiles 2016-2017

School District	PK-12 Enrolled	Student-Staff Ratio	ACT Score*	K-12 Certified Teachers	Average Salary	Avg. Years Exp.	Advanced Degrees %	Dollars per ADM	General Fund Balance
Burke - #26-2	231	12.1	N/A	19.2	$47,781	20.4	22.7%	$11,083	$379,476
Chamberlain - #07-1	867	10.9	20.6	79.4	$44,741	15.9	37.5%	$10,814	$31,982
Gregory #26-4	361	10.5	21.9	34.3	$42,135	14.4	19.4%	$10,152	$931,147
Kimball #07-2	317	11.5	20.0	27.5	$44,100	11.6	28.6%	$9,728	$730,902
Lyman County #42-1	428	10.8	22.3	39.1	$45,535	14.2	31.7%	$12,117	$869,289
Plankinton - #00-01	359	10.9	19.4	31.8	$42,935	15.7	37.5%	$17,142	$714,052
Platte – Geddes - #11-5	496	11.6	22.2	42.6	$46,807	16.3	27.3%	$9,746	$1,467,314
White Lake - #01-3	118	9.0	N/A	13.2	$42,448	14.7	40.0%	$13,886	$873,033
Wessington Springs #36-2	355	13.0	N/A	27.4	$42,191	18.8	13.8%	$11,212	$1,235,473
Winner #59-2	707	13.9	21.1	51.0	$43,895	14.4	13.7%	$9,252	$1,216,297
Sioux Falls	24,644	15.4	22.9	1,580.7	$50,687	12.8	57.4%	$8,622	$14,801,781
Rapid City Area	13,743	21.7	21.7	796.4	$51,322	10.1	44.6%	$8,351	$11,663,073
South Dakota	135,811	14.1	21.9	9,570.1	$46,922	13.4	34.77%	$9,256	$199,093,135

Note: Dollars per ADM is based upon General Fund Expenditures
ACT score is only reported when 10 or more students within the district take the ACT.
Source: South Dakota Department of Education School District Profiles

The information in **Table 28** provides some of the measurements currently utilized within the State. One area in which these or similar statistics play a role is salary and benefit negotiations on behalf of the teaching staff. The Chamberlain and Kimball School Districts have some of the highest average salaries per teacher, not including benefits such as medical insurance. An impressive fact, more importantly than salary is that the Chamberlain School District employs the second highest number of teachers with advanced degrees. There may be a downside associated with the previous statistics in that these two districts average expenditures per student are $10,814 for Chamberlain and $9,728 for Kimball which exceeds the State average by approximately $1,500 and $500 per student respectively.

Taxes and taxation were addressed at length in an earlier chapter but dealt primarily with county levies. When reviewing property taxation, it is important to note the relationship between public education and mill levies as education receives the largest "cut" of property taxes. When examining taxation data, note that the mill levies for Ag., Non-Ag Z, Owner Occupied, and Other, are constant. These levies are established by the State of South Dakota and are consistent throughout the state; whereas, the remaining categories allow individual districts some discretion. There are state mandated limitations or caps in three of the four categories, which are identified in the final line.

Brule County is fortunate to have two distinct alternatives for higher education available to the population base and within a relatively short commuting distance. The City of Mitchell in neighboring Davison County is home to Dakota Wesleyan University and Mitchell Technical Institute.

Dakota Wesleyan University is a private 4-year institution affiliated with the Dakota Conference of the United Methodist Church who sponsors the institution. The University offers 43 majors through its different departments including:

- Teacher and Physical Education
- Nursing
- Humanities
- Business and Social Sciences

In addition, the University offers 52 minors, pre-professional programs in ten disciplines and graduate programs in Education. DWU also offers numerous "short" courses throughout the year for both students and the general public. DWU sponsors athletic teams from which both male and female students may choose. Additional information about Dakota Wesleyan University can be obtained by contacting the institution directly or viewing their web site.

As an alternative to a four-year institution, Mitchell Technical Institute, located in Mitchell offers vocational studies and degrees. The school's course offerings fall into one of seven programs to include:

- Business and Services Industries
- Construction and Manufacturing Technologies
- Agriculture and Transportation Technologies
- Health Sciences
- Energy Production and Transmission
- Engineering Technologies
- Generals

The existing format allows the campus to truly offer the local community the skills and training needed in today's workplaces. They also offer online courses as well as Advanced Technical Courses. The public can contact the local campus directly for additional information on class schedules or offerings.

PLANNING CONSIDERATIONS

County Planning Challenges

The following educational challenges will be addressed by the County over the next 20 years.

- ✓ Finding ways to maintain the quality and accessibility of education throughout the county;
- ✓ Supporting adult education and job training opportunities; and
- ✓ Sharing facilities or resources with school districts (example: joint purchases of supplies, vehicle maintenance etc.).

Policy Recommendations

In addressing the challenges, the Brule County Commission should consider the following recommendations.

1) Establish better lines of communication with school boards and administrators; and
2) Support development activities that strengthen the county's education capacity
3) Provide the best access to higher levels of education such as technical training and trade skills.

CHAPTER VII
ECONOMY

The term "economy" is sometimes viewed as all encompassing. The diversity of Brule County's economy will be presented in four subsections. The following data sets and observations will focus upon **Employment, Income, Tourism**, and **Agriculture**.

EMPLOYMENT

Employment statistics are like other areas in that there are industry specific categories or definitions. Four definitions are used in reviewing employment data. **Table 29** details the employment status of the county, state and comparative counties.

- **Civilian labor force, or Labor Force**: All persons age 16 years old and older, classified as employed or unemployed. Persons not included are active duty members of the U.S. Military, students, homemakers, retired workers, seasonal workers not looking for work, inmates, disabled persons, and those doing unpaid family work of less than 15 hours a week.
- **Employed**: All civilians 16 years old and over who were either at work or had a job but were not at work due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Does not include people whose only activity consisted of work around the house or unpaid volunteer work for religious, charitable, and similar organizations.
- **Unemployed**: All civilians 16 years old and over are classified as unemployed if they did not have a job or had a job but not working and were actively looking for work during the last 4 weeks, and were available to accept a job. Also included as unemployed are civilians who did not work at all during the reference week, were waiting to be called back to a job from which they had been laid off, and were available for work except for temporary illness.

TABLE 29

Employment Status Comparison – 2010

Entity	Persons Age 16 and Above	In Labor Force	Not In Labor Force	Civilian Labor Force	Employed	Unemployed	Percent	Armed Forces
Aurora	2,112	1,511	601	1,508	1,476	32	1.5	3
Brule	3,823	2,773	1,050	2,773	2,665	108	2.8	0
Buffalo	1,.290	815	475	815	584	231	17.9	0
Charles Mix	6,696	4,386	2,310	4,372	3,690	412	6.2	14
Davison	15,319	10,762	4,557	10,762	10,391	371	2.4	0
Hughes	13,189	9,898	3,291	9,805	9,669	136	1.0	93
Jerauld	1,750	1,059	691	1,059	1,024	35	2.0	0
Lyman	2,754	1,946	808	1,946	1,725	221	8.0	0
Minnehaha	129,284	97,053	32,231	96,758	92,826	3,932	3.0	295
Pennington	76,239	53,836	22,376	52,500	49,340	3,160	4.1	1,363
Stanley	2,360	1,789	571	1,789	1,702	87	3.7	0
South Dakota	623,566	433,699	189,897	430,311	410,156	20,155	3.2	3,358

Source: U.S. Census Bureau, 2006-2010 American Community Survey, 5-Year Estimates

Table 29 provides an introduction to terminology, along with an annual overview of the employment status of persons. Brule County ranked fifth in unemployment status, with six counties having a higher unemployment rate and four having a lower unemployment rate. In addition, Brule County's unemployment rate was four tenths lower than the State average.

The data in **Table 29** is almost ten years old. **Table 30** presents unemployment data over a twelve-year period in bi-annual increments. The comparative counties have been replaced with the Sioux Falls Metropolitan Statistical Area (MSA) as defined by the U.S. Census Bureau and illustrated in **Figure 27.** Reviewing Brule County and Sioux Falls MSA data provides an opportunity to compare the County to an area experiencing tremendous population and economic growth. The overall State data provides a statistical buffer. The thirteen-year period of 2005-2017 was a time when Brule County's average unemployment rate was within one to two tenths of a percent of the Sioux Falls MSA, with the exception of 2009 when Brule's unemployment rate was almost 1.5% lower than that of the Sioux Falls MSA. There were no years in which the County's unemployment rate exceeded the State average.

FIGURE 27

Sioux Falls Metropolitan Statistical Area (MSA)

Source: U.S. Department of Commerce Bureau of Census 2010 Census

TABLE 30

Labor Statistics – 2005 - 2017

Area	Year	Labor Force	Employed	Unemployed	Unemployment Rate
Brule County	2005	2,861	2,766	95	3.3%
	2007	2,814	2,741	73	2.6%
	2009	2,856	2,756	100	3.5%
	2011	2,710	2,600	110	4.1%
	2013	2,596	2,507	89	3.4%
	2015	2,532	2,464	68	2.7%
	2017	2,455	2,381	74	3.0%
Sioux Falls Metropolitan Statistical Area	2005	12,564	116,483	4,081	3.4%
	2007	127,714	124,543	3,171	2.5%
	2009	129,544	123,156	6,388	4.9%
	2011	134,281	128,513	5,768	4.3%
	2013	138,817	134,408	4,409	3.2%
	2015	144,258	140,504	3,754	2.6%
	2017	149,333	145,182	4,151	2.8%
South Dakota	2005	430,606	414,209	16,397	3.8%
	2007	442,499	430,011	12,488	2.8%
	2009	446,010	423,993	22,017	4.9%
	2011	440,934	420,054	20,880	4.7%
	2013	443,079	426,284	16,795	3.8%
	2015	449,408	435,450	13,958	3.1%
	2017	455,175	440,028	15,147	3.3%

Source: South Dakota Department of Labor, Labor Market Information Center

Previous information dealt with unemployment while the next section examines the employment base within Brule County. The industry classifications within the following tables are provided by the U.S. Census Bureau and are designed to group similar occupations together for the purpose of statistical analysis. The various classifications have been revised in recent years, which may result in shifts from 1990 to 2000 data. **Table 31** identifies the major employment industries within the County as well as their share of the work force. Drastic shifts from 1990 to 2010 may be a statistical issue and should be viewed with caution.

TABLE 31

Brule County Employment by Industry - 1990 - 2010

Industry	1990	2000	2010	% Change 1990-2010
Agriculture/Forest/Fish/Mining	701	400	440	-37.2%
Construction	142	155	175	23.2%
Manufacturing	105	73	86	-18.1%
Wholesale Trade	85	105	79	-7.1%
Retail Trade	210	293	250	19.0%
Trans., Warehouse, & Utility	98	104	84	-14.3%
Information	71	54	43	-39.4%
Finance/Insurance/Real Estate	84	67	105	25.0%
Professional Services	46	67	92	100%
Education/Health/Social Services	676	718	841	24.4%
Arts,Entertain./Rec./Accom./Food	241	251	242	0.41%
Other	44	107	96	118.2%
Public Administration	134	107	132	-1.5%
Total	2,637	2,501	2,665	1.1%

Source: 1990 Census CP-2-43 T146; 2000 Census Table DP-3; U.S. Census Bureau, 2013-2017 American Community Survey

The twenty-year period between 1990 and 2010 was a time when the agriculture, transportation, information, and manufacturing sectors decreased dramatically in employment numbers within the county. The same period saw significant increases in the professional services, finance, and health/educational services.

The data in **Table 32** focuses on counties abutting or near Brule County. This type of information compares the economic diversity of one county to others including those who are seeing growth and those who have become stagnant or are receding. When the share of a county's employment in a specific sector or industry exceeds 15 to 20 percent, it indicates that workers in the county's economy is concentrated in a particular trade or service.

TABLE 32

Employment by Industry Comparison - 2017

Industrial Classification	Aurora		Davison		Charles Mix		Hughes		Jerauld		Lyman		Stanley	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Agriculture/Forest/Fish/Mining	390	26.4	789	19.9	635	6.1	348	3.6	207	20.2	288	16.7	202	11.9
Construction	73	4.9	201	5.1	719	6.9	588	6.1	81	7.9	136	7.9	162	9.5
Manufacturing	86	5.8	105	2.7	1,235	11.9	181	1.9	102	10.0	7	0.4	28	1.6
Wholesale Trade	43	2.9	67	1.7	280	2.7	285	2.9	22	2.1	52	3.0	72	4.2
Retail Trade	160	10.8	518	13.1	1,608	15.5	1,102	11.4	110	10.7	116	6.7	278	16.3
Trans., Warehouse, & Utility	63	4.3	131	3.3	250	2.4	389	4.0	24	2.3	104	6.0	94	5.5
Information	16	1.1	31	0.8	133	1.3	231	2.4	8	0.8	39	2.3	0	0
Finance/Insurance/Real Estate	58	3.9	183	4.6	378	3.6	657	6.8	43	4.2	73	4.2	66	3.9
Professional Services	48	3.3	136	3.4	575	5.5	537	5.6	42	4.1	47	2.7	80	4.7
Education/Health/Social Services	322	21.8	985	24.9	2,471	23.8	1,842	19.1	249	24.3	418	24.2	291	17.1
Arts,Entertain./Rec./Accom./Food	94	6.4	331	8.4	1,376	13.2	1,029	10.6	73	7.1	166	9.6	152	8.9
Other	56	3.8	170	4.3	443	4.3	283	2.9	24	2.3	81	4.7	35	2.1
Public Administration	67	4.5	313	7.9	288	2.8	2,197	22.7	39	3.8	198	115	242	14.2
Total	1,476	100	3,960	100	10,391	100	9,669	100	1,024	100	1,725	100	1,702	100

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Tables 33 and **34** provide employment forecasts for Brule County by utilizing "shift-share" methodology. Constant shift projects consider the shifts that have been occurring in the local economy over the past few years as compared to the state economy. The constant shift factor is then added to the most recent employment figures. The second projection data set was calculated by a constant share theory. This theory assumes that each economic sector will change at the same rate as the sector is projected to change at the State level. The change will result in the community maintaining a constant share of the State's economic activity in each sector.

TABLE 33

Brule County Employment Trends and Projections – 2000-2020

Employment by Industry	2000	2010	% Change 2000-2010	Employment Forecast 2020[1]	New Acres Needed 2020	Employment Forecast 2030[2]	New Acres Needed 2030	Total New Acres Needed 2030
Ag/Forest/Fish/Mining	400	440	10.0%	484	4.4	532	5.5	9.9
Construction	155	175	12.9%	198	2.8	223	3.5	6.3
Manufacturing	73	86	17.8%	101	1.5	119	1.9	3.4
Wholesale Trade	105	79	-24.7%	59	0.0	45	0.0	0.0
Retail Trade	293	250	-14.7%	213	0.0	182	0.0	0.0
Trans., Warehouse, & Utility	104	84	-19.2%	68	0.0	55	0.0	0.0
Information	54	43	-20.4%	34	0.0	27	0.0	0.0
Fin./Insurance/Real Estate	67	105	56.7%	165	3.0	258	3.7	6.7
Professional Services	67	92	37.3%	126	1.7	173	2.1	3.8
Ed./Health/Social Services	718	841	17.1%	985	9.6	1,154	12.0	21.6
Arts/Rec./Accom./Food, Other	251	242	-3.6%	319	0.0	301	0.0	0.0
Public Administration	107	132	23.4%	163	1.5	201	1.9	3.4
Total	2,501	2,665	6.6%	2,841	24.6	3,271	30.7	55.3

Note: Projections are based on Shift[1] and Share[2] analysis comparing Brule County and the State of South Dakota.
Source: 2000 Census DP-3 P.3; 1990 Census CP-2-43 T146

TABLE 34

South Dakota Employment Trends - 2000 - 2010

Employment by Industry	2000	2010	% Change 2000-2010
Ag/Forest/Fish/Mining	30,305	29,841	-1.5%
Construction	23,448	26,665	13.7%
Manufacturing	41,421	41,192	-0.55%
Wholesale Trade	12,431	11,625	-6.5%
Retail Trade	44,829	47,928	6.9%
Trans., Warehouse, & Utility	17,419	17,169	-1.4%
Information	8,033	7,954	-0.98%
Fin./Insurance/Real Estate	27,615	32,576	18.0%
Professional Services	18,624	24,101	29.4%
Ed./Health/Social Services	82,297	96,312	17.0%
Arts/Rec./Accom./Food	30,906	36,121	16.9%
Other	18,986	18,233	-4.0%
Public Administration	18,059	20,439	13.2%
Total	374,373	410,156	9.6%

Source: U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates

Table 35 presents employment information as a social and economic statistic. Brule County has a disproportionate percentage of women in the workforce with children. This situation places a burden on female-headed households who are employed.

TABLE 35

Women in the Work Force - 2000 - 2010

Entity	Female Population Age 16 & Above		% of Women 16 Yrs and Over in Labor Force		% Women Working With Kids Under 6 Yrs		% Women Working With Kids 6-17	
	2000	2010	2000	2010	2000	2010	2000	2010
Brule County	2,049	1,963	63.1%	70.6%	83.5%	86.6%	83.0%	89.2%
South Dakota	293,889	314,274	63.7%	65.5%	76.5%	74.6%	85.8%	63.0%

Source: 2000 Census Summary File 3; U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates

INCOME

There are several factors to consider in obtaining an accurate understanding of local population characteristics. One of these items is wealth or income. Wealth is affected by numerous variables, but for most of the population it is directly tied to income, which is influenced by employment.

The per capita income of a group is calculated by dividing the total income by the population. The per capita income of the previously established comparative entities for the years 2000 and 2010 are shown in **Table 36**. Several counties in the study area have made some strides to "close the gap" in per capita income earnings compared to the State and the Nation. However, some counties have lost ground in terms of comparing the percentage of per capita income to the State and the Nation.

TABLE 36

Per Capita Income Comparisons - 2000 - 2010

Area or Entity	Per Capita Income		Percent of South Dakota		Percent of United States	
	2000	2010	2000	2010	2000	2010
Aurora	13,887	21,291	79.1%	88.3%	64.3%	77.9%
Buffalo	5,213	11,410	29.7%	47.3%	24.1%	41.7%
Charles Mix	11,502	17,403	65.5%	72.2%	53.3%	63.7%
Davison	17,879	22,794	101.8%	94.5%	82.8%	83.4%
Hughes	20,689	28,236	117.8%	117.1%	95.8%	103.3%
Jerauld	16,856	24,942	96.0%	103.5%	78.1%	91.2%
Lyman	13,862	16,930	78.9%	70.2%	64.2%	61.9%
Minnehaha	20,713	26,392	117.9%	109.5%	96%	96.6%
Pennington	18,938	25,894	107.8%	107.4%	87.7%	94.7%
Stanley	20,300	27,435	115.6%	113.8%	94.0%	100.4%
Brule	14,874	19,779	84.7%	82.0%	68.9%	72.4%
Chamberlain	17,018	21,015	96.9%	87.2%	78.8%	76.9%
South Dakota	17,562	24,110	X	X	81.4%	88.2%
United States	21,587	27,334	122.9%	113.4%	X	X

Source: US Department of Commerce, Bureau of Economic Analysis, Table C3
U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates

Table 36 compares Brule County's per capita income to the population's base within the State of South Dakota and the United States. Brule County's per capita income decreased by almost three percent when compared to the State of South Dakota and increased nearly four percent of the United States' for the ten-year period of 2000-2010.

Table 37 provides the median family income for Brule County along with the comparative counties for the 40-year period of 1970-2010. Median family income is a statistical method which identifies the mid-point in a range of values. In looking at Brule County for the year 2010, the median family income is $48,277 which

means that exactly 50% of the families within the County had an income higher than this and the other 50% had incomes of less. The data within this table should be analyzed at two levels:

1) As individual counties; and
2) Compared between entities at face value as shown in **Table 37**.

In 1990, four of the ten comparative counties had median family incomes greater than Brule County; a number which increases to 5 in 2000 and decreases back to 3 in 2010. The difference is that in 1990 the families in Stanley County received lower incomes, but in 2000 the median family income within Stanley County increased significantly. The exponential increase can most likely be attributed to increased development and a migration of higher income families to the Fort Pierre side of the Missouri River. Brule County also had a significant increase in 2010.

TABLE 37
Median Family Income - 1970 - 2010

Area	1970	1980	1990	2000	2010
Aurora County	$9,500	$14,639	$14,167	$27,926	$9,500
Buffalo County	$11,812	$20,512	$30,688	$35,808	$11,812
Charles Mix County	$16,164	$27,249	$44,357	$41,867	$16,164
Davison County	$20,484	$33,863	$51,235	$53,501	$20,484
Hughes County	$12,781	$22,784	$36,076	$40,607	$12,781
Jerauld County	$12,863	$25,800	$32,028	$36,323	$12,863
Lyman County	$20,535	$34,286	$52,031	$51,799	$20,535
Minnehaha County	$17,364	$29,570	$44,796	$46,849	$17,364
Pennington County	$16,996	$26,351	$47,197	$51,875	$16,996
Stanley County	$13,037	$26,629	$37,361	$48,277	$13,037
Brule County	$9,500	$14,639	$14,167	$27,926	$9,500
Chamberlain	$ 8,978	$ 15,068	$ 29,295	$ 34,487	$ 46,136
Kimball		$ 12,361	$ 22,500	$ 37,813	$ 56,563
Pukwana		$ 15,417	$ 23,750	$ 31,667	$ 47,857
South Dakota	$ 25,572	$ 26,799	$ 27,602	$ 43,237	$ 46,369
United States	$30,169	$33,374	$35,225	$50,046	$51,914

Source: 2000 Census; US Dept. of Commerce, Bureau of Economic Analysis, Table C2
U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates

Table 37 provides a comparison of the median family incomes within eleven counties, the City of Chamberlain, the state, and the nation. Brule County rates well against the state figures in 1990 but is much lower when judged against the State figures in 2000. The median of Brule County exceeded that of the State in 2010.

Tables 38 and **39** are based on the establishment of family income ranges and illustrating the number of families within each range. In the case of Brule County, the separation of the City of Chamberlain and the County provides an even more detailed picture of family income distribution.

TABLE 38

Family Income Distribution - 2000

Entity	Under $10,000	$10,000-$14,999	$15,000-$24,999	$25,000-$34,999	$35,000-$49,999	$50,000-$74,999	$75,000-$99,999	$100,000-$149,999	$150,000-$199,999	$200,000 & Above
Aurora	46	42	142	156	220	161	42	18	2	0
Buffalo	180	34	70	45	51	30	1	5	0	2
Charles Mix	329	183	367	447	396	433	102	42	11	0
Davison	263	274	504	736	1,013	1,193	484	188	60	100
Hughes	137	156	368	519	914	1,260	571	252	89	84
Jerauld	66	56	59	136	149	137	35	18	4	5
Lyman	131	82	163	157	191	179	52	19	13	16
Minnehaha	1,210	975	3,194	4,286	8,036	10,866	4,989	3,045	697	597
Pennington	1,171	1,093	2,834	3,239	5,222	5,247	2,505	1,342	383	454
Stanley	33	37	86	112	163	215	83	27	19	15
Brule	59	88	189	238	313	279	85	51	9	7
Chamberlain	15	21	82	79	141	140	42	33	9	4
Kimball	4	12	25	40	52	35	10	7	0	2
Pukwana	0	6	18	13	25	8	2	0	0	0
South Dakota	11,559	9,483	24,356	28,004	42,797	46,048	17,953	9,898	2,507	2,850
County Average*	138	106	216	283	379	432	162	69	23	25

*Minnehaha and Pennington Counties are not included in average computation.

Source: U.S. Census Bureau, Census 2000 Summary File 3

In 2000 32.4% of families in Brule County had incomes of $15,000-$34,999. Incomes within the same range include 19.7% of the families in Minnehaha and 26.9% of families throughout the State.

TABLE 39

Family Income Distribution - 2010

Entity	Under $10,000	$10,000-$14,000	$15,000-$24,999	$25,000-$34,999	$35,000-$49,999	$50,000-$74,999	$75,000-$99,999	$100,000-$149,999	$150,000-$199,999	$200,000 & Above
Aurora	18	11	55	84	125	229	82	71	14	21
Brule	58	62	78	150	163	545	163	130	18	5
Buffalo	78	50	57	92	43	59	17	29	5	0
Charles Mix	170	125	229	311	389	472	311	156	17	61
Davison	116	70	471	560	1,079	1,034	836	561	137	119
Hughes	214	86	360	398	302	1,066	1,018	756	191	136
Jerauld	33	34	63	68	156	125	41	52	26	22
Lyman	74	60	97	155	179	210	87	82	11	4
Minnehaha	1,338	985	3,082	3,509	5,839	10,839	7,916	5,695	1,651	1,574
Pennington	1,277	671	1,998	2,995	3,943	6,196	4,209	3,162	676	1,123
Stanley	44	19	45	15	114	153	99	82	55	38
Chamberlain	41	39	9	67	73	273	121	34	0	5
Kimball	4	1	31	19	35	91	20	15	0	0
Pukwana	4	2	9	11	9	12	0	11	0	0
South Dakota	8,237	5,910	16,853	20,987	31,304	51,510	33,778	24,670	6,091	6,539
County Average *	89	57	162	214	283	433	295	212	53	45

*Minnehaha and Pennington Counties are not included in average computation.

Source: U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates

The data parameters in **Table 39** were adjusted for inflation and cost of living increases. A comparison of family incomes within the $15,000-$34,999 range shows Minnehaha County with 15.5%, the State at 18.4% and Brule County falls between the two at 16.6%. Family incomes within Brule County have not kept pace

with Minnehaha County. **Table 40** identifies the average earnings in general, not tied to a specific class or industry.

TABLE 40

Average Earnings Per Job by County – 2009 - 2016

County	2009	2010	2011	2012	2013	2014	2015	2016
Aurora	$35,993	$35,327	$37,934	$38,032	$40,042	$42,238	$44,793	$49,699
Buffalo	$34,370	$34,928	$35,568	$37,169	$33,599	$32,990	$33,791	$33,088
Charles Mix	$37,399	$38,224	$38,433	$39,549	$40,336	$42,972	$43,961	$46,830
Davison	$45,537	$42,205	$40,860	$42,187	$40,727	$42,841	$44,524	$45,868
Hughes	$44,413	$45,482	$48,137	$48,713	$49,832	$49,227	$48,418	$49,797
Jerauld	$35,284	$36,774	$44,315	$38,136	$39,796	$47,478	$49,457	$65,587
Lyman	$30,300	$32,959	$38,311	$39,865	$43,027	$42,882	$43,911	$41,434
Minnehaha	$44,752	$46,143	$46,723	$46,358	$46,508	$47,984	$48,117	$49,838
Pennington	$44,462	$45,335	$46,455	$47,636	$46,687	$49,054	$49,143	$50,804
Stanley	$38,237	$39,478	$40,338	$48,928	$49,266	$50,745	$50,710	$51,885
Brule	$32,734	$33,475	$39,276	$39,854	$39,692	$41,394	$41,931	$43,431
South Dakota	$44,228	$43,690	$45,078	$46,233	$46,910	$48,106	$48,529	$50,104

Source: 2006-2010 and 2012-2016 American Community Survey 5-Year Estimates

In 2009 Brule County's average earning was less than the state figure and tenth when compared to the identified counties. In 2016, Brule County's average earning remained less than the state figure and ninth amongst the counties identified. **Table 41** lays out the poverty statistics for a 20-year period from 1990-2010.

TABLE 41

Number and Percent in Poverty - 1990 - 2010

Area or Entity	1990 Persons Below	% Below Poverty	2000 Persons Below	% Below Poverty	2010 Persons Below	% Below Poverty
Aurora	433	15.0%	327	11.4%	218	8.2%
Buffalo	785	45.1%	1,152	56.9%	949	49.3%
Charles Mix	2,785	31.4%	2,462	26.9%	2,132	24.0%
Davison	2,533	15.0%	2,068	11.5%	2,556	13.8%
Hughes	1,517	10.4%	1,255	8.0%	1,525	9.3%
Jerauld	434	18.2%	464	20.6%	222	10.9%
Lyman	894	24.7%	941	24.3%	699	18.8%
Minnehaha	9,611	8.0%	10,790	7.5%	15,518	9.7%
Pennington	10,285	12.9%	9,967	11.5%	13,423	14.0%
Stanley	303	12.4%	238	8.7%	342	11.9%
Brule	962	18.5%	741	14.3%	430	9.1%
South Dakota	106,305	15.90%	95,900	13.2%	105,819	13.7%
United States	31,742,864	13.0%	33,899,812	12.0%	40,917,513	13.8%

Sources: U.S. Census Bureau, 2006-2010 American Community Survey 2000 Census, CP-2-431994; 1990 Census, CP-2-43;

The percent of Brule County residents living at or below poverty level has decreased by 9.4% from 1990-2010.

Another measure of an area's socioeconomic status is a review of participation levels in the Food Stamp Program as shown in **Table 42**. **Table 43** identifies 430 people who were categorized as being of poverty status in 2010. **Table 43** has 35 households who participated in the food stamp program during 2015.

TABLE 42

Food Stamp Participation Comparison - 2015 - 2017

Entity	2015			2017		
	Number of Households	Number Of Recipients	Avg. $ Per Month Per Recipient	Number Of Households	Number Of Recipients	Avg. $ Per Month Per Recipient
Aurora	43	114	$107	44	102	$122
Buffalo	343	943	$104	306	843	$103
Charles Mix	846	2,206	$109	789	1,973	$113
Davison	1,039	2,089	$142	989	1,951	$143
Hughes	744	1,610	$132	727	1,579	$130
Jerauld	31	63	$140	23	53	$123
Lyman	265	749	$101	280	803	$95
Minnehaha	9,354	20,330	$131	8,790	18,684	$132
Pennington	6,371	14,267	$127	6,005	13,317	$127
Stanley	64	159	$115	64	160	$113
Brule	229	457	$142	224	472	$134
South Dakota	43,832	99,759	$125	41,982	95,050	$125

Source: SNAP Data and Statistics January 2015 and January 2017

The data within **Table 43** tracks the Food Stamp Program participation level for the months of January and July in the years 2015-2018. The number of persons utilizing the program fluctuates greatly from year to year. The number of participants has a direct relationship to the County's economy and major employment shifts.

TABLE 43

Brule County Food Stamp Participation – January & July 2015-2018

Data Sets	January 2015	July 2015	January 2016	July 2016	January 2017	July 2017	January 2018
Total Persons	457	430	444	488	472	473	444
Total Dollars	*	*	*	$58,463	$55,631	$57,674	$52,958
Average Per Person	$142	$139	$136	$120	$118	$122	$119

Note: * No value reported

Source: SD Dept of Social Services SNAP Data and Statistics

Table 44 presents data which factors earnings, poverty, and population. Data was calculated by a "Dependency Ratio Formula" which is as follows:

$$\frac{\text{Persons Under Age 15 + Persons 65 and Over (100)}}{\text{Total Persons Age 15 to 64}}$$

TABLE 44

County Senior and Youth Dependency Ratios - 1970 - 2010

Entity	1970	1980	1990	2000	2010
Aurora County	78.2	69.5	78.9	73.1	69.8
Buffalo County	92.8	78.6	85.4	67.8	68.0
Charles Mix County	81.1	74.9	79.9	77.8	73.5
Davison County	74.6	61.8	40.9	58.3	57.9
Hughes County	69.2	56.2	37.2	57.1	49.6
Jerauld County	81.6	76.6	83.7	71.3	76.1
Lyman County	76.6	69.8	71.0	66.7	62.7
Minnehaha County	68.4	50.9	34.8	48.8	47.5
Pennington County	64.3	48.8	35.3	51.0	51.9
Stanley County	69.0	60.4	57.1	49.0	54.2
Brule County	81.1	65.5	81.0	69.1	61.5
Chamberlain	80.1	76.1	72.7	59.8	56.5
South Dakota	71.7	59.1	26.2	56.7	54.1
United States	62.2	32.2*	34.1	33.8	49.0

Note: *National figure denotes youth under the age of 14. All other figures are under the age of 15.
Source: 1970, 1980, 1990, 2000, 2010 US Census; Statistical Abstract of the United States, 1985, 105th Edition, Population Table No. 27

The dependency ratio in Brule County is 61.5, signifying that just over one-third of the population is of working age while just under two-thirds are those traditionally not of working age; the lower the dependency ratio the greater the number of residents in the workforce and a lesser number out of the workforce. In theory, one-third of the population is working to "support" the dependent population in Brule County.

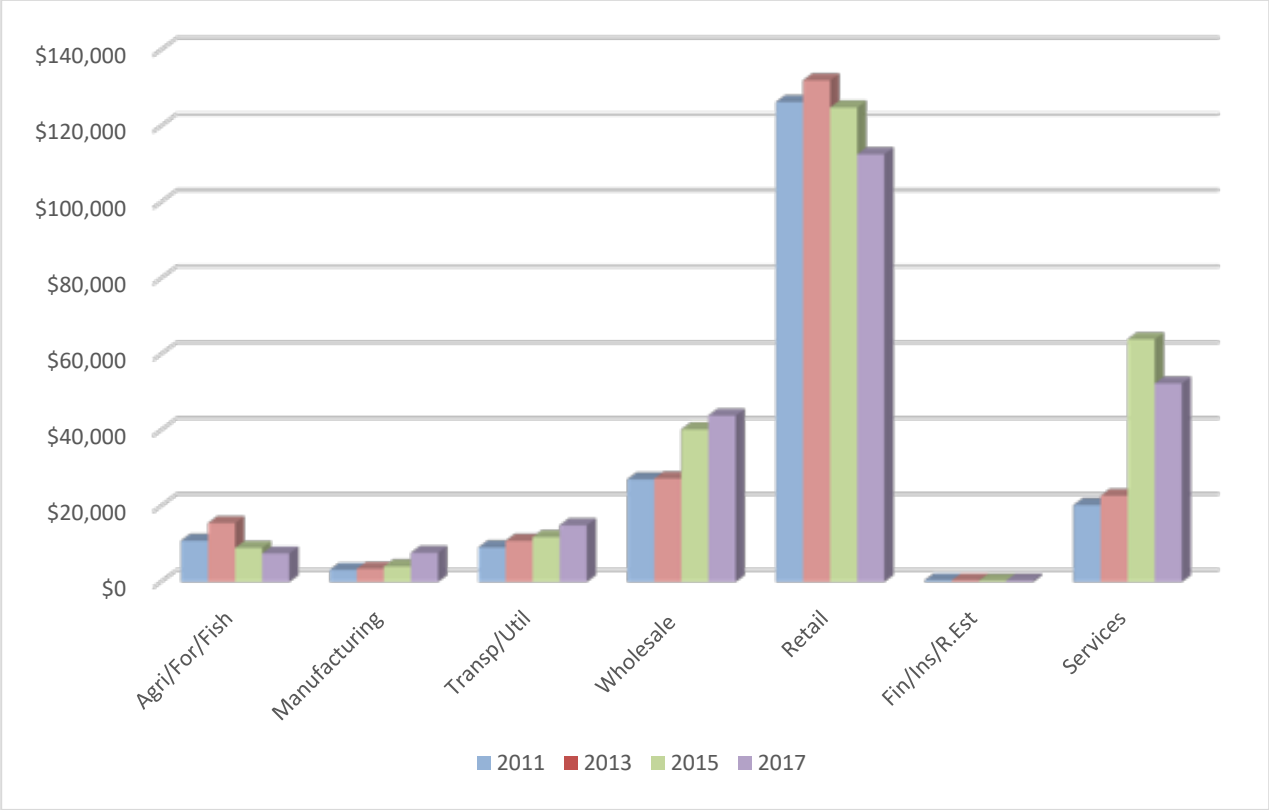
ECONOMY

The term "economy" is not autonomous in nature. The economy influences and is influenced by the same issues. The intent of this section is to provide an overview of the economy within Brule County. It will focus on the primary economic activities and factors.

The state of an economy is measured with numerous factors one of which is sales. Sales may be used to measure the relative "health" of an economy, primarily as it is perceived by the general public. Consumers reflect their confidence in an economy through spending habits.

Figure 28 illustrates the recent trends in general gross sales within Brule County. The data is presented in two-year increments. The strongest period in recent history, with regards to retail, was 2013 while 2015 was the strongest for the services sector.

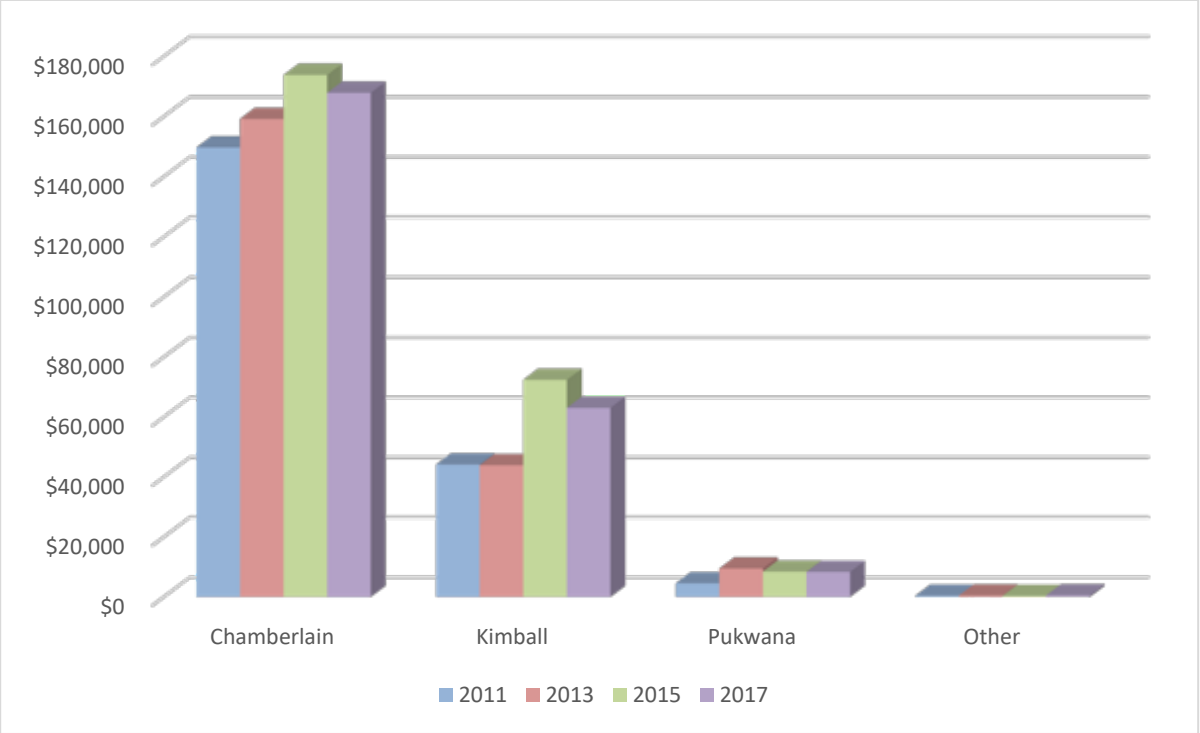
FIGURE 28
Brule County – General Gross Sales ($000's)
2011-20017



Source: SD Dept of Revenue, South Dakota Sales and Use Tax Report 2011-2017

The economy of a county includes all activity within the respective communities as well as the rural areas. The impact of the municipalities within the County for the seven-year period of 2011-2017 is shown in **Figure 29**.

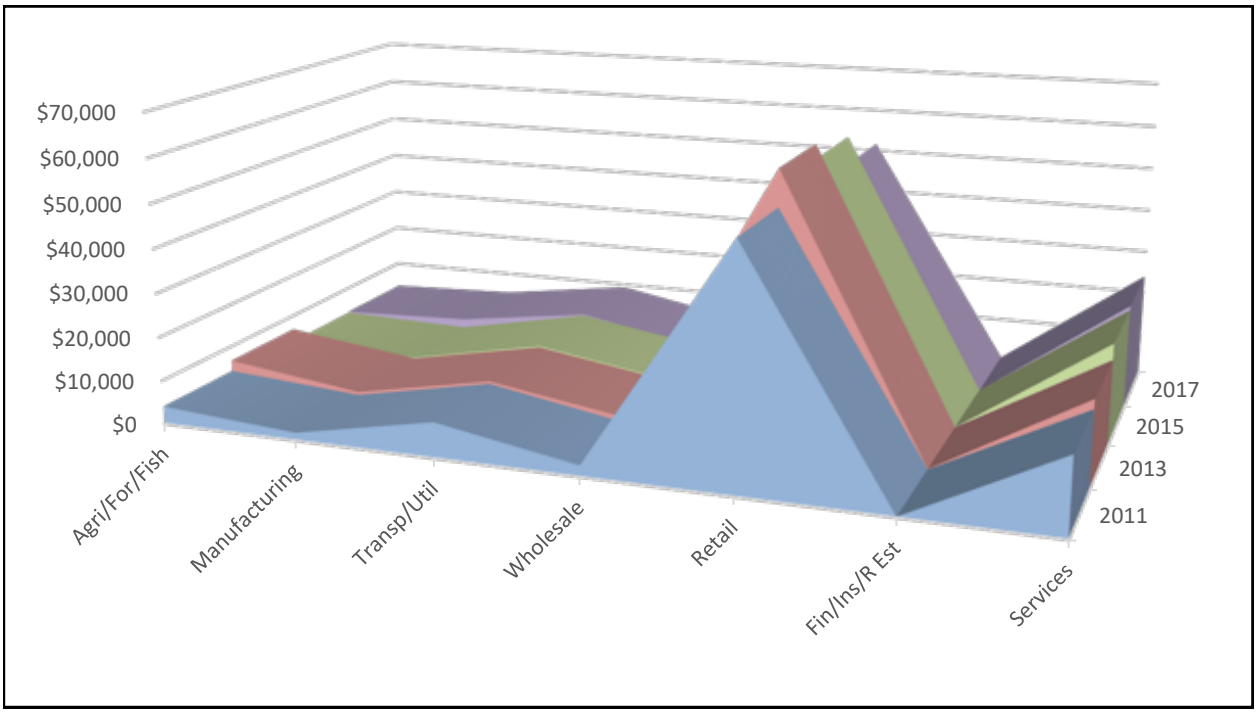
FIGURE 29
Brule County – Cities and Towns
General Gross Sales ($000's)
2011-2017



Source: SD Dept of Revenue, South Dakota Sales and Use Tax Report 2011-2017

Gross figures provide an overall view of a region's economic vitality. Taxable sales numbers may be more important to the general public, as these figures have a direct impact upon individual residents. **Figure 30** illustrates the taxable sales for a seven-year period within Brule County.

FIGURE 30
Brule County - Taxable Sales ($000's)
2011-2017



Source: SD Dept. of Revenue, 2011, 2013, 2015, 2017 Sales and Use Tax Report

The importance of retail sales upon Brule County's economy becomes apparent when viewing the taxable sales data. In addition to retail sales, the top three sectors include services, agriculture, and transportation. These sectors have led in taxable sales since 1996 and are most likely to continue for the foreseeable future.

In addition to sales figures, the impact of new business start-ups and closing can be significant, especially to the economies of smaller entities. The ratios of business openings to closing are tracked to indicate the vitality of an economy. The information in **Tables 45 and 46** includes statistics for the comparative counties and provides a ratio in addition to the raw data for two periods: 2011-2012 and 2015-2016. The data reveal a couple of interesting comparisons. The net establishment and employment changes were positive between 2011 and 2012 while there was no establishment change and a decrease in employment between 2015 and 2016. In 2011-2012, there wasn't a significant change in employment in any individual sector of the economy. However, the Accommodation and Food Services sector experienced a net loss of 40 jobs in 2015-2016.

TABLE 45

Business Openings and Closings – 2011-2012

NAICS DESCRIPTION	INITIAL YEAR (2011)		NET CHANGE ('11-'12)		ESTABLISHMENT BIRTHS (2011-2012)		ESTABLISHMENT DEATHS ('11-'12)		ESTABLISHMENT EXPANSIONS ('11-'12)		ESTABLISHMENT CONTRACTIONS (2011-2012)	
	NUMBER OF ESTABLISHMENTS	EMP	CHANGE IN ESTABLISHMENTS	CHANGE IN EMPLOYMENT	NUMBER OF ESTABLISHMENTS	CHANGE IN EMPLOYMENT	NUMBER OF ESTABLISHMENTS	CHANGE IN EMPLOYMENT	NUMBER OF ESTABLISHMENTS	CHANGE IN EMPLOYMENT	NUMBER OF ESTABLISHMENTS	CHANGE IN EMPLOYMENT
Total	189	1,783	9	2	16	52	7	0	63	118	41	-129
Agriculture, forestry, fishing and hunting	4	0	0	0	0	0	0	0	0	0	1	0
Mining, quarrying, and oil and gas extraction	1	0	0	0	0	0	0	0	0	0	0	0
Utilities	3	12	0	0	0	0	0	0	0	0	0	0
Construction	21	60	0	5	2	0	2	0	7	0	3	0
Manufacturing	4	24	-1	1	0	0	1	0	3	4	0	0
Wholesale trade	10	0	1	0	2	0	1	0	3	0	0	0
Retail trade	37	285	1	-2	2	0	1	0	15	32	8	-30
Transportation and warehousing	8	24	0	1	1	0	1	0	1	0	2	0
Information	2	0	0	0	0	0	0	0	1	0	1	0
Finance and insurance	13	71	1	2	1	0	0	0	3	0	3	0
Real estate and rental and leasing	2	0	1	0	1	0	0	0	0	0	0	0
Professional, scientific, and technical services	14	44	2	-4	2	0	0	0	0	0	4	0
Management of companies and enterprises	1	0	0	0	0	0	0	0	1	0	0	0
Administrative and support and waste management and remediation services	4	0	1	0	1	0	0	0	1	0	2	0
Educational services	1	0	0	0	0	0	0	0	0	0	1	0
Health care and social assistance	22	469	1	9	1	0	0	0	7	23	6	-16
Arts, entertainment, and recreation	3	0	1	0	1	0	0	0	2	0	1	0
Accommodation and food services	19	221	1	-10	1	0	0	0	11	20	7	-44
Other services (except public administration)	20	85	0	9	1	0	1	0	8	0	2	0

Source: US Census, 2011-12 Business Dynamics Statistics Datasets

TABLE 46

Business Openings and Closings – 2015-2016

NAICS DESCRIPTION	INITIAL YEAR (2015)		NET CHANGE (2015-2016)		ESTABLISHMENT BIRTHS (2015-2016)		ESTABLISHMENT DEATHS (2015-2016)		ESTABLISHMENT EXPANSIONS (2015-2016)		ESTABLISHMENT CONTRACTIONS (2015-2016)	
	NUMBER OF ESTABLISHMENTS	EMP	CHANGE IN ESTABLISHMENTS	CHANGE IN EMPLOYMENT	NUMBER OF ESTABLISHMENTS	CHANGE IN EMPLOYMENT	NUMBER OF ESTABLISHMENTS	CHANGE IN EMPLOYMENT	NUMBER OF ESTABLISHMENTS	CHANGE IN EMPLOYMENT	NUMBER OF ESTABLISHMENTS	CHANGE IN EMPLOYMENT
Total	200	1,887	0	-34	16	68	16	-59	45	77	57	-120
Agriculture, Forestry, Fishing and Hunting	2	0	1	0	1	0	0	0	1	0	0	0
Mining, Quarrying, and Oil and Gas Extraction	1	0	0	0	0	0	0	0	0	0	1	0
Utilities	2	0	0	0	0	0	0	0	1	0	1	0
Construction	21	63	-1	4	1	0	2	0	6	11	5	-6
Manufacturing	4	29	1	1	2	0	1	0	0	0	2	0
Wholesale Trade	13	128	-1	14	1	0	2	0	3	6	5	-8
Retail Trade	38	269	-2	-18	0	0	2	0	8	11	7	-11
Transportation and Warehousing	4	20	0	0	2	0	2	0	1	0	1	0
Information	2	0	0	0	0	0	0	0	0	0	1	0
Finance and Insurance	15	80	0	0	0	0	0	0	2	0	3	0
Real Estate and Rental and Leasing	2	0	0	0	1	0	1	0	0	0	0	0
Professional, Scientific, and Technical Services	15	54	-1	-8	1	0	2	0	1	0	5	-7
Management of Companies and Enterprises	1	0	0	0	0	0	0	0	1	0	0	0
Administrative and Support and Waste Management and Remediation Services	5	34	0	4	0	0	0	0	1	0	1	0
Educational Services	1	0	0	0	0	0	0	0	1	0	0	0
Health Care and Social Assistance	21	407	1	4	2	0	1	0	6	8	5	-9
Arts, Entertainment, and Recreation	5	17	0	-1	1	0	1	0	0	0	2	0
Accommodation and Food Services	25	294	0	-40	2	0	2	0	8	16	13	-53
Other Services (except Public Administration)	22	99	2	1	2	0	0	0	5	3	5	-8
Industries not classified	1	0	0	0	0	0	0	0	0	0	0	0

Source: US Census, 2015-16 Business Dynamics Statistics Datasets

RECREATION AND TOURISM

Tourism is an important economic activity throughout the State, region, and County. There are numerous organizations such as multi-county and local tourism organizations in addition to the South Dakota Department of Tourism and State Development who actively promote visitor attractions and services. Outdoor recreation, primarily camping and water recreation within Brule County, is an important component of regional tourism. There is an increased interest in cultural attractions and convention business thereby increasing visitor impact. While the County is currently not home to a "destination resort," the area campgrounds and Cedar Shore Resort could "hold" visitors for several days at a time. The data in **Table 47** identifies 12 major visitor attractions within the state along with visitation numbers for five years; note the large number of persons utilizing the area campgrounds.

TABLE 47
South Dakota Average Annual Attraction Visitation

Attraction	Average Annual Visitors
Mount Rushmore National Monument	2,200,000
Wind Cave National Park	630,000
Jewel Cave National Monument	145,000
Fort Sisseton State Park	60,000
Badlands National Park	950,000
Lewis & Clark Recreation Area	760,000
Minuteman Missile Site	960,000
Custer State Park	1,700,000
Corn Palace	500,000
Story Book Land	235,000

Source: SD Dept of Tourism, 2005 Annual Report

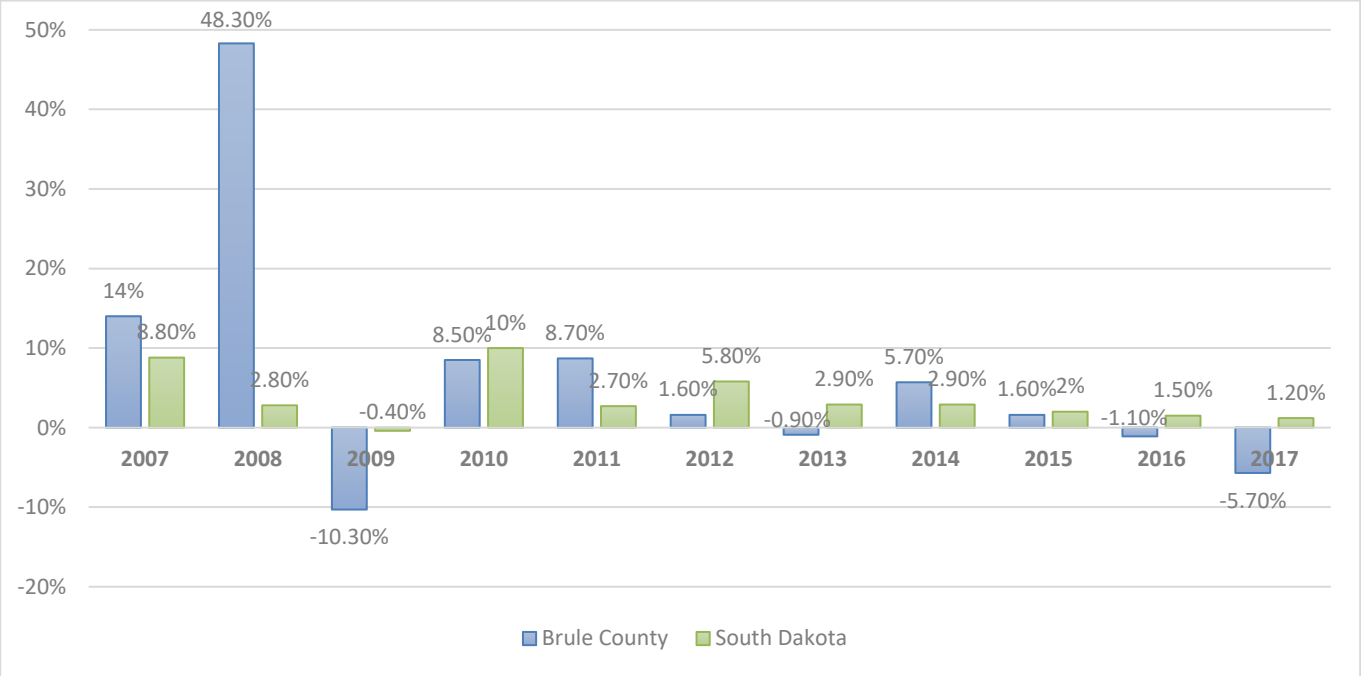
These facilities have resulted in numerous other visitor service businesses such as convenience stores and specialty shops. Communities are viewing conventions as a means of bolstering the "shoulder" tourism seasons (late fall, winter and early spring.) The planning associated with convention events makes community organization essential. Having a local point of contact is vital in competing for even small conventions. The exact impact of tourism upon the local economy is difficult to calculate, yet the South Dakota Department of Tourism has implemented a system to reflect the effect of tourism upon the State, regions, and individual counties. **Figures 31** and **32** identify an educated calculation of tourism's annual impact upon the County's economy along with past trends.

The future of regional tourism appears bright if the visitor industry continues to cooperate. The County's location abutting the Missouri River and Interstate 90 affords numerous opportunities not available to many areas. Making tourism an economic development priority should elevate the issue beyond the perceived interests of a select group of businesses. Public awareness is a first step toward community support.

FIGURE 31

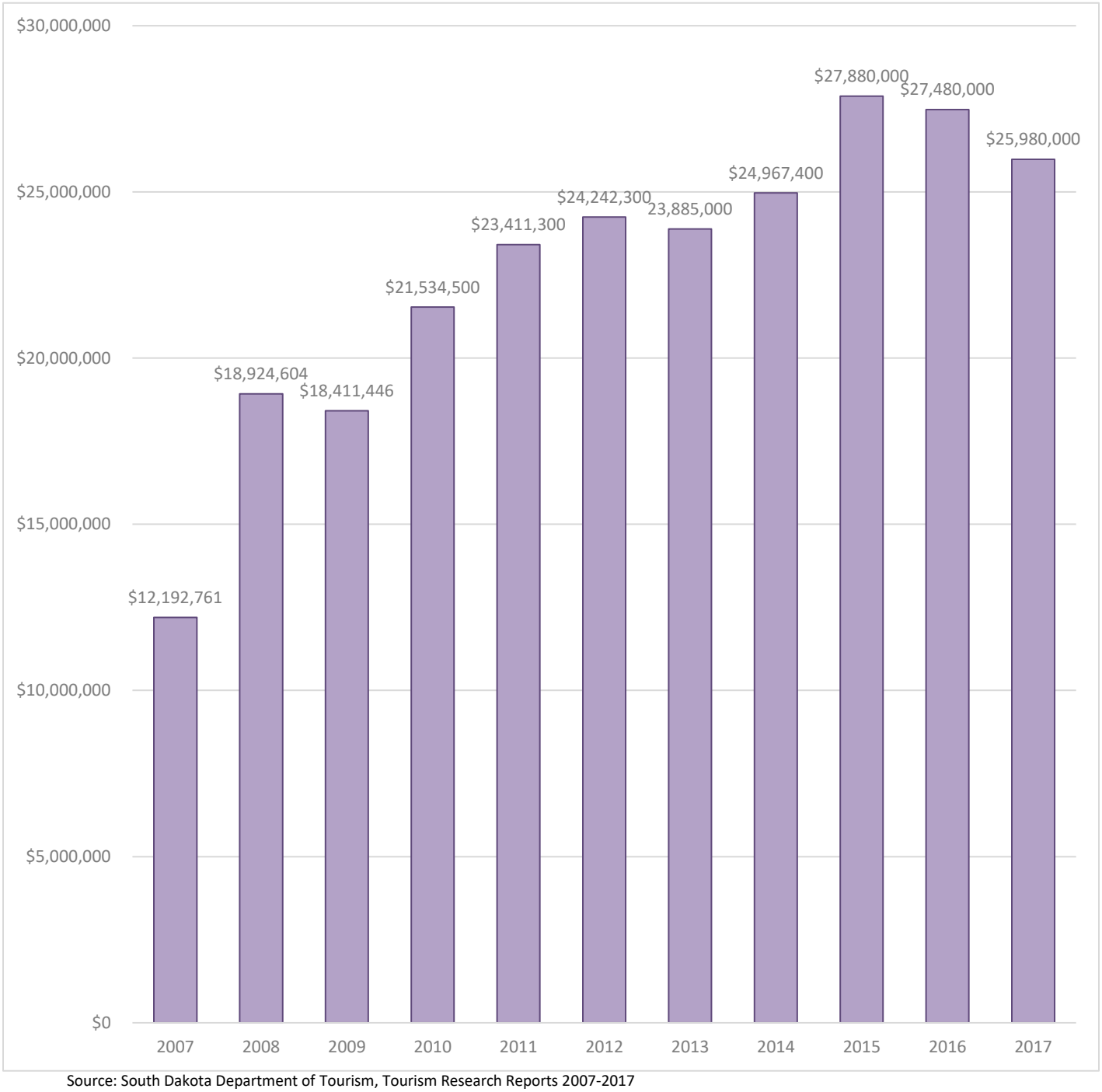
Brule County Compare to Statewide 2007-2017

Annual Change Comparison of Economic Impact of the Vacation Travel Industry



Source: South Dakota Department of Tourism, Tourism Research Reports 2007-2017

FIGURE 32
Economic Impact of the Vacation Travel Industry
2007-2017 Estimated Visitor Sales



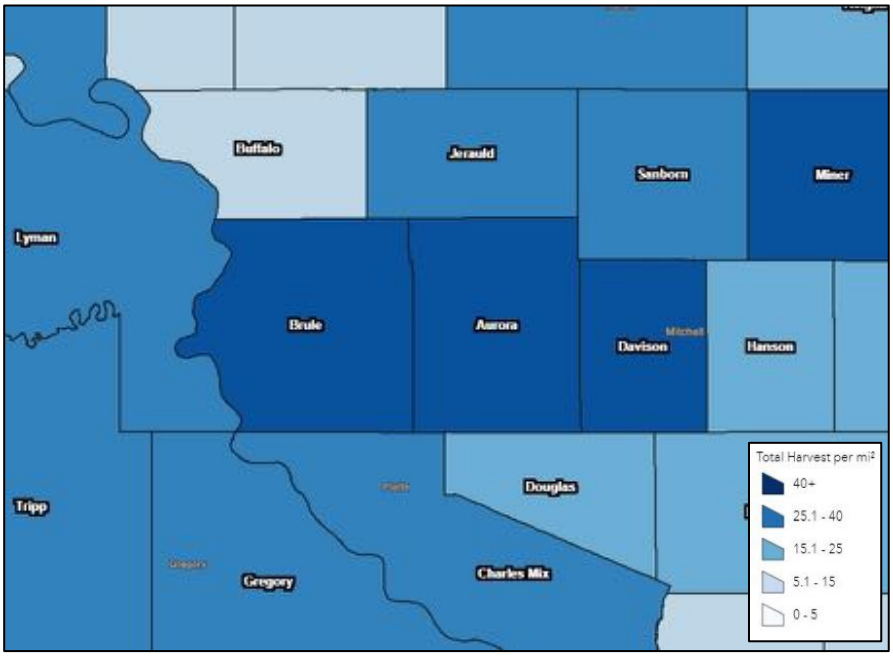
Source: South Dakota Department of Tourism, Tourism Research Reports 2007-2017

Visitor spending reflects lodging, food and beverages, attractions and miscellaneous retail items. Lodging and food and beverages represent key spending sectors in which vacation travelers bear a direct spending impact. Taking the direct spending in these sectors likely made by vacation travelers as a base, the balance of the spending is assumed to be a constant ratio of this base.

South Dakota's Game, Fish, and Parks (GFP) commissioned a study of fishing, hunting, trapping, wildlife viewing, boating, and state park visitation to estimate the level of activity and economic contributions they make to the state's economy. Drawing from license sales records and survey-based data sources, this report presents economic contributions based on retail spending in South Dakota attributable to these activities. Altogether, the lands, waters and wildlife resources managed by GFP directly served at least 7.5 million people in 2016. In the course of all that activity, participants spent over $1.33 billion in South Dakota.

Figure 33 illustrates the concentration of pheasants in Davison, Aurora and Brule counties. This region features an abundant level of pheasants, over 50 birds per square mile, that attract visitors from out-of-state.

Figure 33 – Pheasant Harvest per Square Mile



Source: SD Game Fish & Parks

The richness of pheasants in **Figure 33** translates to **Table 48,** which shows the impact of pheasant hunting in Davison County. The concentration of hunters in the county has decreased slightly, but total spending from non-resident and resident hunters have generally increased.

Table 48
Pheasant Harvest and Economic Impact

Brule County -	2012	2018
Resident Harvest	18,264	11,060
Nonresident Harvest	42,916	44,255
Total Hunters per mi²	8.23	8.0
Total Harvest per mi²	74.7	65.4
Nonresident dollars spent:	$10.03 million	$10.65 million
Resident dollars spent:	$1.2 million	$2.1 million

Source: SD Game Fish & Parks

In the 1900s hunting seasons established by the South Dakota Department of Game, Fish and Parks Commission allowed deer populations to recover from historic lows. Deer hunting seasons have occurred regularly since the 1950s, with deer hunters harvesting approximately 95,000 deer during the recent record year of 2010.

White-tailed deer and mule deer are the most highly sought after big game species in South Dakota and throughout North America. Hunting remains the number one tool for managing deer populations across South Dakota and harvest strategies are intended to ensure the well-being of the species and its habitat while maintaining populations at levels compatible with human activity and land use. **Figure 34** illustrates the locations in Brule County where East River Firearm Deer Harvests are reported. **Table 49** shows the detailed harvest numbers for the County.

Figure 34 – Deer Harvest Reporting Areas

Source: SD Game Fish & Parks

Table 49 – Deer Harvest Statistics

	Firearms			Archery
	Unit 13A	Unit 13L	Unit 13P	13A
Deer Per 100 sq-mi	55	214	5	4.26
Whitetail Buck Adults	244	7	0	21
Whitetail Buck Fawns	12	0	8	2
Whitetail Doe Adults	169	0	35	4
Whitetail Doe Fawns	12	0	2	2
Mule Buck Adults	24	7	0	6
Mule Buck Fawns	0	0	0	0
Mule Doe Adults	4	0	0	1
Mule Doe Fawns	0	0	0	0
Total Deer Harvested	465	14	44	36
Area (sq-mi)	839.74	6.54	839.74	845.81

Source: SD Game Fish & Parks

AGRICULTURE

While agriculture is not directly identified as a major player in the "employment" or "income" categories, nor listed as a significant generator of taxable sales or jobs, it remains an important part of the state, regional, and local economies.

The United States Department of Agriculture prepares the Census of Agriculture every five years. The report and data are available for the 2017 census. The next census will be released in 2022. The following two tables illustrate two significant trends in the agriculture sector. **Table 50** illustrates the decreasing number of operating farms dating back to 1974; although, there is a slight upward trend from 2007-2017.

TABLE 50
Number of Farms - 1978 - 2017

Entity	1978 Farms	1982 Farms	1987 Farms	1992 Farms	1997 Farms	2002 Farms	2007 Farms	2012 Farms	2017 Farms
Aurora	501	480	496	438	421	401	379	442	392
Buffalo	101	94	118	83	77	73	86	78	68
Charles Mix	922	884	830	796	735	755	693	759	671
Davison	508	481	464	462	429	481	406	427	463
Hughes	244	252	297	256	287	258	305	338	315
Jerauld	362	315	305	282	276	272	239	233	244
Lyman	437	424	437	421	414	420	443	430	414
Minnehaha	1,490	1490	1,382	1,262	1,125	1,209	1,194	1,157	1,023
Pennington	570	577	614	636	637	696	655	599	656
Stanley	177	167	196	198	194	166	165	183	172
Brule	455	441	437	419	382	365	370	407	394
South Dakota	39,655	37,148	36,376	34,057	31,284	31,736	31,169	31,989	29,968

Source: USDA-NASS Census of Agriculture 1974 – 2012, South Dakota Agriculture Bulletins 62 and 63 June 2002 and 2003

A general decrease in the overall farm numbers leads to a decrease in farms raising livestock such as cattle and hogs. The data in **Table 51** details the number of farms raising cattle in those counties previously identified as similar to Brule County. There are a few examples where the number of facilities may have increased in recent years. However, the declining numbers appear to be a statewide trend.

TABLE 51
Number of Farms Raising Cattle - 1978 - 2017

Entity	1978	1982	1987	1992	1997	2002	2007	2012	2017
Aurora	414	387	365	349	310	253	214	254	194
Buffalo	85	84	94	64	58	47	54	40	44
Charles Mix	764	731	631	603	569	493	389	378	336
Davison	389	362	289	294	282	264	219	187	181
Hughes	143	153	172	156	167	115	117	133	116
Jerauld	291	255	237	219	226	172	145	131	132
Lyman	303	289	273	284	283	215	180	172	184
Minnehaha	953	922	728	695	559	525	463	437	344
Pennington	453	439	424	431	444	431	369	325	360
Stanley	120	120	123	131	134	105	101	108	102
Brule	387	356	340	330	287	265	246	255	224
South Dakota	28,120	27,000	23,998	22,576	20,502	17,983	15,667	15,583	13,928

Source: USDA-NASS Census of Agriculture 1974 – 2012, South Dakota Agriculture Bulletins 62 and 63 June 2002 and 2003

The downward trend is evident in Brule County where the total number of cattle operations has decreased from a high of 387 in 1978 to a low of 224 in 2017. However, from 2007-2012, there was an increase of 9 farms raising cattle within Brule County. In the 40-year period, Brule County lost over 150 cattle operations, a 42% decrease. During the same time period, the state lost over 14,000 operations or 50%. The statistics are even more dramatic when reviewing the number of hog operations lost during the same time frame **(Table 52).**

TABLE 52

Number of Farms Raising Hogs - 1978 - 2017

Entity	1978	1982	1987	1992	1997	2002	2007	2012	2017
Aurora	286	227	214	158	53	19	13	3	9
Buffalo	31	21	25	17	7	0	0	0	0
Charles Mix	449	370	323	276	125	58	38	33	16
Davison	244	190	156	136	54	39	25	15	11
Hughes	55	34	43	37	23	14	12	5	5
Jerauld	142	91	76	49	19	4	5	4	3
Lyman	107	67	71	60	32	10	4	2	1
Minnehaha	533	427	312	301	146	76	63	35	41
Pennington	64	37	36	29	9	8	10	8	9
Stanley	12	15	23	15	7	5	3	0	3
Brule	203	174	154	112	47	22	16	11	9
South Dakota	12,193	9,336	7,906	6,710	2,899	1,506	959	681	571

Source: USDA-NASS Census of Agriculture 1974 – 2012, South Dakota Agriculture Bulletins 62 and 63 June 2002 and 2003

Brule County lost nearly 200 hog operations in a 40-year period, effectively reducing the number of producers by 95%. At the same time, the state numbers decreased by 11,622 operations or 95.3%. As the number of farms and hog or cattle operations decreased, the amount of land in farms and cropland declined throughout the state with the exception of Brule County which saw an increase of both from 1982-2017 **(Table 52)**.

TABLE 53

Average Farm Size - 1982 - 2017

YEARS SURVEYED / CATEGORIES	1982	1987	1992	1997	2002	2007	2012	2017
South Dakota - Land in Farms	44,422,328	44,157,503	44,828,124	44,354,880	43,785,079	43,666,403	43,257,079	42,243,742
Brule County - Land in Farms	249,921	269,176	271,200	261,071	342,058	322,242	513,888	517,536
South Dakota - Total Cropland	18,838,739	19,641,972	19,582,565	19,355,256	20,318,036	19,094,311	19,147,320	19,813,517
Brule County - Total Cropland	200,895	226,322	229,359	218,720	288,927	249,268	263,853	277,869
South Dakota - Number of Farms	37,148	36,376	34,057	31,284	31.736	31,169	31,989	29,968
Brule Co. - Number of Farms	758	733	692	636	690	658	407	394
South Dakota - Avg. Farm Size	1,179	1,214	1,316	1,418	1,380	1,401	1,352	1,443
Brule County - Avg. Farm Size	330	367	392	410	496	490	1,263	1,314

Source: USDA-NASS Census of Agriculture 1969 – 2012, South Dakota Agriculture Bulletins 62 and 63 June 2002 and 2003

Table 53 also shows an increase in the average farm size in the State and Brule County. The state wide average farm size has increased by 229 acres in 34 years, an increase of 20%. The same trend is

true within Brule County where the average farm size has increased 268% or 920 acres. **Table 54** details the per acre value of land for the 40-year period ending in 2017.

TABLE 54

Per Acre Value of Land and Buildings - 1978 - 2017

Entity	1978	1982	1987	1992	1997	2002	2007	2012	2017
Aurora	$283	$348	$254	$273	$472	$592	$1,368	$2,361	$2,654
Buffalo	$156	$248	$267	$234	$231	$272	$549	$1,182	$1,545
Charles Mix	$312	$428	$294	$361	$486	$596	$1,256	$2,353	$2,788
Davison	$394	$441	$318	$482	$570	$709	$1,706	$3,393	$3,398
Hughes	$279	$341	$300	$324	$374	$441	$834	$1,963	$1,891
Jerauld	$241	$261	$249	$253	$291	$401	$916	$1,968	$2,391
Lyman	$218	$289	$264	$235	$333	$344	$626	$1,003	$1,651
Minnehaha	$820	$1,022	$698	$880	$1,149	$1,461	$2,759	$5,164	$6,449
Pennington	$149	$230	$254	$191	$325	$351	$686	$699	$1,058
Stanley	$173	$262	$279	$169	$192	$208	$396	$918	$921
Brule	$232	$296	$121	$279	$380	$493	$1,050	$2,278	$2,578
South Dakota	$256	$348	$269	$273	$348	$442	$896	$1,687	$2,068

Source: USDA-NASS Census of Agriculture 1969 – 2012, South Dakota Agriculture Bulletins 62 and 63 June 2002 and 2003

The average price for land in Brule County increased $2,140 from 1978 to 2017. An earlier table showed the average Brule County farm increased by 920 acres in size during basically the same period. The difference is that these 920 acres may have cost the individual farmer $2,095,760 in 2012 versus the $126,930 in 1974. Current land prices are even higher within Brule County. **Table 55** illustrates that there are fewer farm operators overall, as well as a greater number of older operators. In 1982 there were 12 operators under the age of 25 in Brule County; this figure decreased to 1 in 2012, a reduction of 91.7%.

TABLE 55

Farm Operator Ages – 1987 - 2017

YEARS SURVEYED / OPERATORS AGE	1987	1992	1997	2002	2007	2012	2017	1982-2017	2002-2017
Brule County - Age <25	27	11	4	8	4	1	7	-74.07%	-12.50%
South Dakota - Age <25	1,146	765	668	414	242	258	675	-41.10%	63.04%
Brule County - Age 25-34	57	62	38	36	33	34	61	7.02%	69.44%
South Dakota - Age 25-34	6,131	4,481	2,916	2,249	2,113	2,631	4,496	-26.67%	99.91%
Brule County - Age 35-44	69	76	78	66	61	70	102	47.83%	54.55%
South Dakota - Age 35-44	7,064	7,696	7,461	6,307	4,045	3,922	6,205	-12.16%	-1.62%
Brule County - Age 45-54	66	73	81	99	83	95	134	103.03%	35.35%
South Dakota - Age 45-54	6,687	6,406	7,232	9,097	8,700	7,445	8,139	21.71%	-10.53%
Brule County - Age 55-65	111	91	124	72	85	107	166	49.55%	130.56%
South Dakota - Age 55-65	8,701	7,221	5,822	6,317	7,835	9,182	14,402	65.52%	127.99%
Brule County - Age 65 >	115	125	113	84	104	100	180	56.52%	114.29%
South Dakota - Age 65 >	6,647	7,488	7,185	7,352	8,234	8,551	14,496	118.08%	97.17%
Brule County Total	445	438	438	365	370	407	662	48.76%	81.37%
South Dakota Total	36,376	34,057	31,284	31,736	31,169	31,989	49,547	36.21%	56.12%

Source: USDA-NASS Census of Agriculture 1969 – 2012, South Dakota Agriculture Bulletins 62 and 63 June 2002 and 2003

The downward trend of production agriculture has been documented as to land, farms, and operators. Another question is the trend with regards to livestock numbers. **Table 56** illustrates the number of cattle raised within Brule County, the comparative counties, and the entire state during the 38-year term of 1974-2012.

TABLE 56
Inventory of Cattle - 1978 - 2017

	1978	1982	1987	1992	1997	2002	2007	2012	2017
Aurora	53,816	56,570	52,581	55,149	50,383	52,723	46,171	56,295	57,078
Brule	73,028	73,358	69,578	70,285	67,387	74,071	80,004	71,366	95,797
Buffalo	25,735	22,940	25,473	24,926	26,527	22,142	26,330	29,282	32,984
Charles Mix	113,862	123,160	88,295	100,017	105,282	106,237	98,306	99,027	115,465
Davison	44,471	43,068	33,314	30,458	34,720	40,620	34,615	23,371	24,399
Hughes	23,894	29,141	27,382	31,772	31,133	24,047	25,450	24,167	23,654
Jerauld	43,673	46,990	44,531	52,103	56,790	46,850	52,103	49,074	43,124
Lyman	59,387	66,618	58,633	61,461	71,002	63,301	63,960	61,716	70,791
Minnehaha	80,665	80,726	64,578	64,198	51,844	59,883	74,307	73,073	73,638
Pennington	56,640	56,148	56,547	68,357	68,107	58,705	52,789	50,340	56,057
Stanley	35,812	35,141	41,027	39,146	38,244	24,101	24,455	24,335	28,854
South Dakota	3,703,674	3,925,131	3,630,200	3,777,822	3,723,271	3,695,877	3,687,728	3,893,251	3,988,183

Source: USDA-NASS Census of Agriculture 1974 – 2012, South Dakota Agriculture Bulletins 62 and 63 June 2002 and 2003

In 1974 there were 83,315 head of cattle raised in Brule County, a number which decreased by 11,949 in 38 years. This represents a 14% decrease in herd size within the county. While the decrease in cattle numbers within Brule County is measurable it is minor when compared to neighboring county's numbers. Cattle numbers have decreased though they are by no comparison as serious as the hog inventory numbers. **Table 57** documents the trend in hog numbers.

TABLE 57
Inventory of Hogs - 1987 - 2017

	1987	1992	1997	2002	2007	2012	2017
Aurora	45,755	41,148	20,444	23,934	19,927	*	21,264
Buffalo	2,837	1,437	900	--	--	--	--
Charles Mix	70,567	84,916	72,528	44,909	74,260	67,379	96,226
Davison	30,353	30,091	20,193	26,612	45,832	28,628	28,236
Hughes	9,192	32,327	30,290	4,317	*	*	*
Jerauld	24,594	15,428	17,122	*	13,429	12,492	*
Lyman	10,499	11,630	5,008	2,137	723	*	*
Minnehaha	78,587	103,713	63,722	50,959	61,333	55,741	37,565
Pennington	2,355	3,206	741	203	133	219	104
Stanley	926	791	218	35	*	--	190
Brule	37,512	40,267	22,001	26,178	30,225	28,309	20,540
South Dakota	1,750,236	1,978,195	1,396,326	1,375,506	1,490,034	1,192,162	1,560,522

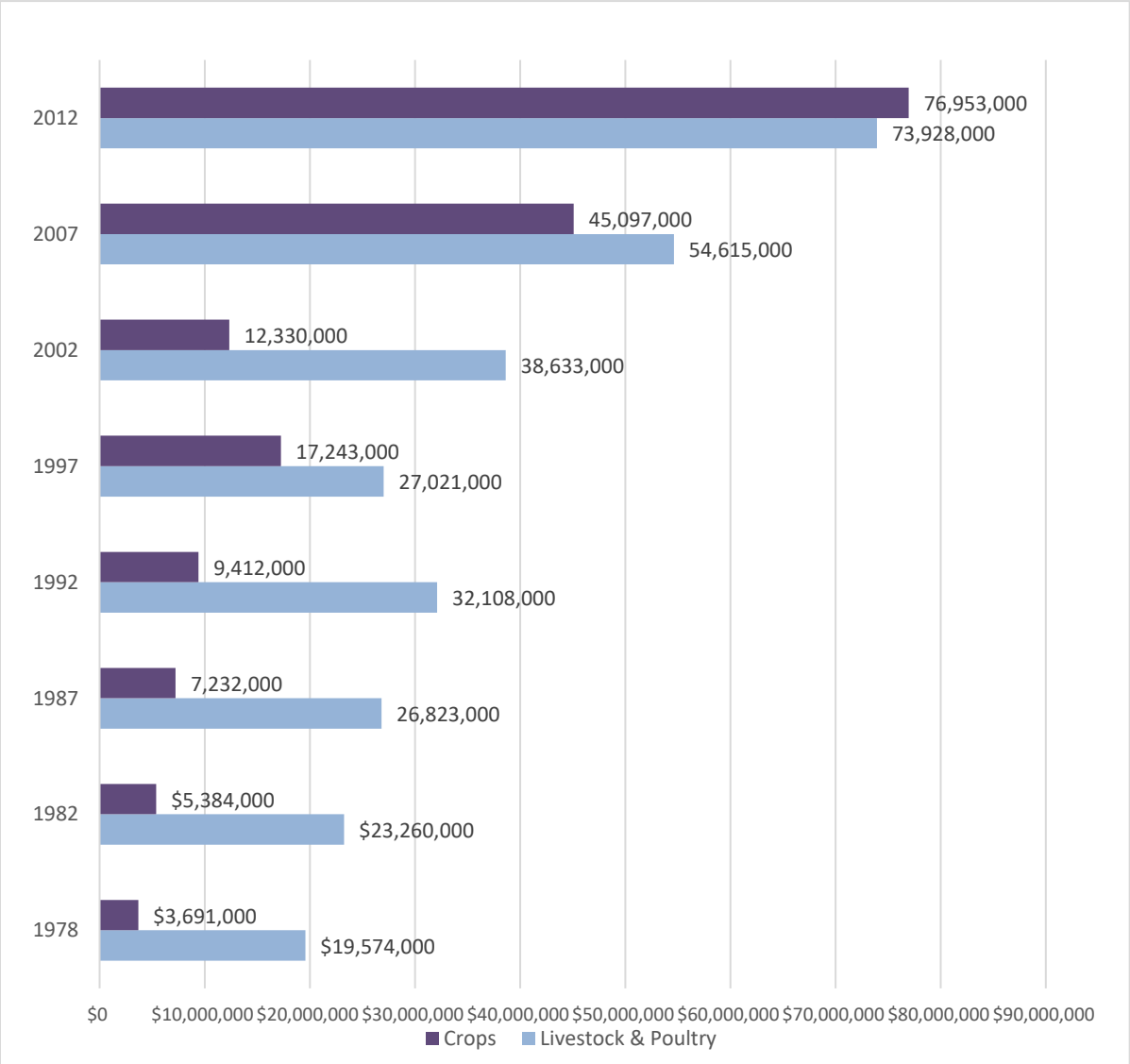
Note: * Suppressed Data

Source: USDA-NASS Census of Agriculture 1974 – 2012, South Dakota Agriculture Bulletins 62 and 63 June 2002 and 2003

Understanding that livestock markets are very cyclical in nature as shown within the annual herd sizes of the previous tables, it is difficult to explain the change in hog number from an annual average of around 33,000 head to a high of 40,267 in 1992 and a low of 22,001 in 1997. In a five-year period, Brule County was home to a 46% reduction in hog numbers. During the same period, the state numbers dropped by 14%.

The information in **Figure 35** illustrates recent agricultural trends in Brule County. The most noticeable trend is the increase in crop production within the County. The county did see a $7.2 million decrease in livestock production from 1992-1997; however, livestock production has increased significantly since 1997 with a $48.9 million increase from 1997-2012.

FIGURE 35
Value of Agriculture Products in Brule County - 1978 – 2012



Source: USDA-NASS Census of Agriculture 1978 – 2012, South Dakota Agriculture

Livestock prices have the largest impact on the agricultural economy. **Figures 36** and **37** show the volatility of cattle and hog prices within the state over a 10-year period ending in 2017. Any action that would increase the local value of livestock as commodities or "finished products" would assist in stabilizing the markets and have positive impacts on the economy.

FIGURE 36
Volatility of Beef Cattle Prices 2008-2017

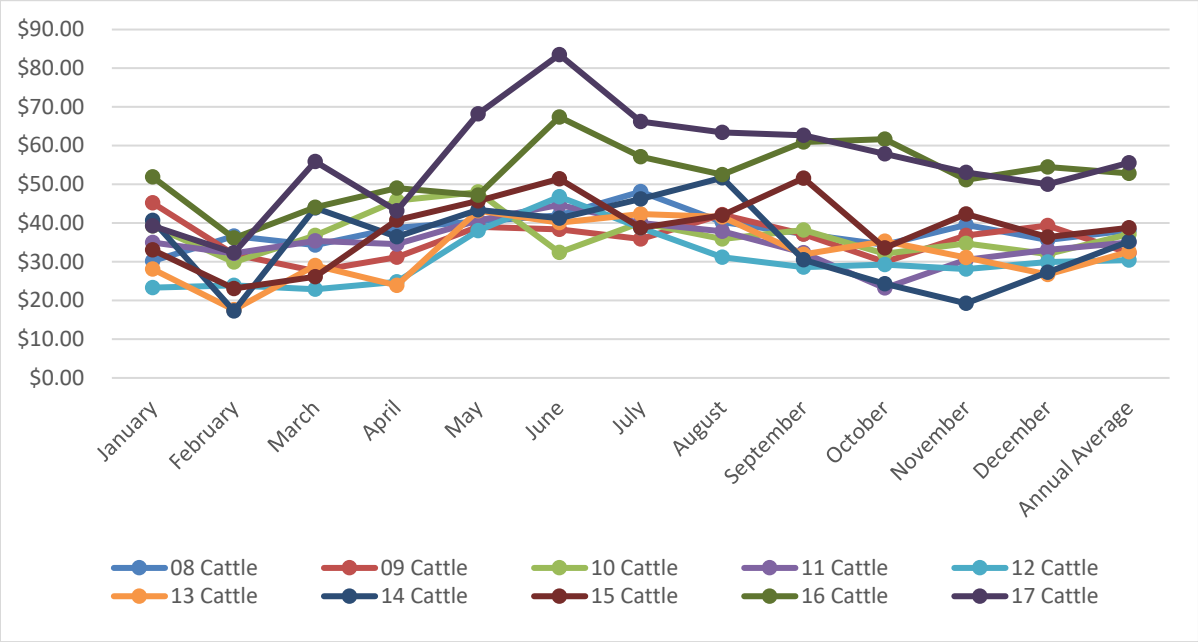
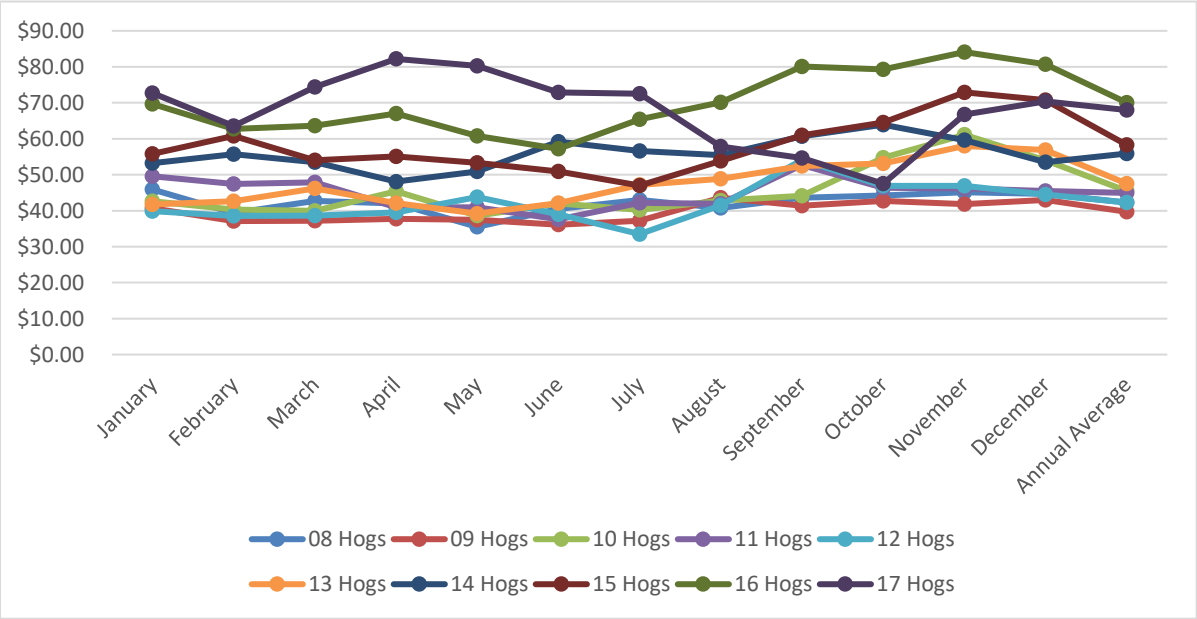


FIGURE 37
Volatility of Hog Prices 2008-2017



Source: USDA South Dakota Agricultural Economic Research Service, Historical monthly price spread data for beef, pork, broilers (Prices represent all hogs and beef cattle)

Table 58 illustrates the impact of agriculture as to cash receipts received by producers in a one-year period. In Brule County, farmers generated $178.7 million in revenues for 2013. This number could be dismissed as insignificant if compared to the $10.84 billion generated throughout the State, but it places agriculture as a major player when compared to other sectors of the local economy.

TABLE 58
Agriculture Cash Receipts - 2013

Area	Crops	Livestock	Sub-Total	Government Payments	Total
Aurora	$110,173,000	$82,429,000	$192,602,000	$2,656,000	$192,602,000
Buffalo	$17,569,000	$21,038,000	$38,607,000	$904,000	$38,607,000
Charles Mix	$148,761,000	$146,572,000	$313,333,000	$5,838,000	$295,333,000
Davison	$67,428,000	$47,493,000	$114,921,000	$3,067,000	$114,921,000
Hughes	$80,326,000	$32,227,000	$112,553,000	$3,018,000	$112,553,000
Jerauld	$72,343,000	$49,142,000	$121,485,000	$1,576,000	$121,485,000
Lyman	$115,482,000	$45,488,000	$160,970,000	$6,272,000	$160,970,000
Minnehaha	$181,447,000	$117,292,000	$298,739,000	$6,610,000	$298,739,000
Pennington	$34,963,000	$50,842,000	$85,805,000	$2,473,000	$85,805,000
Stanley	$33,586,000	$16,316,000	$49,902,000	$4,995,000	$49,902,000
Brule	$101,449,000	$77,252,000	$178,701,000	$2,523,000	$178,701,000
South Dakota	$6,294,967,000	$4,548,937,000	$10,843,904,000	$301,468,000	$10,843,904,000

Source: USDA-NASS South Dakota Agriculture Bulletin No. 75, 2015 South Dakota County Profiles pages 76-98

Brule County ranks fourth for total cash receipts when compared to similar sized counties. The final table, **Table 59**, is an annual balance sheet for agricultural production within the State of South Dakota and includes five years of figures to illustrate the impact agriculture has upon the state as well as the numerous county economies.

The identified line items include industry specific language and are defined as follows:

- **Final Sector output:** The gross value of the commodities and services produced within a year.
- **Net-Value Added:** The sector's contribution to the national economy and is the sum of the income from production earned by all factors of production.
- **Net-Farm Income:** The operators share of income from the sectors production activities.

TABLE 59
South Dakota Net Farm Income
Value Added to Agricultural Sector
2012-2016 (Thousand Dollars)

Years	2012	2013	2014	2015	2016
Expenses and Revenues					
Final Agricultural Sector Output	**12,496,344**	**13,949,048**	**12,861,782**	**11,573,149**	**10,622,942**
Final Crop Output	6,156,480	8,336,678	6,482,249	5,561,179	5,443,763
Final Animal Output	4,178,498	3,946,920	4,899,020	4,517,222	3,712,931
Services and Forestry	2,152,366	1,665,450	1,480,513	1,494,748	1,466,248
Production expenses	**6,352,045**	**6,622,810**	**7,119,226**	**6,329,796**	**5,924,527**
Feed, Livestock & Seed Purchased	2,286,852	2,381,849	2,993,462	2,386,624	2,179,569
Fertilizer, Pesticide, Fuel & Electricity	2,220,703	2,346,815	2,314,687	2,121,611	1,972,255
Other Intermediate Expenses	1,844,489	1,894,145	1,811,077	1,821,561	1,772,703
Net Government Transactions	**-71,144**	**-154,911**	**45,599**	**4,137**	**71,939**
Direct Government Payments	362,817	327,712	486,464	446,621	491,471
Motor Vehicle Fees	16,465	17,964	27,285	16,163	17,100
Property Taxes	433,961	482,624	440,865	442,484	419,532
Gross Value Added	**6,056,587**	**7,145,836**	**5,729,437**	**5,215,323**	**4,739,505**
Capital Consumption	**1,186,223**	**1,274,565**	**1,668,319**	**1,359,674**	**1,467,031**
Net Value Added	**4,870,364**	**5,871,271**	**4,061,118**	**3,855,649**	**3,272,474**
Factor Payments	**1,902,675**	**1,863,096**	**1,805,907**	**1,797,262**	**1,850,854**
Employee Compensation	336,603	329,629	347,968	197,065	224,725
Non-Operator Net Land Rent	734,422	794,945	533,198	605,982	607,468
Real Estate and Other Interest	801,650	738,522	924,741	994,216	1,018,661
Net Farm Income	**2,967,689**	**4,008,175**	**2,255,211**	**2,058,387**	**1,421,621**

Source: United States Department of Agriculture Economic Research Service, Value added to the U.S. economy by the agricultural sector (by state)

The information in the previous table illustrates the comprehensive impact of Agriculture upon the state and local economies. In 2016, South Dakota agricultural producers expended $5,924,527,000 ($5.9 billion) on items necessary for production. These expenses generated $1,421,621,000 ($1.4 billion) in net income during the same period.

While the impact of agriculture upon the local economy is significant, there remains a resistance to large scale concentrated animal feeding operations. This is evident in numerous counties where court cases, special elections, and protests have occurred as a result of proposed cattle feed operations, hog barns and dairy operations.

A counter point to the call for increased or more stringent regulation of concentrated animal feeding operations is the need to balance individual property interests such as residential with the current and future practices of agricultural production activities. This must be done to maintain and expand the current impact of agriculture upon the local economy

PLANNING CONSIDERATIONS

County Planning Challenges

The following economic challenges will be addressed by the County over the next 20 years.

- Promoting economic diversification;
- Supporting development activities that reduce the public dependence upon transfer payments and in-kind services (example: food stamps);
- Taking advantage of the county's expansion in job training facilities;
- Maintaining a manufacturing base in an era of increasing global competition;
- Creating an economic environment that supports entrepreneurship;
- Avoiding a continued decline in production agriculture capacity;
- Building value-added facilities in ways that minimize land use and environmental conflicts;
- Promoting livestock development while mitigating environmental impacts of livestock facilities.
- Keeping small town's viable as local service centers; and
- Presenting a positive image and attitude toward economic development.
- The lack of natural gas infrastructure limits economic development opportunities.

Policy Recommendations

In addressing the challenges, the Brule County Commission should consider the following recommendations.

1) Expand county interaction with community development corporations and business organizations;
2) Encourage development projects that take advantage of existing industrial and commercial areas and infrastructure;
3) Discourage projects that take prime farmland out of production;
4) Preserve individual property rights while promoting and protecting economic opportunities of existing and future crop and livestock production operations;
5) Recognize that agriculture is a primary economic activity which is subject to increasing development pressures;
6) Protect the quality of life for county residents by establishing limitations on concentrated animal feeding operations regarding maximum size and minimum setbacks;
7) Target available county resources to projects that have the greatest potential for job creation and/or private investment;
8) Involve the public early in the process of evaluating economic development project impacts; and
9) Establish regulations or ordinances that promote the separation of economic activities from conflicting land uses.
10) Investigate a regional plan development of natural gas infrastructure.

CHAPTER VIII
LAND USE

OVERVIEW

The first chapter introduced the elements of a Comprehensive Plan, as identified in state statute. South Dakota Codified Law (SDCL) specifically notes guiding "land utilization" as one of the required outcomes of a comprehensive plan. The intent of this chapter is to identify, map, and analyze the various land use patterns and issues within the County. The "Introduction" also identified five primary issues facing Brule County:

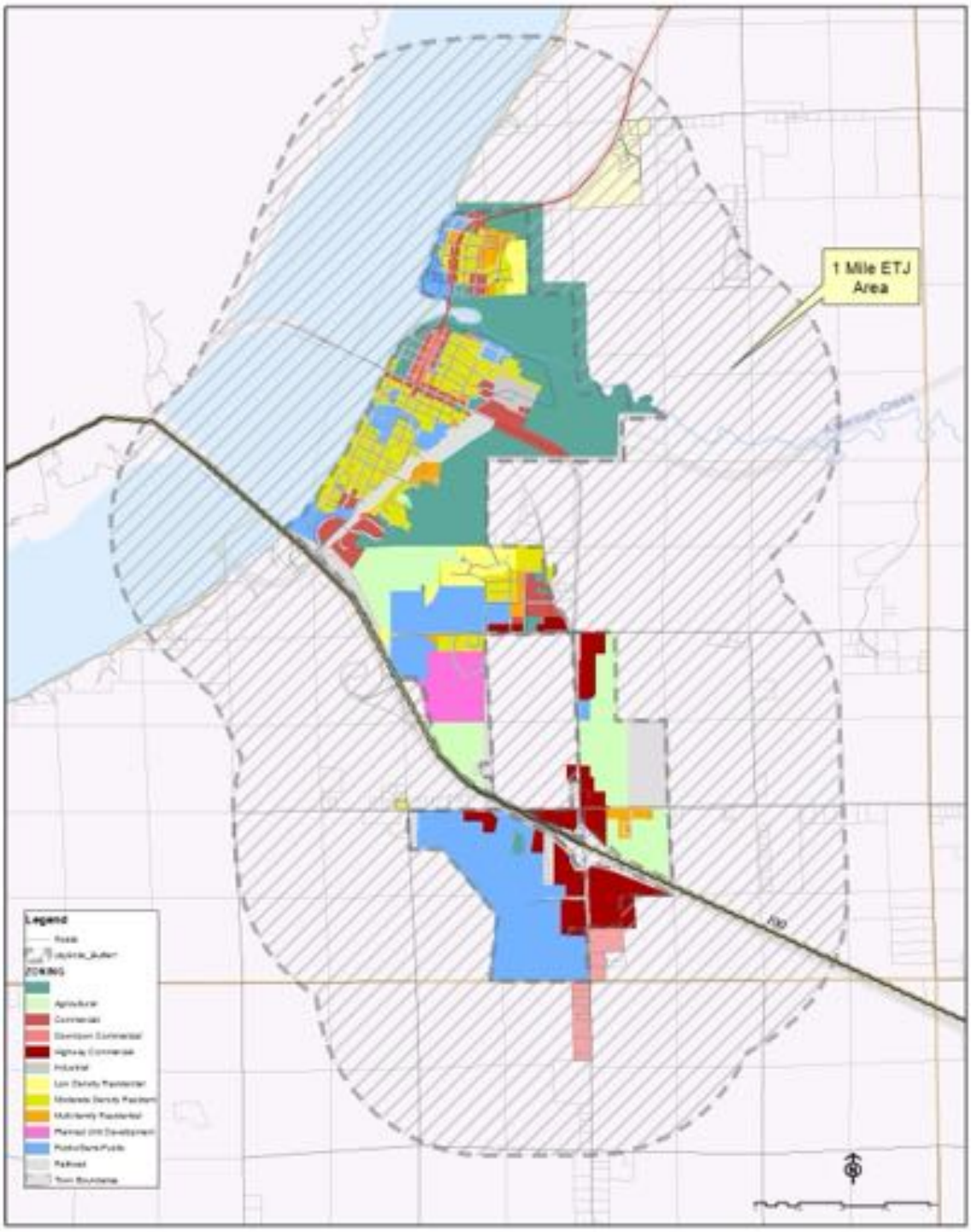
- The investment of public and private capital in real estate and infrastructure;
- Orderly growth of a variety of housing types;
- Preservation of the current agricultural practices as viable economic activities;
- Environmental protection; and
- Balancing the cost-benefit ratio in providing government services.

The land use plan will balance these five primary issues with generally acceptable land use guidelines. This balance was considered in the text of this chapter as well as in preparing current and future land use maps. The final section on land use will focus upon two planning principles, which were considered in developing future land use policies.

Earlier, the County's land use planning jurisdictional area was defined as Brule County except the incorporated municipalities. This is an accurate description with the exception of an pseudo Extra-Territorial Jurisdictional (ETJ) area abutting the City of Chamberlain. The ETJ area was agreed to by the County Commission for the purpose of "joint" regulation of land uses on properties lying outside the corporate limits, as illustrated within **Figure 60**. Currently, the City has no mechanism for formal input or regulatory authority within the ETJ area around the City of Chamberlain.

A baseline of data was utilized by the Planning and County Commissions to formulate the current and future land use maps. The baseline included the existing transportation network and locations of rural residences and farms within the County as, prepared by Planning and Development District III. District III, in conjunction with the South Dakota Department of Transportation conducted a a road inventory in July of 1999. The data has been somewhat updated over the years yet all information should be field verified though it does provide a valid representation of land use patterns.

FIGURE 60
City of Chamberlain ETJ



EXISTING LAND USE

Brule County is unique in that the development of property was not regulated for any significant period. The lack of regulations guiding development has resulted in the following situation:

- A mixture of land uses within relatively small areas;
- Scattered home sites or rural residences within agricultural areas; and
- A high concentration of homes on half acre lots within large rural subdivisions.

Earlier chapters provided statistics and maps illustrating these issues within the County. A thorough review of the current situation was undertaken by the Planning Commission prior to forwarding the Plan for County Commission consideration. The Commission reviewed volumes of statistics and numerous illustrations including:

- Existing structures;
- Soils and slope;
- Flood plains;
- Transportation;
- Utilities; and
- Population densities.

A review of the information led to the establishment of four land use categories:

- Agriculture;
- Commercial;
- Public; and
- Residential.

The predominant land use is agriculture, constituting 425,571 of the 541,440 acres or 78.6% of the land within the County. The smallest category is commercial. These properties are often located in or adjacent to municipalities.

While the County has not restricted development there remains a level of natural gravitation for all four of the identified categories. Agriculture is difficult to quantify due to progression of these lands from agricultural uses in order to accommodate the remaining three uses. Residential properties are most predominant either near the Missouri River or Lake Francis Case. Commercial properties are most likely abutting the municipalities. Public lands include property along the Missouri River, Lake Francis Case, and scattered sites throughout the County. The four identified uses have been incorporated with the existing uses on the ground and are presented as the “Current Land Use Map” in **Figures 61A, 61B, and 61C**.

FIGURE 61A

Current Land Use – Brule County

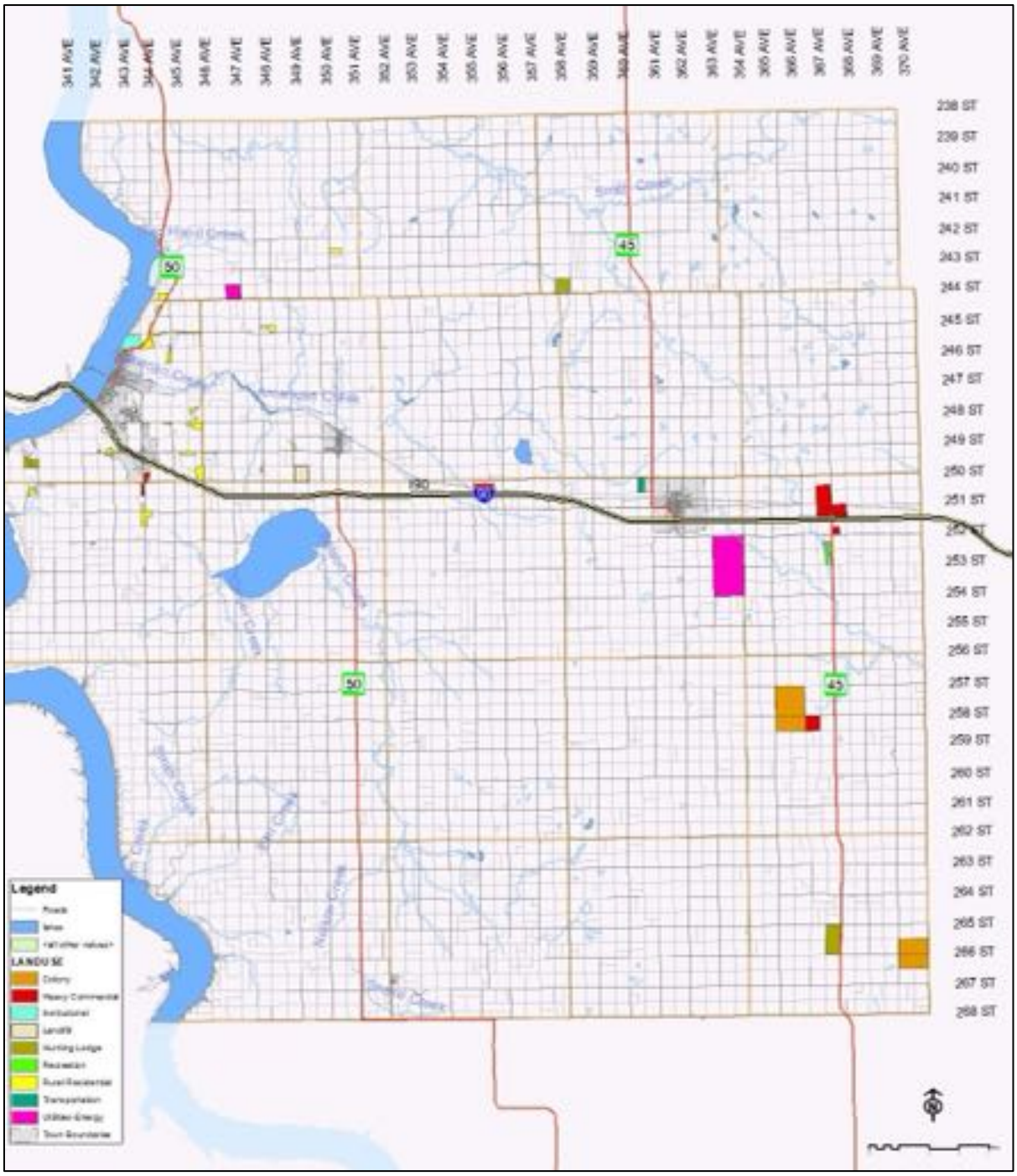


FIGURE 61B

Current Land Use – Town of Pukwana

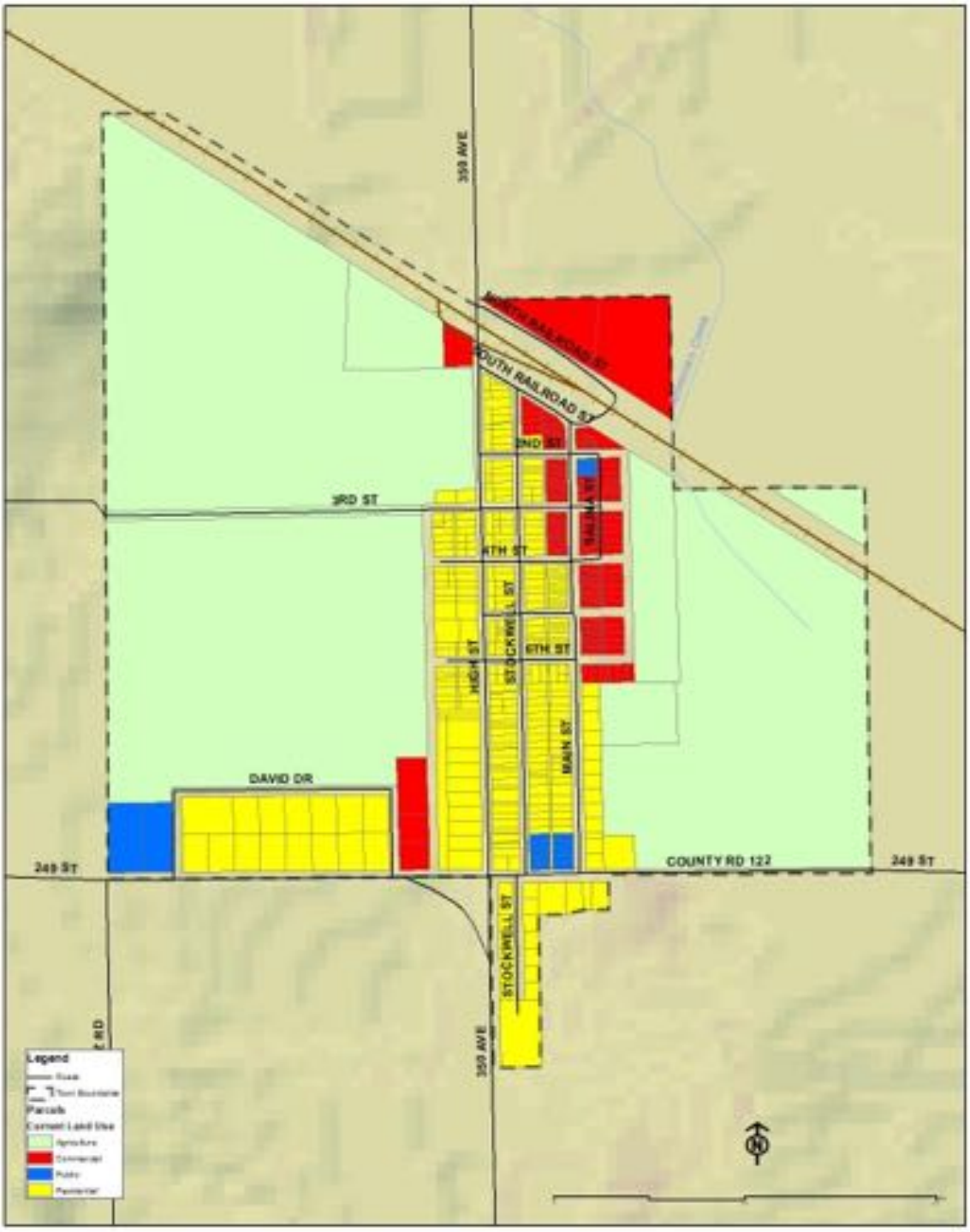
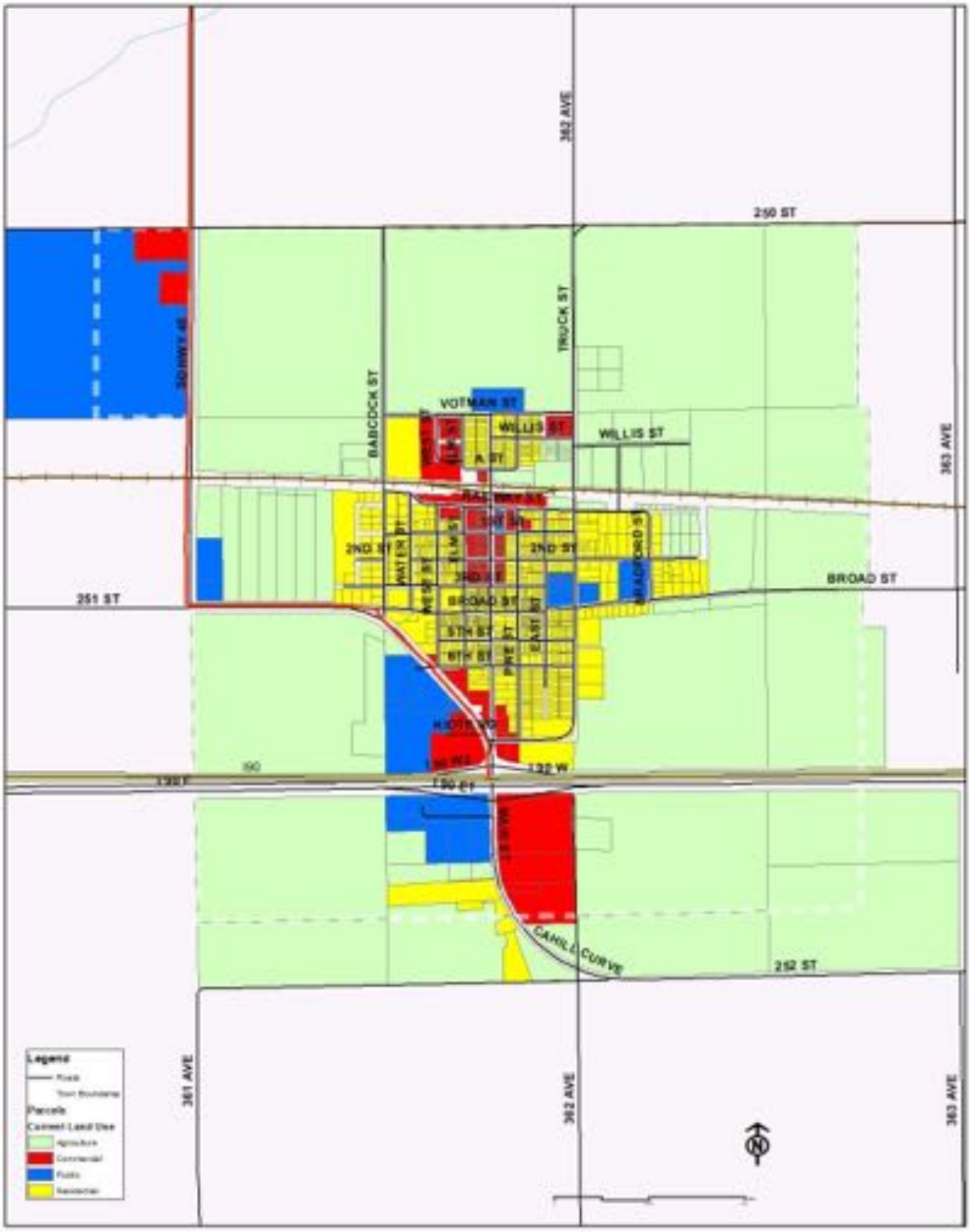


FIGURE 61C

Current Land Use – City of Kimball



FUTURE LAND USE

The data presented in earlier chapters supports the expectation of continued growth within the county. The impact of growth can be controlled through clearly established goals and policies with regards to the development of property. These goals must balance individual property rights with the public good thus mitigating the potential of negative impacts.

Policies and regulations may be viewed as "what not to do," yet it is as important to provide language in the reverse, "what to do". These types of objectives are evident when discussing preservation issues or elements including agricultural lands, road right-of-ways, utility corridors, and transitional areas. Transitional areas were established to regulate development in those areas most likely to transition or change in uses with the 5 - 20 years.

Brule County's role in influencing development must be guided by the phrase, "in the best interest of the public" and not that of individuals or selective groups. It is important to concentrate on the whole prior to moving forward with additional planning documents including a future land use map or zoning ordinance.

The final piece of a Comprehensive Plan is development of a "Future Land Use Map". This map is generally based upon numerous factors including:

- Infrastructure;
- Existing development patterns; and
- Future growth needs.

The purpose of a future land use map is to provide a reference guide for development. The various land use boundaries are defined by the factors noted above along with other external influences. The intent is to not prepare the "future" map in a vacuum but to look past what has occurred and plan what should reasonably be expected to happen in the next 10 to 20 years. While this map is a guide it may also be utilized as a reference document in support of future land use decisions.

The Future Development Patterns and Future Land Use Map is presented in **Figures 62 and 62A**. The illustrations emphasize development activity within the same three townships. This map is intended to be a guide upon what a zoning map is prepared. The map illustrates land uses in the same four general categories as were shown within the current land use maps along with a fifth, Transitional.

- Agriculture;
- Commercial;
- Public;
- Residential; and

The fifth use, transitional which is intended to limit scattered development while encouraging planned and organized developments will be reserved for those areas identified as prime development properties and will most often be found abutting the River. These five categories will most likely be further divided into subsets when the zoning map is prepared.

FUTURE DEVELOPMENT PATTERNS

Brule County has land use patterns that may be described in the following terms.

1. AREAS OF DEVELOPMENT: **TRANSITION**

These areas are located near growing communities. They have been experiencing residential or commercial development. The current land use is usually crop land or pasture. The areas could also be near a major recreation site (lake, etc.) that is being developed for residential units. Transition areas are going to be the major conflict zones in terms of public services, incompatible uses and municipal verses county regulations.

2. AREAS OF DEVELOPMENT: **ADVANTAGE**

These areas have qualities that make their development more likely in the future. They often have good highway access, are adjacent to already developed lots or present much better than average site characteristics (i.e. flat, good drainage, trees, view, etc.). A typical advantage area would be at the intersection of well traveled, hard surfaced roads, directly between two communities. Special access to rail, natural gas, the interstate, rural water or other facilities could also give an area a development advantage.

3. AREAS OF DEVELOPMENT: **LIMITATION**

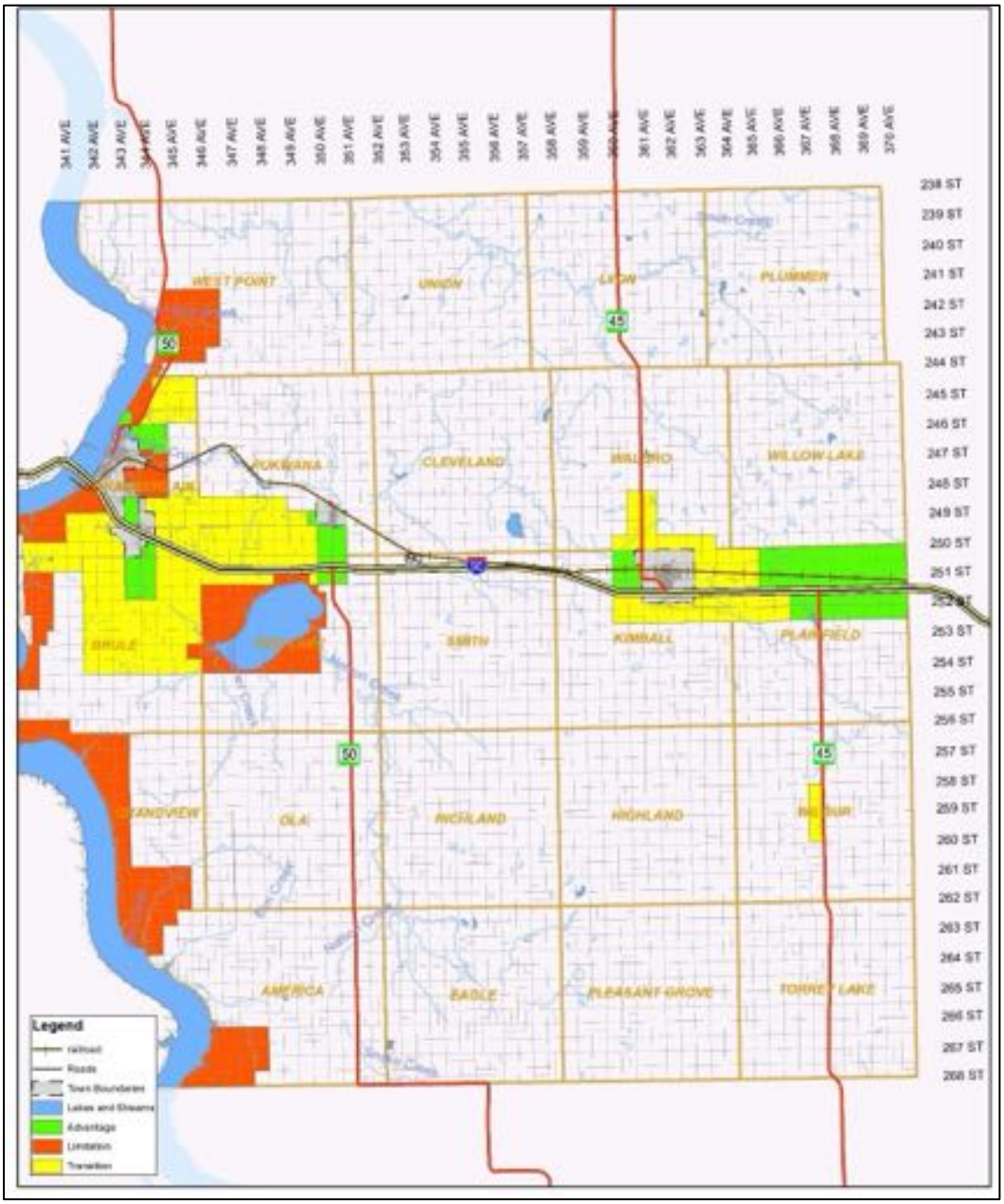
These areas have characteristics that would either prevent them from being developed or would result in excessive construction costs. Regular flooding, steep slopes, fragile soils, and proximity to certain facilities (gravel pits, lagoons, landfills, etc.) would all be limiting factors. Transportation isolation or poor access to public facilities would also limit an area's potential.

4. AREAS OF DEVELOPMENT: **STABILITY**

This category represents the bulk of farm land and other sites that are not expected to change very much. There may be an occasional home or rural business constructed, but the primary agricultural focus of the land should be the same in the future. Large land intensive projects such as a reservoir, landfill, or large confinement operation could dramatically alter certain areas. However, these things would normally involve both mandatory public input and environmental assessment procedures. They would also have to comply with state and federal regulations.

Figure 62 shows the locations of several areas in Brule County that meet these definitions. It is within these areas that future development conflict is likely to occur. Areas of the county that are not colored are considered to have the Stability land use pattern label.

FIGURE 62
Future General Development Patterns & Policies



Land use controls (zoning ordinances, etc.) should be designed according to four basic principles.

1. **Future development** should be compatible with existing land uses;
2. **Future development** should take advantage of existing public infrastructure and systems;
3. **Future development** should promote the public health, safety and the general welfare; and
4. **Future development** should be consistent with the rights of citizens to use their property for lawful purposes.

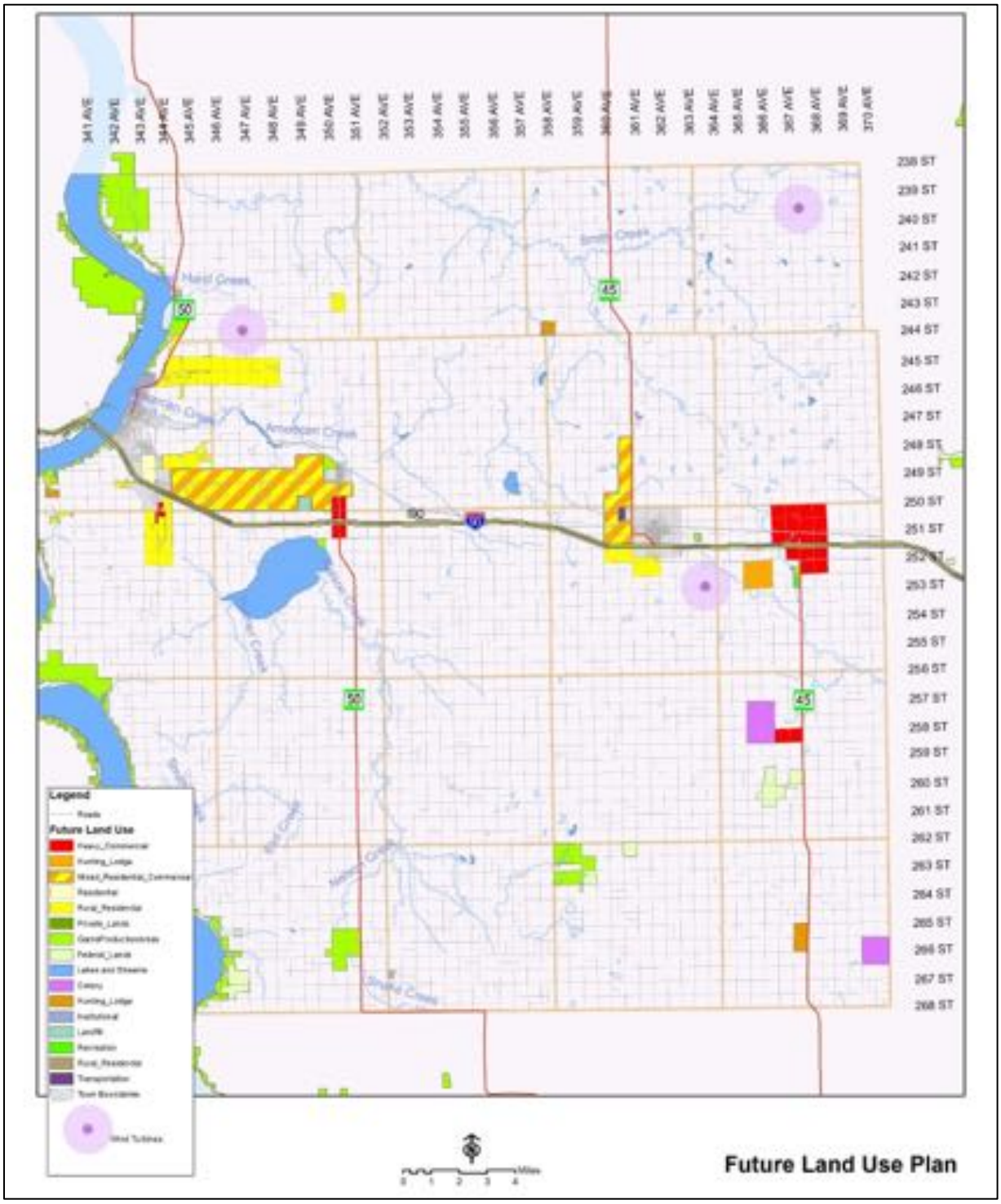
Development proposals, which do not follow these principles, should be carefully evaluated before being implemented.

The land use principles recognize that Brule County's future development will probably be a continuation of present activity, although, the effects may be less dramatic. For example, it may be beyond the ability of county officials to stop the loss of family farms. The 1989 survey counted 184 vacant farmsteads. Many of these sites have been abandoned for decades. Other vacancies are more recent.

The reuse of these sites for either residential or commercial development would meet the intent of the four principles, in the majority of situations. In the process, reuse would mitigate the impacts of new rural residential development.

FIGURE 62A

Future Land Use Map



FUTURE DEVELOPMENT

This section contains the development "vision" for Brule County. It is expressed through goals and policies. A definition for each term is presented below.

- Goal: A general statement that reflects ideals, ambitions or hopes.
- Policy: A statement concerning an action or position taken to achieve an objective.

GOALS

The goals of guiding development within Brule County are as follows:

- Provide for orderly, efficient and economical development;
- To enhance communication among townships, municipalities, and service providers who have the potential to impact and influence development patterns;
- To maintain a viable agricultural economy and preserve the rural quality of life;
- To provide a choice of living environments for county residents;
- To achieve the maximum efficiency in the provision of public services and facilities;
- To promote aesthetically attractive development in rural areas;
- To preserve environmental, historical and cultural resources; and
- To provide a transportation system that promotes the safe and efficient movement of people, goods, and services.

POLICIES

Goals are general statements drafted to assist in identifying policies whereas policies are implemented via regulations such as a zoning ordinance. Brule County has established the following policies regarding the development of lands within the jurisdictional area defined herein. The policies have been divided into the five categories reflected within the current and future land use maps.

Agriculture Development Policies

- ✓ Preserve and protect the agricultural productivity of rural land by regulating the development of non-farm residential sites;
- ✓ The premature development of agricultural land should be discouraged;
- ✓ Protect the rural area from uses which interfere and are not compatible with general farming practices; and
- ✓ Regulate concentrated animal feeding and processing operations to protect environmental quality and minimize conflicts with human activities.

Commercial Development Policies

- ✓ Coordinate the siting of commercial and industrial activities with the municipalities;
- ✓ Coordinate the siting of agriculture related activities with the customer base;
- ✓ Locate commercial activities in close proximity to the necessary infrastructure;
- ✓ Regulate strip development along major transportation routes; and
- ✓ Preserve the environmental quality with regards to economic development.

Public Properties Development Policies

- ✓ Foster communication between the numerous public land holders;
- ✓ Apply zoning regulations to public entities whenever possible;
- ✓ Weigh proposed public activities against the rights of affected property owners;
- ✓ Mitigate potential conflicting land uses; and
- ✓ Promote additional public green space within the county.

Residential Development Policies

- ✓ Encourage new residential construction to locate on platted lots of record and other parcels which already qualify as building sites;
- ✓ Restrict premature development of residential areas before proper infrastructure needs can be developed;
- ✓ Limit rural densities so that current service levels are not exceeded, thereby avoiding the creation of special purpose districts (i.e. sanitary, water and road districts);
- ✓ Restrict development in areas where unsuitable soils and other physical limitations are present; and
- ✓ Discourage strip development along roadways, particularly those which serve as gateways to the municipalities, rural subdivisions, and major activity centers.

Transitional Development Policies

- ✓ Encourage new residential construction to locate on platted lots of record and other parcels which already qualify as building sites;
- ✓ Control development of transition areas so infrastructure improvements are not needed before they can be economically developed;
- ✓ Limit rural densities so that current service levels are not exceeded, thereby avoiding the creation of special purpose districts (i.e. sanitary, water and road districts);
- ✓ Restrict development in areas where unsuitable soils and other physical limitations are present; and
- ✓ Regulate strip development along roadways, particularly those which serve as gateways to the municipalities, rural subdivisions, and major activity centers.

SUMMATION

Future development should be regulated through land use controls such as the Brule County Zoning Ordinance. Any land use regulations administered by the County should be designed according to these six basic principles.

1. Compatibility of land uses;
2. Promotion of in-fill;
3. Reuse of vacant sites within the appropriate districts;
4. Utilization of existing public infrastructure and road systems;
5. Protection of the public health, safety and the general welfare; and
6. Balancing of private citizen rights and the public interest.

Any development proposals, which do not follow these principles, nor are proposed in the appropriate district, should be carefully evaluated before being implemented or approved.

CHAPTER IX
PLAN IMPLEMENTATION

The process of implementing a comprehensive plan is multi-faceted and includes past, immediate, short-term and long-term actions by both the Planning and County Commissions. This chapter reviews identified facets and provides measures to address each aspect.

PAST ACTIONS

The Brule County Comprehensive Plan has been developed over many years through various actions and decision by private citizens, commercial enterprises, and governmental action. The majority of these past issues and decisions or their end results were addressed within numerous meetings, hearings, and subsequent discussions since the authorship and adoption of the original Brule County Comprehensive Plan and Zoning Ordinance in the early 1970's.

The Planning Commission is responsible for drafting the Comprehensive Plan and presenting the document to the County Commission for its review, approval, and potential adoption. In drafting the plan, the Planning Commission was provided extensive amounts of statistical information along with planning principles, theory, and examples for its consideration and possible inclusion in the comprehensive plan.

The first eight chapters contained information ranging from demographic to economic data along with summations of individual tables, statistics, and theories. The close of each chapter included planning challenges and policy recommendations. The challenges and policy recommendations were developed from three primary sources:

1. Information within the preceding chapter;
2. Discussions amongst the commission members; and
3. Incorporation of survey results completed by the membership of both commissions.

IMMEDIATE ACTIONS

The immediate action required by the Commissions is to adopt the Comprehensive Plan in accordance with South Dakota Statutes, specifically SDCL 11-2. The process includes:

- Acceptance by the Planning Commission;
- A minimum of one public hearing before the Planning Commission;
- Revisions as needed in response to the public comments;
- Planning Commission recommendation of adoption;
- A minimum of one public hearing before the County Commission;
- Revisions as needed in response to the public comments;
- County Commission adoption of the Comprehensive Plan.

SHORT TERM ACTIONS

Upon adoption of the Comprehensive Plan by the County Commission, the Planning Commission must begin revising the Zoning Ordinance. The Planning Commission must complete its work in a timely matter to ensure cohesiveness with the new planning goals, objectives, and policies. A definite timetable is not necessary but completion of the zoning ordinance within 6-9 months would be ideal.

The overall purpose of a zoning ordinance is to regulate the use of land in order to promote health, safety, and the general welfare of the County. The current Zoning Ordinance provides for five zoning districts:

- A Agricultural
- R Residential
- HC Highway Commercial
- I Industry
- E Environmental Conservation

The original zoning ordinance was based on existing land uses and the expectation that private citizens, developers, contractors, and other affected persons would have driven changes in the original districts. The changing landscape which has occurred over the past 40 years will require the Commissions to redefine districts to include boundaries and regulations.

The processes of administering the existing Ordinance and drafting the Comprehensive Plan have assisted in identifying the need for a new and improved zoning ordinance. The Commissions have recognized the need to regulate certain land uses and possibly provide additional zoning districts within the final zoning ordinance.

LONG TERM ACTIONS

There are a variety of land use regulation options available to local governments within the State of South Dakota. A zoning ordinance is the most common and relied upon method of regulating or controlling the use of land. In many situations a zoning ordinance is the first step in a series of regulations. Various common options available for regulating the use, development, appearance, or maintenance of property are detailed below.

- **Zoning Ordinance:** The County is currently operating with a Zoning Ordinance originally adopted in 1973 and with amendments addressing animal feeding operation adopted in around the later part of 1997. In addition, the County approved a Memorandum of Understanding with the City of Chamberlain for an area approximately one mile outside of the City's corporate boundaries to facilitate orderly growth on the City's periphery. The ordinance was updated in 2012 and amended in 2012 and 2017.

- **Subdivision Regulations:** These rules usually follow the adoption of zoning regulations and are considered the second step in land use planning regulations. The intent of a subdivision ordinance is to:

  - ✓ regulate the subdivision of land;
  - ✓ coordinate streets and roads;
  - ✓ promote planned infrastructure development;
  - ✓ address drainage and flood control;
  - ✓ minimize cut and fill operations;
  - ✓ foster efficient and orderly urban growth compatible with the natural environment;
  - ✓ prevent premature land subdivision; and
  - ✓ promote and protect the interests of all members of the community.

- **Housing, Building, Health, and Environmental Codes:** While an effective codes program is viewed as a necessary element of land use regulations by some entities, the specificity of the regulations has a tendency to concern residents. Prior to drafting a property maintenance ordinance or adopting a nationally standardized building code, such as the Uniform Building Code, a group of strong public advocates is advised. As was brought to the County's attention in the recent past, a sound code enforcement program can assist a "community" in helping to attract new residents, employees, and businesses by offering a pleasant living environment and safe and healthy housing for its residents.

- **Capital Improvements Program**: The land use regulations detailed above are able to provide the regulations necessary to guide the development of the County. These regulations do not provide for future public facilities. A Capital Improvements Program (CIP) is a means to develop public facilities through identifying immediate and future needs based on population, growth, and development. The advantages of implementing a CIP include: fiscally sound budgeting and planning thereby ensuring a stable tax rate, planning, engineering, and other professional studies can be completed in a "non-crisis" atmosphere, assurance that the projects can be carried out within the means and needs of the County, and increased coordination between agencies, governmental entities, and commercial or private interests having responsibility for public facility construction.

- **Comprehensive Plan**: The Comprehensive Plan should be periodically updated. Revisions in background data would be appropriate after each decennial census or as significant information becomes available. The entire plan should be updated every 10 to 15 years.