

**Appendix C:
Deer Creek Station Social and Economic Impact Study
and Deer Creek Power Project Economic Impact
Analysis**

Basin Electric Deer Creek Station Project

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Deer Creek Station

Social and Economic Impact Study

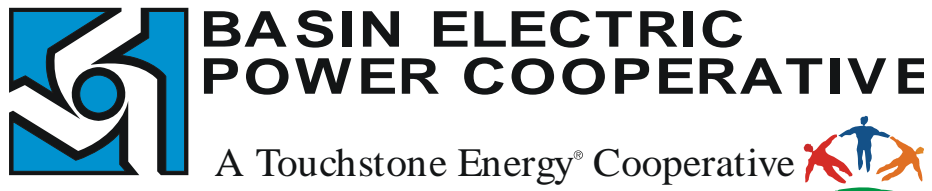


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Introduction

First District Association of Local Governments entered into an agreement with Basin Electric Power Cooperative to create this Social & Economic Impact Study for the proposed Deer Creek Station to address the impact in the twelve areas identified in South Dakota Codified Law 49-41B-7. The purpose of this study is to assess the extent of the potential social and economic effect to be generated by the proposed facility, to assess the affected area's capability to absorb those effects at various stages of construction, and formulate mitigation measures. This study will assist the Local Review Committee in their decision making process.

This Social and Economic Impact Study is provided for the proposed 300-megawatt net combined-cycle energy conversion facility and associated linear facilities (i.e., electric transmission infrastructure, water wells/pipeline and gas pipeline) near White, South Dakota, referred to as the Deer Creek Station Project to be constructed and owned by Basin Electric Power Cooperative.

The Public Utilities Commission defined "Affected Area" is defined as an area encompassing all of the land in South Dakota within a 12 mile radius of the project site. Because all of the construction and electrical distribution will take place in South Dakota, no effects on the Minnesota side of the border require consideration as a part of this study.

Project Overview

Basin Electric Power Cooperative (Basin Electric) is proposing to construct and own a new 300-megawatt (MW) net intermediate generation facility and infrastructure facilities (Project). Based on studies that evaluated the amount and type of power needed to meet the demand in the eastern portion of Basin Electric's service area and after a review of alternative site locations, Basin Electric determined a location in eastern Brookings County, South Dakota would best meet Basin Electric's current need. As a result of the alternative site locations studies, Basin Electric identified two potential sites within a Project Area that includes a portion of southeastern Deuel County, South Dakota and the northeastern portion of Brookings County. The Project Area is located approximately 10 miles northeast of the City of Brookings. In addition to the generation facility, the proposed Project would include ancillary facilities such as a natural gas pipeline for fuel delivery, electrical transmission facilities to connect to the existing Department of Energy (DOE) Western Area Power Administration (Western) White electrical substation, either a water well system or water delivery from existing rural water system, and wastewater processing. The proposed Project would consist of interconnection of the transmission facilities with Western Area Power Administration's (Western) transmission system at its existing White Substation.

Basin Electric is a regional wholesale electric generation and transmission cooperative owned and controlled by the member cooperatives it serves. It was created in May 1961 as a result of regional efforts by electric distribution cooperatives and the Rural Electrification Administration, now Rural Utilities Service (RUS), an agency within the U.S. Department of Agriculture (USDA). Basin Electric includes 120 rural electric systems and is one of the largest electric generation and transmission cooperatives in

the U.S. Basin Electric serves approximately 2.5 million customers in 430,000 square miles covering portions of nine states: Colorado, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, South Dakota, and Wyoming.

Construction of the proposed Deer Creek Station Project is expected to begin in July of 2010 after all necessary permits and approvals have been received. The plant will be commercially available in August of 2012 reflecting a 25 month construction period. It is anticipated that employment will peak at a high of 360 workers at the power plant during construction. For plant operation it is anticipated that 30 full time employees will be required. Basin Electric estimates the capital cost of the energy conversion facility to be approximately \$405 million.

- **Executive Summary**

With the mitigation measures proposed in several of the study areas outlined in this social and economic assessment, neither the Deer Creek Station project construction nor the operational workforce will cause significant negative impact on the project area. All of the mitigation measures recommended involve receiving federal, state or local permits prior to the start of construction or consulting with federal, state or local agencies if human remains are uncovered during construction.

It is the professional opinion of the management and staff of 1st District Association of Local Governments, that the construction of the Deer Creek Station Project, as proposed by Basin Electric Power Cooperative, will cause no significant negative impacts on the social and economic infrastructure of the Affected Area and that the Project will provide beneficial long-term employment with 31 new full-time operational positions.

- **Federal Action**

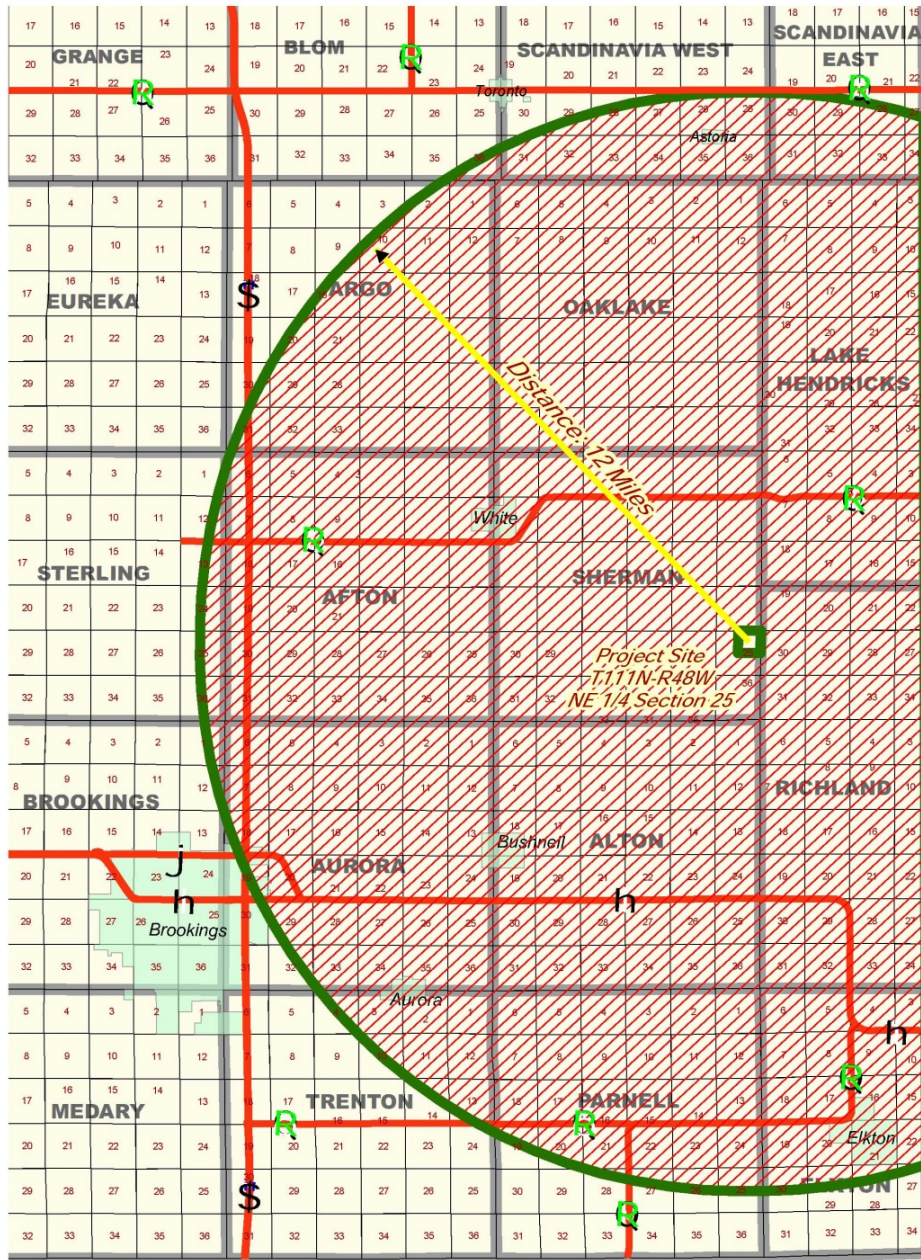
Basin Electric has submitted requests to interconnect the proposed Project to Western Area Power Administration's transmission system. The request for interconnection is a Federal action, triggering an environmental review under the National Environmental Policy Act (NEPA), Section 102(2), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations (CFR) parts 1500-1508), DOE National NEPA Implementing Procedures, 10 CFR Part 1021. Western is the lead federal agency as defined at 40 CFR 1501.5. Western is preparing this Environmental Impact Statement (EIS) under these regulations to describe the analysis of environmental effects of the Proposed Action and alternatives including the No-Action Alternative.

The impacts on the physical environment will be studied in detail as part of the Western Environmental Impact Statement and are not covered in this socioeconomic impact assessment.

Project Location and Area Map

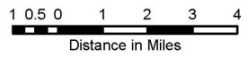
The site is located in eastern Brookings County, South Dakota and the legal description of the property is as follows: NE ¼, Section 25, Township 111 N, Range 48 W, Brookings County. The energy conversion facility would be located on a greenfield (i.e., undeveloped) site of approximately 40 acres within a 100 acre plant site.

Basin Electric has considered a range of plant site alternatives. The chosen site, referred to as White Site I, was chosen because of its proximity to a 42" natural gas pipeline and electrical transmission facilities. A map of the study area can be found on the following page.



Brookings County Project Area

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Social and Economic Impact Study Purpose and Steps

The purpose of this study is to assess the extent of the potential social and economic effect to be generated by the proposed facility, to assess the affected area's capacity to absorb those effects at various stages of construction and, if needed, formulate mitigation measures. The Social and Economic Impact Study will provide information to the Local Review Committee regarding social and economic impacts and associated mitigation measures.

This study shall compare the existing conditions within the study area to the anticipated future conditions in the study area if the energy conversion and transmission facilities are constructed. The relative impact of the project will then be assessed and mitigation strategies can be recommended or a determination of no significant impact can be made.

The analysis process for the Social and Economic Impact Study is as follows:

1. Establish existing conditions within the study area
2. Identify project impacts to the existing conditions
3. Make a determination of 'no significant impact' or 'mitigation recommended'
4. Identify mitigation measures to address project impacts

The assessment shall include but not be limited to consideration of the temporary and permanent alternatives in the following areas:

1. Housing supplies
2. Educational facilities and manpower
3. Waste supply and distribution
4. Waste water treatment and collection
5. Solid waste disposal and collection
6. Law Enforcement
7. Transportation
8. Fire Protection
9. Health
10. Recreation
11. Government
12. Energy
13. Water supply
14. Environmental justice
15. Historic Preservation

Public Utilities Commission Defined Study Area

The methodology for the Social and Economic Impact Study involves the description of the existing conditions within the South Dakota Public Utilities Commission defined study area, which includes the following school districts, municipalities and counties:

1. Brookings 05-1 School District – 2007-08 enrollment 2,686
2. Debrook 05-6 School District – 2007-08 enrollment 391
3. Elkton 05-3 School District – 2007-08 enrollment 283

4. Town of Astoria – population 150
5. Town of Aurora – population 500
6. City of Brookings – population 18,504
7. Town of Bushnell – population 75
8. City of Elkton – population 677
9. City of White – population 530
10. Brookings County
11. Deuel County

Methodology

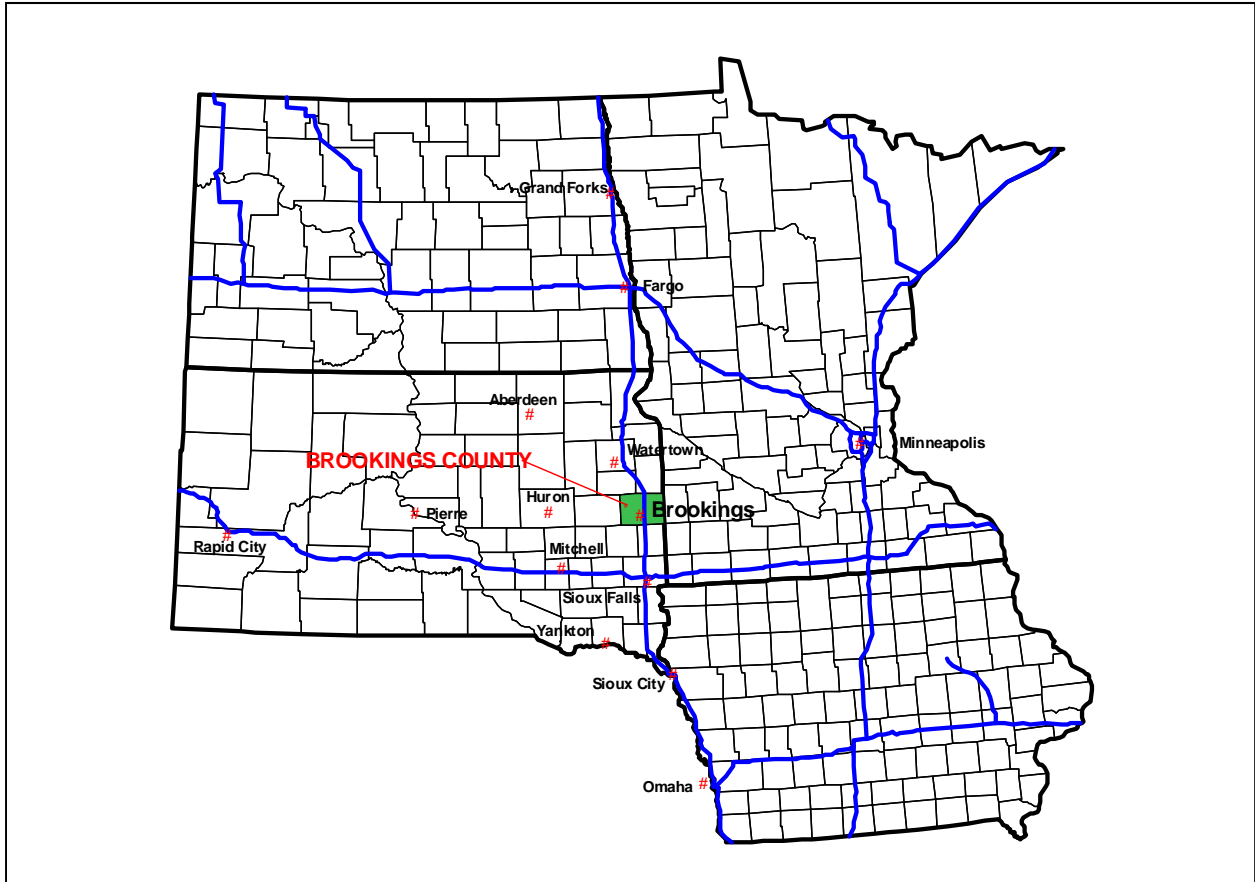
The methodology for the Social and Economic Impact Study includes a description of existing conditions within the South Dakota PUC-defined Affected Area, assessing future conditions during project construction and operation and identifying any measures that may need to be implemented to mitigate negative impacts. Impacts are based upon the number of additional workers that a study area will likely need to serve and whether the existing conditions can absorb the anticipated demand created by the project.

If the existing conditions can absorb the anticipated demand created by the project then a determination of 'no significant impact' is made and no mitigation measures are proposed. If the existing conditions cannot absorb the anticipated demand created by the project then a determination of 'mitigation recommended' is made and mitigation measures are proposed.

BROOKINGS COUNTY - REGIONAL LOCATION

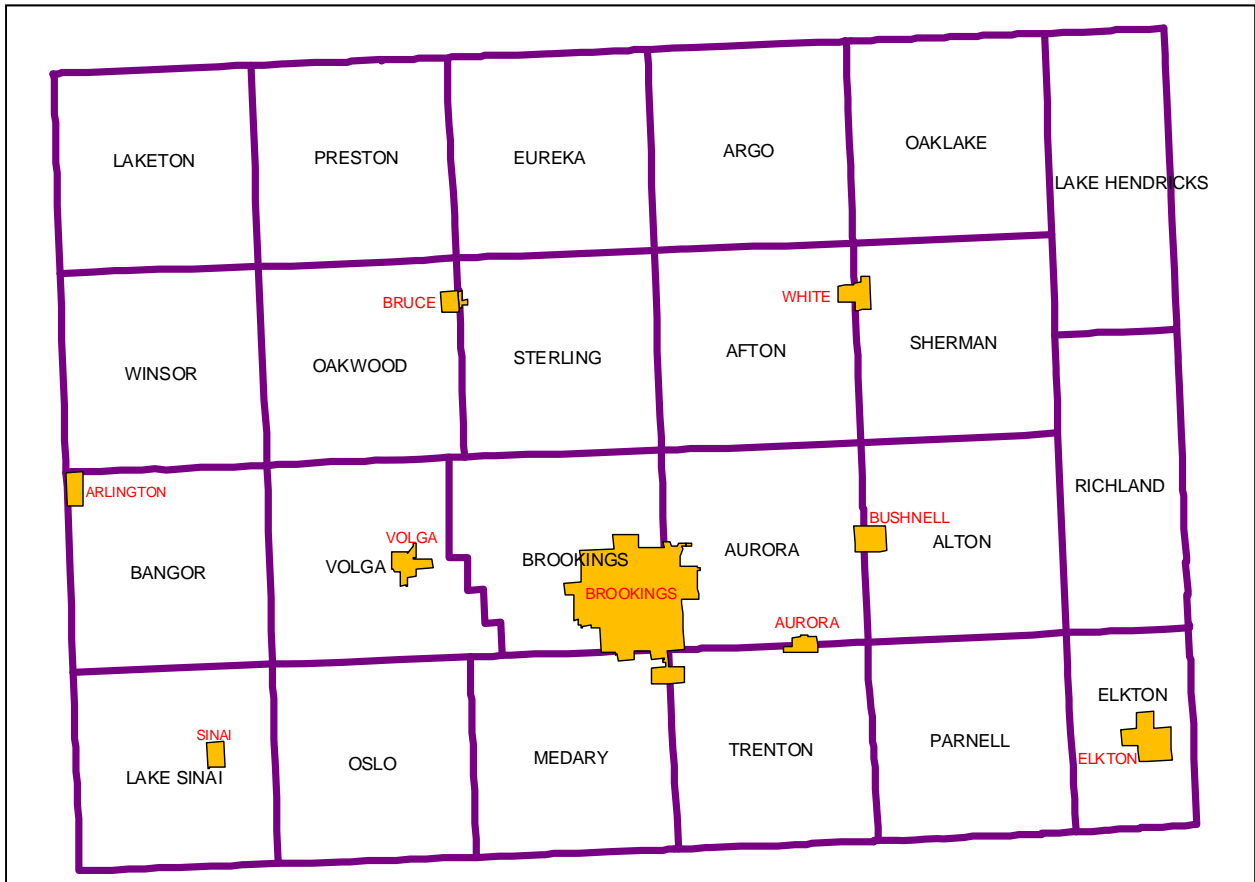
Brookings County lies in the eastern portion of the State of South Dakota at the crossroads of Interstate 29 and Highway 14. Major cities within the area include Fargo, Sioux City, Minneapolis, and Sioux Falls.

**MAP 1
REGIONAL LOCATION MAP**



The county is comprised of nine communities (the City of Arlington is located in both Kingsbury and Brookings Counties) and twenty-three townships. The centrally located City of Brookings is the county seat.

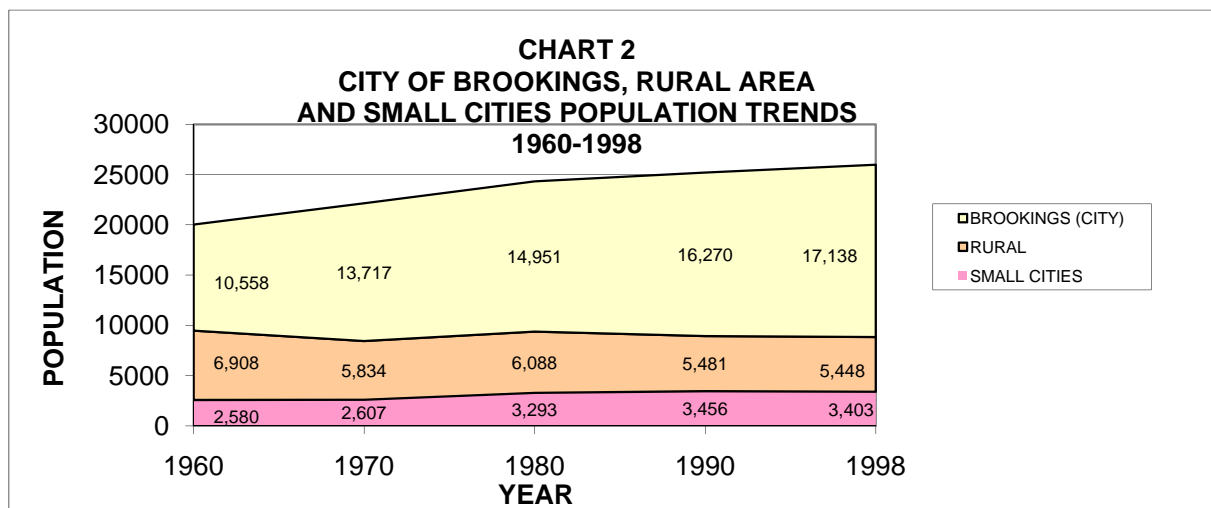
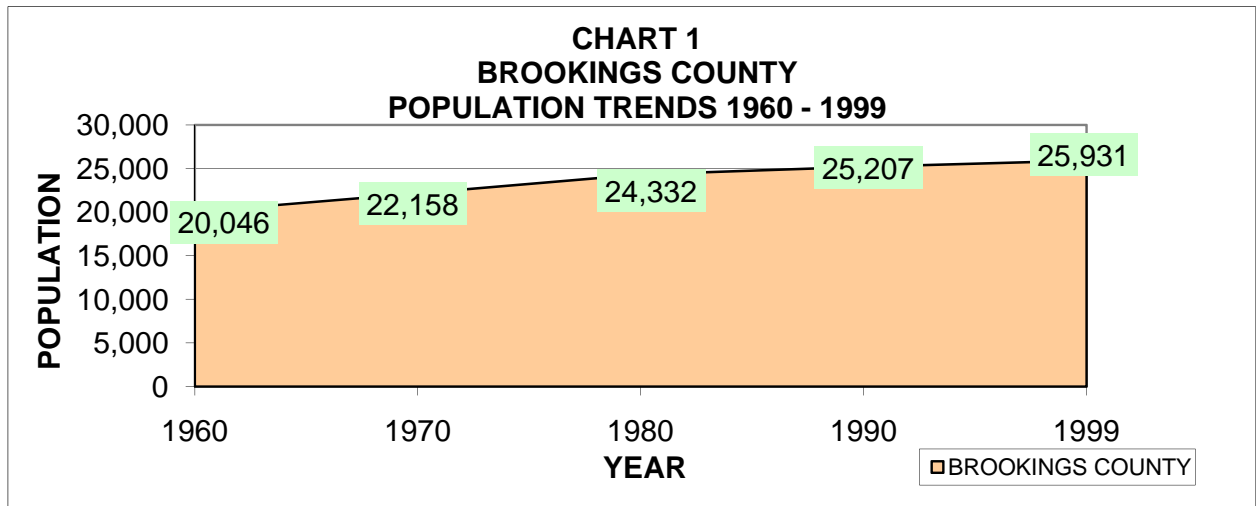
MAP 2 MUNICIPALITIES AND TOWNSHIPS MAP



POPULATION AND HOUSING

The first section examines the population of Brookings County with respect to such factors as population growth, migration trends and age structure.

Brookings County is comprised of nine communities and twenty-three townships. The estimated population of the county is 25,931 (1999 US Census Bureau). Chart 1 displays information on the population trends for Brookings County from 1960 to 1999. Since 1960, Brookings County has experienced an increase in its population of 29.4%.



SOURCES FOR CHART 1 AND CHART 2 – US Bureau of Census of the Population 1960, 1970, 1980, And 1990. and 1999 Population Estimates South Dakota State Data Center

The population trends of Brookings County are further detailed in Chart 2 and Table 1. Chart 2 and Table 1 detail Brookings County population trends by dividing the county into three data subsets. They include the City of Brookings, smaller cities, and the rural area. The smaller cities subset is defined to include Aurora, Bruce, Bushnell, Elkton, Sinai, Volga, and White.

**TABLE 1
BROOKINGS COUNTY
POPULATION HISTORY 1960-1998**

CENSUS YEAR	BROOKINGS	RURAL	SMALLER CITIES	TOTAL COUNTY
1960	10,558	6,908	2,580	20,046
1970	13,717	5,834	2,607	22,158
1980	14,951	6,088	3,293	24,332
1990	16,270	5,481	3,456	25,207
1998	17,138	5,448	3,403	25,989

The smaller cities population for 1960-1998 included Aurora, Bruce, Bushnell, Elkton, Sinai, Volga, and White.

The City of Brookings has steadily increased both its population and overall proportion of the county's population. In 1960, the City of Brookings represented approximately fifty-three (53) percent of the county's population. In contrast, that number has increased to sixty-six (66) percent in 1998. Nearly all of the increase of population in Brookings County since 1990 is due to the growth of the City of Brookings. Much of the City of Brookings population growth may be attributed to - - physical location, job center, education center, and county seat.

Except for an increase between the 1970 and 1980 Census, the population of the rural areas within Brookings County have steadily been declining since 1960 (-21.1%). These trends have been influenced by several factors - farm consolidation, city annexations, residential lot requirements.

Between 1960 and 1998 the population of the smaller cities in Brookings County increased by approximately thirty-two (32) percent. However, since 1990 the State Data Center has projected that all small cities, with the exception of Volga, lost population. Influencing factors affecting smaller cities may include - lack of resident employers, loss of service sector industries, aging population, and out-migration of young adults.

Table 2 shows the population trends from 1990 to 1998 for Brookings County (the rural area and incorporated communities). The data from Table 2 continues to support the historical migration patterns that shift the rural/urban mix of Brookings County. Between 1990 and 1998 the City of Brookings population increase of 5.3%, combined with population losses in the rural areas and smaller communities (excluding Volga), was responsible for 99.9% of the county's population increase. Also, while most of the rural areas and communities in Brookings County experienced population losses, Brookings increased its proportion of the county's total population from 64.5 percent to 66 percent.

TABLE 2
BROOKINGS COUNTY POPULATION ANALYSIS 1980 – 1998
BROOKINGS, OTHER COMMUNITIES AND RURAL AREA PROPORTIONS

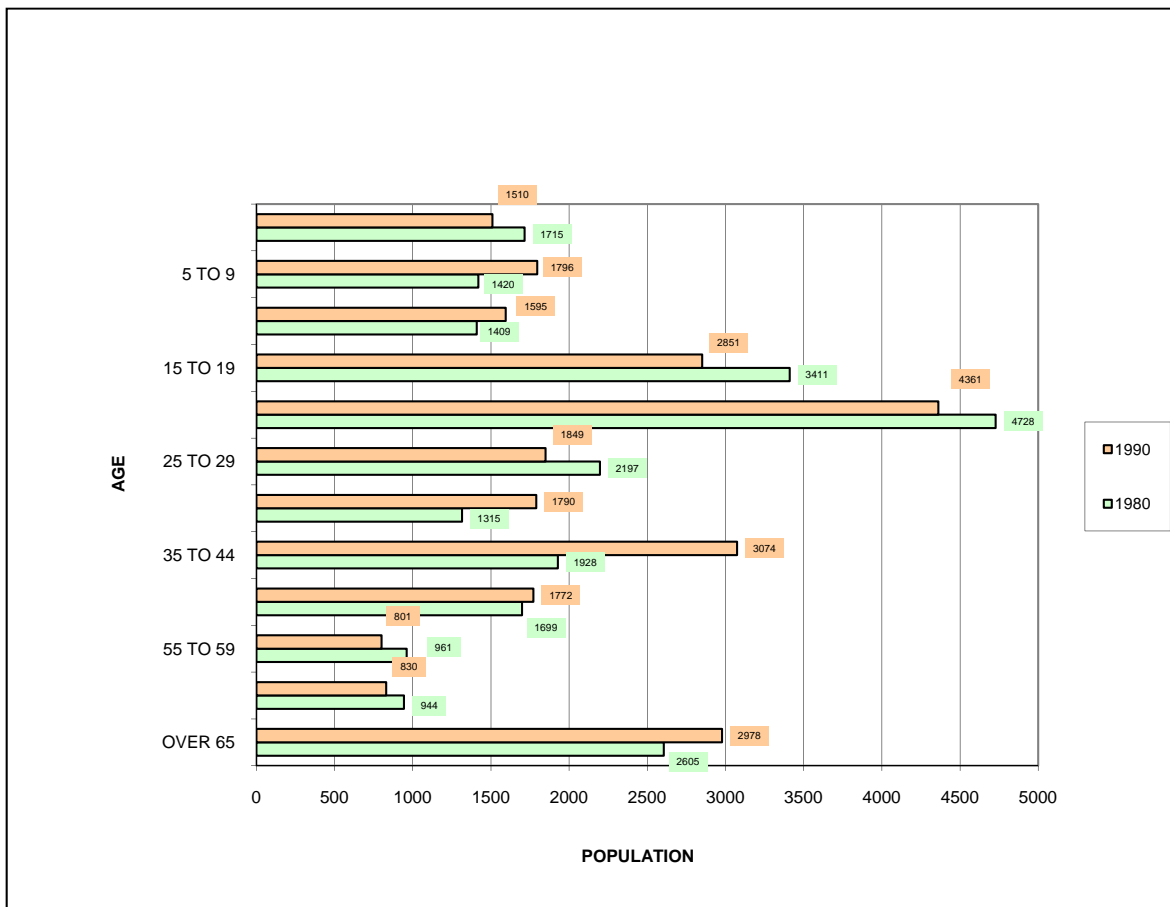
	POP 1990	PROPORTION OF BROOKINGS COUNTY 1990	POP 1998	PROPORTION OF BROOKINGS COUNTY 1998	CHANGE IN PROPORTION 1990 - 1998
BROOKINGS	16,270	64.5	17,138	66.0	+1.5
AURORA	619	2.5	594	2.3	-0.2
BRUCE	235	0.9	216	0.8	-0.1
BUSHNELL	81	0.3	76	0.3	----
ELKTON	602	2.4	577	2.2	-0.2
SINAI	120	0.5	114	0.4	-0.1
VOLGA	1,263	5.0	1,296	5.0	----
WHITE	536	2.2	530	2.0	-0.2
RURAL	5,481	21.7	5,448	20.1	-1.6
TOTAL	25,207		25,989		

Sources: US Bureau of the Census, Census of Population 1980, 1998. – Yellow shading denotes municipality within study area.

Chart 3 shows the age distribution of Brookings County residents in 1980 and 1990. Several conclusions about the county’s age distribution trends become apparent after reviewing 1980 and 1990 Census Statistics. The most notable trends observed were the increase in the number of individuals in the 0 to 14, 30 to 44, and over age 64 age cohort groups, and the decrease in the population base of the 0 to 4 and 15 to 29 age cohort groups.

Between 1980 and 1990, the number of Brookings County’s children age 0 to 14 increased by 7.9 % (357 individuals). During this period, the State experienced an increase of 1.8% in this cohort group. The growth of this age cohort would be stronger except for losses experienced in the 0 to 4-year-old cohort group (-13.6%, 195 individuals). The 0 to 4-year-old cohort group decrease may be attributed to the fertility ratio. Upon examination of the fertility ratio, (the number of children under the age of five compared to the number of women in their childbearing years, ages 15 to 44) one can see a decrease in Brookings County’s potential birthrate. The fertility ratio in 1990 decreased by 42.5% (2.7 births per 10 women ages 15 to 44 in 1990 compared to 4.7 births per 10 women in their childbearing years in 1980). Although in 1990 there were more women in their childbearing years than in 1980, those women in 1990 were having fewer babies than the women in 1980.

The second trend is that of the 12.3% decrease in the number of individuals who comprise the 15 to 29 year age group. The 15 to 29 year old cohort group is the largest cohort group within the county. Much of this is due to the location of the South Dakota State University in the city of Brookings. However, even with the location of the University, Brookings County is experiencing a phenomenon not uncommon to South Dakota. Generally, there has been a decrease in this cohort group because of several factors. The first is being that of the “baby boom/baby bust eras”. The individuals who comprise the 15 to 29 age categories in 1980 were the final children born into the baby boom era. Meanwhile, individuals 15 to 29 years old in 1990 were the first children of the baby bust era. Also this age cohort group consistently across the state has historically experienced a very high migration rate. Between 1980 and 1990 the State experienced a loss of 28% in the same cohort group.

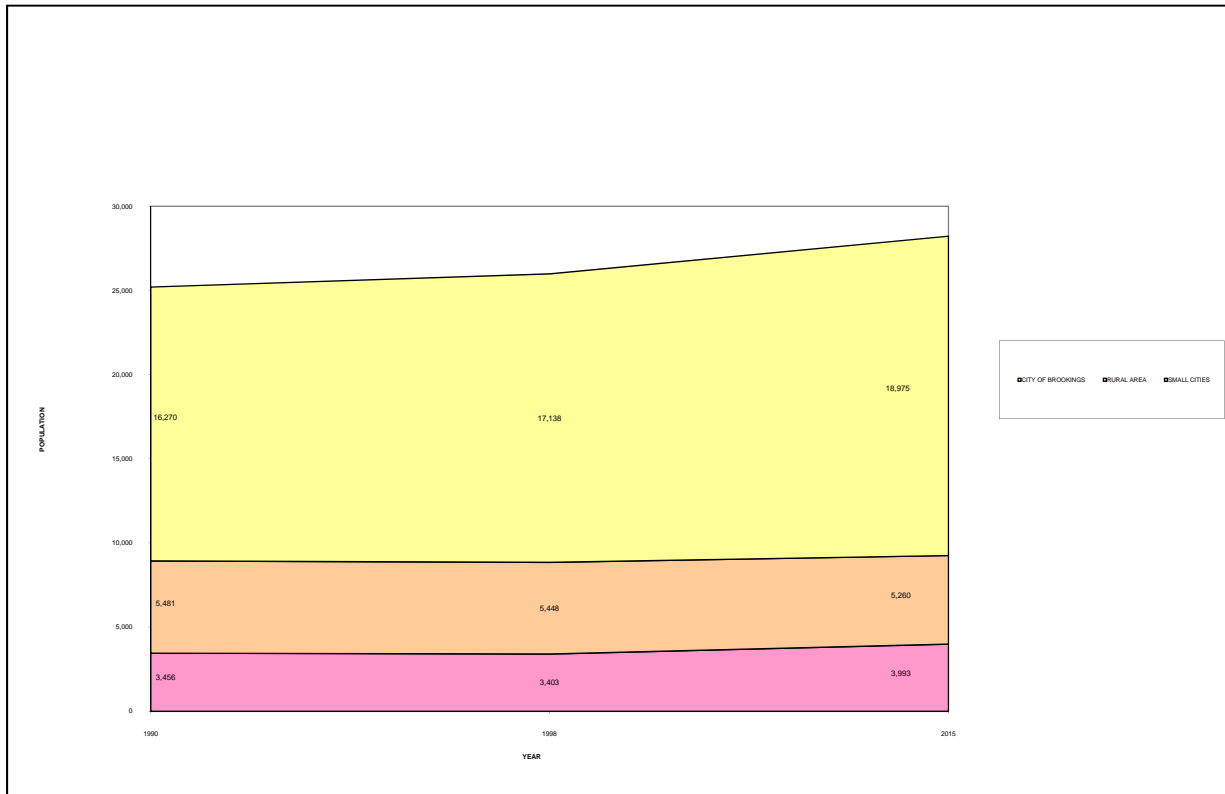


Source: US Bureau of the Census, Census of the Population 1980, 1990

The third observable trend is the increase in the number of individuals in the 30 to 44 year old age groups. Between 1980 and 1990, this group experienced an increase of 50% (an increase of 1621 people). These individuals were born at the height of the “baby boom”. During the same time frame the State experienced an increase of over 43% in this age cohort group.

Finally, the number of individuals over the age of 65 experienced an increase of 14.3 percent. The graying of Brookings County is not a secluded incident. It is a very common occurrence throughout the state. Between 1980 and 1990 the State’s population of individuals 65 years of age and older increased by 12.4 %. It should be noted that with extended life spans, migration of elderly individuals from rural areas and the increased number of the baby boomers getting older, the “Graying of Brookings County” will continue at a higher pace over the next fifteen to twenty years.

In 1995, the South Dakota State Data Center has estimated that Brookings County would increase its population to 32,392 (an increase of 24.6 %) by the year 2020. In the early 90’s, Brookings County was experiencing growth in all subset areas (rural, small cities, and Brookings). Over the past four years, those trends have leveled off and in some instances declined. The trends of growth in the number of the elderly, individuals having fewer children, potential out-migration of individuals 15 to 29 years old, and farm consolidation will have an impact on Brookings County potential for future growth. If the recent trends are to continue, it is unlikely that the 1995 population projection would be attained.



The City of Brookings will contribute substantially to the county’s future population base. Volga, Elkton, Aurora, and White are examples of communities that should experience modest population expansion during the planning period. These numbers are based upon their existing economies and proximity to the City of Brookings. Although there may be potential for growth in Bushnell, Sinai, and Bruce, it is probable that those communities and the rural unincorporated areas will continue to lose population throughout the planning period. Table 3 and Chart 4 exhibit population projections for Brookings County. The population projections were based on regression analysis utilizing U.S. Census Data and some local building permit information.

**TABLE 3
BROOKINGS COUNTY POPULATION PROJECTIONS
MUNICIPALITIES AND RURAL AREA 1990 – 2015**

	1990	1998	2015
Aurora	619	594	780
Brookings	16,270	17,138	18,975
Bruce	235	216	200
Bushnell	81	76	60
Elkton	602	577	722
Sinai	120	114	94
Volga	1,263	1,296	1,512
White	536	530	625
Rural Area	5,481	5,448	5,260
Total	25,207	25,989	28,228

Yellow shading denotes municipality within study area

HOUSING

The number of housing units in Brookings County totaled nearly 10,000 in 1990, with the City of Brookings accounting for over 60 percent of the structures and the rural unincorporated area making up nearly 28 percent of total.

Between 1990 and 2000 there were 366 residences constructed in the rural area (Tables 4 and 5) of the county. The rural housing stock is comprised almost entirely of single-family residences. New residential construction has been predominantly site built with manufactured and mobile homes representing approximately 33 percent. It should be noted that not all of the 366 new residences were on previously undeveloped sites.

**TABLE 4
RESIDENTIAL BUILDING PERMITS BY TYPE
RURAL BROOKINGS COUNTY**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
Site built (stick built)	10	14	15	35	28	23	19	18	30	25	217
Moved to Site (stick built)	2	3	10	5	8	0	1	6	3	3	41
Manufactured	7	13	20	7	15	7	6	10	12	11	108
<i>Total</i>	<i>19</i>	<i>30</i>	<i>45</i>	<i>47</i>	<i>51</i>	<i>30</i>	<i>26</i>	<i>34</i>	<i>45</i>	<i>39</i>	<i>366</i>

**TABLE 5
RESIDENTIAL CONSTRUCTION 1990 – 1999**

Townships	# of Housing Units '90 Census	Units Added									Total added	Total
		90-91	1992	1993	1994	1995	1996	1997	1998	1999		
Afton	83	2	0	1	2	0	1	1	1	0	8	91
Alton	85	1	0	0	3	1	0	0	1	4	10	95
Argo	62	0	1	1	0	1	1	1	0	1	6	68
Aurora	114	3	1	1	2	1	1	1	1	1	12	126
Bangor	76	0	1	0	2	0	0	0	1	1	5	81
Brookings	147	3	1	4	2	0	2	1	5	3	21	168
Elkton	33	1	1	0	0	0	0	0	2	1	5	38
Eureka	70	1	0	0	0	2	1	0	2	0	6	76
Lake Hendricks	118	4	1	2	2	2	0	3	0	1	15	133
Lake Sinai	74	0	1	0	1	1	1	2	1	1	8	82
Laketon	149	3	2	1	3	1	0	2	2	2	16	165
Medary	430	15	14	28	17	7	8	12	9	12	122	552
Oak Lake	40	0	2	0	3	0	1	0	1	1	8	48
Oakwood	171	3	2	3	2	1	0	1	1	3	16	187
Oslo	78	2	0	1	0	0	0	2	0	1	6	84
Parnell	62	1	0	0	1	0	0	0	4	1	7	69
Preston	58	0	0	0	1	1	1	0	1	0	4	62
Richland	63	2	1	0	0	2	2	3	1	0	11	74
Sherman	59	2	3	0	3	2	1	0	4	0	15	74
Sterling	119	2	9	3	1	2	3	2	1	1	24	143
Trenton	139	2	3	0	1	2	0	2	3	0	13	152
Volga	135	1	1	2	5	3	2	0	4	3	21	156
Winsor	202	1	1	0	0	1	1	1	0	2	7	209
Town. Total	2,567	49	45	47	51	30	26	34	45	39	366	2,933
Municipalities												
Aurora	205	0	1	0	0	0	1	NA	NA	NA	2	207
Bruce	112	1	0	0	0	0	0	NA	NA	NA	1	113
Brookings	6,012	52	55	47	81	45	42	46	64	46	478	6,490
Bushnell	29	0	0	0	0	0	0	NA	NA	NA	0	29
Elkton	274	0	2	1	1	2	1	3	2	3	15	289
Sinai	65	0	0	0	0	0	0	NA	NA	NA	0	65
Volga	493	4	17	5	3	8	4	5	7	4	57	550
White	202	1	3	1	2	1	0	5	2	4	19	221
Mun. Total	7,392	58	78	54	87	56	48	59	75	57	564	7,964
Brookings	6,012	52	55	47	81	45	42	46	64	46	478	6,490
Smaller Cities	1,380	6	23	7	6	11	6	13	11	11	94	1,474
Mun. & Town. Total	9,959	101	123	101	138	86	74	93	120	96	938	10,897

Yellow denotes a municipality within the study area

Rural farm and non-farm residential construction is expected to continue at a pace consistent with past trends (approximately 35 units per year). This number could fluctuate in either direction if certain events take place. Increases would be related to future development of lakes, and/or the departure from density zoning. Decreases may be the result of regional economic conditions, mortgage interest rates and/or lack of supply of developable lots. Based upon the future land use policies within this plan, county residents will still continue to have the choice of either an urban, small town or rural lifestyle.

The Brookings County information contained in this chapter was taken from the Brookings County Comprehensive Land Use Plan. A copy of that plan is on file in the First District offices.

If constructed, the Deer Creek Station Project is projected to increase the population of Brookings County by approximately 247 during the construction phase and approximately 29 when construction is complete and the plant becomes operational. The following tables show estimates of construction and operational worker distribution, based upon the existing available housing stock, within Brookings County.

Construction Worker Distribution and Population Impact

City/Town	Current Population	# of Workers	Projected Population
Aurora	500	9	509
Brookings	18,504	218	18,722
Bushnell	75	1	76
Elkton	677	12	689
White	530	7	537
Total	20,286	247	20,533

Projected Impact of Construction Workers on the Existing Available Housing Stock

City/Town	Housing Units	Occupied	By Owner	By Renter	Vacant	Construction Worker Housing Need
Aurora	221	205	147	58	16	9
Brookings	7,359	6,971	3,238	3,733	388	218
Bushnell	34	32	23	9	2	1
Elkton	289	267	201	66	22	12
White	212	198	151	47	14	7

The projected population increase associated with the Deer Creek Station construction workers to the population of Brookings County within the study area is 1.21% and, according to this study, will not have a significant or lasting impact on the area's social and economic environment.

Operational Worker Distribution and Population Impact

City/Town	Current Population	# of Workers	Projected Population
Aurora	500	3	503
Brookings	18,504	17	18,521
Bushnell	75	1	78
Elkton	677	5	682
White	530	3	533
Total	20,286	29	20,315

Projected Impact of Operational Workers on the Existing Available Housing Stock

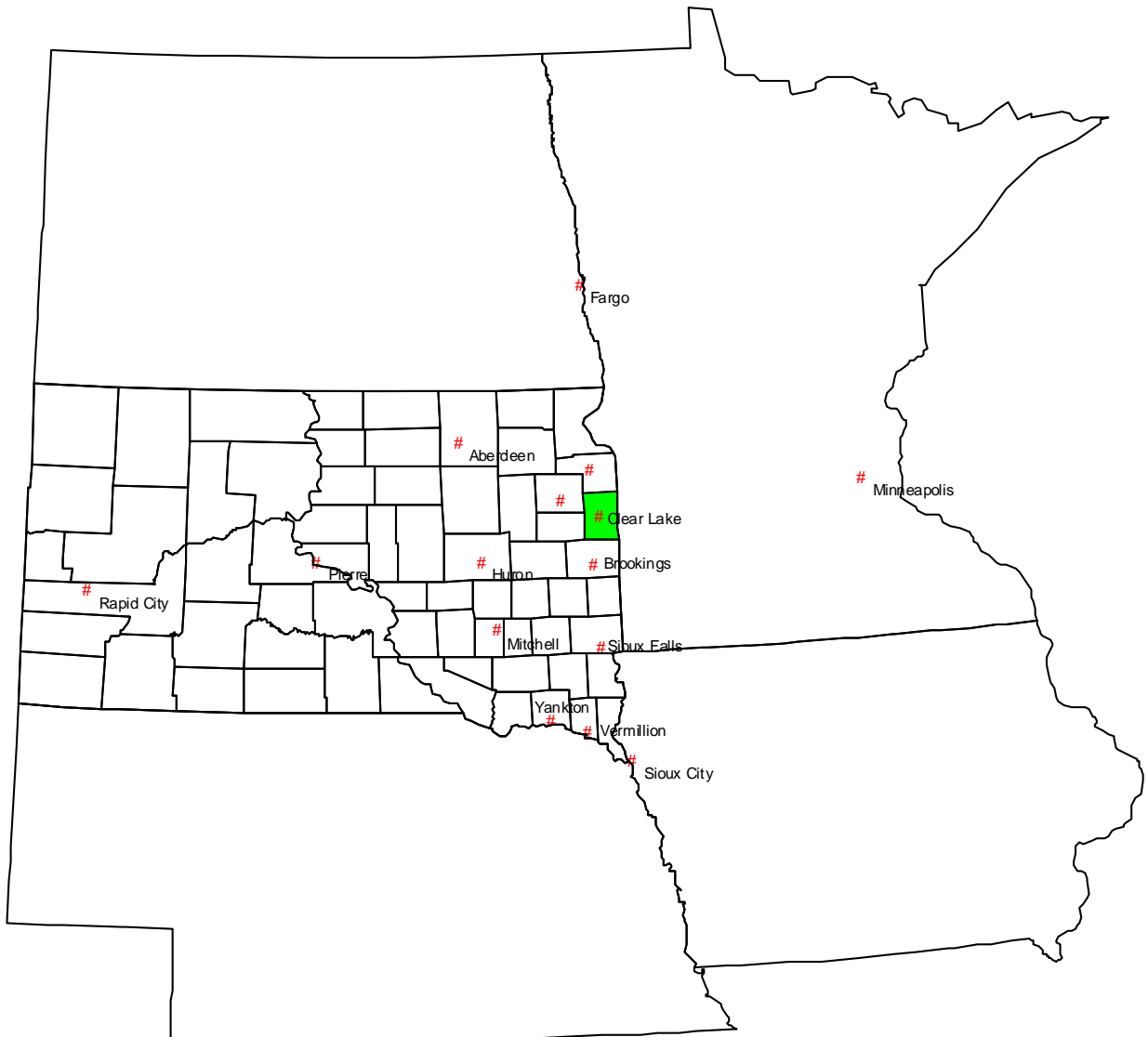
City/Town	Housing Units	Occupied	By Owner	By Renter	Vacant	Operational Worker Housing Need
Aurora	221	205	147	58	16	3
Brookings	7,359	6,971	3,238	3,733	388	17
Bushnell	34	32	23	9	2	1
Elkton	289	267	201	66	22	5
White	212	198	151	47	14	3

The projected population increase associated with the Deer Creek Station operational workers to the population of Brookings County within the study area is 0.14% and, according to this study, will not have a significant or lasting impact on the area's social and economic environment.

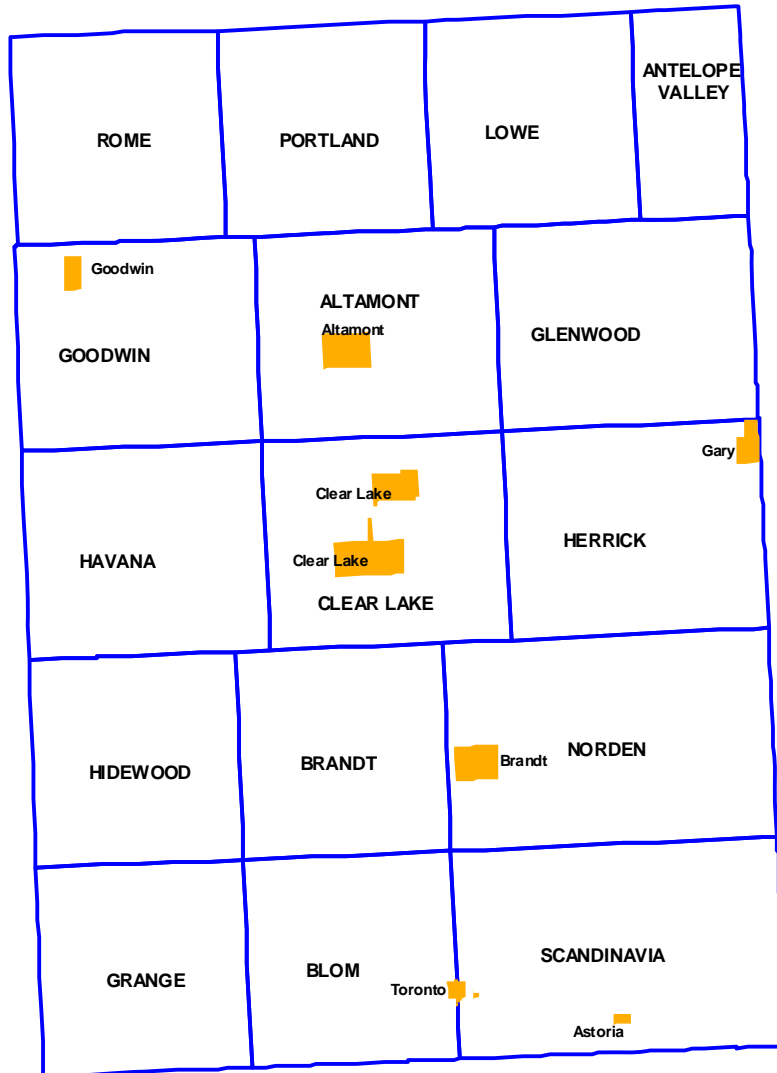
DEUEL COUNTY - REGIONAL LOCATION

Deuel County is located in northeastern South Dakota, bounded on the north by Grant County, on the east by the State of Minnesota, on the west by Codington and Hamlin counties, and on the south by Brookings County. The county is comprised of seven (7) incorporated communities (Altamont, Astoria, Brandt, Clear Lake, Gary, Goodwin and Toronto), one (1) unincorporated community (Bemis) and sixteen (16) townships. The City of Clear Lake is the county seat.

**MAP 1
REGIONAL LOCATION MAP**

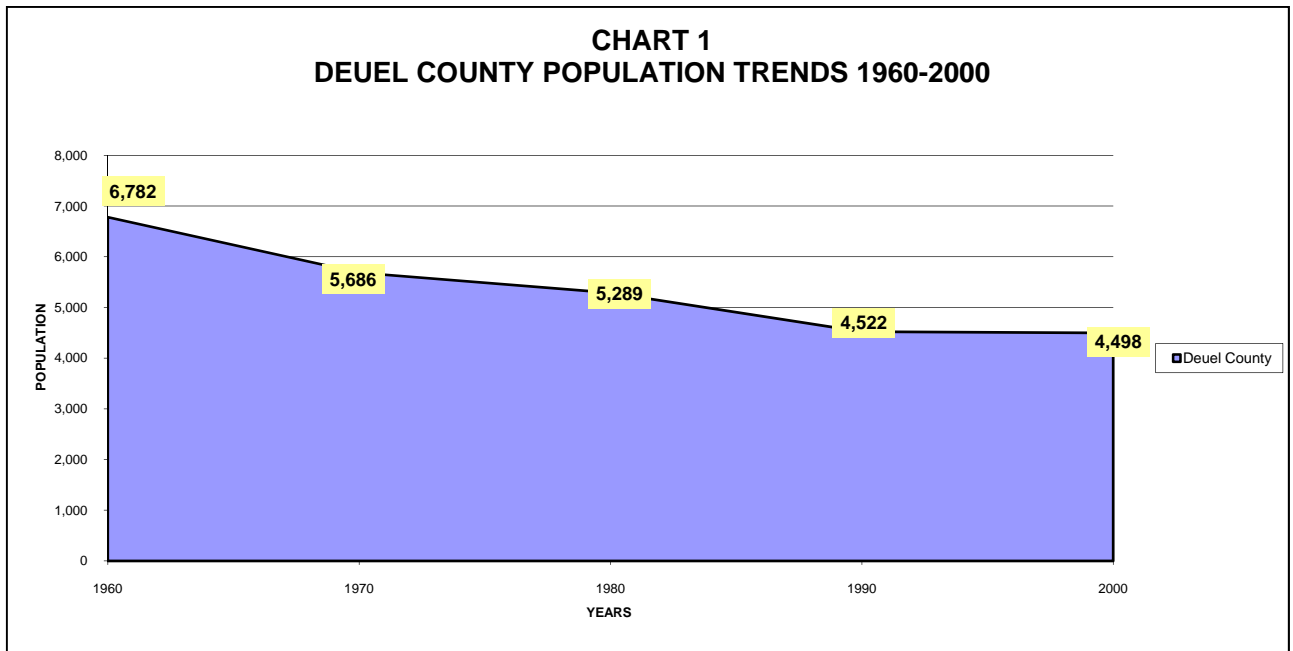


**MAP 2
INCORPORATED MUNICIPALITIES AND TOWNSHIPS MAP**



POPULATION AND HOUSING

The first section examines the population of Deuel County with respect to such factors as population growth, migration trends and age structure.



Sources For Chart 1: US Bureau of Census of the Population 1960, 1970, 1980, 1990, and 2000.

The population of the county is 4,498 (2000 Census). Chart 1 displays information on the population trends for Deuel County from 1960 to 2000. Deuel County has lost over thirty-three (33) percent of its population since 1960 (2,284 persons). It should be noted that nearly two-thirds of the population loss occurred between 1960 and 1980 (1,493 persons). Since 1980 Deuel County experienced a loss of 791 persons. However between 1990 and 2,000, Deuel County generally maintained its population with only a loss of twenty-four (24) persons.

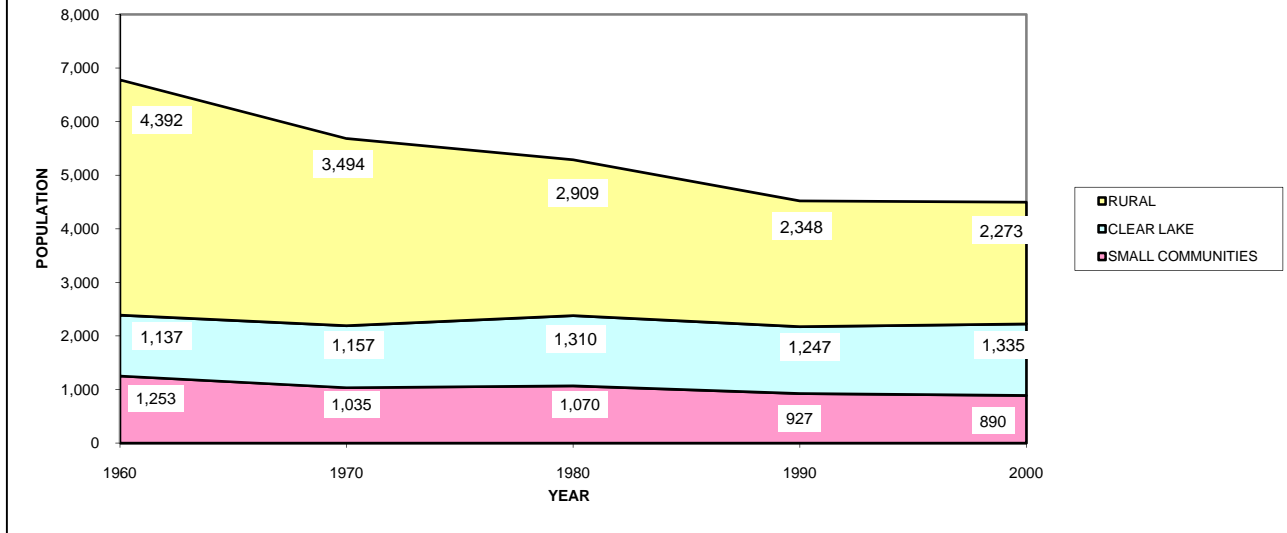
**TABLE 1
DEUEL COUNTY
POPULATION HISTORY 1960-2000**

CENSUS YEAR	CLEAR LAKE	RURAL	SMALLER COMMUNITIES	TOTAL COUNTY
1960	1,137	4,392	1,253	6,782
1970	1,157	3,404	1,035	5,686
1980	1,310	2,909	1,070	5,289
1990	1,247	2,397	878	4,522
2000	1,335	2,273	890	4,498

The smaller communities population for 1960-2000 included Altamont, Astoria, Brandt, Gary, Goodwin, and Toronto.

Table 1 and Chart 2 detail Deuel County population trends by dividing the county into three data subsets. They include the City of Clear Lake, smaller communities, and the rural area. The smaller communities subset is defined to include Altamont, Astoria, Brandt, Gary, Goodwin, and Toronto.

**CHART 2
CITY OF CLEAR LAKE, SMALLER COMMUNITIES,
AND RURAL AREA POPULATION TRENDS
1960 TO 2000**



Sources For Table 1 And Chart 2 – US Bureau of Census of the Population 1960, 1970, 1980, 1990, and 2000.

The City of Clear Lake has steadily increased its overall proportion of the county's population. In 1960, the City of Clear Lake represented approximately seventeen (17) percent of the county's population. Between 1990 and 2000, Clear Lake increased its proportion of the county's population from 27.6% to 29.7% (Table 2). If Clear Lake had not experienced an increase of seven (7) percent between 1990 and 2000, Deuel County's population would have experienced an additional loss of eighty-eight (88) persons. Based on population trends, it is possible that Clear Lake could possess nearly one-third of the county's entire population by the 2010. The City of Clear Lake's ability to generally maintain its population base may be attributed to its characteristics such as physical location, job center, education center, and county seat. The previous and following data continues to support the historical migration patterns which shift the rural/urban mix of this county.

The population of the rural areas within Deuel County has steadily been declining since 1960 (-48.2%). Although Deuel County has continued to experience population losses in the rural areas of the county, the percentage decreases have slowed over the past ten (10) years to an annual loss of approximately 0.3 percent. It is quite probable that the rural area of Deuel County will continue to experience population decreases due to factors such as farm consolidation, and out-migration trends to larger communities.

Between 1960 and 2000 the population of the smaller communities in Deuel County decreased cumulatively by twenty-nine (29) percent. Since 1990, the smaller communities experienced a decrease of thirty-seven (37) individuals. This is not to say that all of the small communities experienced a population decrease between 1990 and 2000. Altamont, Astoria, Brandt, and Gary's combined loss of seventy-two (72) individuals was out paced by the population increases in Andover (42%), Goodwin

(27%), and Toronto (0.5%). Table 2 shows that communities and the rural area either maintained or experienced slight increases or decreases in their respective proportion of the County's population base. It should be noted these communities, like other small towns in South Dakota, are suspect to forces which may influence future population decreases such as - lack of resident employers, loss of service sector industries, aging population, and out-migration of young adults.

**TABLE 2
DEUEL COUNTY POPULATION ANALYSIS 1990 – 2000
CLEAR LAKE, OTHER COMMUNITIES AND RURAL AREA PROPORTIONS**

	POP 1990	PROPORTION OF DEUEL COUNTY 1990	POP 2000	PROPORTION OF DEUEL COUNTY 2000	CHANGE IN PROPORTION 1990-2000
ALTAMONT	48	1.1%	34	0.8%	-0.3
ASTORIA	155	3.4%	150	3.3%	-0.1
BRANDT	123	2.7%	113	2.5%	-0.2
CLEAR LAKE	1,247	27.6%	1,335	29.7%	+2.1
GARY	274	6.1%	231	5.1%	-1.0
GOODWIN	126	2.8%	160	3.6%	+0.8
TORONTO	201	4.4%	202	4.5%	+0.1
RURAL	2,348	51.9%	2,273	50.5%	-1.4
TOTAL	4,522		4,498		

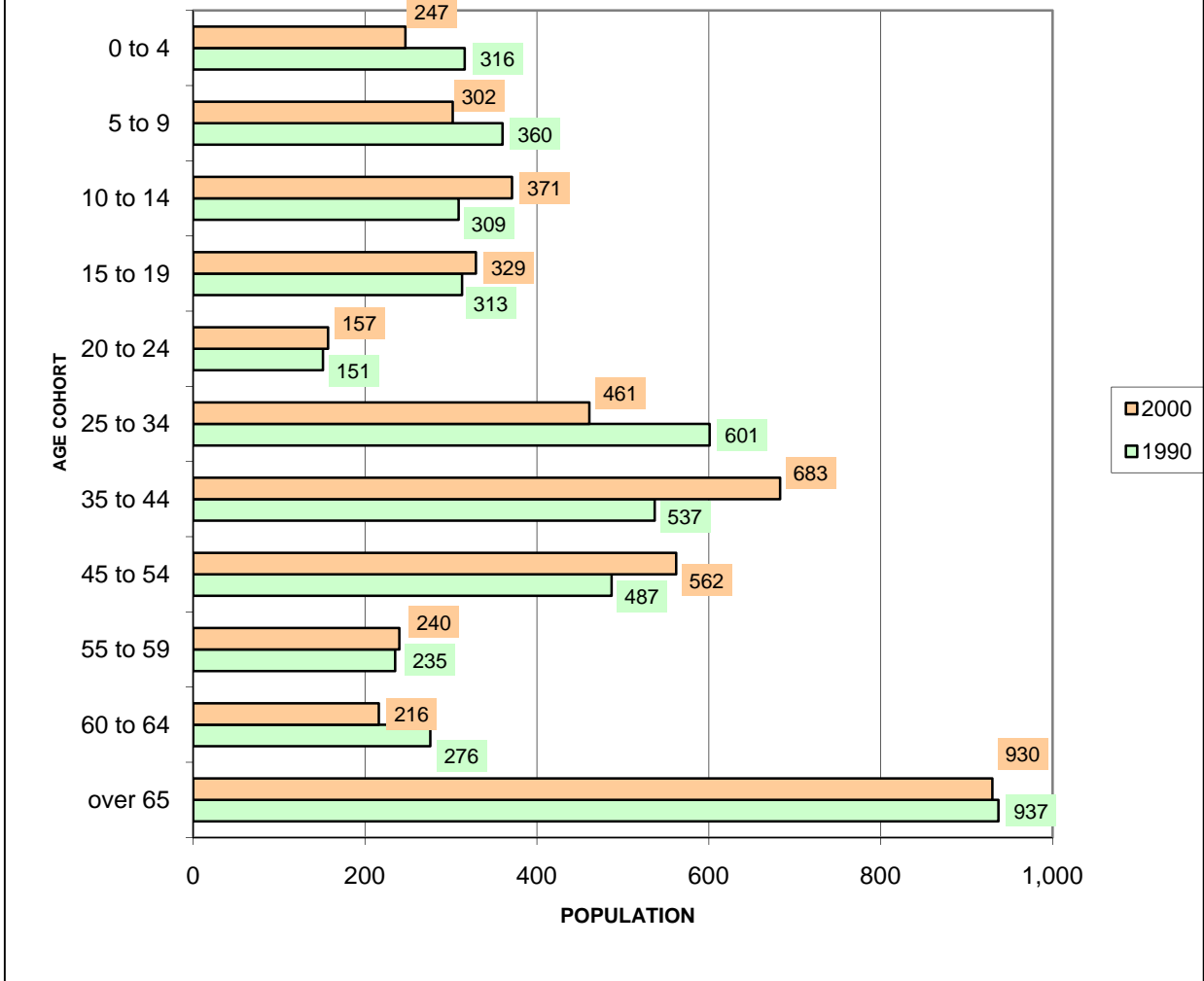
Sources: US Bureau of the Census, Census of Population 1990, 2000. Yellow denotes a municipality within the study area

Chart 3 shows the age distribution of Deuel County residents in 1990 and 2000. Several conclusions about the county's age distribution trends become apparent after reviewing the 1990 and 2000 Census age statistics. The most notable trends observed were the increase in the number of individuals in the 10 to 14, 15 to 19, 20 to 24, 35 to 44 and 45 to 54 age cohort groups and the decreases in all other cohort groups.

Between 1990 and 2000, the number of Deuel County's children age 0 to 9 decreased by 18.9 percent (127 individuals). During this period, the State experienced a decrease 6.8 percent in these cohort groups. The 0 to 4-year-old cohort group decrease of nearly twenty-two (22) percent (69 persons) may be attributed to the fertility ratio. Upon examination of the fertility ratio, (the number of children under the age of five compared to the number of women in their childbearing years, ages 15 to 44) one can see a decrease in Deuel County's potential birthrate. The fertility ratio in 2000 decreased by a twenty-six (26) percent, 4.2 births per 10 women ages 15 to 44 in 1990 compared to 3.1 births per 10 women in their childbearing years in 2000). The data shows that there were more women in their childbearing years in 2000 as opposed to 1990, and those women in 2000 were having fewer children than their counterparts in 1990. Between 1990 and 2000 Deuel County experienced a positive natural increase. This is to say that there were forty-five (45) more births than instances of death over the decennial period,

The second trend is that of the nearly eleven (11) percent increase in the number of individuals who comprise the 10 to 24 year age cohort groups (84 persons). This positive statistic provides hope for the future if community, county, school and business leadership within the county could provide incentives for these individuals to stay within the county or return after receiving an education.

**CHART 3
POPULATION ANALYSIS BY AGE COHORT GROUP 1990 - 2000**



Source: US Bureau of the Census, Census of the Population 1990, 2000

The third observable trend is that of the twenty-three (23) percent decrease (140 persons) in the number of individuals who comprise 25 to 34 year age group. Generally, there is a decrease in these cohort groups because of several factors. The first is being that of the “baby boom/baby bust eras”. The individuals who comprise the 25 to 34 age cohort group in 1990 were the final children born into the baby boom era. Meanwhile, individuals 25 to 34 years old in 2000 were the first children of the baby bust era. Also this age cohort group consistently across the state has historically experienced a very high migration rate. Between 1990 and 2000 the State experienced a loss of 16.8% in the same cohort group. It should further be noted that Deuel County experienced a negative out-migration rate of 1.3 percent (61 persons) between 1990 and 2000.

The fourth observable trend is the increase in the number of individuals in the 35 to 54 year old age groups. Between 1990 and 2000, this group experienced an increase of nearly twenty-two (22) percent (an increase of 221 people). These individuals were born at the height of the “baby boom”. During the same time frame the State experienced an increase of over thirty-four (34) percent in this age cohort group.

Finally, the number of individuals over the age of 60 experienced a near-zero change (loss of 7 persons). Between 1990 and 2000 the State’s population of individuals 65 years of age and older increased by 5.7 %. Even though Deuel County experienced a minor decrease in this age cohort group, it should be noted that with extended life spans, migration of elderly individuals from rural areas and the increased number of the baby boomers getting older, the “Graying of Deuel County” will continue at a higher pace over the next fifteen to twenty years.

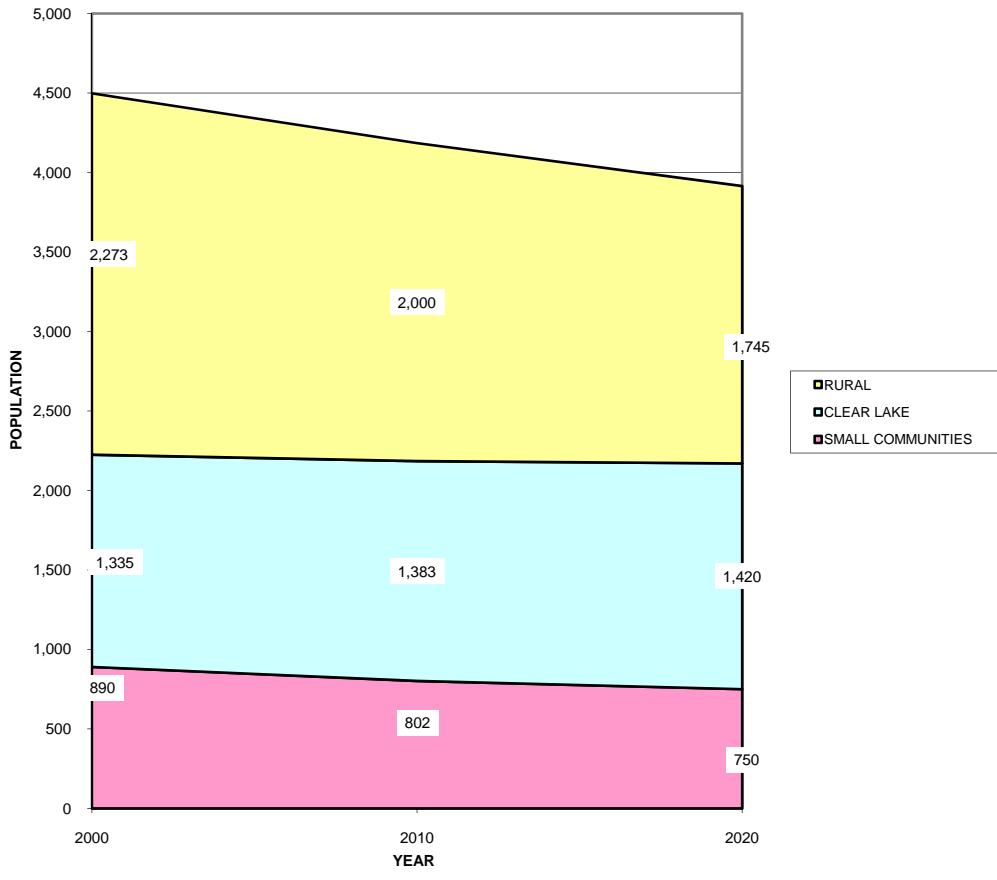
In 2003, the South Dakota State Data Center estimated that by the year 2025 Deuel County would have a population of three thousand four hundred eighty six (3,486 - a decrease of 22.5 % from the year 2000). The trends of growth in the number of the elderly, individuals having fewer children, out-migration of individuals 20 to 34 years old, and farm consolidation will continue to have an impact on Deuel County’s potential for future growth.

The City of Clear Lake has the most potential to contribute to the county’s future population base. Although there may be potential for growth in Gary, Goodwin, and Toronto, it is probable that those incorporated communities will struggle to maintain their population, and will more likely, similar to Altamont, Astoria, Brandt and the rural unincorporated areas, continue to lose population throughout the planning period. Table 3 and Chart 4 exhibit population projections for Deuel County. The population projections were based on regression analysis utilizing U.S. Census Data and some local building permit information.

**TABLE 3
DEUEL COUNTY POPULATION PROJECTIONS
MUNICIPALITIES AND RURAL AREA 2000 – 2020**

	2000	2010	2020
ALTAMONT	34	27	20
ANDOVER	150	143	130
BRANDT	113	105	90
CLEAR LAKE	1,335	1,383	1,420
GARY	231	175	150
GOODWIN	160	162	170
TORONTO	202	190	185
RURAL	2,273	2,000	1,745
TOTAL	4,498	4,185	3,915

**CHART 4
POPULATION PROJECTIONS FOR THE CITY OF CLEAR LAKE
SMALLER COMMUNITIES AND RURAL AREAS OF DEUEL COUNTY
2000 TO 2020**



HOUSING

The number of housing units in the unincorporated areas of Deuel County totaled 1,087 in 2000. Between 2000 and 2003* there were ninety-eight (98) residences either constructed or moved-in into the rural area of the county (Tables 4 and 5). The rural housing stock is comprised almost entirely of single-family residences.

**TABLE 4
RESIDENTIAL BUILDING PERMITS BY TYPE
RURAL DEUEL COUNTY 2000-2003**

	Units Constructed 2000 to 2003
Stick built - On-site or Moved in	67
Manufactured	31
Total	98

**TABLE 5
RESIDENTIAL CONSTRUCTION 2000 – 2003**

Townships	# of Housing Units (2000 Census)	Units Added 2000 to 2003	Total
Altamont	44	6	50
Antelope Valley	20	1	21
Blom	52	0	52
Brandt	48	5	53
Clear Lake	89	9	98
Glenwood	39	3	42
Goodwin	76	5	81
Grange	52	0	52
Havana	75	7	82
Herrick	54	9	63
Hidewood	46	9	55
Lowe	50	7	57
Norden	270	30	300
Portland	31	4	35
Rome	46	1	47
Scandinavia	95	2	97
Total	1,087	98	1,185

2003 Building permits through December 31, 2003.

Approximately sixty-eight (68) percent of the new residential construction within the county over the last four (4) years has been stick-built, with most of which being on-site constructed. Manufactured homes represent approximately thirty-two (32) percent of new residential housing.

Map 3 shows that approximately thirty-one (31) percent of the homes constructed between 2000 and 2003 were located within Norden Township (Lake Cochrane). Excluding Antelope Valley, Blom, Rome, Glenwood, Grange, and Scandinavia Townships, the remaining townships in Deuel County averaged at least one (1) building permit per year since 2000.

**MAP 3
RESIDENTIAL CONSTRUCTION IN RURAL AREAS OF DEUEL COUNTY
2000 to 2003**

ROME 1	PORTLAND 4	LOWE 7	ANTELOPE VALLEY 1
GOODWIN 5	ALTAMONT 6	GLENWOOD 3	
HAVANA 7	CLEAR LAKE 9	HERRICK 9	
HIDEWOOD 9	BRANDT 5	NORDEN 30	
GRANGE 0	BLOM 0	SCANDINAVIA 2	

Rural farm and non-farm residential construction (excluding lake development) is expected to continue at a pace consistent with past trends (approximately fifteen (15) units per year). Residential development is often related to regional economic conditions, mortgage interest rates, zoning requirements and/or lack of supply of developable lots. Based upon the future land use policies within this plan, county residents will still continue to have the choice of either an urban, small town, or rural lifestyle.

The Deuel County information contained in this chapter was taken from the Deuel County Comprehensive Land Use Plan. A copy of that plan is on file in the First District offices.

If constructed, the Deer Creek Station Project is projected to increase the population of Deuel County by approximately 3 during the construction phase and approximately 2 when construction is complete and the plant becomes operational. The following tables show estimates of construction and operational worker distribution, based upon the existing available housing stock, within Deuel County.

Construction Worker Distribution and Population Impact

City/Town	Current Population	# of Workers	Projected Population
Astoria	150	3	153

Projected Impact of Construction Workers on the Existing Available Housing Stock

City/Town	Housing Units	Occupied	By Owner	By Renter	Vacant	Construction Worker Housing Need
Astoria	75	69	55	14	6	3

The projected population increase associated with the Deer Creek Station construction workers to the population of Deuel County within the study area is 2.00% and, according to this study, will not have a significant or lasting impact on the area's social and economic environment.

Operational Worker Distribution and Population Impact

City/Town	Current Population	# of Workers	Projected Population
Astoria	150	2	152

Projected Impact of Operational Workers on the Existing Available Housing Stock

City/Town	Housing Units	Occupied	By Owner	By Renter	Vacant	Operational Worker Housing Need
Astoria	75	69	55	14	6	2

The projected population increase associated with the Deer Creek Station operational workers to the population of Deuel County within the study area is 1.33% and, according to this study, will not have a significant or lasting impact on the area's social and economic environment.

Operational Staffing

Date	Position Title	# Jobs
May 2010	Plant Manager	1
November 2010	Administrative Assistant	1
December 2010	Safety and Training Coordinator	1
December 2010	Plant Engineer	1
December 2010	Operations Superintendent	1
April 2011	Maintenance Supervisor	1
April 2011	Lead Operating/Technicians	5
May 2011	Results-Environmental Engineer	1
May 2011	Lab Technician	1
May 2011	Operator Technicians	10
May 2011	Instrument & Controls Technicians	2
May 2011	Electricians	2
June 2011	Mechanical Technicians	2
August 2011	Mechanical Helpers	2
	TOTAL	31

The staffing plan for the Deer Creek Station outlines 31 new positions that will be created by Basin Electric. Hiring of the operational staff will take place from May 2010 to August 2011. The hiring schedule is shown on the table at the right.

Construction Staffing

Deer Creek Station construction is expected to commence in July 2010 and be completed by August 2012. An Area Labor Study for the project was completed by Schumacher Consulting LLC in October 2008 and shows estimated peak manpower of 360 workers on site in June 2011. That study shows, in greater detail, the construction schedule and manpower demands associated with the Deer Creek Station project.

In addition to construction of the energy conversion facility there will be crews working to build the necessary gas pipeline and transmission line. The gas pipeline will be built between July and September 2010 and the construction crew will consist of 70 workers. The transmission line construction will take place over the course of approximately six weeks beginning in April 2011 with a crew of 8 workers.

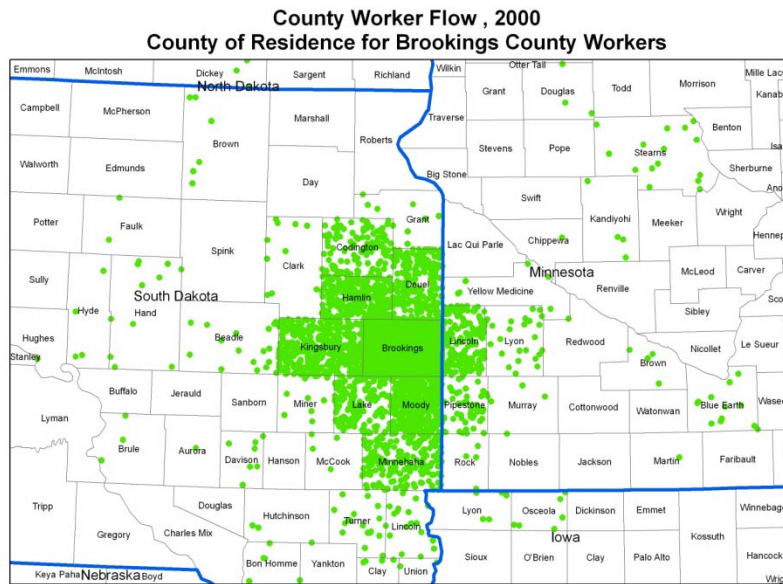
*Peak craft manpower is approximately:
 $(287 \times 1.25 \text{ factor}) = 360$

The 1.25 factor considers the average manpower loading on large manhour activities and is the consultants (Schumacher Consulting LLC) opinion.

Date	# Jobs
July 2010	70
August 2010	70
September 2010	70
October 2010	26
November 2010	26
December 2010	108
January 2011	148
February 2011	179
March 2011	161
April 2011	187
May 2011	193
June 2011	289*
July 2011	280
August 2011	273
September 2011	276
October 2011	251
November 2011	208
December 2011	158
January 2012	158
February 2012	158
March 2012	179
April 2012	175
May 2012	112
June 2012	56
July 2012	50
August 2012	48

Existing Study Area Commuting Patterns

According to the 2000 US Census, 2,195 of the 16,371 employees working in Brookings County commute to work and a one hour commute distance is not uncommon. While operational workers will likely live within the 12 mile study area it is reasonable and prudent to assume that construction workers will commute to and from the site from a greater distance.



1 Dot = 1 Worker

County of Residence for Brookings County Workers

Source: Census 2000, Journey to Work

County of Residence	# of Workers
Lincoln County, MN	166
Pipestone County, MN	49
Brookings County, SD	14,176
Codington County, SD	110
Deuel County, SD	225
Hamlin County, SD	257
Kingsbury County, SD	402
Lake County, SD	140
Minnehaha County, SD	177
Moody County, SD	351
Remaining Counties	318
Total	16,371

Housing Supplies

While it is reasonable to assume that most of the operational staff will seek housing within the 12-mile study area, it is highly unlikely that the estimated 360 workers needed during peak construction will seek housing only within the 12-mile study area. In this

section, the 12-mile study area will be used to determine the impact on housing supplies for operational workers and the impact on housing supplies for construction workers will be based on the Census 2000, Journey to Work data for Brookings County.

According to the 2000 US Census, 2,195 of the 16,371 employees working in Brookings County commute to work and a one hour commute distance is not uncommon. A recent construction project in the City of Brookings, the Innovation Campus at South Dakota State University, strengthens the assumption that workers will commute to and from the site from outside of Brookings County. A review of construction payroll reports from the Innovation Campus documented workers traveling into Brookings County from as far away as Rapid City with the most common addresses from the Sioux Falls area. Personal interviews revealed that many of those Sioux Falls workers commuted to and from Brookings on a daily basis.

The following table shows the predicted distribution of construction workers at the peak estimated employment rate of 360 workers. This estimate is based upon the assumption that 250 workers will live within the 12 mile PUC defined study area and 110 workers will live outside of the 12 mile PUC defined study area. Worker distribution estimates were made based upon the existing available housing stock within each municipality.

Construction Worker Distribution

City/Town	# of Workers
*Astoria	3
*Aurora	9
*Brookings	218
*Bushnell	1
*Elkton	12
*White	7
Clear Lake	1
DeSmet	2
Flandreau	3
Lake Benton, MN	1
Lake Norden	1
Madison	4
Pipestone, MN	6
Sioux Falls	64
Watertown	28
Total	360

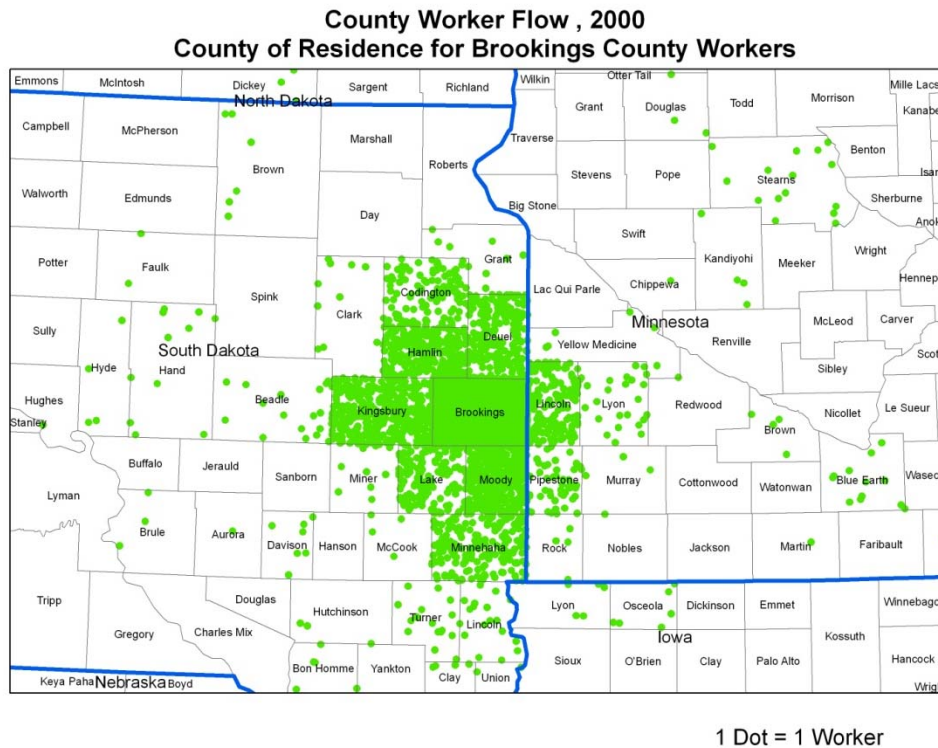
* Municipality within the 12-mile PUC defined study area

According to the Area Labor Study prepared by Schumacher Consulting LLC much of the required Deer Creek Station workforce will consist of workers that must be imported from outside of the state. The workforce, peaking at 360 on-site workers, will be made up of approximately 50% union and 50% non-union labor. 50-60% of union workers and 10-20% of non-union workers, the study notes, would be from South Dakota. The balance of the workforce will have to be imported from outside the state.

The operational assumption for this portion of the study is that 50% of the union workforce (90 workers) and 90% of the non-union workforce (162 workers) will come from outside of the state. This assumption should show the maximum stress that the estimated peak employment of 252 out-of-state workers will have on housing supplies within the County Worker Flow area.

If 252 out-of-state workers move into the County Worker Flow area to assist in the construction of the Deer Creek Station project they will greatly increase the demand on rental housing supplies with a monthly rental rate below \$500 per month. While out-of-state construction workers regularly utilize a variety of nontraditional housing options such as hotels, motels and campgrounds they will not be included as a part of this study because it would be difficult to create an accurate estimation of how many of those units would be utilized.

The following data analysis will identify where the Deer Creek Station workers are likely to seek housing, how much affordable rental housing is available within the County Worker Flow area and whether or not the existing stock of affordable rental housing can absorb the increased demand created by 252 out-of-state workers moving into the area.



County of Residence for Brookings County Workers

County of Residence	# of Workers
Lincoln County, MN	166
Pipestone County, MN	49
Brookings County, SD	14,176
Codington County, SD	110
Deuel County, SD	225
Hamlin County, SD	257
Kingsbury County, SD	402
Lake County, SD	140
Minnehaha County, SD	177
Moody County, SD	351
Remaining Counties	318
Total	16,371

Source: Census 2000, Journey to Work

To address the housing supplies issue for construction workers, housing supplies in the largest municipalities within the following counties have been examined: (Minnesota) Lincoln and Pipestone (South Dakota) Brookings, Codington, Deuel, Hamlin, Kingsbury, Lake, Minnehaha, and Moody. The following charts track owner-occupied and renter-occupied information within the Journey to Work area for Brookings County.

Housing Summary of Occupied and Vacant Housing Units, 2000

City/Town	Housing Units	Occupied	By Owner	By Renter	Vacant
*Astoria	75	69	55	14	6
*Aurora	221	205	147	58	16
*Brookings	7,359	6,971	3,238	3,733	388
*Bushnell	34	32	23	9	2
*Elkton	289	267	201	66	22
*White	212	198	151	47	14
Clear Lake	607	565	406	159	42
DeSmet	582	524	374	150	58
Flandreau	1,090	986	583	403	104
Lake Benton, MN	365	334	241	93	31
Lake Norden	193	172	126	46	21
Madison	2,706	2,589	1,604	985	117
Pipestone, MN	2,097	1,900	1,306	594	197
Sioux Falls	51,680	49,731	30,370	19,361	1,949
Watertown	9,193	8,385	5,549	2,836	808
Total	76,703	72,928	44,374	28,554	3,775

* Denotes a Municipality within the 12 Mile Study Area - Source: 2000 U.S. Census

The six municipalities within the 12 mile study area have 448 vacant housing units – more than enough to meet the housing needs of the 31 Deer Creek Station operational staff members. There are an additional 3,327 vacant housing units within a one hour commuting radius from the project site. Approximately 4.9% of the total housing units are vacant and 37.2% of the housing units are renter-occupied – statistics that are vitally

important because most of the construction workers will likely seek affordable rental opportunities over home ownership due to the relatively short duration of this project. A further breakdown of home values and rental rates can be found in the following tables.

Town of Astoria

Specified owner-occupied units	47	100.0	Specified renter-occupied units	15	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	42	89.4	Less than \$200	3	20.0
\$50,000 to \$99,999	5	10.6	\$200 to \$299	7	46.7
\$100,000 to \$149,999	0	0.0	\$300 to \$499	2	13.3
\$150,000 to \$199,999	0	0.0	\$500 to \$749	0	0.0
\$200,000 to \$299,999	0	0.0	\$750 to \$999	0	0.0
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	3	20.0
Median (dollars)	17,800	(X)	Median (dollars)	221	(X)

Source: 2000 U.S. Census

Town of Aurora

Specified owner-occupied units	124	100.0	Specified renter-occupied units	59	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	19	15.3	Less than \$200	10	16.9
\$50,000 to \$99,999	98	79.0	\$200 to \$299	11	18.6
\$100,000 to \$149,999	7	5.6	\$300 to \$499	14	23.7
\$150,000 to \$199,999	0	0.0	\$500 to \$749	12	20.3
\$200,000 to \$299,999	0	0.0	\$750 to \$999	4	6.8
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	2	3.4
\$1,000,000 or more	0	0.0	No cash rent	6	10.2
Median (dollars)	71,400	(X)	Median (dollars)	366	(X)

Source: 2000 U.S. Census

City of Brookings

Specified owner-occupied units	2,506	100.0	Specified renter-occupied units	3,729	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	142	5.7	Less than \$200	257	6.9
\$50,000 to \$99,999	1,338	53.4	\$200 to \$299	780	20.9
\$100,000 to \$149,999	629	25.1	\$300 to \$499	1,762	47.3
\$150,000 to \$199,999	290	11.6	\$500 to \$749	662	17.8
\$200,000 to \$299,999	79	3.2	\$750 to \$999	134	3.6
\$300,000 to \$499,999	28	1.1	\$1,000 to \$1,499	45	1.2
\$500,000 to \$999,999	0	0.0	\$1,500 or more	18	0.5
\$1,000,000 or more	0	0.0	No cash rent	71	1.9
Median (dollars)	93,900	(X)	Median (dollars)	393	(X)

Source: 2000 U.S. Census

Town of Bushnell

Specified owner-occupied units	12	100.0	Specified renter-occupied units	9	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	4	33.3	Less than \$200	0	0.0
\$50,000 to \$99,999	6	50.0	\$200 to \$299	0	0.0
\$100,000 to \$149,999	2	16.7	\$300 to \$499	3	33.3
\$150,000 to \$199,999	0	0.0	\$500 to \$749	6	66.7
\$200,000 to \$299,999	0	0.0	\$750 to \$999	0	0.0
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	0	0.0
Median (dollars)	60,000	(X)	Median (dollars)	575	(X)

Source: 2000 U.S. Census City of Elkton

Specified owner-occupied units	187	100.0	Specified renter-occupied units	69	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	85	45.5	Less than \$200	4	5.8
\$50,000 to \$99,999	88	47.1	\$200 to \$299	3	4.3
\$100,000 to \$149,999	14	7.5	\$300 to \$499	31	44.9
\$150,000 to \$199,999	0	0.0	\$500 to \$749	13	18.8
\$200,000 to \$299,999	0	0.0	\$750 to \$999	2	2.9
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	16	23.2
Median (dollars)	52,700	(X)	Median (dollars)	433	(X)

Source: 2000 U.S. Census

City of White

Specified owner-occupied units	127	100.0	Specified renter-occupied units	46	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	56	44.1	Less than \$200	4	8.7
\$50,000 to \$99,999	63	49.6	\$200 to \$299	13	28.3
\$100,000 to \$149,999	2	1.6	\$300 to \$499	17	37.0
\$150,000 to \$199,999	6	4.7	\$500 to \$749	8	17.4
\$200,000 to \$299,999	0	0.0	\$750 to \$999	4	8.7
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	0	0.0
Median (dollars)	53,000	(X)	Median (dollars)	338	(X)

Source: 2000 U.S. Census

City of Clear Lake

Specified owner-occupied units	365	100.0	Specified renter-occupied units	164	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	193	52.9	Less than \$200	38	23.2
\$50,000 to \$99,999	147	40.3	\$200 to \$299	31	18.9
\$100,000 to \$149,999	25	6.8	\$300 to \$499	64	39.0
\$150,000 to \$199,999	0	0.0	\$500 to \$749	4	2.4
\$200,000 to \$299,999	0	0.0	\$750 to \$999	4	2.4
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	23	14.0
Median (dollars)	48,100	(X)	Median (dollars)	302	(X)

Source: 2000 U.S. Census

City of DeSmet

Specified owner-occupied units	310	100.0	Specified renter-occupied units	147	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	175	56.5	Less than \$200	38	25.9
\$50,000 to \$99,999	110	35.5	\$200 to \$299	31	21.1
\$100,000 to \$149,999	16	5.2	\$300 to \$499	52	35.4
\$150,000 to \$199,999	4	1.3	\$500 to \$749	14	9.5
\$200,000 to \$299,999	2	0.6	\$750 to \$999	2	1.4
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	3	1.0	No cash rent	10	6.8
Median (dollars)	46,200	(X)	Median (dollars)	299	(X)

Source: 2000 U.S. Census

City of Flandreau

Specified owner-occupied units	500	100.0	Specified renter-occupied units	397	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	193	38.6	Less than \$200	45	11.3
\$50,000 to \$99,999	282	56.4	\$200 to \$299	88	22.2
\$100,000 to \$149,999	21	4.2	\$300 to \$499	201	50.6
\$150,000 to \$199,999	4	0.8	\$500 to \$749	36	9.1
\$200,000 to \$299,999	0	0.0	\$750 to \$999	3	0.8
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	24	6.0
Median (dollars)	55,600	(X)	Median (dollars)	355	(X)

Source: 2000 U.S. Census

City of Lake Benton (MN)

Specified owner-occupied units	234	100.0	Specified renter-occupied units	88	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	153	65.4	Less than \$200	28	31.8
\$50,000 to \$99,999	71	30.3	\$200 to \$299	18	20.5
\$100,000 to \$149,999	10	4.3	\$300 to \$499	25	28.4
\$150,000 to \$199,999	0	0.0	\$500 to \$749	15	17.0
\$200,000 to \$299,999	0	0.0	\$750 to \$999	0	0.0
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	2	2.3
Median (dollars)	39,300	(X)	Median (dollars)	281	(X)

Source: 2000 U.S. Census

City of Lake Norden

Specified owner-occupied units	104	100.0	Specified renter-occupied units	46	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	88	84.6	Less than \$200	14	30.4
\$50,000 to \$99,999	16	15.4	\$200 to \$299	6	13.0
\$100,000 to \$149,999	0	0.0	\$300 to \$499	15	32.6
\$150,000 to \$199,999	0	0.0	\$500 to \$749	6	13.0
\$200,000 to \$299,999	0	0.0	\$750 to \$999	0	0.0
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	0	0.0
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	5	10.9
Median (dollars)	33,800	(X)	Median (dollars)	303	(X)

Source: 2000 U.S. Census

City of Madison

Specified owner-occupied units	1,407	100.0	Specified renter-occupied units	988	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	272	19.3	Less than \$200	111	11.2
\$50,000 to \$99,999	788	56.0	\$200 to \$299	177	17.9
\$100,000 to \$149,999	284	20.2	\$300 to \$499	405	41.0
\$150,000 to \$199,999	45	3.2	\$500 to \$749	221	22.4
\$200,000 to \$299,999	18	1.3	\$750 to \$999	29	2.9
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	15	1.5
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	30	3.0
Median (dollars)	74,900	(X)	Median (dollars)	377	(X)

Source: 2000 U.S. Census

City of Pipestone (MN)

Specified owner-occupied units	1,164	100.0	Specified renter-occupied units	583	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	565	48.5	Less than \$200	93	16.0
\$50,000 to \$99,999	477	41.0	\$200 to \$299	122	20.9
\$100,000 to \$149,999	92	7.9	\$300 to \$499	235	40.3
\$150,000 to \$199,999	28	2.4	\$500 to \$749	78	13.4
\$200,000 to \$299,999	2	0.2	\$750 to \$999	8	1.4
\$300,000 to \$499,999	0	0.0	\$1,000 to \$1,499	14	2.4
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	33	5.7
Median (dollars)	51,500	(X)	Median (dollars)	357	(X)

Source: 2000 U.S. Census

City of Sioux Falls

Specified owner-occupied units	25,571	100.0	Specified renter-occupied units	19,384	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	817	3.2	Less than \$200	943	4.9
\$50,000 to \$99,999	11,635	45.5	\$200 to \$299	820	4.2
\$100,000 to \$149,999	8,266	32.3	\$300 to \$499	6,771	34.9
\$150,000 to \$199,999	2,446	9.6	\$500 to \$749	8,498	43.8
\$200,000 to \$299,999	1,611	6.3	\$750 to \$999	1,374	7.1
\$300,000 to \$499,999	693	2.7	\$1,000 to \$1,499	434	2.2
\$500,000 to \$999,999	81	0.3	\$1,500 or more	211	1.1
\$1,000,000 or more	22	0.1	No cash rent	333	1.7
Median (dollars)	101,700	(X)	Median (dollars)	521	(X)

Source: 2000 U.S. Census

City of Watertown

Specified owner-occupied units	4,539	100.0	Specified renter-occupied units	2,841	100.0
VALUE		%	GROSS RENT		%
Less than \$50,000	526	11.6	Less than \$200	358	12.6
\$50,000 to \$99,999	2,506	55.2	\$200 to \$299	392	13.8
\$100,000 to \$149,999	998	22.0	\$300 to \$499	1,078	37.9
\$150,000 to \$199,999	319	7.0	\$500 to \$749	800	28.2
\$200,000 to \$299,999	129	2.8	\$750 to \$999	126	4.4
\$300,000 to \$499,999	61	1.3	\$1,000 to \$1,499	20	0.7
\$500,000 to \$999,999	0	0.0	\$1,500 or more	0	0.0
\$1,000,000 or more	0	0.0	No cash rent	67	2.4
Median (dollars)	84,600	(X)	Median (dollars)	401	(X)

Source: 2000 U.S. Census

The above tables show both owner-occupied values and gross rent for renter-occupied units. The focus of this section will be placed on units with a gross rent below \$500 because anything above that rate falls outside of the realm of affordable housing. The \$500 threshold was determined by using the recommended union incentive of \$50 per day subsistence/Per Diem for days worked found in the Schumacher Consulting LLC Area Labor Study (section 3.2.4 – Incentives). Dedicating half of the recommended \$50 per day subsistence/Per Diem (\$25) as a housing allowance would result in a monthly housing allowance of \$500 per month in months with four full work weeks (20 days).

The following table shows the estimated total number of available rental units within the Journey to Work area that meet the \$500 per month affordable rent as defined above.

Gross Rent	Less than \$200	\$200 to \$299	\$300 to \$499
Total Units	1,946	2,499	10,675
Vacancies (4.9%)	95	122	523

There are approximately 740 vacant rental units within the Journey to Work area that fall below the \$500 threshold for affordability. This existing supply of rental units is far more than sufficient to meet the demands of 252 new workers seeking rental housing.

It is also likely that construction workers will live in campers that they will park within a reasonable commuting distance of the project. This was the chosen form of housing for many construction workers during the construction of the VeraSun Ethanol plant that was completed in 2003.

Those VeraSun construction workers were able to park their campers in campgrounds and mobile home parks that allowed campers. State parks and private campgrounds were utilized extensively as they provided the largest number of available camper sites. The City of Aurora issued a variance during the duration construction that allowed campers to be located in mobile home parks.

There are no less than 500 available camper sites within the project area commuting region. Approximately 400 of those sites are located within campgrounds owned and operated by the South Dakota Department of Game, Fish & Parks. The remaining sites can be found within the confines of privately owned and operated campgrounds.

Determination: No Significant Impact

Educational Facilities and Manpower

There are three school districts within the study area:

1. Brookings 05-1
2. Deubrook 05-6
3. Elkton 05-3

- **Brookings School District**

The current enrollment in the Brookings School District is 2,747 students and their peak enrollment was 2,900. 153 new students would need to be added to the district to reach previous peak enrollment numbers.

2007 Payable 2008 Taxable Valuations

Agricultural	\$91,755,877
Owner Occupied	\$549,811,042
Non-Ag Z	\$2,739,032
Other Non-Ag/Utilities	\$357,205,889
Total	\$1,001,511,840

Source: SD Department of Education

2007 Payable 2008 Levy per Thousand

Agricultural	\$3.06
Non-Ag Z	\$4.19
Owner Occupied	\$4.81
Other Non-Ag/Utilities	\$10.29
Special Education	\$1.40
Capital Outlay	\$3.00
Bond Redemption	\$1.26
Pension Fund	\$0.30

Source: SD Department of Education

According to Dr. Roger DeGroot, Brookings School District Superintendent, the Deer Creek Station would create no negative impacts on the Brookings School District during construction or operational phases.

- **Deubrook School District**

The current enrollment in the Deubrook School District is 375 students and their peak enrollment was 388. 13 new students would need to be added to the district to reach previous peak enrollment numbers.

2007 Payable 2008 Taxable Valuations

Agricultural	\$129,281,709
Owner Occupied	\$43,028,456
Non-Ag Z	\$3,190,841
Other Non-Ag/Utilities	\$25,013,723
Total	\$200,514,729

Source: SD Department of Education

2007 Payable 2008 Levy per Thousand

Agricultural	\$3.20
Non-Ag Z	\$4.38
Owner Occupied	\$5.03
Other Non-Ag/Utilities	\$10.76
Special Education	\$1.40
Capital Outlay	\$3.00
Bond Redemption	\$0.00
Pension Fund	\$0.30

Source: SD Department of Education

According to Kevin Keenaghan, Deubrook School District Superintendent, the Deer Creek Station would create no negative impacts on the Brookings School District during construction or operational phases.

- **Elkton School District**

The current enrollment in the Elkton School District is 295 students and their peak enrollment was 406. 111 new students would need to be added to the district to reach previous peak enrollment numbers

2007 Payable 2008 Taxable Valuations

Agricultural	\$89,266,325
Owner Occupied	\$29,221,778
Non-Ag Z	\$2,345,715
Other Non-Ag/Utilities	\$12,350,295
Total	\$133,184,113

Source: SD Department of Education

2007 Payable 2008 Levy per Thousand

Agricultural	\$4.39
Non-Ag Z	\$6.01
Owner Occupied	\$6.90
Other Non-Ag/Utilities	\$14.76
Special Education	\$1.40
Capital Outlay	\$2.50
Bond Redemption	\$1.10
Pension Fund	\$0.30

Source: SD Department of Education

According to Tony Simons, Elkton School District Superintendent, the Deer Creek Station would create no negative impacts on the Brookings School District during construction or operational phases.

The Deer Creek Station will be constructed within the boundaries of the Elkton School District and will have a positive impact on the taxable valuation of the school district.

Total additional student capacity of the three school districts within the study area: 277.

According to the latest census data, the average size of the United States household unit is approximately 2.2 members per household unit. The .2 represents the average number of children per household unit. Based upon the unlikely assumption that each member of the projected labor force peak of 360 new workers would fall within the accepted parameter of .2 children per household unit, the projected maximum number of additional new students would peak at approximately 72 new students.

This figure is well below the additional student capacity of 277 new students identified to reach peak enrollment of the three school districts within the study area.

Determination: No Significant Impact

Waste Supply and Distribution

Commercial, industrial, residential and rural waste generated within the study area is handled by private contractors. Several private contractors provide garbage and rubbish collection services and must deliver the materials that they collect to a state permitted and approved landfill or rubble site.

The Brookings Regional landfill serves approximately 35,000 people spread out over portions of seven counties. The counties involved are Brookings, Deuel, Hamlin, Kingsbury, Lake, Miner and Moody. Some of the major cities are Arlington, Brookings, Colman, DeSmet, Estelline, Flandreau, Howard, Toronto and Volga. The city of Madison is in the Sioux Falls region; however the smaller towns in Lake County are in the region.

The regions were established based on who the haulers were and the shortest distance to the landfill. The landfill is designed as a subtitle D landfill with a clay liner, leachate collection system and required monitoring programs for groundwater, air quality and surface water.

The landfill is permitted to handle municipal solid waste and special wastes such as asbestos and petroleum contaminated soil. The trees and branches are either burned or chipped based on the availability of the wood grinder. The trommel screen and wood grinder are owned jointly with the City of Sioux Falls Landfill.

The landfill usually handles approximately 32,000 tons of municipal solid waste per year, plus varying amounts of compost trees, scrap metals and petroleum-contaminated soil. The estimated peak construction force of 360 employees would represent an increase to the service area of approximately 1% and would not significantly impact the operations or capacity of the Brookings Regional Landfill.

<http://www.epa.gov/cleanenergy/energy-and-you/affect/sw-generation.html> - According to the U.S. Environmental Protection Agency:

Some electricity generation technologies result in the creation of solid waste. In some cases, this waste is disposed of in landfills. In other cases, this waste may contain toxic and hazardous elements and materials that require special handling, treatment, and disposal, as described below. Certain electricity generation technologies, however, produce no solid waste, or very insubstantial amounts. The specific solid waste impacts for each energy generation technology are described below.

- **Coal**
The burning of coal creates solid waste, called ash, which is composed primarily of metal oxides and alkali. On average, the ash content of coal is 10 percent. Solid waste is also created at coal mines when coal is cleaned and at power

plants when air pollutants are removed from the stack gas. Much of this waste is deposited in landfills and abandoned mines, although some amounts are now being recycled into useful products, such as cement and building materials.

- **Oil**

Oil refining produces wastewater sludge and other solid waste that can contain high levels of metals and toxic compounds. Also, when oil is burned at power plants, residues that are not completely burned can accumulate, forming another source of solid waste that must be disposed.

- **Nuclear Energy**

Every 18 to 24 months, nuclear power plants must shut down to remove and replace the "spent" uranium fuel. This spent fuel has released most of its energy as a result of the fission process and has become radioactive waste.

All of the nuclear power plants in the United States together produce about 2,000 metric tons per year of radioactive waste. Currently, the radioactive waste is stored at the nuclear plants at which it is generated, either in steel-lined, concrete vaults filled with water or in above-ground steel or steel-reinforced concrete containers with steel inner canisters. In addition to the fuel waste, much of the equipment in the nuclear power plants becomes contaminated with radiation and will become radioactive waste after the plant is closed. These wastes will remain radioactive for many thousands of years.

Uranium processing produces radioactive wastes that must be adequately stored and isolated to minimize the risk of radioactive release. The management, packaging, transport, and disposal of this waste is strictly regulated and carefully controlled by the U.S. Nuclear Regulatory Commission and the U.S. Department of Transportation.

- **Municipal Solid Waste**

The burning of MSW in boilers creates a solid waste called ash, which can contain any of the elements that were originally present in the waste. MSW power plants reduce the need for landfill capacity because disposal of MSW ash requires less land area than does unprocessed MSW. However, because ash and other residues from MSW operations may contain toxic materials, the power plant wastes must be tested regularly to assure that the wastes are safely contained to prevent toxic substances from migrating into groundwater supplies. Under current regulations, MSW ash must be sampled and analyzed regularly to determine whether it is hazardous or not.⁴ Hazardous ash must be managed and disposed of as hazardous waste. Non-hazardous ash may be disposed of in a MSW landfill or recycled for use in roads, parking lots, or daily covering for sanitary landfills.

- **Natural Gas**

The use of natural gas to create electricity does not produce substantial amounts of solid waste.

This is a relevant piece of information because it comes from an extremely reliable source, the U.S. Environmental Protection Agency, and leads to the following conclusion: the natural gas powered Deer Creek Station will not produce substantial amounts of solid waste.

Determination: No Significant Impact

Waste Water Treatment and Collection

The following table shows the predicted distribution of construction workers at the peak estimated employment rate of 360 workers. This estimate is based upon the assumption that 250 workers will live within the 12 mile PUC defined study area and 110 workers will live outside of the 12 mile PUC defined study area. Worker distribution estimates were made based upon the existing available housing stock within each municipality.

Construction Worker Distribution

City/Town	# of Workers
*Astoria(pop.150)	3
*Aurora(pop.500)	9
*Brookings(pop.18,504)	218
*Bushnell(pop.75)	1
*Elkton(pop.677)	12
*White(pop.530)	7
Clear Lake	1
DeSmet	2
Flandreau	3
Lake Benton, MN	1
Lake Norden	1
Madison	4
Pipestone, MN	6
Sioux Falls	64
Watertown	28
Total	360

* Municipality within the 12 mile PUC defined study area

According to the American Water Works Association the daily indoor per capita water use in the typical single family home is 69.3 gallons or approximately 2,100 gallons per month. It is reasonable to assume that nearly all of that water will wind up in a centralized waste water treatment and collection system. The largest overall increase in water consumption and increased waste water treatment and collection volume, approximately 457,800 gallons per month, will occur in the City of Brookings.

While the increased waste water volume seen in the City of Brookings may seem like a significant amount it results in an increase of only 1.178% in total system load. Due to the relatively brief construction duration of construction and the available capacity within the City's waste water infrastructure the projected waste water increase would have no significant impact to the City of Brookings waste water treatment and collection system.

The largest increase, based upon percentage, is expected to be 2% and would occur in Astoria. This estimated 2% increase in Astoria does not amount to a significant impact because it represents an increase of only three people or 6,300 gallons per month. This increase would not represent a noticeable increase and would have no significant impact on the waste water treatment and collection system in Astoria.

Based upon previous waste water technical and financial assistance provided by First District staff to the remaining municipalities within the study area none of the impacted waste water treatment and collection systems would be significantly impacted by the temporary influx of Deer Creek Station construction workers.

The following waste water treatment and collection permits for the Deer Creek Station will be issued by the South Dakota Department of Environment and Natural Resources:

1. NPDES/Surface Water Discharge
2. On-site Septic Systems
3. Storm Water Discharge

- **NPDES/Surface Water Discharge**

The only "process water" that is anticipated to be discharged at this time is the water treatment reject water. Presently the plant will utilize ground water that will undergo treatment to remove the undesirable salts/minerals that occur naturally. This reject water is anticipated to be very mineralized, However until a sample is collected from the GW and analyzed the quantity and quality of the "reject" water is unknown. The schedule to acquire the groundwater sample is out into April/May.

Should the reject water be required to be controlled, the path that the project is pursuing is to make arrangements with the City of Brookings to accept this water into their Wastewater system. Initial discussions with the City of Brookings have occurred thru our water consultant; however, until we have the water sample and have designed the water treatment no final arrangements can be made. It is still possible that the reject water can be of such quality that it may be allowed to be discharged off-site directly. (It is possible but unlikely).

- **On-site Septic Systems**

There will be on-site wastewater septic system that incorporates a drain field. The water will originate from sinks, showers, toilets etc.-no process water will flow into this system.

- **Storm Water Discharge**

There will be a storm water pond to collect rainfall/snowmelt etc. from the areas that are paved or impacted by the facility. This pond will acquire a Storm water Discharge permit. Should storm water accumulate into the pond the water will be sampled and analyzed and will be discharged off-site once the parameters of the discharge permit are met.

Determination: Mitigation Recommended – the necessary environmental permits must be acquired from the South Dakota Department of Environment and Natural Resources before construction begins. More information on obtaining the necessary permits can be found in the attached document: *Environmental Permitting and Regulation Guide (2007 Edition)*.

Solid Waste Disposal and Collection (No Survey)

Information Source: Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, North Dakota 58503-0564
PHONE: 701-223-0441

Notification of Intent Filed Pursuant to:

- SDCL 49-41B-5
- Proposed Deer Creek Station Project
- December 22, 2008

FROM: Ronald R. Harper
CEO & General Manager

TO: Patricia VanGerpen, Executive Director
South Dakota Public Utilities Commission
500 East Capitol Avenue
Pierre, South Dakota 57501-5070

“**Office and lunchroom-type waste** would be disposed of in on-site dumpsters and then hauled away by local waste management services for placement in permitted facilities.”

“**Construction debris** would be removed and taken to the nearest permitted landfill in South Dakota.”

Solid Waste Management Facilities Summary

Basin Electric’s Deer Creek Station Project appears to have a sound, current and workable solid waste management plan. The proposed construction of the Deer Creek Station Project should not impact regional permitted facilities.

Solid Waste Management Amelioration

During the construction phase of most projects, all contractors are required to remove their own solid waste materials and transport them to regionally permitted facilities. In some instances, arrangements have been made with solid waste recycling firms that minimize impact on regionally permitted facilities. The very nature of the Deer Creek Power Project’s electrical generation energy sources (natural gas and steam) eliminates any possibilities of fly ash / pit ash solid waste disposal issues. Due to Basin Electric’s proactive philosophy of responsible solid waste management, amelioration issues appear remote.

Determination: No Significant Impact

Law Enforcement

During the month of February 2009, representatives from First District Association of Local Governments, Watertown, South Dakota conducted a survey and weighted questionnaire with the county law enforcement agencies which had been pre-determined by the scope and sequence of the 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station, Social and Environmental Impact Study.

A total of two South Dakota law enforcement agencies have jurisdiction and enforcement responsibilities for all of the communities within the 12-mile community impact radius of the proposed Deer Creek Power Station project.

A sample of the law enforcement survey and weighted questionnaire are enclosed in this study.

All contacts are verified by time, date and by whom, and are kept on file at First District Association of Local Governments, 124 1st Avenue NW, Watertown, SD 57201.

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**Impact Item
Law Enforcement**

**Survey and
Weighted Questionnaire**

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IMPACT ITEM: LAW ENFORCEMENT

What presuppositions regarding this impact item do we have?

With new construction workers on a 300-megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, there may be additional cases relating to drinking/driving, assault, domestic abuse, traffic violations.

1. What is the number of existing staff: patrolmen, deputies, etc.? _____
2. Is there 24-hour protection? If not, what level? _____
3. Does the department have the capacity to accommodate potential expanding caseloads? _____
4. Any recollection of a past project having an impact on law enforcement? _____
5. Any perceived impacts? Weighted survey question.
6. If there are any impacts, real or perceived, what can be done to ameliorate those impacts? _____

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

SIGNATURE _____ DATE _____

WEIGHTED SURVEY QUESTIONNAIRE

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

- (5) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a very positive impact on my community.
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- (2) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a slightly negative impact on my community.
- (1) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a very negative impact on my community.

Law Enforcement Agencies

Brookings County, South Dakota Sheriff's Department Marty Stanwick, Sheriff	888-858-8954 605-696-8300
Deuel County, South Dakota Sheriff's Department David Solem, Sheriff	605-874-8212

Weighted Survey Questionnaire

South Dakota County Law Enforcement Agencies

Brookings County Sheriff's Department	5
Deuel County Sheriff's Department.....	4
Sheriff's Departments Weighted Questionnaire Average	4.5

Total Survey Number of Full- and Part-Time Law Enforcement Officers, by Agency

Brookings County Sheriff's Department	9
Deuel County Sheriff's Department.....	5
Total South Dakota County Full- and Part-Time Law Enforcement Officers in the Two Surveyed Law Enforcement Agencies	14

NOTE: Brookings County Sheriff's Department has 17 county law enforcement volunteers (Retired Senior Volunteer Program). These volunteers are unarmed and lack the power of arrest, but do patrol in department-furnished vehicles and remain in radio contact while on patrol and provide many sets of "extra eyes" for the law enforcement community.

Survey Question Results

Is there 24-hour protection available? If not, what level?

- Twenty-four-hour / 365 / 7 dispatch services are utilized by the two survey county agencies.
- Twenty-four-hour services are provided to all community and county residents.
- South Dakota agencies vis-à-vis the new South Dakota State Radio System now have the capability to communicate directly with other emergency responders. Emergency situations which may require additional law enforcement personnel, such as the South Dakota Highway Patrol, are as close as the “mike switch.”

Does the department have the capacity to accommodate potential expanding caseloads?

- Both of the surveyed law enforcement agencies responded with a “yes” to this survey question.

Any recollection of a past project having an impact on law enforcement?

Responses are as follows:

- Brookings County Sheriff’s Department – “A few problems during the construction of one of the last ethanol plants.”
- Deuel County Sheriff’s Department – “No.”

If there are any impacts, real or perceived, what can be done to ameliorate those impacts?

- Amelioration situations would vary from community to community and county to county. The respective county commissioners would consider the request of law enforcement and citizens to help ameliorate any areas of concern.

Summary

The 14 full- and part-time county law enforcement officers that make up the enforcement nucleus of the two surveyed law enforcement agencies represent the “thin blue line.” These officers, by oath, will protect and serve. They represent that “order” that communities and counties come to routinely expect on a daily basis. These law enforcement professionals realize that the vast majority of their citizens and residents are solid, respectable, hard-working individuals. They also realize that, through their experiences, generally 10 percent of the people generate 90 percent of their workload.

Brookings County is unique in that Brookings sworn municipal police officers are deputized by the county and, thus, have county jurisdiction beyond the confines of the municipality. This additional “labor pool” provides an additional “safety net” for county emergencies.

The 17-member Brookings Sheriff's Department Retired Senior Volunteer Patrol Program also provides an additional layer to the in place safety net.

Determination: No Significant Impact

Transportation

Two primary modes of transportation will be used to bring shipments of construction equipment and materials into the 12-mile study area: rail and truck. Rail shipments coming into the study area will be offloaded in Aurora and trucked to the project site. Shipments trucked to the project site will travel on Interstate Highways, US Highways, and gravel roads maintained by Brookings County and, to a lesser degree, Deuel County. The locations of points of interest along transportation routes are associated with the nearest Mile Reference Marker (MRM) whenever possible.

- **Interstate 29**

Approximately 10 miles of I-29, from MRM 133 near Brookings (located between exit 132 and exit 133) north to MRM 143 (approximately two miles north of exit 140), fall within the study area. Shipments coming from both north and south will be likely travel over I-29 prior to leaving the interstate at exit 132 to travel east on US Highway 14.

I-29 within the study area carries a concrete surface with an asphalt overlay from MRM 133 to MRM 139 and a concrete surface from MRM 139 to MRM 143 that was completely rebuilt in 2007 and 2008. The surface on I-29, within the study area, has a uniform width of 24 feet. Detailed surface information can be found on page 8 of the South Dakota Department of Transportation Surfacing Log.

There are three bridges, two located at MRM 134.94 and one located at MRM 141.45, on I-29 within the study area.

Structure Number	MRM	ADT	Fed Sufficiency Rating
06184074	141.45	3565	96.5
06184139	134.94	4355	96.5
06185139	134.94	4355	96.5

Source: SDDOT State Owned Structures Report

Data from two traffic count locations on I-29 provides average daily traffic information broken down by total traffic volume and total truck volume. One of the traffic count locations is north of exit 132 and the other is located to the south of exit 132. Traffic count information was taken from the 2008 South Dakota Traffic Flow Map.

- Average daily traffic north of exit 132
 - 8,820 – Total traffic volume
 - 1,729 – Total truck volume
- Average daily traffic south of exit 132
 - 11,420 – Total traffic volume
 - 2,113 – Total truck volume

As of August 1, 2007, commercial vehicles carrying 80,000 pounds or more on the interstate system will be required to purchase annual South Dakota interstate permits. The permit does not allow a motor vehicle to exceed its legal axle weight, legal tire weight, or the weight as allowed by the Bridge Gross Weight Formula.

- **US Highway 14**

Approximately 18 miles of US Highway 14, from I-29 exit 132 at Brookings east to the South Dakota/Minnesota border, fall within the study area. Almost all of the shipments trucked to the site will travel over US Highway 14 prior to entering the road network maintained by Brookings County.

US Highway 14 from I-29 east for two and a half miles to 475th Avenue carries an asphalt surface that is 24 feet in width and the remainder, from 475th Avenue east to the South Dakota/Minnesota border, carries a concrete surface ranging from 24-28 feet in width. Detailed surface information can be found on page 7 of the South Dakota Department of Transportation Surfacing Log.

There are three bridges, located at MRM 422.54, MRM 423.53 and MRM 423.85, on US Highway 14 between I-29 and Aurora.

Structure Number	MRM	ADT	Fed Sufficiency Rating
06194160	422.54	4635	97
06201160	423.53	4055	97.8
06204160	423.85	4055	97.8

Source: SDDOT State Owned Structures Report

Data from two traffic count locations on US Highway 14 provides average daily traffic information broken down by total traffic volume and total truck volume. One of the traffic count locations can be found between I-29 and Aurora and the other is located approximately five miles east of Aurora. Traffic count information was taken from the 2008 South Dakota Traffic Flow Map.

- Average daily traffic between I-29 and Aurora
 - 4,625 – Total traffic volume
 - 458 – Total truck volume
- Average daily traffic approximately five miles east of Aurora
 - 1,710 – Total traffic volume
 - 250 – Total truck volume

- **SD Highway 30**

Approximately 16 miles of SD Highway 30, from approximately a mile and a half west of I-29 exit 140 to the South Dakota/Minnesota border, fall within the study area.

All of SD Highway 30 within the study area carries an asphalt surface ranging from 24-26 feet in width. Detailed surface information can be found on page 9 of the South Dakota Department of Transportation Surfacing Log.

There are three bridges, located at MRM 358.53, MRM 357.71 and MRM 361.95, on SD Highway 30 within the study area.

Structure Number	MRM	ADT	Fed Sufficiency Rating
06185080	358.53	801	99
06178080	357.71	555	88.2
062190800	361.95	740	90.4

Source: SDDOT State Owned Structures Report

Data from three traffic count locations on SD Highway 30 provides average daily traffic information broken down by total traffic volume and total truck volume. One of the traffic count locations can be found immediately west of exit 140 on I-29, a second traffic count location can be found between exit 140 on I-29 and the Town of White and the third is located between the Town of White and the South Dakota/Minnesota border. Traffic count information was taken from the 2008 South Dakota Traffic Flow Map.

- Average daily traffic west of exit 140 on I-29
 - 525 – Total traffic volume
 - 57 – Total truck volume
- Average daily traffic between exit 140 on I-29 and the Town of White
 - 760 – Total traffic volume
 - 83 – Total truck volume
- Average daily traffic between the Town of White and the South Dakota/Minnesota border
 - 700 – Total traffic volume
 - 83 – Total truck volume

- **Brookings County Roads**

Although there are hundreds of miles of Brookings County roads within the study area, not all of them will be impacted during construction or operation of the Deer Creek Station. Approximately 15 miles of Brookings County roads, 2 miles of concrete with a 24 foot wide surface, 9 miles of gravel ranging from 24-28 feet in width and 5 miles of asphalt with a 27-foot wide surface, will see an increased usage as a result of this project.

A Heavy Haul Roads will be utilized to haul construction materials that require precautions beyond normal deliveries to the project site. Construction/Operational Worker Commuting Roads will be utilized by construction workers, operational workers and normal freight deliveries as a means of travel to and from the project site.

- Construction/Operational Worker Commuting Roads
 - Either
 - 486th Avenue from US Highway 14 north to 207th Street – asphalt with a 28 foot wide surface
 - 207th Street from 486th Avenue west to 484th Avenue – gravel with a 28 foot wide surface

- 484th Avenue north one mile to the project site – gravel with a 24 foot wide surface, or
- 482nd Avenue from US Highway 14 north to 207th Street
- East on 207th Street 2 miles to 484th Avenue – gravel with a 24 foot wide surface
- 484th Avenue north one mile to the project site – gravel with a 24 foot wide surface

The western travel route would have the traffic flow on 482nd Avenue from US 14. This route will be the defined route for all freight deliveries other than Heavy Haul loads. Traffic on 486th Avenue north will, other than light vehicle traffic, be minimal due to the light bridge rating of the bridge located on 207th Street 0.2 miles east of 484th Avenue.

There are three bridges on the above mentioned Brookings County Roads: two on 207th Street and one on 486th Avenue. The smallest of the three bridges, located on 207th Street, has a posted 17 ton load limit. The SDDOT does not maintain an inventory of bridges for Brookings County.

207th Street Bridge – 0.2 miles east of 484th Avenue – 54x24' bridge deck



207th Street Bridge – 0.6 miles east of 484th Avenue – 29x23' bridge deck



207th Street Bridge – 0.6 miles east of 484th Avenue - Load limit sign



486th Avenue Bridge – 0.8 miles south of 207th Street – 73x32' bridge deck



- **Railroad**

The Dakota, Minnesota and Eastern (DM&E) Railroad is the only railroad located within the study area. An estimated 23-25 pieces of equipment will be delivered for the Deer Creek Station via rail and offloaded at a rail siding near the Aurora Elevator in Aurora.

- **Previous Heavy Hauls**

The Deer Creek Station will not be the first construction project within the study area to require heavy construction loads to be hauled over Brookings County roads. On October 3, 2006 a 330,000 pound transformer was brought into Aurora on the DM&E railroad, offloaded onto a 14 double-axle trailer, hauled by truck north on 476th Avenue to US Highway 14, east on US Highway 14 to 483rd Avenue, north on 483rd Avenue to 207th Street, east on 207th Street to 484th Avenue and north approximately a quarter of a mile on 484th Avenue to the entrance of the Brookings County Substation. The entrance to the Brookings County Substation is approximately a half of a mile south of the proposed entrance of the Deer Creek Station construction site.

The transformer was hauled by Vic's Heavy Haul Trucking of Rosemont, Minnesota to the Brookings County Substation owned and operated by Xcel Energy. The above route was chosen because there are no bridges located on any of the roads impacted by the weight of the haul. Culverts were spanned using a twelve foot jumper bridge that removed the stress of the load from the culvert and no damage to the impacted Brookings County roads as a result of the transformer haul.

The right hand turn at the intersection of 483rd Avenue and 207th Street and the steep grades near the intersection made the move extremely difficult. Due to the difficulties experienced by the Heavy Haul contractor on the Brookings County Substation and alternative route is being pursued by the Deer Creek Station Project and is described in the next section.

- **Preferred Heavy Haul Route**

Because of the difficulties at the intersection of 483rd Avenue and 207th Street, the preferred heavy haul route utilizes 484th Avenue as described below:

- Heavy Haul Roads
 - 476th Avenue from Aurora north to US Highway 14 – concrete with a 24 foot wide surface
 - US Highway 14 east to 484th Avenue – concrete with a 24 foot wide surface
 - 484th Avenue from US Highway 14 north to the project site one mile north of 207th Street – gravel with a 24 foot wide surface

484th is more easily maneuvered than 483rd Avenue – however it may require some improvements. There is an existing bridge on 484th Avenue located 0.4 miles south of 207th Street. The Project is proposing to install a temporary jumper bridge over the existing bridge to protect it. The existing bridge is approximately 61 feet long.

484th Avenue Bridge – 0.2 miles south of 207th Street – 61x23' bridge deck



Appropriate signage and guard rails would be added for traffic control. The temporary bridge deck would be manufactured in manageable sections and placed over the existing structure without any contact. Steel sheets would be placed at each end to maintain a level surface and to spread the load. The temporary bridge would be about 80 feet long, providing a 10 foot setback from each abutment.

Additionally, there are some areas of the roadway that may require additional gravel to make for a safe all weather passage. Hill crests along 484th Avenue may require modification by cutting the crest to accommodate the length of trailers that may be used.

- **South Dakota Department of Motor Carrier Services Permits**

- Single Trip Permits

Temporary Licensing - Single-trip commercial license, temporary fuel, or temporary PUC (single state registration) permits.

Oversize / Overweight - Allows for the movement on state highways of a vehicle transporting a non-divisible load that exceeds size, weight, or size and weight limitations.

Over 80K on the interstate - Single-trip permits which allows a motor vehicle to exceed 80,000 pounds when traveling on the Interstate Highways. The permit does not allow a motor vehicle to exceed its legal axle weight, legal tire weight, or the weight as allowed by the Bridge Gross Weight Formula.

Movement to scale site - Single-trip permit to allow a motor vehicle to move to the nearest available public or private scale to determine whether a load is properly placed on the motor vehicle. Before a single-trip permit is requested, the operator moving a load in question must obtain approval from the private scale operator to weigh the vehicle and its load. A motor vehicle operator issued a permit to move to a weigh scale may not leave the scale site unless his load conforms to all legal weight limits or he obtains an overweight permit.

Books of 10 - Self issue books of permits for over 80k on the interstate, single trip commercial licensing, telephonic coupons, and construction plate permits.

- Extended Length Permits

Booster Axle - Allows the movement on State Trunk Highways of a cement truck equipped with an overweight booster axle (not a variable load or lift axle) before July 1, 1996 whose loaded weight exceeds that allowed by SDCL 32-22-21 but does not exceed 600 pounds per inch of tire width.

Non-divisible Loads - Allows for the movement of a non-divisible oversize but not overweight load being hauled on a single unit or combination of two units up to a width of 14 feet 6 inches. Side overhang may not exceed 3 feet 3 inches. Total combined front and rear overhang may not exceed 30 feet.

Total length of a single unit is limited to 60 feet, including load overhang. Total length for a two unit combination is limited to 85 feet, including load overhang, and the second unit's wheelbase may not exceed 43 feet. The vehicle operator must keep a trip log. Trip authorization is required if the load exceeds a width of 12 feet.

Lift Axle/ Variable Load Axle - Allows a motor vehicle to be overweight when making a turn due to the lifting of a lift axle or variable load axle in order to make the turn. This permit allows the raising of the lift axle 100 feet before beginning a turn provided the axle is lowered within 100 feet after completing the turn. Not available for trailers.

Oversize Trailer - Allows for the movement of a semi-trailer manufactured for moving oversize equipment up to 10 feet wide and up to 110 feet long, but not over height or overweight. Can be assigned to a trailer or the power unit.

Overlength Semi-trailer - Allows for the movement of a semitrailer manufactured before July 1, 1998 over 53 feet long but not longer than 60 feet. The overall length of the tractor and semitrailer may not exceed 80 feet.

Slow on Interstate - This permit is valid only when no parallel route is available. Allows the movement of a vehicle that cannot maintain a speed of 40 miles per hour on Interstate Highways. The vehicle must display flashing warning lights and must be driven as far to the right as possible.

- **Brookings County Haul Road Agreements**

Brookings County requires the execution of a haul road agreement between the County and the contractor prior to the beginning of construction. The haul road agreement identifies haul roads, the condition of haul roads prior to construction and sets forth the responsibilities of the contractor to restore said highway roadbed and highway appurtenances to the condition they were in prior to the start of construction.

A sample copy of the forms used to prepare a Brookings County Haul Road Agreement is included as an attachment to this report.

- **Construction Traffic**

The impact of construction traffic will be addressed in permits issued by the State of South Dakota and by Haul Road Agreements issued by Brookings County. The greatest impact of construction traffic will be experienced on Brookings County Roads because they are simply not designed for the amount of heavy traffic that will occur during the construction of the Deer Creek Station. This issue will be addressed in the Brookings County Haul Road Agreement and will require a post construction inspection to be completed to determine what must be done to return the haul roads to preconstruction conditions.

During the scoping meeting an area resident expressed concern about the amount of dust that will result from the increase in construction traffic. This is a common issue that can be easily dealt with by applying water to the gravel road surface. Dust control should be addressed on an as-needed basis during construction.

- **Operational Traffic**

The impact of operational traffic will be minimal as it will consist largely of motor vehicle traffic to and from the facility. 31 employees will have no significant impact on traffic patterns or traffic safety. No mitigation is recommended for operational traffic.

Determination: Mitigation Recommended – improvements to the Heavy Haul roads should be made prior to the beginning of construction – dust control measures should be implemented during construction - all state and local transportation permits must be obtained before construction hauling to the Deer Creek Station site commences.

Fire Protection

During the month of February 2009, representatives from First District Association of Local Governments, Watertown, South Dakota conducted a survey and weighted questionnaire with community fire/ambulance services which had been pre-determined by the scope and sequence of the 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station, Social and Environmental Impact Study.

A total of six South Dakota communities were included in the study. All surveyed communities lie within the 12-mile community impact radius of the proposed Deer Creek Power Station project.

A sample of the fire/ambulance services survey and weighted questionnaire are enclosed in this study.

All contacts are verified by time, date and by whom, and are kept on file at First District Association of Local Governments, 124 1st Avenue NW, Watertown, SD 57201.

**Impact Item
Fire Protection**

**Survey and
Weighted Questionnaire**

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IMPACT ITEM: FIRE PROTECTION / AMBULANCE

What presuppositions regarding this impact item do we have?

With construction of a 300-megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, there may be additional fire and ambulance calls.

1. What is the number of existing staff: full-time and volunteer firemen _____
2. What is the community's fire rating? _____
3. What does your department have for fire-fighting equipment? _____
4. How is ambulance service provided? _____
5. Any recollection of a past project having an impact on fire protection/ambulance services? _____
6. Any perceived impacts? – Weighted survey question.
7. If there are any impacts, real or perceived, what can be done to ameliorate those impacts? _____

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

SIGNATURE _____ DATE _____

WEIGHTED SURVEY QUESTIONNAIRE

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

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Communities Included in the Fire / Ambulance Services Impact Study

- Brookings, South Dakota
- Elkton, South Dakota
- White, South Dakota
- Aurora, South Dakota
- Astoria, South Dakota
- Bushnell, South Dakota

Weighted Survey Questionnaire: Fire / Ambulance Services

Brookings, South Dakota Fire Chief – Darrel Hartman (605-692-6323)	4
Elkton, South Dakota Fire Chief – Ryan BeBensee (605-542-2401)	4
White, South Dakota Fire Chief – Keith Schmidt (605-695-2989).....	5
Aurora, South Dakota Fire Chief – Mark Potthast (605-696-5419).....	4
Astoria, South Dakota Fire Chief – Sheldon Crooks (605-832-3351)	4
Bushnell, South Dakota City Finance Officer – Alvira Anderson (605-693-4314) The community of Bushnell does not operate a volunteer fire department, but contracts services with Aurora.	
Fire/Ambulance Services Weighted Questionnaire Average.....	4.2

Impact Communities: Fire / Ambulance Services

Brookings, South Dakota

Fire Department Staff.....	47 Firefighters
Community Fire Rating	5

Equipment:

- 5 Primary Pumpers – 1,250 gpm or above
- 1 65 Foot Aerial Stick
- 1 104 Foot Aerial Platform
- 4 Brush Trucks
- 2 Tenders
- 1 6-Wheel Drive Range Grass Fire Rig
- 1 10-Person Spartan Rescue Rig
- * Engine #3 is set up with jaws for heavy rescue operations

Ambulance Service

- The City of Brookings operates an ambulance service

Recollection of a past project having an impact on fire protection/ambulance services?

- Yes – Soybean and Ethanol Plants

Weighted Survey Questionnaire 4

Elkton, South Dakota

Volunteer Fire Department Staff 30 Firefighters

Community Fire Rating 8

Equipment:

- 1 2007 International Pumper – 1,000 gallons with 1,500 gpm capacity
- 1 1999 Freightliner 1,250 gallons – 1,250 gpm pump (Also has foam capacity)
- 1 Ford 350 Grass Rig
- 1 Mack 5,000 Gallon Tanker

No recollection of a past project having an impact on fire protection/ambulance services.

Weighted Survey Questionnaire 4

White, South Dakota

Volunteer Fire Department Staff 23 Firefighters

Community Fire Rating N/A

Equipment:

- 1 6 x 6 1,200 Gallon Tanker
- 2 1,000 Gallon Pumpers
- 1 750 Gallon Pumper
- 1 Rescue Unit

Ambulance Service:

- The White Volunteer Fire Department operates a 10-person volunteer ambulance service.

No recollection of a past project having an impact on fire protection/ambulance services.

Weighted Survey Questionnaire 5

Aurora, South Dakota

Volunteer Fire Department Staff 17 Firefighters

Community Fire Rating 5

Equipment:

- 2 Pumpers – 1,000 Gallons Each (1 @ 1,250 gpm and 1 @ 1,000 gpm)
- 1 Kenworth 2,400 Gallon Tender
- 1 Rescue Rig Panel Van
- 1 6 x 6 Grass Rig
- 1 4-Door Chevrolet Pickup Grass Rig

Ambulance Service

- Brookings, South Dakota

Recollection of a past project having an impact on fire protection/ambulance services?

- Yes – Area Ethanol Facility – Several medical calls

Weighted Survey Questionnaire 4

Astoria, South Dakota

Volunteer Fire Department Staff 14 Firefighters

Community Fire Rating “Rural Rating”

Equipment:

- 2 Pumpers (1 @ 1,000 gpm and 1 @ 800 gpm)
- 1 Tanker (1,800 gallons)
- 1 Grass Rig – 250 gallons/200 gpm
- 1 One-Ton Chevrolet 4 x 4

Ambulance Service:

- Hendricks, Minnesota and Clear Lake, South Dakota

Weighted Survey Questionnaire 4

Bushnell, South Dakota

Bushnell, South Dakota does not operate a volunteer fire department, but contracts for fire services with the Aurora, South Dakota volunteer Fire Department.

Community Fire Rating N/A

Equipment:None

Ambulance Service:

- Brookings, South Dakota

No recollection of a past project having an impact on fire protection/ambulance services.

Weighted Survey Questionnaire N/A

Fire / Ambulance Services Impact Summary

With the exception of Brookings, South Dakota who has a paid fire chief, assistant, and secretary, all of the fire services in the fire services impact survey are unpaid volunteer firefighters. Surveyed communities can be proud of their volunteer firefighting “heroes.” A total of 131 community volunteer firefighters comprise the nucleus of fire services/fire protection for the survey area.

The individual community volunteer fire departments work closely with one another and, through mutual aid agreements, have the ability to augment and “team” firefighting emergencies that would tax the resources and personnel of an individual agency. Several of the fire agencies provide emergency rescue capability and also provide ambulance services.

State Fire Marshall Al Christy (605-773-3562) stated that no special type of new equipment would be required by the surveyed fire service agencies to respond to a Deer Creek emergency. Christy stated, "From what you tell me about this operation, you would have far fewer issues than a conventional ethanol facility. After you turn the gas off, no special equipment should be required."

Fire Services Amelioration

There were no real or perceived fire services impacts indicated from this survey. Any fire services amelioration issues that might arise would ultimately be resolved by the local elected officials and the membership of the local fire district.

Determination: No Significant Impact

Health

During the month of February 2009, representatives from First District Association of Local Governments, Watertown, South Dakota conducted a survey and weighted questionnaire with health facilities which had been pre-determined by the scope and sequence of the 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station, Social and Environmental Impact Study.

A total of six South Dakota communities were included in the study. All surveyed communities lie within the 12-mile community impact radius of the proposed Deer Creek Power Station project.

A sample of the fire/ambulance services survey and weighted questionnaire are enclosed in this study.

All contacts are verified by time, date and by whom, and are kept on file at First District Association of Local Governments, 124 1st Avenue NW, Watertown SD 57201.

**Impact Item
Health Facilities**

**Survey and
Weighted Questionnaire**

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IMPACT ITEM: HEALTH FACILITIES

What presuppositions regarding this impact item do we have?

With construction of the 300-megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, there may be additional need for medical services.

Source for information: Hospitals, clinics, chambers of commerce.

1. What medical services are available? _____
2. What is the current staff level – physicians, nurses, etc.? _____
3. Any recollection of a past project having an impact on health facilities? _____
4. Any perceived impacts? – Weighted survey question.
5. If there are any impacts, real or perceived, what can be done to ameliorate those impacts? _____

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

SIGNATURE _____ DATE _____

WEIGHTED SURVEY QUESTIONNAIRE

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

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Health Facilities Survey (by Community)

Brookings, South Dakota

Avera Brookings Medical Clinic.....605-697-9500
400 22nd Avenue
Brookings, SD 57006

Sanford Clinic Brookings.....605-697-1900
922 2nd Avenue South, University Mall
Brookings, SD 57006

Brookings Health System (Hospital).....605-696-7700
300 22nd Avenue
Brookings, SD 57006

Brookings, South Dakota Chiropractic Directory

Kleinjan Chiropractic
Murray Chiropractic
Hungerford Chiropractic
Brookings Chiropractic Clinic
Back in Motion Chiropractic

Egges Chiropractic
Bommersbach Chiropractic
Complete Care Chiropractic
Willert Wellness & Chiro.

Brookings, South Dakota Oral Health

Richard Allen, DDS
102 22nd Avenue
Brookings, SD 57006

Benjamin Gates, DDS
305 Main Avenue South
Brookings, SD 57006

Geoffrey Johnson, DDS
Johnson Dental Clinic
2215 Derald Drive
Brookings, SD 57006

Wiseman Family Dentistry, PC
719 North Main Avenue
Brookings, SD 57006

Brookings Dental Clinic, PC
2215 Derald Drive
Brookings, SD 57006

Daniel W. Carlson, DDC
102 22nd Avenue South
Brookings, SD 57006

Konrad Hauffe
717 Main Avenue
Brookings, SD 57006

Longworth Orthodontics
David Longworth, DDS
604 Medary Avenue South
Brookings, SD 57006

Yorkshire Dental
Thomas A. Schmanski, DDS
2220 Yorkshire Drive #A
Brookings, SD 57006

Knutzen Family Dentistry
Randy Knutzen, DDS
2215 Derald Drive
Brookings, SD 57006

Johnson-Harris Anne, DDS
2215 Derald Drive
Brookings, SD 57006

Brookings, South Dakota Vision / Eye Health

Elanor S. Haney, OD
2233 6th Street
Brookings, SD 57006

Jahn Optometric Clinic
1110 6th Street
Brookings, SD 57006

Richard Barnett, OD
960 22nd Avenue South
Brookings, SD 57006

Brookings Vision Center
2425 6th Street
Brookings, SD 57006

Total Eyewear
960 22nd Avenue South
Brookings, SD 57006

Yorkshire Eye Clinic, Ltd.
2311 Yorkshire Drive
Brookings, SD 57006

Chad D. Kalil, DOD
2233 6th Street
Brookings, SD 57006

M.D. Bartley Opticians
2311 Yorkshire Drive
Brookings, SD 57006

Classic Touch Eye Wear
1100 6th Street
Brookings, SD 57006

Optical Shop
112 22nd Avenue South
Brookings, SD 57006

White, South Dakota

White Family Practice Clinic605-629-8211
East 5th Street
White, SD 57276

Services:

The White Family Practice Clinic is a satellite clinic of the Hendricks, Minnesota Hospital. The hours are 8:00 a.m. – 5:00 p.m. Monday, Tuesday, Thursday, and Friday. The clinic is closed on Wednesday, and any calls coming into the office are directly transferred to the Hendricks Hospital.

As a satellite clinic, the White Family Clinic has access to the Hendricks member-owned Hospital Association services:

24-Hour Emergency Care
Cardiac Clinic Services
Doppler Studies
Laparoscopic Surgery
24-Hour Ambulance Service
Ultrasound
MRI
Same-Day Surgery
Respiratory Therapy
26 Licensed Acute Care Beds
70 Licensed Long-Term Care Beds

Cardiac Rehabilitation
CAT Scans
Major Surgery
Occupational Therapy
Nuclear Medicine
Mammography
Dietary Counseling
Physical Therapy
Hospice

White Family Practice Clinic Physicians

Jo Gibson, MSRN / CMP..... Daily—M, T, TH, F
Dr. Tabb McCluskey, DO 1 day per week

Emergency Services605-629-8211

In addition to the medical services provided by the White Family Practice Clinic, the White Volunteer Fire Department augments area service by operating a 10-volunteer ambulance service. Several of the 10 members are EMTs.

The fire department also equips and maintains a “rescue unit” which can respond to emergencies.

Impact Item: Health Facilities

Brookings, South Dakota

Avera Brookings Medical Clinic.....605-697-9500
400 22nd Avenue
Brookings, SD 57006

Services:

“Avera Brookings Medical Clinic is a multi-specialty medical group. All of our physicians have completed residencies and are certified specialists in their field. We offer the following services:”

Family Practice	Pediatrics
Internal Medicine	Obstetrics and Gynecology
ENT (Ear, Nose, Throat)	General Surgery
Orthopedics	Physical Therapy
X-Ray and Imaging	Clinic Laboratory
Outreach Specialty Services	

Physicians:

Matt Bien, MD, FAAP, FACP.....	Internal Medicine, Pediatrics
Daniel Cecil, MD.....	Internal Medicine
Ingrid Chamales	Gynecology, Obstetrics/Gynecology
Kishore Elaprolu, MD	Internal Medicine
Shaun Fitzpatrick, PA-C.....	Orthopedics, Sports Medicine
Richard Gudvangen, MD.....	Gynecology, Obstetrics/Gynecology
Caroline Hagberg, CNP.....	Geriatrics
Richard S. Hieb, MD.....	Family Medicine
Joanie Holm, CNP.....	Pediatrics
Richard P. Holm, MD.....	Internal Medicine
Debra Johnston, MD	Family Medicine
Rodney King, PA-C	Family Medicine
Eric Murunga, MD	Internal Medicine

Beth Neimeyer, CNP	Family Medicine, Geriatrics
Chan Park, MD, FACS	General Surgery, Surgery
John D. Ramsay, MD	Orthopedics
Robert R. Rietz, MD	Ear, Nose & Throat
Tatiana Sergeev, MD	Pediatrics
Sara J. Smith, MD	Family Medicine
Amy Nelson-Suarez, PA-C	Urgent Care
Gerald Turner, MD	Internal Medicine, Pediatrics
Rebecca VandeKop, MD	Family Medicine
Jim Walery, MD	Family Medicine
Merritt G. Warren, MD	Family Medicine

Avera Brookings Medical Clinic maintains an **urgent care team**, which is dedicated on a daily basis. Medical emergencies can be processed and dealt with in a timely and thorough manner.

Emergency Services:605-697-9500

Ambulance services are provided by the City of Brookings Ambulance Services.

Avera Brookings is affiliated with Avera McKennan Hospital and University Health Care Center in Sioux Falls. This enables the offering of a much more efficient health care environment.

Other Services:

Through Avera’s networking, access to a wide range of services exists: Mammography, ultrasound, CT scan, physical therapy, cardiac and pulmonary rehabilitation, cardiology, urology, and orthopedics.

Sanford Clinic605-697-1900
 922 22nd Avenue South
 Brookings, SD 57006

Services:

- | | |
|-----------------|---------------------|
| Family Medicine | Vascular |
| Surgery | Preventive Medicine |
| Gynecology | Ear, Nose & Throat |
| Nephrology | Mobile Mammography |
| Cardiology | |

Physicians:

Shelley J. Cole, MD.....	OB/Gyn
Rick C. Jensen, MD.....	Ear, Nose & Throat
Thomas L. Looby, MD.....	OB/Gyn
Dean L. Madison, MD.....	OB/Gyn
Jennifer L. Olson, MD.....	Family Medicine
Curtis L. Peery, MD, FACS	General Surgery

Greg A. Schultz, MD, FACS	Peripheral
.....	Vascular Disease/Interventions
.....	Vascular Medicine
.....	Vascular Percutaneous
.....	Interventions
.....	Vascular Surgery
Tomasz P. Stys, MD, FSCAI, FACC	Cardiology
.....	CT Coronary Angiography
.....	Invasiv Cardiology
.....	Nuclear Medicine
.....	Peripheral Interventions
.....	Peripheral Vascular
.....	Disease/Interventions
.....	Vascular Medicine
.....	Vascular Percutaneous
.....	Interventions
Jennifer S. Tan, MD	Family Medicine
Gary L. Timmerman, MD, FACS	General Surgery
William F. Waltz, PhD, MD	Pediatrics
.....	Pediatrics-Cardiology
Stephanie Kreie, MPAS, PA-C	Family Medicine
Mary Ann Sherman, PA-C.....	Certified Physician Assistant

Emergency Services605-697-1900

Ambulance services are provided by the City of Brookings Ambulance Service.

Brookings Sanford Clinic is affiliated with the Sanford Hospital, Sioux Falls, South Dakota, and is rated nationally by Thomson Reuters Top Hospital as one of America's Best.

Other Services:

Through Sanford's networking, a wide range of additional health services and expertise are made available to patients.

Brookings Health System (Hospital)605-696-9000
 300 22nd Avenue
 Brookings, SD 57006

61 certified hospital beds
 Eligible to participate in Medicare and/or Medicaid – Yes
 In compliance with program requirements – Yes
 As of 10/27/2005

Services	Provided by Staff	Provided by Arrangement or Agreement
Ambulance	X	
Anesthesia	X	
Audiology	X	
Blood Bank	X	
CT Scanner	X	
Dietary	X	
Emergency	X	X
Home Health	X	
Hospice	X	
ICU Cardiac (Non-Surgical)	X	
ICU Medical/Surgical	X	
ICU Pediatric	X	
ICU Surgical	X	
Anatomical Laboratory		X
Clinical Laboratory	X	
Long Term Care	X	
MRI		X
Nuclear Medicine	X	
Operating Room	X	
Ophthalmic	X	X
Organ Transplant		X
Orthopedic Surgery	X	X
Outpatient	X	
Outpatient Surgery	X	X
Pediatric	X	
Physical Therapy		X
Postoperative Recovery	X	
Radiology Diagnostic	X	
Social	X	
Speech Pathology	X	
Inpatient Surgical	X	X

Surgical Services / Physicians

Brookings Health System surgical services offers a full range of inpatient, outpatient (same-day surgery), and emergency surgical treatments that are provided by skilled surgeons and professional support staff. Physicians and surgeons who are part of the medical team at Brookings Health System provide the services.

Dedicated Care Team is the latest addition to emergency services that are critical to Brookings and the surrounding communities.

New Emergency Department Care Team – “If you or your family ever experience a medical emergency, it’s comforting to know you have a first-class team ready to care for you right here in Brookings. At Brookings Health System, we’ve listened to feedback from community members and made important enhancements to our emergency medical services. We now offer a fully dedicated team for patients visiting the emergency department, including a new ED physician, Dr. Jim Wolery. Having physicians and other caregivers committed 100 percent to emergency care will lead to better treatment and service for our patients....”

Brookings Hospital Employees / Staff

	FTE
Registered Nurses.....	20.50
Licensed Practical Nurses or Vocational.....	4.30
Certified RN-Anesthetists	3.00
Respiratory Therapists	3.50
Occupational Therapist	0.01
Physical Therapist.....	0.01
Speech Pathologist/Audiologists	0.89
Registered Pharmacists	1.99
Dietitians	1.00
Other Employees.....	102.08

Emergency Services605-696-9000

Other Services: (www.brookingshealth.org/health)

eICU® Patient Safety Technology at Brookings Health System

“We are pleased to be partnered with Avera Health in providing an additional level of care through Avera eICU care, which allows a specially trained ICU physician, or an intensivist, to have real-time access to ICU patients in Brookings Health System.”

How does eICU work?

- “The eICU system uses telemedicine technology, early warning software and remote monitoring to connect off-site specially trained physicians and critical care nurses to patients in the ICU.”
- “Intensivists staffing the remote operations site, which is located at the Avera McKennan Hospital Campus in Sioux Falls, make use of a camera and monitoring devices in the eICU patient room at the Brookings Health System to keep watch over ICU patients located in Brookings, while these patients are being cared for by onsite nurses and physicians.”
- “The eICU operations center at the Avera McKennan Hospital acts like an air traffic control room. Intensivists who specialize in caring for critically ill patients, and critical care nurses constantly monitor patient conditions by using several computers and powerful real-time cameras. Information such as patients’ vital signs, medications, X-rays, and test results are sent to the operations center via secure, high speed data lines.

- Computers continuously analyze the information, helping the intensivists recognize changes in patient conditions. This allows for early intervention through coordination with Brookings Health System.”

Bushnell, South Dakota

Services generally provided by the Brookings, South Dakota “medical community.”

Elkton, South Dakota

Avera out of Flandreau, South Dakota provides a PA to the community (twice weekly).

Services: General medicine; networking with Avera Flandreau.

The City of Elkton, South Dakota, through the Elkton Volunteer Fire Department, also operates an ambulance service, which provides an additional community and area medical “safety net.”

Astoria, South Dakota

Services generally provided by the Hendricks, Minnesota medical community.

Aurora, South Dakota

Services generally provided by the Brookings, South Dakota and Hendricks, Minnesota medical community.

The City of Aurora, South Dakota, through the Aurora Volunteer Fire Department, operates a rescue unit. The rescue unit has two volunteer EMTs that provide an additional community and area “safety net.”

Weighted Survey Questionnaire: Health Facilities

Brookings, South Dakota Avera Brookings Medical Clinic 605-692-9500 Medical Clinic Administrator	4
White, South Dakota White Family Practice Clinic 605-629-8211 Clinic Administrative Secretary	4
Elkton, South Dakota Community PA from Flandreau/Avera (twice weekly) 605-542-5411 Mayor of Elkton	4
Community Health Facilities Weighted Questionnaire Average.....	4

Health Facilities Impact Summary

The six surveyed communities within the 12-mile radius of First District's February 2009 health facilities impact survey provide a variety of exceptional and total health services and technology for the area's citizens.

Five health providers: Brookings Avera Clinic, Brookings Sanford Clinic, Brookings Health System (hospital), White Family Clinic, and Elkton/Avera Clinic provide medical personnel and care. Health facilities provide a network of outreach and technology programs that augment on-site facilities.

- Avera Brookings, Sanford Brookings, and Brookings Health System each have a dedicated emergency or urgent care team which specializes in emergency response and care.

Oral health care and wellness, vision and eye care and wellness, along with chiropractic services, are in place to meet the additional health needs of the area.

Ambulance services provided by the cities of Brookings, Elkton and White, along with rescue units and staff provided by Brookings, White and Aurora, supplement the local and area's health services.

Health Facilities Amelioration

There were no real or perceived health facilities impacts indicated from this survey. The survey average was "4" (positive). Any possible health facilities amelioration would possibly be categorized in the "insurance/workman's compensation" area. Current "state of the art" technological data and networking should provide accurate information on patients' claims, processing and disbursements. Communications and accurate records would provide the foundation for resolution of most issues.

Determination: No Significant Impact

Recreation

During the month of February 2009, representatives from First District Association of Local Governments, Watertown, South Dakota conducted a survey and weighted questionnaire with local recreational information resources which had been pre-determined by the scope and sequence of the 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station, Social and Environmental Impact Study.

A total of six South Dakota communities were included in the study. All surveyed communities lie within the 12-mile community impact radius of the proposed Deer Creek Power Station project.

A sample of the fire/ambulance services survey and weighted questionnaire are enclosed in this study.

All contacts are verified by time, date and by whom, and are kept on file at First District Association of Local Governments, 124 1st Avenue NW, Watertown, SD 57201.

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**Impact Item
Recreation**

**Survey and
Weighted Questionnaire**

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IMPACT ITEM: RECREATIONAL FACILITIES

What presuppositions regarding this impact item do we have?

With new construction workers on a 300-megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, will there be a need to develop new or enhance existing recreational facilities?

Source for information: Community Park and Rec Departments, Chambers of Commerce, Municipal Finance Officers

1. What recreational opportunities exist? _____

2. Are there any plans for new recreational opportunities or programs? _____
3. Will the power plant project have an impact on existing recreational facilities? _____
4. Any recollection of a past project having an impact on recreational facilities? _____
5. Any perceived impacts – Weighted survey question.
6. If there are any impacts, real or perceived, what can be done to ameliorate those impacts? _____

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

SIGNATURE _____ DATE _____

WEIGHTED SURVEY QUESTIONNAIRE

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

- (5) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a very positive impact on my community.
- (4) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a positive impact on my community.
- (3) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a no impact on my community.
- (2) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a slightly negative impact on my community.
- (1) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a very negative impact on my community.

Recreation Impact Survey, By Community

Communities Included in the Recreation Impact Survey

- White, South Dakota
- Astoria, South Dakota
- Brookings, South Dakota
- Aurora, South Dakota
- Bushnell, South Dakota
- Elkton, South Dakota

Weighted Survey Questionnaire: Recreation

White, South Dakota	
City Finance Officer.....	4
Astoria, South Dakota	
City Finance Officer.....	3
Brookings, South Dakota	
Recreation Program Coordinator	4
Aurora, South Dakota	
Aurora Recreation Committee Member.....	4
Bushnell, South Dakota	
City Finance Officer.....	4
Elkton, South Dakota	
Elkton Mayor	4
Surveyed Communities Recreation Weighted Questionnaire Average	3.83

Impact Item: Recreation

The specific questions addressed to all of the survey respondents included:

- What recreational opportunities exist?
- Are there any plans for new recreational opportunities or programs?
- Will the power plant project have an impact on existing recreational facilities?
- Any recollection of a past project having an impact on recreational facilities?
- Any perceived impacts? – Weighted survey questionnaire

White, South Dakota

Existing Recreational Opportunities:

- 9-hole golf course
- City Park with available camping and playground equipment
- Concrete basketball court

- New sports complex with lighted softball fields
- Horseshoe pits available
- Close access (all within an approximate ½ hour drive from White) to the following lakes and rivers for fishing, hunting, biking, swimming, camping, hiking, boating:
 - Lake Hendricks
 - Oak Lake
 - Lake Poinsett (Lake Poinsett State Park)
 - Lake Albert
 - Fish Lake
 - Lake Campbell
 - Lake Sinai
 - Oakwood Lake (Oakwood Lake State Park)
 - Big Sioux River

Special Events:

- Pioneer Day Celebration – 3rd week of July
- 125th Anniversary Celebration – July 2009

Major Retail Centers:

- Brookings, South Dakota (approximately 12 miles)
- Watertown, South Dakota (approximately 45 miles)
- There are no plans for new recreational opportunities or programs at this juncture.
- The Deer Creek Power Station project would have a positive impact on existing recreational facilities, “possibly by more utilization of present facilities.”
- Did a past project have an impact on recreational facilities? “Yes, the repaving project of Highway #30 produced revenue for the community by camper fees at the City Park.”
- Weighted survey questionnaire: 4.

Astoria, South Dakota

Existing Recreational Opportunities:

- City Auditorium available for sports activities (Have to check out and return key)
- City Park with picnic tables, gazebo, and playground equipment
- Lighted softball complex
- Close access (all within an approximate 45-minute drive from Astoria) to the following lakes and rivers for fishing, hunting, biking, swimming, camping, hiking, boating:
 - Lake Hendricks
 - Oak Lake
 - Lake Poinsett (Lake Poinsett State Park)
 - Lake Albert
 - Fish Lake
 - Lake Campbell
 - Lake Sinai
 - Oakwood Lake (Oakwood Lake State Park)
 - Big Sioux River

Special Events:

- Astoria Fun Days – 4th Sunday in July
- 2010 marks the 110th Anniversary

Major Retail Centers:

- Brookings, South Dakota (approximately 28 miles)
- Watertown, South Dakota (approximately 37 miles)
- There are no plans for new recreational opportunities or programs at this juncture.
- The Deer Creek project would have no impact on existing recreational facilities.
- No recollection of a past project having had an impact on recreational facilities.
- Weighted survey questionnaire: 3.

Bushnell, South Dakota

Existing Recreational Opportunities:

- City Park with playground
- Basketball court
- Close access (all within an approximate 45-minute drive from Bushnell) to the following lakes and rivers for fishing, hunting, biking, swimming, camping, hiking, boating:
 - Lake Hendricks
 - Oak Lake
 - Lake Poinsett (Lake Poinsett State Park)
 - Lake Albert
 - Fish Lake
 - Lake Campbell
 - Lake Sinai
 - Oakwood Lake (Oakwood Lake State Park)
 - Big Sioux River

Major Retail Centers:

- Brookings, South Dakota (approximately 5 miles)
- Watertown, South Dakota (approximately 50 miles)
- There are no plans for new recreational opportunities or programs at this juncture.
- The Deer Creek project would have no impact on existing recreational facilities.
- The City Park improvement was a nice addition to recreational facilities.
- Weighted survey questionnaire: 4.

Aurora, South Dakota

Existing Recreational Opportunities:

- Lighted baseball field
- Volleyball court
- Basketball court
- City Park with picnic shelters and playground
- Adjacent 5-camper electric hookup facility

- Close access (all within an approximate 45-minute drive from Aurora) to the following lakes and rivers for fishing, hunting, biking, swimming, camping, hiking, boating:
 - Lake Hendricks
 - Oak Lake
 - Lake Poinsett (Lake Poinsett State Park)
 - Lake Albert
 - Fish Lake
 - Lake Campbell
 - Lake Sinai
 - Oakwood Lake (Oakwood Lake State Park)
 - Big Sioux River

Major Retail Centers:

- Brookings, South Dakota (approximately 5 miles)
- Watertown, South Dakota (approximately 50 miles)

There are plans for new playground equipment this summer, and a new City Park is being proposed.

The Deer Creek Station project would have no impact on existing recreational facilities.

Any recollection of a past project having an impact on recreational facilities? “Yes, a positive impact—Vera Sun Corporation donated money for lights for the ball field.”

Weighted survey questionnaire: 4.

Elkton, South Dakota

Existing Recreational Opportunities:

- Basketball court
- City Park with picnic area and playground
- Tennis court
- Lighted baseball complex
- Lighted slow-pitch softball complex
- Close access (all within an approximate 45-minute drive from Aurora) to the following lakes and rivers for fishing, hunting, biking, swimming, camping, hiking, boating:
 - Lake Hendricks
 - Oak Lake
 - Lake Poinsett (Lake Poinsett State Park)
 - Lake Albert
 - Fish Lake
 - Lake Campbell
 - Lake Sinai
 - Oakwood Lake (Oakwood Lake State Park)
 - Big Sioux River

Special Events:

- June Harvest Festival – Parade, carnival, and talent contest

Major Retail Centers:

- Brookings, South Dakota (approximately 18 miles)
- Watertown, South Dakota (approximately 63 miles)
- The community of Elkton is considering a new fast-pitch softball and soccer field. A new camping facility with 30 camping spots and a municipal pool are on the future “wish list.”
- The Deer Creek Station project would have no impact on existing recreational facilities.
- No recollection of a past project having had an impact on recreational facilities.
- Weighted survey questionnaire: 4.

Brookings, South Dakota

Parks, Recreation, and Forestry Department:

- (Selected excerpts from www.cityofbrookings.org/departments/park_rec/.)
- Mission Statement (adopted by the Brookings Park & Recreation Board 4/6/1992):
- The recreational programming goals of the Brookings Park, Recreation and Forestry Department include:
 - To provide recreational activities which enhance the quality of life for participants and volunteer leaders.
 - To provide recreational opportunities, both competitive and non-competitive, for persons of all ages at a reasonable expense.
 - To establish an atmosphere at each sponsored activity which is supportive of the efforts of each participant and affirms their worth.
- In order for these goals to be met it is expected that leaders (volunteers and paid staff) do the following things:
 - Give positive reinforcement to each participant.
 - Provide educational feedback in a calm manner.
 - Attempt to include every participant in every activity.
- Programs and Services:
 - The Recreation Department provides a wide range of youth and adult public recreational activities. City Recreation exists to provide opportunities for leisure time activities at an affordable cost (usually subsidized by public funds) that are not feasible or easily provided by the private sector. Programs have developed primarily through a process of request and interest.

- Specific Activities Include:
 - Youth – Baseball/softball, recreational swimming and instruction, tennis instruction, golf instruction, basketball, ice skating, field trips, specialized instruction (horsemanship, fishing, etc.), open gyms, youth soccer, ice hockey, arts and cultural activities.
 - Adult – Baseball/softball, swimming, golf, tennis, basketball, volleyball, ice skating, open gyms and arts and cultural activities.
 - The services are provided in a variety of ways with a wide range of degree of involvement by the city. In some activities, the entire program is organized and supervised by the city. Some examples would be youth baseball/softball, golf, tennis, field trips and open gym.
 - Other programs are jointly sponsored with parent or adult organizations, such as ice hockey, youth soccer, youth basketball and adult softball/baseball.
 - Finally, some agencies, such as Brookings Arts Council are partially supported financially to insure the providing of a quality program to the community, in lieu of duplicating a service.
- Long-Term Benefits Include:
 - Learning of life skills in recreation activities.
 - Providing a well-rounded list of recreational opportunities to meet expectations of current residents and as an attraction to those considering relocating to Brookings.
 - All residents are served to the degree that they choose or are able to participate. However, in general, it could be fairly stated that city recreation in Brookings, especially as concerns the expenditures of tax dollars, puts a high priority on youth, providing numerous activities for their leisure time.

Parks Division

- Mission Statement:

The purpose of the park section of Parks section of Parks, Recreation and Forestry is to provide parcels of open space, green areas throughout the city, for aesthetic purposes, as sites for recreation activities and to reduce the perceived and real population density of residential areas.

- Programs and Services:

The parks department builds and maintains the parks in the Brookings Park system, comprising over 500 acres. Included are a municipal golf course, an indoor ice arena, 6-mile bike/recreational trail, baseball/football complex,

- softball complex, small mini-parks, neighborhood parks and playgrounds and community parks. The department also cooperates closely with the Brookings school district in building and maintaining joint school/park facilities.
- The parks department maintains a fully equipped maintenance fleet of vehicles, mowers and specialty equipment. A full-time staff of 12 employees, assisted by 30 seasonal employees, provides all maintenance and plays a significant role in developing and constructing new parks.
- A long-term benefit of the park system is assurance that open space and parks will be available into the future in developed neighborhoods. The activities in these parks may change over the years, but once the land is developed residentially, it is unlikely that it can be converted back to open space.

EdgeBrook Golf Course

- EdgeBrook Golf Course is an eighteen-hole facility. The regulation 18 holes play at 6,200 yards in a par of 70. Additionally, there are 9 free practice holes for juniors and beginners to get started in the game of golf.
- EdgeBrook's many amenities include a fleet of 35 golf carts, a green grass tee-stand, driving range, large practice green and chipping green. EdgeBrook carries a full line of golf equipment for advanced to beginning players. The staff is authorized club fitters for a number of companies including Ping, Wilson, Cobra and Tour Edge. Equipment repair and re-grips can also be arranged with the staff.
- PGA professional Dave Spaulding and his staff are available for group and individual lessons by appointment. Beer, pop, snacks and catered foods are available daily and for special outings.

Hillcrest Aquatic Center

- The Hillcrest Aquatic Center opened in June 2006, and consists of four pools: a 50 meter pool with one and three meter diving boards and a drop slide; a large wading pool with a water-drop umbrella; a zero-depth leisure pool with multiple water features, including a small slide, water walls and various spray components; a plunge pool with two slides for tubing (provided) or body-sliding. Other play features near the leisure pool include a spray-pad with bucket drops, geysers and water cannon and a wet sand area for building sandcastles and digging.
- Chaise lounge chairs are provided throughout the center, and two party pads with large umbrellas are available to rent by reservation. Additionally, abundant grass areas surround the leisure pool, and patrons are welcome to roll out blankets and towels in these areas.

Community Gardens

- Each year the Brookings Parks and Recreation Department rents approximately 500 garden plots to a variety of Brookings citizens. Plots are available for annual

and perennial planting. They are available on a first-come, first-serve basis for new gardeners, but may be reserved year-to-year by those returning from the previous year. More than one plot may be reserved.

- The City Garden Plots are located at the NE corner of Medary Avenue and Highway 14 Bypass intersection. Each plot measures 20 ft. x 25 ft. and is rented for \$15 per season.

Parks, Recreation & Forestry Affiliated Support Community Recreation Agencies

- Brookings Arts Council – Assisted financially with city recreation funds to ensure quality programming in the visual and performing arts.
- Brookings Senior Citizens, Inc. – Supported in part by City of Brookings. Operates a Senior Activity Center at 306 3rd Street.
- Brookings Ice Skating Association (BISA) – Parent operated organization offering ice hockey for all youth, through 18 years of age.
- Brookings Figure Skating Association – Offering advanced instruction in ice figure skating.
- Brookings Swim Club – Competitive swimming for all youth through 18 years of age. Summer and winter programs.
- Brookings Youth Soccer Association – Offering recreational soccer for all youth through age 18. Spring and fall seasons.
- Brookings Soccer Club – Offering high school and JV soccer as a club sport.
- American Legion Baseball – Sponsored by Brookings American Legion. Traveling teams play through summer.
- VFW Baseball – Sponsored by Brookings VFW. Traveling team and tournaments.
- Brookings Youth Basketball Association – Parent run organization to promote youth basketball in Brookings from grade 3 through grade 6. City Recreation assists in the use of various programs.
- Big Sioux Bowmen Archery Club – A membership organization offering instruction and shooting range privileges on indoor and outdoor ranges developed on city property.
- 2008-2009 Brookings in the Fall & Winter Schedule of Events Includes:
 - Larson Park Disc Golf Course
 - Sledding Hill at Larson Park
 - Brookings Cup
 - Kool Kids Klassic
 - Ground Hog Day Ski Race
 - Open Gym Schedule
 - Adult Volleyball (Men & Women’s League)

- Adult Basketball (Men & Women's League)
- Fall Adult Hockey
- Winter Adult Hockey
- Broomball
- Private Ice Rental
- Figure Skating/Beginning Skating
- Preschool Skating
- Aquatics
- Red Cross Swimming Lessons
- Scuba Diving
- Elementary Intramurals
- High School Intramurals
- Brookings 4-H Shooting Sports
- Tae Kwon Do
- Brookings Activity Center – Calendar
- Brookings Public Library – Calendar
- Brookings Arts Council Community Cultural Center – Calendar
- Science Vision Program

Outdoor Recreation

- Miles and miles of biking trails throughout the city of Brookings provide entertainment for the entire family, while serious cyclists will enjoy the challenges offered by the area's rolling prairie.
- Water sports enthusiasts will find a myriad of possibilities, from jet skiing to canoeing, on the several area lakes and rivers. Lake Poinsett State Recreation area and Oakwood Lakes State Park both offer camping, hiking trails, and public lake access.
- The Brookings area boasts seven quality golf courses that cater to the novice as well as the seasoned player and provide a unique look at the Eastern South Dakota landscape.
- Outdoor recreation doesn't have to end when the snow flies in South Dakota—the winter months also provide excellent opportunities to appreciate the beauty of the area. Cross country skiing, snowmobiling, sledding, ice skating, and ice fishing are popular winter activities in the area.
- Lakes and rivers that are easily accessible from Brookings for fishing, hunting, biking, swimming, camping, hiking, and boating:
 - Lake Hendricks
 - Oak Lake
 - Lake Poinsett (Lake Poinsett State Park)
 - Lake Albert
 - Fish Lake
 - Lake Campbell
 - Lake Sinai
 - Oakwood Lake (Oakwood Lake State Park)
 - Big Sioux River

Recreation Impact Summary

The impact survey communities of White, Bushnell, Astoria, Elkton, Brookings and Aurora, South Dakota are fortunate to have a plethora of recreational opportunities. The area provides recreational experiences to residents and visitors alike. Swimming, boating, open water fishing, ice fishing, hiking, camping, biking, hunting, exploring, sightseeing, photograph, or just “lounging on the beach” on a warm, sunny day help make for the “good life” in the survey area.

A large variety of non-lake/state park recreational opportunities are provided by the survey communities. Many of these communities provide special events and annual celebrations. There appears to be something happening—somewhere—most of the time.

Recreation Amelioration

There were no real or perceived recreational impacts indicated from this survey. “4” = Positive, “3” = No Impact. (The 6-community survey average was 3.83.) Any recreation amelioration/mitigation issues would ultimately be determined by the local and county elected officials.

Determination: No Significant Impact

Government

During the month of February 2009, representatives from First District Association of Local Governments, Watertown, South Dakota conducted a survey and weighted questionnaire with community finance and taxing jurisdictions which had been pre-determined by the scope and sequence of the 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station, Social and Environmental Impact Study.

A total of six South Dakota communities were included in the study. All surveyed communities lie within the 12-mile community impact radius of the proposed Deer Creek Power Station project.

A sample of the community finance and taxing jurisdictions survey and weighted questionnaire are enclosed in this study.

All contacts are verified by time, date and by whom, and are kept on file at First District Association of Local Governments, 124 1st Avenue NW, Watertown, SD 57201.

Impact Item
Government
Survey and
Weighted Questionnaire

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IMPACT ITEM: GOVERNMENT

What presuppositions regarding this impact item do we have?

With the construction of the 300-megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, there will be an increase in the amount of property taxes collected in Brookings County.

There will be an increase in sales tax collected in the communities.

Source for Information: Community and county finance/taxing jurisdictions.

1. Any perceived impacts? – Weighted survey question.
2. If there are any impacts, real or perceived, what can be done to ameliorate those impacts? _____

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

SIGNATURE _____ DATE _____

WEIGHTED SURVEY QUESTIONNAIRE

NAME OF AGENCY _____ KEY CODE _____

COMMUNITY _____

DATE OF CONTACT _____

TIME OF CONTACT _____

CONTACTED BY WHOM _____

- (5) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a very positive impact on my community.
- (4) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a positive impact on my community.
- (3) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a no impact on my community.
- (2) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a slightly negative impact on my community.
- (1) I feel that the building and development of the proposed 300 megawatt combined-cycle power plant, referred to as the Deer Creek Station Project, to be located near the town of White, South Dakota could have a very negative impact on my community.

Communities Included in Government

- Brookings, South Dakota
- Elkton, South Dakota
- White, South Dakota
- Aurora, South Dakota
- Astoria, South Dakota
- Bushnell, South Dakota

Weighted Survey Questionnaire: Government

Brookings, South Dakota City Finance Officer – Rita Thompson (605-692-6281).....	4
Elkton, South Dakota City Finance Officer – Susan Schuurman (605-542-5411)	4
White, South Dakota City Finance Officer – Sheryl Brown (605-629-3661).....	4
Aurora, South Dakota City Finance Officer – Danita Fischer (605-693-3548).....	4
Astoria, South Dakota City Finance Officer – Vicki Oval (605-832-2121)	3
Bushnell, South Dakota City Financer Officer – Alvira Anderson (605-693-4314)	3
Community Government Finance/Taxing Jurisdiction Weighted Questionnaire Average.....	3.67

Government Impact Summary

The six South Dakota surveyed communities of Brookings, Elkton, White, Aurora, Astoria and Bushnell and their respective City Finance Officers responded from “3”—No Community Impact to “4”—Positive Community Impact. The average survey results were 3.67. No perceived impacts were expressed by any of the survey respondents.

Government Amelioration

There were no real or perceived Community Government Finance/Taxing Jurisdictions impacts indicated from this survey. One respondent hoped that an additional power plant would eventually help reduce electrical rates. Amelioration issues appear to be remote.

Determination: No Significant Impact

Energy

“Conservative estimates by the Mid-Continent Area Power Pool (MAPP) indicate that electricity consumption in the MAPP region will increase by as much as 15 percent over the next decade. Estimates by a highly regarded independent market analyst indicate that energy consumption in the region will increase by as much as 25 percent. Resource Data International (RDI) estimates that meeting that increased consumption will require adding more than 9,300 megawatts of capacity in the MAPP region by 2012.”

“For many years, MAPP has been one of the nation’s most reliable systems. However, according to RDI, as of mid-2001 it had less than 2,700 megawatts scheduled to come on line within the next several years. That’s 6,300 megawatts less than the region will require. Because it takes four to six years to plan, site and build a base-load generating plant, we need to act soon to prevent a supply problem...”

SOURCE: Otter Tail Power Company. “Big Stone II – A Study by Otter Tail Power Company for Meeting the Region’s Energy Needs and Strengthening its Economy with a Highly Efficient, Environmentally Responsible Coal-Fired Electric Generating Plant.”

The proposed Deer Creek Station will not detract from the energy needs in the area. The Deer Creek Station would only enhance power production and, thus, by the nature of the project, be part of the solution rather than part of the problem.

Determination: No Significant Impact

Water Supply

The following table shows the predicted distribution of construction workers at the peak estimated employment rate of 360 workers. This estimate is based upon the assumption that 250 workers will live within the 12 mile PUC defined study area and 110 workers will live outside of the 12 mile PUC defined study area. Worker distribution estimates were made based upon the existing available housing stock within each municipality.

* Municipality within the 12 mile PUC defined study area

The communities of Astoria, Bushnell, Elkton and White receive their water supply from the Brookings-Deuel Rural Water System. The City of Brookings receives its water supply from underground aquifers and operates two treatment plants. The City of Aurora receives its water supply from the City of Brookings.

Construction Worker Distribution

City/Town	# of Workers
*Astoria	3
*Aurora	9
*Brookings	218
*Bushnell	1
*Elkton	12
*White	7
Clear Lake	1
DeSmet	2
Flandreau	3
Lake Benton, MN	1
Lake Norden	1
Madison	4
Pipestone, MN	6
Sioux Falls	64
Watertown	28
Total	360

According to the American Water Works Association the daily indoor per capita water use in the typical single family home is 69.3 gallons or approximately 2,100 gallons per month. The largest overall increase in water consumption, approximately 457,800 gallons per month, will occur in the City of Brookings.

The East Treatment Plant, which has four wells, can provide up to four million gallons of treated water to Brookings each day. Brookings Municipal Utilities maintains a second water treatment plant one mile north of the City. Its water source is also from an underground aquifer. Six wells operate at the North Plant and can provide up to 3.5 million gallons of treated water to Brookings each day. The East and North Plants have a combined daily capacity of 7.5 million gallons of treated water.

A 3 million-gallon above ground storage tank is located adjacent to the East Water Plant and an underground 1.5 million-gallon tank is adjacent to the North Plant. This makes for a total storage at the plants of 4.5 million gallons. Four water towers are located in the city with a combined storage of 1.65 million gallons.

The increased demand resulting from the Deer Creek Station construction and/or operational workforce would have no significant impact to the municipalities within the study area.

An engineering report completed by Banner Associates, Inc. in December 2008 identifies water needs, alternatives to for meeting water needs, cost estimates and provides an implementation plan for the design and construction of the water supply system. The Deer Creek Station process water supply will come from one of two possible sources: the Brookings-Deuel Rural Water System or by installing a well and pipeline. In-house potable water for drinking, sinks, restrooms, bathrooms, showers, etc...will be provided through a connection to a service line from the Brookings-Deuel Rural Water System.

The primary area of concern pertaining to the Deer Creek Station water supply would fall in the area of water rights. If the facility develops its own water supply from private wells or a surface water source, even for backup purposes, a water right and possibly surface water permit will need to be obtained. Information on local aquifers, known wells in the area and other water rights can be obtained by contacting the South Dakota Department of Environment and Natural Resources Water Rights Program.

Connecting to the Brookings-Deuel Rural Water System would not require Basin Electric to acquire permitting from the South Dakota Department of Environment and Natural Resources because the Brookings-Deuel Rural Water System already has the necessary permits in place.

Determination: Mitigation Recommended – if the Deer Creek Station is to receive water from new wells as proposed in the Banner Associates, Inc. engineering report the necessary environmental permits must be acquired from the South Dakota Department of Environment and Natural Resources before construction begins. More information on obtaining the necessary permits can be found in the attached document: *Environmental Permitting and Regulation Guide (2007 Edition)*.

Environmental Justice

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

Fair treatment means that no group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Environmental justice communities are minority and/or low income communities that often are excluded from the environmental policy setting and/or decision-making process and are subject to a disproportionate impact from one or more environmental hazards. These communities experience a disparate implementation of environmental regulations, requirements, practices, and activities.

The information found in the tables below provides information on race and economic characteristics for the municipalities within the 12 mile study area. This data identifies the locations of minority and/or low income communities where environmental justice concerns may arise.

Town of Astoria

<i>Race alone or in combination with one or more other races</i>	#	%
White	148	98.7
Black or African American	0	0.0
American Indian and Alaska Native	1	0.7
Asian	3	2.0
Native Hawaiian and Other Pacific Islander	0	0.0
Some other race	0	0.0
<i>Economic Characteristics</i>	#	%
Families Below Poverty	8	17.8
Individuals Below Poverty	31	19.3

Source: 2000 U.S. Census

Town of Aurora

<i>Race alone or in combination with one or more other races</i>	#	%
White	493	98.6
Black or African American	0	0.0
American Indian and Alaska Native	10	2.0
Asian	0	0.0
Native Hawaiian and Other Pacific Islander	0	0.0
Some other race	0	0.0
<i>Economic Characteristics</i>	#	%
Families Below Poverty	0	0
Individuals Below Poverty	13	2.4

Source: 2000 U.S. Census

City of Brookings

<i>Race alone or in combination with one or more other races</i>	#	%
White	17,819	96.3
Black or African American	115	0.6
American Indian and Alaska Native	243	1.3
Asian	407	2.2
Native Hawaiian and Other Pacific Islander	11	0.1
Some other race	81	0.4
<i>Economic Characteristics</i>	#	%
Families Below Poverty	253	7.3
Individuals Below Poverty	2,931	18.5

Source: 2000 U.S. Census

Town of Bushnell

<i>Race alone or in combination with one or more other races</i>	#	%
White	65	86.7
Black or African American	3	4.0
American Indian and Alaska Native	12	16.0
Asian	1	1.3
Native Hawaiian and Other Pacific Islander	0	0.0
Some other race	1	1.3
<i>Economic Characteristics</i>	#	%
Families Below Poverty	0	0
Individuals Below Poverty	6	8.7

Source: 2000 U.S. Census

City of Elkton

Race alone or in combination with one or more other races ³	#	%
White	674	99.6
Black or African American	3	0.4
American Indian and Alaska Native	4	0.6
Asian	0	0.0
Native Hawaiian and Other Pacific Islander	0	0.0
Some other race	1	0.1
Economic Characteristics	#	%
Families Below Poverty	11	5.9
Individuals Below Poverty	46	6.8

Source: 2000 U.S. Census

City of White

Race alone or in combination with one or more other races	#	%
White	525	99.1
Black or African American	3	0.6
American Indian and Alaska Native	6	1.1
Asian	0	0.0
Native Hawaiian and Other Pacific Islander	0	0.0
Some other race	0	0.0
Economic Characteristics	#	%
Families Below Poverty	6	4.3
Individuals Below Poverty	33	6.3

Source: 2000 U.S. Census

United States

Race alone or in combination with one or more other races	#	%
White	216,930,975	77.1
Black or African American	36,419,434	12.9
American Indian and Alaska Native	4,119,301	1.5
Asian	11,898,828	4.2
Native Hawaiian and Other Pacific Islander	874,414	0.3
Some other race	18,521,486	6.6
Economic Characteristics	#	%
Families Below Poverty	6,620,945	9.2
Individuals Below Poverty	33,899,812	12.4

Source: 2000 U.S. Census

There are two municipalities showing a percentage of families below poverty and individuals below poverty higher than that of the U.S. and one showing a double digit percentage of population that is other than white. None of these municipalities have a population comprised of a majority of families below poverty, individuals below poverty, or minorities.

The highest percentage of families below poverty (17.8%) and individuals below poverty (19.3%) can be found in the Town of Astoria. While these percentages, approaching nearly twice the U.S. average, may appear alarming at first glance it is important to note that the number of families below poverty is 8 and the number of individuals below poverty is 31.

The City of Brookings has 2,931 (18.5%) individuals below poverty and it is reasonable to assume that most of these individuals are students attending South Dakota State University as there are only 253 (7.3%) families below poverty in Brookings. In 2008 the total enrollment at South Dakota State University was 11,995 or approximately 2/3 of the population of the City of Brookings.

The Town of Bushnell (population 65) is the only municipality with a racial makeup that falls below 96% white. The 12 (16.0%) residents of Bushnell that are American Indian and Alaska Native do not constitute a majority of the town's population.

There are no federally recognized Indian tribes within the 12 mile study area. The nearest federally recognized Indian tribe, the Flandreau Santee Sioux, is headquartered approximately 25 miles to the south of the project site and outside of the study area. The Flandreau Indian Reservation is located in Moody County and a records search did not show any reservation land within the study area.

A review of some 38 domestic environmental justice case studies at the University of Michigan (<http://www.umich.edu/~snre492/cases.html>) was conducted as a means of determining what constitutes an environmental justice infraction. The majority of those case studies involved a demographic cross-section that was either occupied mostly by minorities, people living below poverty, or both. Demographic information from four of the case studies can be found in the table below.

Project and Location	% Minority	% Below Poverty
North Ridge Sewage Treatment Plant, New York, NY	60.6%	33.7%
Chevron Refinery, Richmond, CA	48.8%	44.2%
Barrio Logan, San Diego, CA	94.9%	41.4%
Henry Ford Hospital Medical Waste Incinerator, Detroit, MI	91%	60%

There are no municipalities within the 12 mile study area with a minority population or population living below the poverty level making up a majority of any given municipality. The area population is over 90% white and less than 10% live below the poverty level and no group of people, including a racial, ethnic, or a socioeconomic group, will bear a disproportionate share of the negative environmental consequences resulting from the Deer Creek Station energy conversion facility.

Determination: No Significant Impact

Historic Preservation

While Basin Electric will make every effort to identify historically significant locations prior to the commencement of construction, the significant disturbance associated with construction activities may result in unanticipated discoveries of historic significance. Should any unanticipated discoveries of human remains or cultural resources be made during construction of the energy conversion facility or transmission facilities federal and state regulations must be followed.

The following South Dakota Codified Laws apply to human remains found on state or private property:

- **SDCL 34-27-25**
Reporting discovery of human skeletal remains--Failure to report as misdemeanor. Any person who encounters or discovers human skeletal remains or what he believes may be human skeletal remains in or on the ground shall immediately cease any activity which may disturb those remains and shall report the presence and location of such human skeletal remains to an appropriate law enforcement officer. Willful failure to report the presence or discovery of human skeletal remains or what may be human skeletal remains within forty-eight hours to an appropriate law enforcement officer in the county in which the remains are found is a Class 2 misdemeanor.
- **SDCL 34-27-28**
Notification to landowner and coroner--Notification to state archaeologist and tribal officials--Time limits. If a law enforcement officer has reason to believe that the skeletal remains, reported pursuant to § 34-27-25, may be human, he shall promptly notify the landowner and the coroner . If the remains reported under § 34-27-25 are not associated with or suspected of association with any crime, the state archaeologist shall be notified within fifteen days. The state archaeologist shall thereupon follow the procedure set out in § 34-27-31, except that the skeletal remains shall be turned over to the attorney general or any state's attorney should either request the remains for further investigation.

The South Dakota State Historic Preservation Office had developed the following draft process that should be followed should any unanticipated discoveries of human remains be made during the course of construction.

1. When unmarked human burial or human remains are discovered during construction activities, the construction contractor and Basin Electric will comply with South Dakota State Law Chapter 34-27
2. Upon encountering an unmarked human burial or human remains during ground disturbing activities, the construction contractor will immediately stop work within a one hundred (100) foot radius from the point of discovery and notify Basin Electric officials. The construction contractor will implement interim measures to protect the discovery from vandalism and looting, but must not remove or otherwise disturb any human remains or other items in the immediate vicinity of the discovery.
3. The construction contractor will notify the local law enforcement agency, South Dakota State Historic Preservation Office, and the South Dakota State Archaeologist within twenty four (24) hours of the discovery.
 - Local law enforcement agency – Brookings Cty Sheriff – Martin Stanwick
 - (605) 696-8300 or (888) 858-8954
 - mstanwick@brookingscountysd.gov

- South Dakota State Historic Preservation Office – Paige Hoskinson Olson
 - (605) 773-6004
 - Paige.HoskinsonOlson@state.sd.us
 - South Dakota State Archaeologist – James Haug
 - (605) 394-1936
 - Jim.haug@state.sd.us
4. If local law enforcement determines the remains are not associated with a crime, the construction contractor, in consultation with the State Archaeologist will determine if it is prudent and feasible to avoid disturbing the remains. If the disturbance cannot be avoided, the State Archaeologist and other consulting parties, including Indian tribes, will determine acceptable procedures for the removal, treatment, and disposition of the burial or remains. The construction contractor will implement the plan for removal, treatment, and disposition of the burial or remains as authorized by the State Archaeologist.
 5. The construction contractor may resume construction activities in the area of the discovery upon completion of the plan authorized by the State Archaeologist.

If a previously undiscovered cultural resource site is encountered during construction, in accordance with 36 CFR part 800.13, work within a minimum distance of 100 feet of the discovery will cease, except as necessary to secure and protect the discovery. Work will not resume until all activities to comply with 36 CFR part 800.13 have been completed.

- **36 CFR part 800.13 Post-review discoveries.**
 - *Planning for subsequent discoveries.*
 - *Using a programmatic agreement.*

An agency official may develop a programmatic agreement pursuant to §800.14(b) to govern the actions to be taken when historic properties are discovered during the implementation of an undertaking.

- *Using agreement documents.*

When the agency official's identification efforts in accordance with § 800.4 indicate that historic properties are likely to be discovered during implementation of an undertaking and no programmatic agreement has been developed pursuant to paragraph (a)(1) of this section, the agency official shall include in any finding of no adverse effect or memorandum of agreement a process to resolve any adverse effects upon such properties. Actions in conformance with the process satisfy the agency official's responsibilities under section 106 and this part.

- *Discoveries without prior planning.*

If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties and: (1) If the agency official has not approved the undertaking or if construction on an approved undertaking has not commenced, consult to resolve adverse effects pursuant to § 800.6; or (2) If the agency official, the SHPO/THPO and

any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property agree that such property is of value solely for its scientific, prehistoric, historic or archeological data, the agency official may comply with the Archeological and Historic Preservation Act instead of the procedures in this part and provide the Council, the SHPO/THPO, and the Indian tribe or Native Hawaiian organization with a report on the actions within a reasonable time after they are completed; or (3) If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council shall respond within 48 hours of the notification. The agency official shall take into account their recommendations regarding National

Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council a report of the actions when they are completed.

- o *Eligibility of properties.*

The agency official, in consultation with the SHPO/THPO, may assume a newly discovered property to be eligible for the National Register for purposes of section 106. The agency official shall specify the National Register criteria used to assume the property's eligibility so that information can be used in the resolution of adverse effects.

- o *Discoveries on tribal lands.*

If historic properties are discovered on tribal lands, or there are unanticipated effects on historic properties found on tribal lands, after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section and construction has commenced, the agency official shall comply with applicable tribal regulations and procedures and obtain the concurrence of the Indian tribe on the proposed action.

Determination: Mitigation Recommended - if unanticipated discoveries of human or cultural remains are made during construction the mitigation measures outlined above should be implemented by Basin Electric and the construction contractor.

Deer Creek Station Social and Economic Impact Study Conclusions

It is the opinion of the First District Association of Local Governments that the Deer Creek Station will have no significant negative impacts on the social and economic environment within the Public Utilities Commission defined twelve mile study area. The following conclusions provide a brief summary of the projected impacts that the Deer Creek Station will have on each subject reviewed in this report.

- Housing Supplies – no significant impact

It is estimated that 110 of the projected 360 construction workers required during peak construction will live outside of the 12-mile study area. The 250 construction workers seeking housing within the 12-mile study area will have the greatest impact on rental housing with a secondary impact on campgrounds. The existing supply of rental housing and campgrounds within the study area is sufficient to meet the housing needs of workers that will be needed to construct the Deer Creek Station.

The 31 projected operational workers will most likely live within the 12-mile study area and will seek either rental housing or home ownership opportunities. The operational workers will have significantly less impact on area housing supplies than the construction workers will.

- Educational Facilities and Manpower – no significant impact

The construction workforce should have a minimal impact on the educational facilities and manpower within the study area. If the projected maximum number of 72 new construction worker-related students is realized there will still be room for more than 200 additional students within the area school systems before past peak enrollment numbers are reached.

The student impact associated with the operational workforce will be considerably lower than the student impact associated with the construction workforce.

- Waste Supply and Distribution – no significant impact

The Deer Creek Station will burn natural gas and the use of natural gas, according to the U.S. Environmental Protection Agency, to create electricity does not produce substantial amounts of solid waste.

- Waste Water Treatment and Collection – no significant impact

Area municipal waste water treatment and collection systems currently have sufficient capacity to adequately handle the projected population increase and associated waste water impacts within the 12 mile study area and will not be impacted negatively by the construction and operational workers associated with the Deer Creek Station.

- Solid Waste Disposal and Collection – no significant impact

The population impact on the project area associated with the Deer Creek Station will be less than 2%. The additional waste supply created by both construction and operational workers will not result in a noticeable or negative impact on area landfills or garbage collection contractors.

- Law Enforcement – no significant impact

Brookings County is unique in that the Brookings sworn municipal police officers are deputized by the county and, this, have county jurisdiction beyond the confines of the municipality. This additional labor pool provides an additional safety net for county emergencies. Area law enforcement does not anticipate any impacts beyond what they have experienced during previous, large scale, ethanol plant construction projects and do not believe the Deer Creek Station construction and/or operational workers will impact them in a negative fashion.

- Transportation – mitigation recommended

Improvements to the Heavy Haul roads should be made prior to the beginning of construction – dust control measures should be implemented during construction - all state and local transportation permits must be obtained before construction hauling to the Deer Creek Station site commences.

The operational impact on the existing transportation system will consist primarily of light vehicle traffic to and from the site. This traffic will not generate a noticeable stress on federal, state or local roads within the study area.

- Fire Protection – no significant impact

State Fire Marshall Al Christy stated that no special type of new equipment would be required by the surveyed fire service agencies to respond to a Deer Creek Station emergency. Christy stated, “From what you tell me about this operation, you would have far fewer issues than a conventional ethanol facility. After you turn the gas off, no special equipment should be required.”

- Health – no significant impact

No real or perceived health facilities impacts were indicated in the responses from the survey used to complete this portion of the study. Any possible health facilities amelioration would possibly be categorized in the “insurance/workman’s compensation” area. Existing health facilities have adequate personnel and facilities to deal with the emergency response and care needs associated with the Deer Creek Station.

- Recreation – no significant impact

Due to the relatively short duration of construction associated with the Deer Creek Station the existing recreational opportunities should be adequate to meet the recreational wants and needs of both the construction and operational workers.

- Government – no significant impact

The City Finance Officers in the communities of Astoria, Aurora, Brookings, Bushnell, Elkton and White were surveyed and indicated that the Deer Creek Station will either have “No Community Impact” or a “Positive Community Impact”. The respondents did not perceive any negative impacts associated with the project.

- Energy – no significant impact

The proposed Deer Creek Station will not detract from the energy needs in the area. The Deer Creek Station would only enhance power production and, thus, by the nature of the project, be part of the solution rather than part of the problem.

- Water Supply – no significant impact

Area municipalities receive their water supply either from the Brookings-Deuel Rural Water System or from wells and water treatment systems owned and operated by the City of Brookings. Between the two, there is more than enough existing capacity to meet the increased water demand created by construction and operational workers associated with the Deer Creek Station.

- Environmental Justice – no significant impact

There are no municipalities within the 12 mile study area with a minority population or population living below the poverty level making up a majority of any given municipality. The area population is over 90% white and less than 10% live below the poverty level and no group of people, including a racial, ethnic, or a socioeconomic group, will bear a disproportionate share of the negative environmental consequences resulting from the Deer Creek Station energy conversion facility.

- Historic Preservation – no significant impact

While Basin Electric will make every effort to identify historically significant locations prior to the commencement of construction, the significant disturbance associated with construction activities may result in unanticipated discoveries of historic significance. Should any unanticipated discoveries of human remains or cultural resources be made during construction of the energy conversion facility or transmission facilities federal and state regulations must be followed.

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Appendix A – School District Data and Maps

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Appendix A – School District Data and Maps (Brookings)



2007-2008 Profile of Brookings School District 05-1

2130 8th St S, Brookings, SD 57006-3507

Home County: Brookings

Area in Square Miles: 194

Revenue				
	General	Capital Outlay	Special Education	Pension
Local	\$7,620,107	\$2,969,255	\$1,361,568	\$297,236
County	\$281,534	\$0	\$0	\$0
State	\$6,822,795	\$0	\$907,839	\$0
Federal	\$801,135	\$0	\$567,159	\$0
Total	\$15,525,570	\$2,969,255	\$2,836,565	\$297,236

Expenditures				
	General	Capital Outlay	Special Education	Pension
K-12 Instruction	\$9,285,863	\$881,754	\$2,067,570	\$0
PK Instruction	\$0	\$0	\$139,917	\$0
Adult Instruction	\$0	\$0	\$0	\$0
Student/Staff Services	\$1,586,310	\$37,509	\$469,612	\$0
Administration Services	\$1,159,048	\$2,616	\$120,164	\$0
Transportation Services	\$349,261	\$70,170	\$72,905	\$0
Other Support Services	\$2,372,417	\$729,151	\$0	\$0
Community Services	\$28,002	\$0	\$0	\$0
Non-Programmed	\$3,529	\$0	\$0	\$236,124
Debt Service	\$0	\$1,022,344	\$0	\$0
Co-Curricular	\$680,839	\$41,035	\$0	\$0
Total Expenditures	\$15,465,269	\$2,784,579	\$2,870,168	\$236,124

Other Fund Data		
	Revenue	Expenditures
Bond Redemption	\$1,091,349	\$1,229,413
Capital Projects	\$303,989	\$3,774,199
Other Special Revenue	\$0	\$0
Enterprise Funds	\$960,142	\$1,019,956

Ending Fund Balance	
General	\$3,894,937
Capital Outlay	\$2,382,698
Special Education	\$95,320
Pension	\$446,052

State Aid	
General Aid	\$6,338,534
Special Education	\$907,839
Sparsity	\$0
Reorganization Incentive	\$0
Extraordinary Cost Fund - SE	\$0
Total State Aid	\$7,246,373

2007 Payable 2008 Taxable Valuations	
Agricultural	\$91,755,877
Owner Occupied	\$549,811,042
Non-Ag Z	\$2,739,032
Other Non-Ag/Utilities	\$357,205,889
Total	\$1,001,511,840

2007 Payable 2008 Levy per Thousand	
Agricultural	\$3.06
Non-Ag Z	\$4.19
Owner Occupied	\$4.81
Other Non-Ag/Utilities	\$10.29
Special Education	\$1.40
Capital Outlay	\$3.00
Bond Redemption	\$1.26
Pension Fund	\$0.30

*District has opted out of General Fund levy

Appendix A – School District Data and Maps (Brookings)

Student Data	
Fall 2007 PK-12 Enrollment	2,700
Fall 2007 K-12 Fall Enrollment	2,700
Open Enrolled Students Rec'd	39
Home School ADM	54,900
Fall 2007 State Aid Fall Enroll.	2,701.84
District Dropout Rate	2.3%
% Eligible for Free/Red. Lunch	20.6%
% Special Needs Students	14.7%
Students Transported	591
Student to Staff Ratio	15.4
District Attendance Rate	95.9%
Number of Graduates	169

Enrollment		
	ADA	ADM
K-8	1,828.863	1,897.158
9-12	746.961	789.581
Total	2,575.824	2,686.739

Cost per ADM	
General Fund Only	\$5,718
Educational Funds*	\$6,690

* Includes General, Special Education and Pension Funds

Special Education Federal Flowthrough	
Part B, Sec. 619, PK	\$20,856
IDE A Part B	\$496,670
Total	\$517,526

Special Education Placement Categories	
Regular Classroom	217
Resource Room	107
Self-Contained Classroom	30
Separate Facility	
Regular Early Childhood	32
Age 3-5 Special Ed Prg	
Age 3-5 Other SE Locations	
Total	398

American College Test (ACT)	
English	22.6
Math	24.2
Reading	23.8
Science	23.4
Composite Score	23.7
Number Tested	127

December 2007 Federal Child Count	
Deaf-Blind	
Emotionally Disturbed	20
Mental Retardation	31
Hearing Impaired	
Learning Disabled	220
Multiple Disabilities	12
Orthopedic Impairment	
Visually Impaired	
Deaf	
Speech/Language	60
Other Health Impaired	
Autism	17
Traumatic Brain Injury	
Developmental Delay	25
Total	398

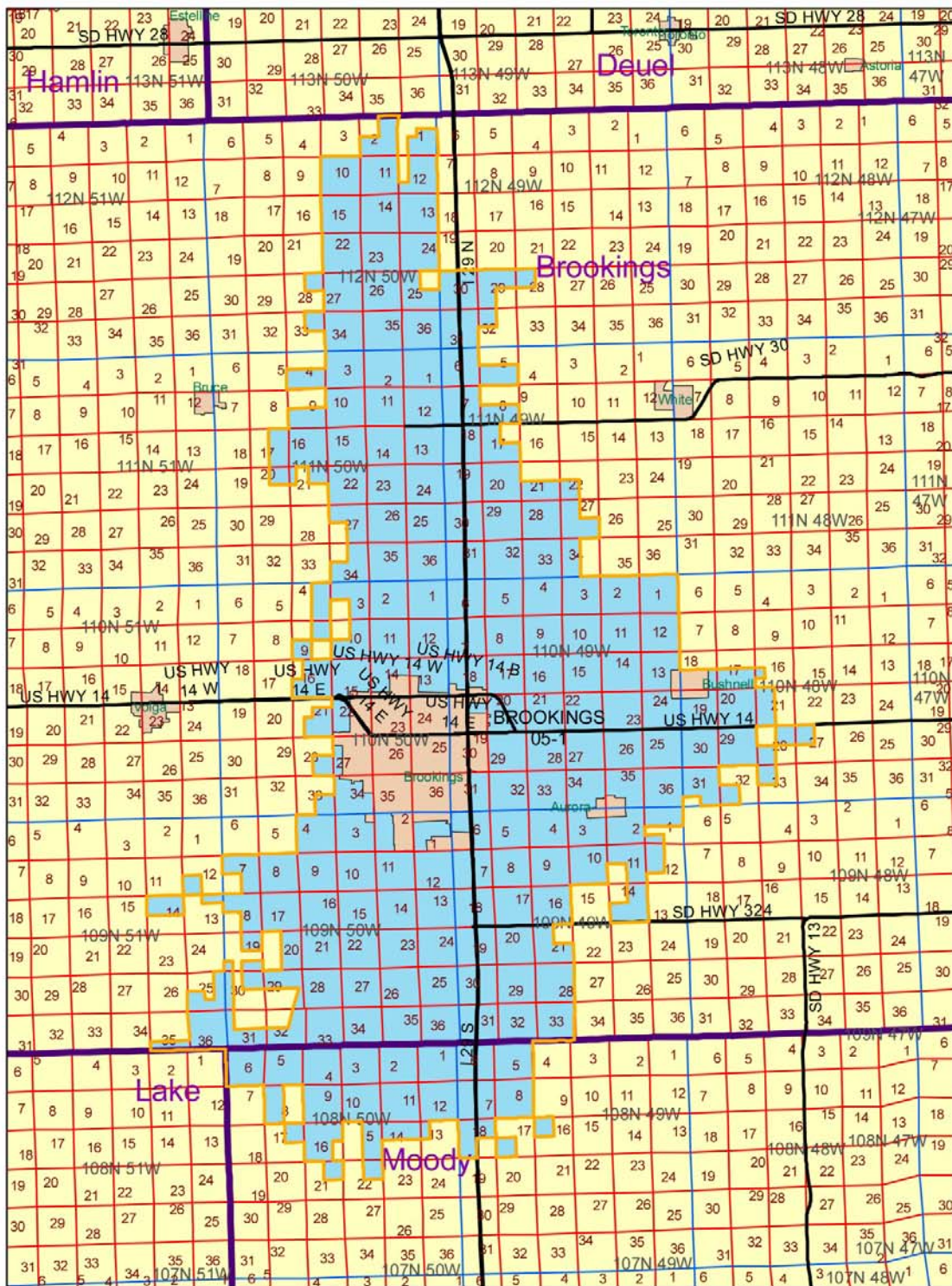
Teaching Staff Data	
Average Teacher Salary	\$38,661
Experience Adjusted Salary	\$35,878
Avg Years of Experience	18.2
% with Advanced Degrees	23.2%
Certified Instructional Staff	175.7
Classroom Staff	0.0

*No Special Education or ACT data are reported when less than ten students are reported

*No Free/Red. Lunch Eligible data are reported when greater than 90%.

Appendix A – School District Data and Maps (Brookings)

Brookings School District 05-1



NOTE: THIS MAP IS FOR REFERENCE ONLY
 Although every effort has been made to ensure the accuracy of information, errors and conditions originating from the physical sources used to develop the database may be reflected in the data supplied. The user must be aware of the data conditions and assume full responsibility for its appropriate use of the information with respect to precision, original scale, collection methodology, currency of data, and other conditions specific to certain data.



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