



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
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February 13, 2004

Robert E. Roberts
Regional Administrator
U.S. Environmental Protection Agency
Region VIII
999 18th Street - Suite 300
Denver, CO 80202-2466

RE: Proposed Designations in South Dakota for the PM2.5 Standard

Dear Mr. Roberts:

Your letter dated May 19, 2003, asked the Governor of South Dakota to provide EPA with the appropriate recommendations for designating areas of the state for the fine particulate (PM2.5) National Ambient Air Quality Standard. Governor M. Michael Rounds delegated the authority to determine and submit these designations for South Dakota to the Secretary of the Department of Environment and Natural Resources (DENR).

In 1997, EPA revised the particulate matter standard by adding new standards for PM2.5. DENR set up a network of monitoring sites and began collecting PM2.5 data in 1999. The sampling network included sites in several counties around the state with goals of high concentration, population, source impact, background and regional transport. The population of these counties with air monitoring sites represents about 50 percent of the population in South Dakota. See Attachment 1, Figure 1 for a map of the state showing the counties with PM2.5 monitoring data.

To meet the minimum requirements of three consecutive years of PM2.5 data with a valid sample recovery rate of 75 percent in each calendar quarter, South Dakota had to include the 2003 sampling year. DENR experienced continuous problems with the Andersen PM2.5 sequential monitor, which dropped the valid sample recovery rate below the required 75 percent for each calendar quarter in 1999 and the first quarter of 2000. Improvements made by the manufacturer and a significant amount of DENR staff time to continually make repairs to the monitors increased the valid sample recovery rate above the 75 percent completeness level in the second quarter of 2000. See Attachment 2, Table #1 through Table #4 for summaries of the valid sampling rates, for each PM2.5 monitoring site.

The PM2.5 data collected in the state during the past five years show no concentration levels that exceed the 24-hour or annual standards. I fully expect future sampling will continue to show the same results. As required by Section 107(d)(1) of the Clean Air Act, I recommend that EPA designate all counties in South Dakota as attaining the 24-hour and annual standards for PM2.5. See Attachment 2, Table #5 for a complete list of proposed designation for counties in South Dakota.

The average 24-hour concentration for each site was calculated as the three year average of the yearly 98 percentile concentration (see Attachment 1, Figure 2 through Figure 4). The highest calculated 24-hour 98 percentile average was recorded at the Rapid City Fire Station #3 site with a concentration level of 25 micrograms per cubic meter.

The annual mean concentration for each PM2.5 monitoring site is shown in the graphs in Attachment 1, Figure 5 through Figure 7. The annual mean concentrations were calculated as an average of three consecutive years of valid sampling data. The highest annual mean was recorded at the Sioux Falls KELO site with a concentration of 10.0 micrograms per cubic meter.

Thank you for the opportunity to propose designations for the PM2.5 standard. If you have questions on this notice, please contact Brian Gustafson at 605-773-3151 for more information.

Sincerely,



Steven M. Pirner
Secretary

Enclosure

cy: Dick Long, EPA Region VIII
Libby Faulk, EPA Region VIII

Attachment 1

Figures

Figure 1. South Dakota Counties With PM2.5 Data

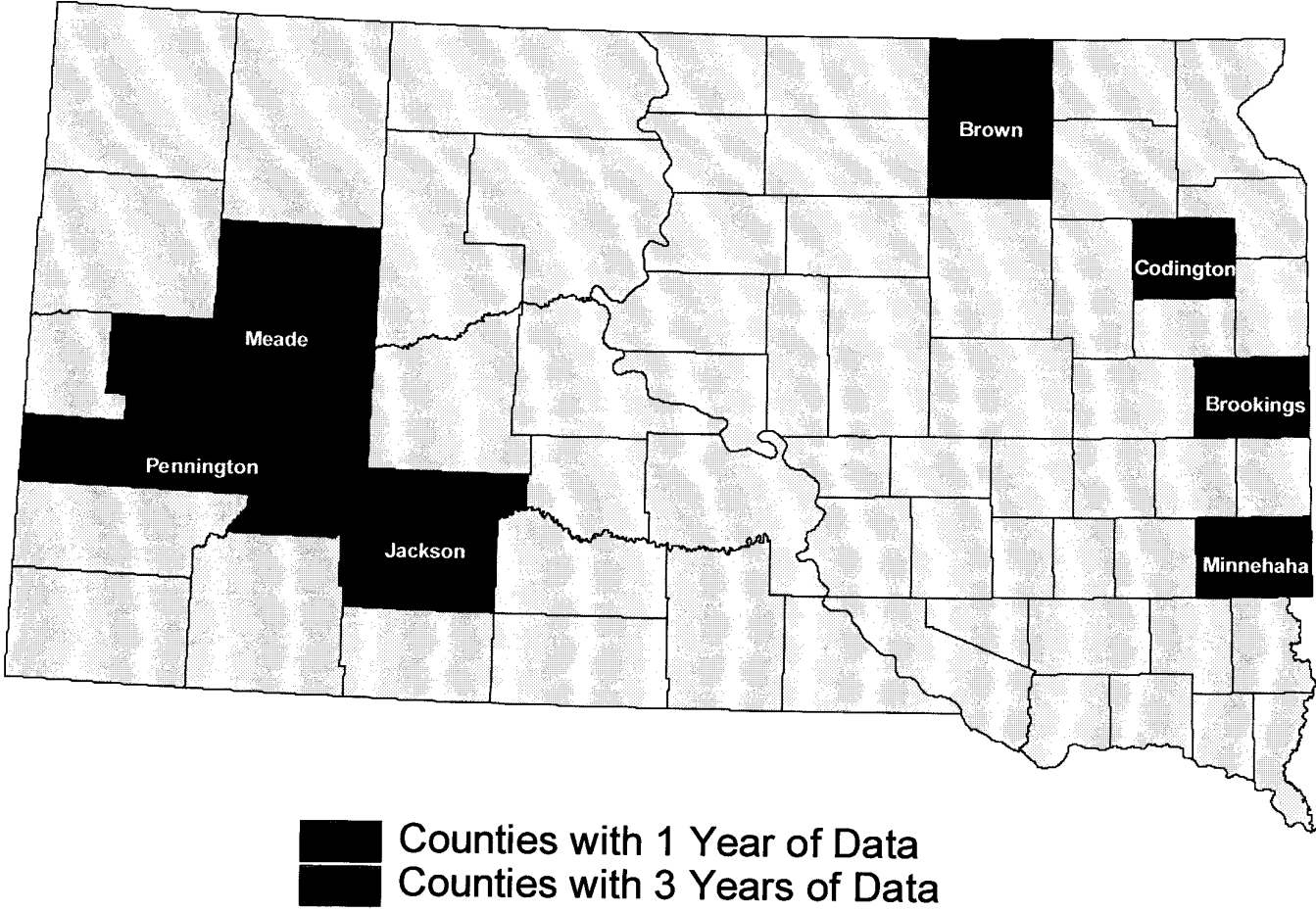
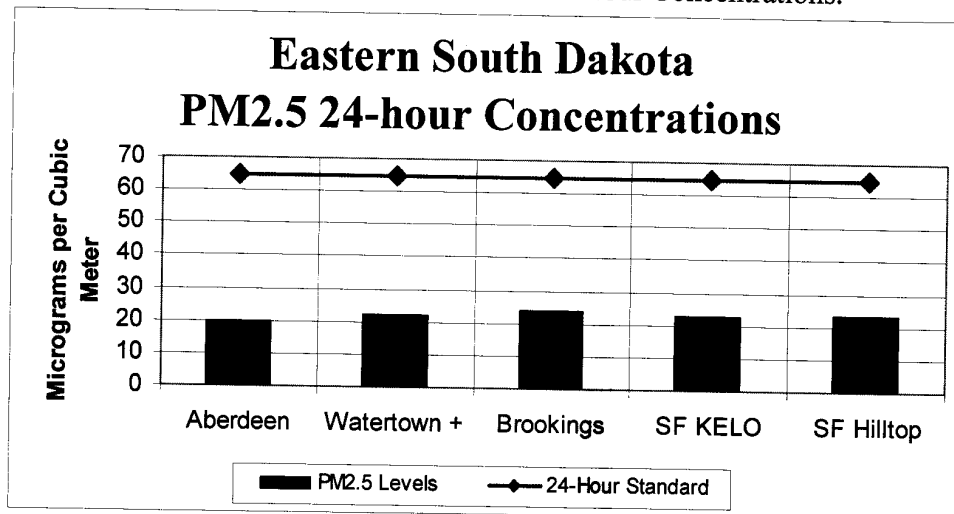
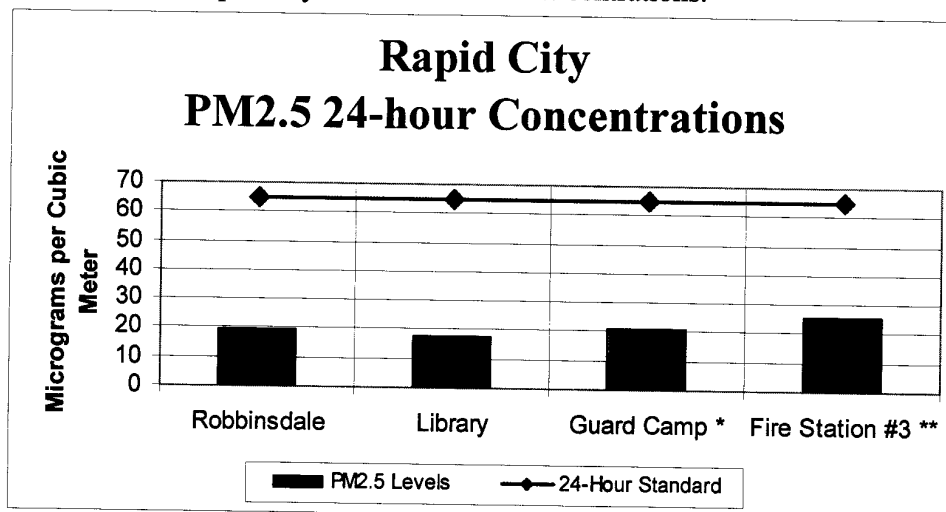


Figure 2. Eastern South Dakota PM2.5 24-hour Concentrations.



+ Less than 3 years of data.

Figure 3. Rapid City PM2.5 24-hour Concentrations.



* Special Purpose Site. ** Fire Station #3/Credit Union Site.

Figure 4. Background Site Concentrations.

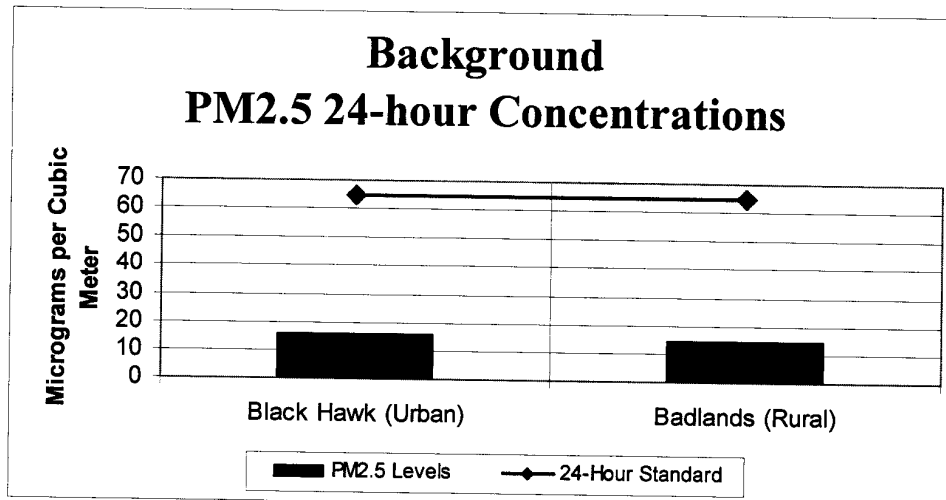
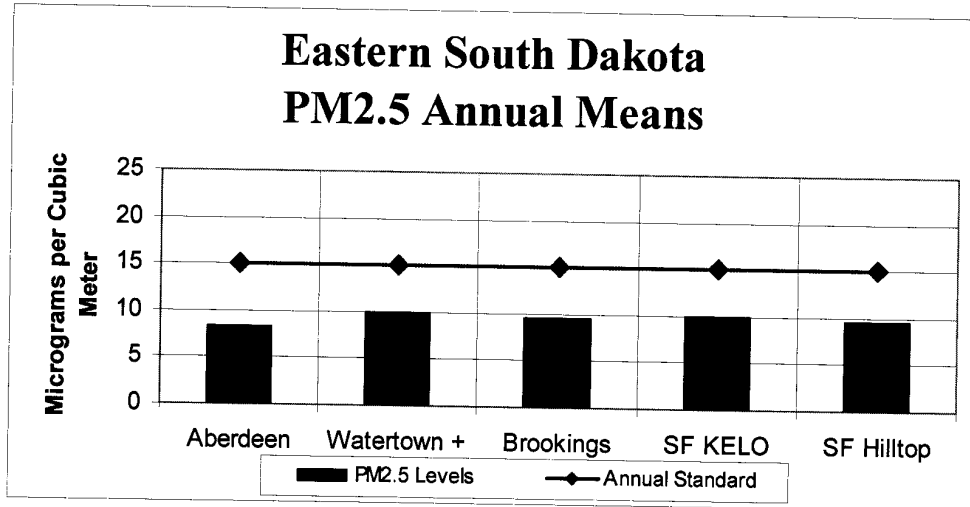
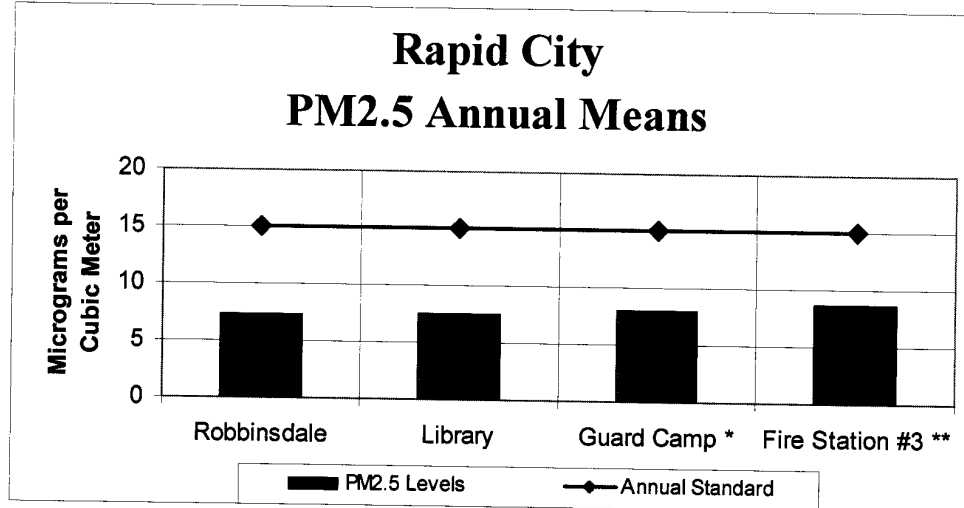


Figure 5. Eastern South Dakota PM2.5 Annual Means



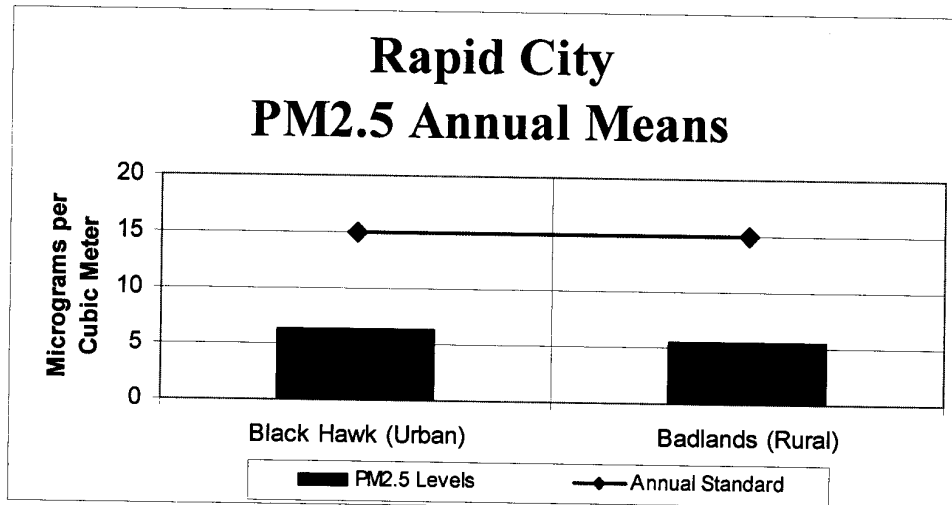
+ Less than 3 years of Data.

Figure 6. Rapid City PM2.5 Annual Means



* Fire Station/Credit Union Site. ** Special Purpose Site.

Figure 7. Background Site in Western South Dakota



Attachment 2

Tables

Table 1. Eastern South Dakota PM2.5 Sites

Aberdeen Fire Station #1 Site 46-013-0003

Year	Percent Valid Samples per Quarter				Annual	24-hour 98%
	1st Qt	2nd Qt	3rd Qt	4th Qt		
2000	33	90	97	97	8.9	21.6
2001	100	100	100	97	8.6	21.6
2002	100	90	90	100	7.9	17.9
2003	97	100	97	100	8.5	19.4
Three Year Average					8.3	20

Watertown Site 46-029-0002 (Less than 3 years of data.)

Year	Percent Valid Samples per Quarter				Annual	24-hour 98%
	1st Qt	2nd Qt	3rd Qt	4th Qt		
2003	97	100	97	100	9.6	22.2
Three Year Average					9.6	22

Brookings City Hall Site 46-011-0002

Year	Percent Valid Samples per Quarter				Annual	24-hour 98%
	1st Qt	2nd Qt	3rd Qt	4th Qt		
1999	0	76	55	84	12.6	28.9
2000	57	97	94	100	8.2	27.5
2001	97	100	93	90	9.4	20.7
2002	80	93	87	84	9.1	24.5
2003	83	77	94	100	10.2	26.6
Three Year Average					9.6	24

Sioux Falls KELO Site 46-103-0006

Year	Percent Valid Samples per Quarter				Annual	24-hour 98%
	1st Qt	2nd Qt	3rd Qt	4th Qt		
1999	0	97	90	87	11.4	27.7
2000	57	100	100	100	9.3	25.5
2001	90	100	100	97	10.4	21.6
2002	93	97	100	100	9.2	22.4
2003	100	100	87	93	10.5	24.1
Three Year Average					10.0	23

Sioux Falls Hilltop Site 46-099-0007

Year	Percent Valid Samples per Quarter				Annual	24-hour 98%
	1st Qt	2nd Qt	3rd Qt	4th Qt		
1999	63	83	74	77	12.1	32.6
2000	57	93	68	90	9.1	31.0
2001	90	100	90	90	9.8	20.4
2002	93	90	100	100	9.0	22.2
2003	93	87	81	97	10.0	27.1
Three Year Average					9.6	23

Table 2. Rapid City PM2.5 Sites

Robinsdale Site 46-103-0016

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		98%
1999	63	87	94	87	9.1	25.0
2000	47	70	90	93	7.8	22.2
2001	90	90	97	100	7.9	21.6
2002	100	97	100	100	7.2	20.1
2003	97	100	97	97	7.2	16.8
Three Year Average					7.4	20

Library Site 46-103-1001

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		98%
1999	0	93	97	94	8.2	16.3
2000	53	57	100	97	8.8	26.2
2001	97	97	93	100	7.8	15.8
2002	100	100	97	100	7.2	17.6
2003	97	100	100	100	7.4	19.6
3-Year Avg.					7.5	18

Fire Station #3 Site 46-103-0019 (Does not meet the 75% data completeness)

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		98%
2000	40	100	87	80	9.1	33.3
2001	100	93	100	100	9.1	21.2
2002	100	100	97	100	8.0	21.0
2003	100	17	0	0	NA	NA
Three Year Average					8.7	25

Site closed in April of 2003, and moved to the Credit Union Site.

Guard Camp Site 46-103-0013 (Does not meet the 75% Data completeness)

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		98%
2000	0	27	93	93	7.9	29.5
2001	100	94	100	73	8.4	15.6
2002	40	67	100	93	8.0	26.7
2003	100	100	94	93	7.7	21.0
Three Year Average					8.0	21

Special Purpose Monitor 1/6 sampling frequency.

Table 3. Background PM2.5 Sites

Black Hawk Site 46-093-0001

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		
2001	93	97	97	100	6.1	12.6
2002	100	100	97	100	6.3	16.4
2003	100	100	97	97	6.4	18.0
Three Year Average					6.3	16

Badlands Site 46-071-0001

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		
2000	53	93	100	100	5.4	13.4
2001	100	100	100	93	5.6	12.4
2002	90	97	94	94	5.2	13.4
2003	93	100	94	100	5.8	16.8
Three Year Average					5.5	14

Table 4. Closed PM2.5 Sites

Rapid City Meadowbrook Site 46-103-0017 (Less than 3 years of data.)

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		
1999	0	87	94	77	8.2	22.0
2000	40	80	58	100	6.6	13.9
2001	87	77	87	100	6.8	15.3
2002	100	100	100	100	6.9	26.7
Three Year Average					6.8	19

Closed in December of 2002 and moved to the Watertown Site.

Northdale Site 46-103-0015 (Less than 3 years of data.)

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		
1999	80	100	87	94	7.8	16.7
2000	30	73	87	0	7.9	21.8
Two Year Average					7.9	19

Site closed in October of 2000 and moved to the Black Hawk Site.

Rapid City Thrift Center Site 46-103-0014 (Less than 3 years of data.)

Year	Percent Valid Samples per Quarter				Annual	24-hour
	1st Qt	2nd Qt	3rd Qt	4th Qt		
1999	80	87	77	77	9.3	27.1
Average					9.3	27

Closed in December 1999 and moved to the Fire Station #3 Site

Table 5.
South Dakota – PM2.5 Designations

Designated Area	Designation	Classification
	Type	Type
Aurora County	Attainment	
Beadle County	Attainment	
Bennett County	Attainment	
Bon Homme County	Attainment	
Brookings County	Attainment	
Brown County	Attainment	
Brule County	Attainment	
Buffalo County	Attainment	
Butte County	Attainment	
Campbell County	Attainment	
Charles County	Attainment	
Clark County	Attainment	
Clay County	Attainment	
Codington County	Attainment	
Corson County	Attainment	
Custer County	Attainment	
Davison County	Attainment	
Day County	Attainment	
Deuel County	Attainment	
Dewey County	Attainment	
Douglas County	Attainment	
Edmunds County	Attainment	
Fall River County	Attainment	
Faulk County	Attainment	
Grant County	Attainment	
Gregory County	Attainment	
Haakon County	Attainment	
Hamlin County	Attainment	
Hand County	Attainment	
Hanson County	Attainment	
Harding County	Attainment	
Hughes County	Attainment	
Hutchinson County	Attainment	

Designated Area	Designation	Classification
	Type	Type
Hyde County	Attainment	
Jackson County	Attainment	
Jerauld County	Attainment	
Jones County	Attainment	
Kingsbury County	Attainment	
Lake County	Attainment	
Lawrence County	Attainment	
Lincoln County	Attainment	
Lyman County	Attainment	
Marshall County	Attainment	
McCook County	Attainment	
McPherson County	Attainment	
Meade County	Attainment	
Mellette County	Attainment	
Miner County	Attainment	
Minnehaha County	Attainment	
Moody County	Attainment	
Pennington County	Attainment	
Perkins County	Attainment	
Potter County	Attainment	
Roberts County	Attainment	
Sanborn County	Attainment	
Shannon County	Attainment	
Spink County	Attainment	
Stanley County	Attainment	
Sully County	Attainment	
Todd County	Attainment	
Tripp County	Attainment	
Turner County	Attainment	
Union County	Attainment	
Walworth County	Attainment	
Yankton County	Attainment	
Ziebach County	Attainment	