



## Rocky Mountain Mapping Center

### Locating Study Sites for *Stipa Comata* Using GIS - Answer Key

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1) [-321,556.64

-93,399.87]

2) [Albers]

[Central Meridian = -100

Standard Parallel 1 = 43

Standard Parallel 2 = 45

Central Parallel = 44]

3) [ The user cannot view the geology theme.]

4) [-104.03

43.14 This theme is in a Latitude/ Longitude - Geographic Coordinate System]

[No they do not match.]

5) [- 100]

[ Negatives ensure that the data will be in the Western Hemisphere ]

6)

Central Parallel = [44]

Standard Parallel 1 = [43]

Standard Parallel 2 = [45]

7) [Same projection information that was displayed in the previous file.]

[They contain the same projection information.]

8) **[Northwest part of the state except for the 2 bituminous coal areas in the Southwest part of the state.]**

9) **[2]**

10) **[The area that is selected is highlighted in yellow when displayed on the map.]**

11) **[No]**

12) **[Adds an area value based on the shape of the polygon.]**

13) **[Late Wisconsin Glacial Sediments.]**

**[Eastern half of South Dakota.]**

**[Upper Cretaceous (Shale, Chalk)]**

**[Central and Southwestern parts of South Dakota.]**

14) **[ Range ]**

**[ Along the western border - Black Hills]**

**[ 37]**

15) **[Pennington]**

16) **[Todd County receives 17 - 22 inches of rain annually.]**

17) **[Areas of Land ownership are displayed in different colors.]**

18) **[Private]**

**[No]**

**[The Bennett County portion is discontinuous from the other private land and is indicated by a separate polygon and separate row in the table.]**

19) **[Cheyenne River Indian Reservation]**

**[2,801,789.8]**

20) **[6th in terms of acreage.]**

**[The map only shows that the Rosebud Indian Reservation is only located in Todd County.]**

**[ No ]**

21) **[340]**

**[The table contains only one entry that lists the buffered distance.]**

22) [Those streams that have a slope of  $\geq 0.01$  pct.]

23) [The buffer is 1 kilometer on each side of the stream.]

24) [Eastern part of South Dakota.]

[1,690]

25) [115]

[Western and Southwestern part of South Dakota.]

26) [A study area within 30 km of the Office in Mission.]

27) [1]

[730]

28) [ 30 Km]

[A circle]

29) [You are only interested in the suitable soil areas that lie within 1 km of a river.]

[64]

30) [The attributes came from both the soils and river buffer tables.]

31) [Rivers\_soils and citybuffer]

32) [ 11 ]

[There are three sites that have the same size.]

33) [\*C]

[Northwest]

[Around 6 -7 KM]

34) [White Thunder Creek]

[Northeast]

[Around 11 - 12 KM]

35) [Site selection involves analyzing data from many different disciplines and layers. GIS can be used to perform analysis about site selection. GIS can be used to examine geographic characteristics, patterns, trends, and linkages.]

36) [ One needs to know what coordinate system or projection your files are in. One can Buffer

**areas to use for selection. You can combine two or more themes to determine a site selection. I also learned how to enter new fields in a table and how to use the [shape].returnarea function to calculate the correct area of a polygon.]**

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Last modified: 3 March 2004