



# Homesite Judging In South Dakota



South Dakota State University  
College of Agriculture & Biological Sciences  
in cooperation with the USDA-Natural Resources Conservation Service

# Judging Land for Homesites In South Dakota

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A home is a major investment for most people. Individual families and communities can avoid construction and maintenance problems if a study of soil conditions is made before construction begins. Soil information can be used to predict potential problems associated with planned or existing homesites. Before building or buying a home, consider if:

- There is a flood hazard.
- Drainage and seasonal high water table are a problem.
- The soils have high shrink-swell properties.
- Slope and unstable soil make erosion and soil movement a major problem.
- Soil conditions exist that corrode uncoated steel and concrete easily.
- Grading and soil removal was extensive.
- The soil properties are favorable for plant growth without extensive soil modification.
- Bedrock is present.

This contest is designed to emphasize the importance of soils and their limitations for homesites. The importance of a soil's suitability for parks, playgrounds, roads, streets, and other uses can also be considered. Many of the properties important for agricultural uses are also important for urban/rural uses (e.g., homesites). While the properties are the same, a different set of criteria is used to evaluate urban/rural uses.

Use of soil survey information can be very useful in determining general locations for homesites, but on-site soil investigations should be performed since soil survey information is not site specific and the site may be on an included soil in the soil map unit.

## **Defining Limitations**

Soils have limitations in use depending on their inherent properties. In homesite evaluations, the soils are rated as having slight, moderate, or severe limitations as follows:

***Slight limitations*** -- Soils or sites have properties favorable for the planned use and present few limitations. Low maintenance can be expected.

***Moderate limitations*** -- Soils or sites have one or more properties considered somewhat restrictive for the planned use. Limitations may be overcome or modified with special planning, design, treatment, and/or maintenance.

***Severe limitations*** -- Soils or sites have one or more properties unfavorable for the planned use. Limitations are very difficult and expensive to modify or overcome for the desired use. A severe rating means that extensive, costly work needs to be done to overcome the soil limitations for the desired use.

## **Defining Land Uses**

Limitation ratings will be made for four homesite uses: (1) foundations for buildings, (2) lawns and landscaping, (3) septic system absorption field, and (4) sewage lagoon. Ratings for other uses can be made but are not included in this contest.

***Foundations for buildings*** -- This determination reflects the suitability of the soil to support buildings. Some important soil properties that affect building foundations are soil depth, slope, erosion, runoff, shrink-swell potential, water table, and flooding.

***Lawns and landscape plantings*** -- This rating reflects the use of the soil for growing lawns, shrubs, trees, and vegetable gardens. The important soil properties are those that affect establishment and maintenance of planting. They include texture, permeability, soil depth, runoff, water table, slope, erosion, flooding, fertility, pH, salinity, and sodicity.

***Septic tank absorption field*** -- This subsurface system of tile or perforated pipe distributes waste water (effluent) from a septic tank into the soil for purification. Properties and features that affect the absorption of the effluent are permeability, soil depth, slope, erosion, runoff, shrink-swell, water table, and flooding. Absorption fields are typically installed at 2 to 4 feet.

***Sewage lagoon*** -- A dug pond used to hold sewage solids for bacterial decomposition and effluent evaporation is a sewage lagoon. Consideration of the soils ability to impound water and for use as embankment material must be made. Soil properties affecting sewage lagoons are permeability, soil depth, slope, erosion, water table, and flooding. Sewage lagoons are typically installed below a depth of 2 feet.

## **Factors Affecting Suitability**

### **1. Texture**

This refers to the texture of the surface soil. Surface texture is not a factor for foundation for buildings, septic systems, and sewage lagoons because foundations, lagoons, and lateral lines are dug below the surface. Surface textures may be a limitation for lawns and landscape plantings. Water and wind erosion may be a problem during construction. Table 1 (below) is a guide for evaluation of texture for homesite uses.

**Coarse: Moderate limitations for all uses --** May require stabilization with organic material and/or loamy topsoil to improve moisture and nutrient holding and supplying capacity for desired plant growth. Coarse textures throughout the profile may also cause a hazard during excavation and construction.

**Moderately Coarse, Medium, Moderately Fine: Slight limitations for all uses --** Care should be exercised during construction to be sure the surface soil is not covered by less desirable material.

**Fine: Severe limitations for all uses--**Soil is sticky when wet, hard when dry, and difficult to work with in flower beds and gardens. The soils crack when dry, swell when wet, requiring frequent and low rate of watering for plant growth.

**Table 1.** Effect of Texture on Land Use Adaptation

|   | <b>Foundations for Buildings</b> | <b>Lawns and Landscaping</b> | <b>Septic System Absorption Field</b> | <b>Sewage Lagoon</b> |
|---|----------------------------------|------------------------------|---------------------------------------|----------------------|
| <b>Coarse</b>                               |                                  | Moderate                     |                                       |                      |
| <b>Mod. Coarse<br/>Medium<br/>Mod. Fine</b> |                                  | Slight                       |                                       |                      |
| <b>Fine</b>                                 |                                  | Severe                       |                                       |                      |

## 2. Permeability

This refers to the rate water or air moves through the most restricted layer in the soil. Laterals for septic systems may be located below such layers in some soils. Final design should be based on detailed study of permeability, and seasonally high water tables. A standard percolation test should be performed on site to determine permeability rates. These investigations are important factors in deciding between septic tank absorption fields, sewage lagoons, or a community sewage system (Figure 1). Table 2 (below) is a guide for evaluation of permeability for homesite uses.

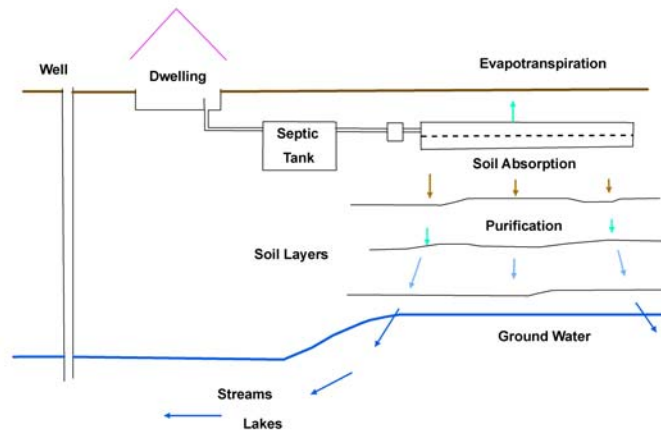


Figure 1. Soil Disposal of Septic Tank Effluent

**Special note:** For contest purposes, permeability will be determined from the subsoil texture box. A 3<sup>rd</sup> box for homesite may be used to determine the most restrictive layer; if significant coarse material is present in the profile & noted on the pit card as other considerations.

**Very Slow: Severe limitations for septic system absorption field.** Permeability is less than 0.06 inches per hour. This would require a prohibitively large field of laterals or costly modifications would be necessary to effectively dispose of the effluent. Septic systems are generally not recommended. **Limitations would be slight for sewage lagoons.** The subsoil has a fine textured layer and usually coated with clay which restricts water movement. **Limitations would be severe for lawns and landscape plantings.**

**Slow: Severe limitations for septic system absorption field.** The subsoil has a moderately fine textured layer. Problems are generally similar to the very slowly permeable soils but the modifications required for use are less intense. Permeability ranges from 0.06 to 0.6 inches per hour. At the .06 inch per hour rate (1 1/2 inches per day), the cost of modifications and size of filter field would be prohibitive. **Limitations would be slight for sewage lagoons and lawns and landscape plantings.**

**Moderate: Slight limitations for septic system absorption field, lawns and landscape plantings, and moderate for sewage lagoons.** The subsoil has a medium textured layer. Permeability ranges from 0.6 to 2 inches per hour.

**Moderately Rapid: Moderate limitations for septic system absorption field. Limitations would be slight for lawns and landscapes and severe for sewage lagoons.** The subsoil has a moderately coarse textured layer. Permeability ranges from 2 to 6 inches per hour. Septic systems may not adequately filter waste water.

**Rapid: Severe limitations for septic tank absorption field and sewage lagoons. Limitations would be moderate for lawns and landscape plantings.** The subsoil has a coarse textured layer. Permeability is 6 inches or more per hour. These soils have a very low available water content which makes it very difficult to establish lawns and landscape plantings. Seepage from lagoons and septic tank absorption fields will occur and make it difficult to maintain adequate water depth and could contribute to ground water pollution. Septic systems will not adequately filter waste water.

**Special note:** The ratings for permeability are different from the land judging permeability. Land judging permeability ratings are determined on how permeability would limit plant growth only with soil texture and structure.

**Table 2.** Effect of Permeability on Land Use Adaptation

|                         | <b>Subsoil Texture</b> | <b>Foundations for Buildings</b> | <b>Lawns and Landscaping</b> | <b>Septic System Absorption Field</b> | <b>Sewage Lagoon</b> |
|-------------------------|------------------------|----------------------------------|------------------------------|---------------------------------------|----------------------|
| <b>Very Slow</b>        | Fine                   |                                  | Severe                       | Severe                                | Slight               |
| <b>Slow</b>             | Moderately Fine        |                                  | Slight                       | Severe                                | Slight               |
| <b>Moderate</b>         | Medium                 |                                  | Slight                       | Slight                                | Moderate             |
| <b>Moderately Rapid</b> | Moderately Coarse      |                                  | Slight                       | Moderate                              | Severe               |
| <b>Rapid</b>            | Coarse                 |                                  | Moderate                     | Severe                                | Severe               |

### 3. Soil Depth

This refers to the vertical depth of a soil to bedrock such as sandstone, limestone, or consolidated clays (shale) that restrict roots and excavations. Severity of limitations because of depth varies greatly for different uses. Table 3 (below) is a guide for evaluation of soil depth for homesite uses.

**Special note:** In Homesite Evaluation, soils with coarse gravel are not limiting for soil depth. For contest purposes soils with coarse gravel will be rated in the permeability section.

**Table 3.** Effect of Soil Depth on Land Use Adaptation

|                        | <b>Depth in Inches</b> | <b>Foundations for Buildings</b> | <b>Lawns and Landscaping</b> | <b>Septic System Absorption Field</b> | <b>Sewage Lagoon</b> |
|------------------------|------------------------|----------------------------------|------------------------------|---------------------------------------|----------------------|
| <b>Very Shallow</b>    | < 10"                  | Severe                           | Severe                       | Severe                                | Severe               |
| <b>Shallow</b>         | 10 - 20"               | Severe                           | Severe                       | Severe                                | Severe               |
| <b>Moderately Deep</b> | 20 - 40"               | Severe                           | Moderate                     | Severe                                | Severe               |
| <b>Deep</b>            | 40 - 60"               | Moderate                         | Slight                       | Moderate                              | Moderate             |
| <b>Very Deep</b>       | > 60"                  | Slight                           | Slight                       | Slight                                | Slight               |

#### 4. Slope

This refers to the steepness of the surface or the vertical rise or fall over 100 feet of distance, expressed in percent. Broader and different slope ranges apply to homesite use considerations than normally apply to considerations for agricultural uses. Table 4 (below) will aid in interpretation of the slope condition for homesite evaluation.

**Table 4.** Effect of Slope on Land Use Adaptation

|                               | <b>Slope in Percent</b> | <b>Foundations for Buildings</b> | <b>Lawns and Landscaping</b> | <b>Septic System Absorption Field</b> | <b>Sewage Lagoon</b> |
|-------------------------------|-------------------------|----------------------------------|------------------------------|---------------------------------------|----------------------|
| <b>Depression</b>             |                         | Severe                           | Severe                       | Severe                                | Severe               |
| <b>Nearly Level</b>           | 0-3                     | Slight                           | Slight                       | Slight                                | Slight               |
| <b>Gently Sloping</b>         | 3-6                     | Slight                           | Slight                       | Slight                                | Moderate             |
| <b>Moderately Sloping</b>     | 6-9                     | Slight                           | Slight                       | Slight                                | Moderate             |
| <b>Strongly Sloping</b>       | 9-15                    | Moderate                         | Moderate                     | Moderate                              | Severe               |
| <b>Steep &amp; Very steep</b> | >15                     | Severe                           | Severe                       | Severe                                | Severe               |



## 5. Erosion

Wind and water erosion of the soil can increase the expense of landscaping and require additional topsoil to be brought onto the site. Severe gullies will impose additional limitations on septic system absorption fields. Table 5 (below) will aid in interpretation of the erosion condition for homesite evaluation.

The amount of past erosion that has occurred is calculated by comparing present topsoil depth with original topsoil depth given under the "Field Condition Card"

**Slight:** Slight limitations for any use and less than 25% topsoil loss.

**Moderate:** Moderate limitations for any use and between 25% to 75% topsoil loss.

**Severe:** Severe limitations for any use and greater than 75% topsoil loss. Usually severely gullied areas require much filling and leveling, extra expense on septic system absorption field, and extensive modification for flower beds, lawns, etc.

**Table 5.** Effect of Erosion on Land Use Adaptation

|                 | <b>Erosion Percent</b> | <b>Foundations for Buildings</b> | <b>Lawns and Landscaping</b> | <b>Septic System Absorption Field</b> | <b>Sewage Lagoon</b> |
|-----------------|------------------------|----------------------------------|------------------------------|---------------------------------------|----------------------|
| <b>Slight</b>   | <25%                   | Slight                           | Slight                       | Slight                                | Slight               |
| <b>Moderate</b> | 25-75%                 | Moderate                         | Moderate                     | Moderate                              | Moderate             |
| <b>Severe</b>   | >75%                   | Severe                           | Severe                       | Severe                                | Severe               |

## 6. Surface Runoff

This is generally a factor of importance in connection with drainage, infiltration, permeability, and erosion. It is a function of slope and surface texture. Special attention needs to be given to surrounding areas. Runoff from adjacent areas onto building sites and the possibility of ponding water around the building foundation need consideration. Surface runoff is not a factor for sewage lagoons because they will be protected from outside water. Table 6 (below) will aid in interpretation of the surface runoff condition for homesite evaluation.

**Ponded:** Free water stands on the surface for long periods of time, for several days or almost continuously during wet periods.

**Slow:** Occurs on nearly level to very gently sloping areas (0 to 3%) and deep sands. *Moderate* limitations may require modification for building foundations and special design of septic system absorption field. On deep sands, slow runoff would not present any limitations. Limitations are *slight* for other uses.

**Moderate:** *Slight* limitations for foundations and septic systems. *Moderate* limitations for lawns and landscape plantings and occurs on slopes of (3 to 6%), except on deep sands where runoff would be slow.

**Rapid:** Occurs on slopes above (6%) except on deep sands where runoff would be slow. *Severe* limitations requiring care to maintain and to prevent erosion on lawns and gardens. Limitations would be *slight* for foundation for buildings and septic systems absorption field.

**Table 6.** Effect of Surface Runoff on Land Use Adaptation

|                                      | Slope Percent | Foundations for Buildings | Lawns and Landscaping | Septic System Absorption Field | Sewage Lagoon |
|--------------------------------------|---------------|---------------------------|-----------------------|--------------------------------|---------------|
| <b>Ponded</b>                        |               | Severe                    | Severe                | Severe                         |               |
| <b>Slow</b> (coarse surface/subsoil) | All Slopes    | Slight                    | Slight                | Slight                         |               |
| <b>Slow</b>                          | <3            | Moderate                  | Slight                | Moderate                       |               |
| <b>Moderate</b>                      | 3-6           | Slight                    | Moderate              | Slight                         |               |
| <b>Rapid</b>                         | >6            | Slight                    | Severe                | Slight                         |               |

## 7. Shrink-Swell

This factor is implied in the permeability, texture, and mineralogy of a soil. Because it is important in foundation design, it should have special consideration. The most clayey layer in the profile is generally considered in shrink-swell limitations. Shrink-swell is not generally a factor for lawns and landscape plantings and sewage lagoons. Table 7 (below) will aid in interpretation of the shrink-swell condition for homesite evaluation.

**Low:** Coarse and moderately coarse textured soils have *slight* limitations for all uses.

**Moderate:** Medium and moderately fine textured soils have *moderate* limitations for all uses, except slight for sewage lagoons.

**High:** Fine textured soils have *severe* limitations for all uses, except slight for sewage lagoons.

**Special note:** For contest purposes the subsoil texture box will be used to determine the shrink-swell.

**Table 7.** Effect of Shrink-Swell on Land Use Adaptation

|                 | <b>Foundations for Buildings</b> | <b>Lawns and Landscaping</b> | <b>Septic System Absorption Field</b> | <b>Sewage Lagoon</b> |
|-----------------|----------------------------------|------------------------------|---------------------------------------|----------------------|
| <b>Low</b>      | Slight                           |                              | Slight                                |                      |
| <b>Moderate</b> | Moderate                         |                              | Moderate                              |                      |
| <b>High</b>     | Severe                           |                              | Severe                                |                      |

## 8. Water Table

The internal wetness of an area is influenced by most of the factors previously discussed. The presence and depth to a water table is the reflection of climate, season, and landscape position. It must be evaluated on the basis of depth to the seasonal high level and the permanency of the water table. This requires study during different times of the year and under differing climatic conditions. Capillary water is moisture held in the tiny pores between soil particles and is dependant on the soil texture. It is the principal source of moisture for plant's. Table 8 (below) will aid in interpretation of the water table condition for homesite evaluation.

**Deep:** Water table greater than 72 inches.

**Moderately Deep:** Water table 40 to 72 inches.

**Shallow:** Water table less than 40 inches.

**Special note:** Season High Water Table will be listed on the Field Condition Card as inches.

**Table 8.** Depth of Water Table (inches)

| Degree of Limitation | Foundations for Buildings | Lawns and Landscaping | Septic System Absorption Field | Sewage Lagoon    |
|----------------------|---------------------------|-----------------------|--------------------------------|------------------|
| Slight               | greater than 72"          | greater than 30"      | greater than 72"               | greater than 60" |
| Moderate             | 30" – 72"                 | 12" – 30"             | 48" – 72"                      | 40" – 60"        |
| Severe               | less than 30"             | less than 12"         | less than 48"                  | less than 40"    |

## 9. Flooding

The occurrence of floods is a factor frequently overlooked in planning the use and management of land. Flooding may not occur on an area for many years however, a serious flood can occur. Urban development on the watershed of a small stream can increase runoff up to 75%, thus greatly increasing the flood hazards. Soils may give an indication of flooding, but records must be studied to determine the true condition. Position in the landscape and proximity to nearby streams are good indicators of frequency of flooding. In contests this is normally given information. Table 9 (below) will aid in interpretation of the flooding condition for homesite evaluation

**None:** *Slight* limitations for all uses.

**Rare:** 1 to 5 percent chance of flooding in any year or 1 to 5 times in 100 years. *Slight* limitation for lawns and landscaping. *Moderate* limitation for septic system absorption field and sewage lagoon. *Severe* limitation for foundations for buildings.

**Occasional:** 5 to 50 percent chance of flooding in any year or 5 to 50 times in 100 years. *Severe* limitations for foundations for buildings, septic system absorption field and sewage lagoon. *Moderate* limitations for lawns and landscaping.

**Frequent:** more than a 50 percent chance of flooding in any year or more than 50 times in 100 years. *Severe* limitations for all uses.

**Table 9.** Effect of Flooding on Land Use Adaptation

|                   | <b>Foundations for Buildings</b> | <b>Lawns and Landscaping</b> | <b>Septic System Absorption Field</b> | <b>Sewage Lagoon</b> |
|-------------------|----------------------------------|------------------------------|---------------------------------------|----------------------|
| <b>None</b>       | Slight                           | Slight                       | Slight                                | Slight               |
| <b>Rare</b>       | Severe                           | Slight                       | Moderate                              | Moderate             |
| <b>Occasional</b> | Severe                           | Moderate                     | Severe                                | Severe               |
| <b>Frequent</b>   | Severe                           | Severe                       | Severe                                | Severe               |

## **RESOURCES:**

South Dakota State University  
 Natural Resources Conservation Service  
[www.landjudging.com](http://www.landjudging.com)



### Homesite evaluation contests

are conducted in the same manner as land judging contests. Three points will be awarded for each feature in Part 1; two points for each feature in Part 2. Ninety-three points represents a perfect score. The factors are similar to land judging with the exception of *permeability, shrink-swell, water-table, and flooding*

| Land Factors   |  | Interpretations of Limitations in Terms of: (2 pts. each)  |  |  |  |
|--|--|--|--|--|--|
| Features of the Site Being Considered<br>(3 pts. each)   |  | Foundations<br>for Buildings                               | Lawns and<br>Landscaping                                   | Septic<br>Systems  | Sewage<br>Lagoon   |
| <b>A. Texture – Surface</b>  |  |  |  |  |  |
| Coarse<br>Moderately Coarse, Medium, Moderately Fine<br>Fine   |  |  | Moderate<br>Slight<br>Severe                               |  |  |
| <b>B. Permeability - Subsoil</b>   |  |  |  |  |  |
| Very Slow<br>Slow<br>Moderate<br>Moderately Rapid<br>Rapid   | Fine<br>Moderately Fine<br>Medium<br>Moderately Coarse<br>Coarse |  | Severe<br>Slight<br>Slight<br>Slight<br>Moderate           | Severe<br>Severe<br>Slight<br>Moderate<br>Severe           | Slight<br>Slight<br>Moderate<br>Severe<br>Severe             |
| <b>C. Depth of Soil</b>  |  |  |  |  |  |
| Very Shallow<br>Shallow<br>Moderately Deep<br>Deep<br>Very Deep  | <10"<br>10-20"<br>20-40"<br>40-60"<br>>60"                       | Severe<br>Severe<br>Severe<br>Moderate<br>Slight           | Severe<br>Severe<br>Moderate<br>Slight<br>Slight           | Severe<br>Severe<br>Severe<br>Moderate<br>Slight           | Severe<br>Severe<br>Severe<br>Moderate<br>Slight             |
| <b>D. Slope</b>  |  |  |  |  |  |
| Depression<br>Nearly Level<br>Gently Sloping<br>Moderately Sloping<br>Strongly Sloping<br>Steep / Very Steep | <br>0-3%<br>3-6%<br>6-9%<br>9-15%<br>>15%                        | Severe<br>Slight<br>Slight<br>Slight<br>Moderate<br>Severe | Severe<br>Slight<br>Slight<br>Slight<br>Moderate<br>Severe | Severe<br>Slight<br>Slight<br>Slight<br>Moderate<br>Severe | Severe<br>Slight<br>Moderate<br>Moderate<br>Severe<br>Severe |
| <b>E. Erosion</b>  |  |  |  |  |  |
| Slight<br>Moderate<br>Severe   | <25%<br>25-75%<br>>75%   | Slight<br>Moderate<br>Severe                               | Slight<br>Moderate<br>Severe                               | Slight<br>Moderate<br>Severe                               | Slight<br>Moderate<br>Severe                                 |

| Land Factors   | Interpretations of Limitations in Terms of: (2 pts. each) |                          |                   |                  |
|--|---|--------------------------|-------------------|------------------|
| Features of the Site Being Considered<br>(3 pts. each) | Foundations<br>for Buildings                              | Lawns and<br>Landscaping | Septic<br>Systems | Sewage<br>Lagoon |

**F. Surface Runoff**

|   |          |          |          |  |
|---|----------|----------|----------|--|
| Ponded                                    | Severe   | Severe   | Severe   |  |
| Slow - Surface and Subsoil Coarse Texture | Slight   | Slight   | Slight   |  |
| Slow                                      | Moderate | Slight   | Moderate |  |
| Moderate                                  | Slight   | Moderate | Slight   |  |
| Rapid                                     | Slight   | Severe   | Slight   |  |

**G. Shrink-Swell (subsoil texture)**

|          |                             |          |  |          |
|----------|-----------------------------|----------|--|----------|
| Low      | Coarse or Moderately Coarse | Slight   |  | Slight   |
| Moderate | Medium or Moderately Fine   | Moderate |  | Moderate |
| High     | Fine                        | Severe   |  | Severe   |

**H. Water Table (permanent or temporary)**

|   |        |                 |                 |                 |                 |
|---|--------|-----------------|-----------------|-----------------|-----------------|
| <i>Given Factor Information at site will be in inches</i> |        |                 |                 |                 |                 |
| Deep  | >72"   | > 72" Slight    | > 30" Slight    | > 72" Slight    | > 60" Slight    |
| Moderately Deep   | 40-72" | 30-72" Moderate | 12-30" Moderate | 48-72" Moderate | 40-60" Moderate |
| Shallow   | <40"   | < 30" Severe    | <12" Severe     | < 48" Severe    | < 40" Severe    |

**I. Flooding (given factor)**

|            |                  |        |          |          |          |
|------------|------------------|--------|----------|----------|----------|
| None       |                  | Slight | Slight   | Slight   | Slight   |
| Rare       | 1-5 in 100 yrs.  | Severe | Slight   | Moderate | Moderate |
| Occasional | 5-50 in 100 yrs. | Severe | Moderate | Severe   | Severe   |
| Frequent   | >50 in 100 yrs.  | Severe | Severe   | Severe   | Severe   |

**Final Evaluation**

|  |                                      |                                      |                                      |                                      |
|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
|  | Most Limiting Factor<br>Marked Above | Most Limiting Factor<br>Marked Above | Most Limiting Factor<br>Marked Above | Most Limiting Factor<br>Marked Above |
|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|

**Conducting Homesite Evaluation**

Homesite evaluation contests are conducted in the same manner as land judging. Additional items must be added to the given information site card. The contestant should be given 15 minutes to fill out a scorecard. If both land and homesite evaluations are judged simultaneously, a combined time of 20 to 25 minutes is ample. To avoid having the contest become too long and the grading burdensome by adding homesite evaluation, some alternatives are possible.

1. Use four land sites and use the same sites but evaluate only two homesites for judging.
2. Other would be to use 4 land judging and 3 homesites for judging.

# SOUTH DAKOTA HOMESITE EVALUATION CARD



School Name \_\_\_\_\_ Field No. \_\_\_\_\_  
 Contestant Name \_\_\_\_\_ Contestant Number \_\_\_\_\_

| Part 1<br>Land Factor (3 pts. each)            |   | Part 2. Planned Use – Family Dwelling Site With Basement.<br>Interpretations of Limitations in Terms of: (2pts. each) |                           |                          |                          |                          |
|--|---|---|---------------------------|--------------------------|--------------------------|--------------------------|
| Score  | Features of the Site Being Considered                       | Degree of Limitation  | Foundations for Buildings | Lawns and Landscaping    | Septic Systems           | Sewage Lagoon            |
| <b>A. Texture-Surface</b>                      |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Coarse                             | Slight  |                           | <input type="checkbox"/> |                          |                          |
|  | <input type="checkbox"/> Mod. Coarse, Medium, Mod. Fine     | Moderate  |                           | <input type="checkbox"/> |                          |                          |
|  | <input type="checkbox"/> Fine                               | Severe  |                           | <input type="checkbox"/> |                          |                          |
| <b>B. Permeability-Subsoil</b>                 |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Very Slow      Fine                | Slight  |                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Slow              Mod. Fine        | Moderate  |                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Moderate        Medium             | Severe  |                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Moderately Rapid Mod. Coarse       |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Rapid              Coarse          |   |                           |                          |                          |                          |
| <b>C. Depth of Soil</b>                        |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Very Shallow      <10"             | Slight  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Shallow            10-20"          | Moderate  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Moderately Deep 20-40"             | Severe  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Deep                40-60"         |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Very Deep         >60"             |   |                           |                          |                          |                          |
| <b>D. Slope</b>                                |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Depression                         |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Nearly Level      0-3%             | Slight  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Gently Sloping    3-6%             | Moderate  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Moderately Sloping 6-9%            | Severe  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Strongly Sloping 9-15%             |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Steep & Very Steep >15%            |   |                           |                          |                          |                          |
| <b>E. Erosion</b>                              |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Slight              <25%           | Slight  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Moderate          25-75%           | Moderate  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Severe              >75%           | Severe  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>F. Surface Runoff</b>                       |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Ponded                             | Slight  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |                          |
|  | <input type="checkbox"/> Slow                               | Moderate  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |                          |
|  | <input type="checkbox"/> Moderate                           | Severe  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |                          |
|  | <input type="checkbox"/> Rapid                              |   |                           |                          |                          |                          |
| <b>G. Shrink-Swell (Subsoil Texture Box)</b>   |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Low                                | Slight  | <input type="checkbox"/>  |                          | <input type="checkbox"/> |                          |
|  | <input type="checkbox"/> Moderate                           | Moderate  | <input type="checkbox"/>  |                          | <input type="checkbox"/> |                          |
|  | <input type="checkbox"/> High                               | Severe  | <input type="checkbox"/>  |                          | <input type="checkbox"/> |                          |
| <b>H. Water Table (permanent or temporary)</b> |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> Deep                >72"           | Slight  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Moderately Deep 40-72"             | Moderate  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Shallow            <40"            | Severe  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>I. Flooding</b>                             |   |   |                           |                          |                          |                          |
|  | <input type="checkbox"/> None                               | Slight  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Rare                1-5 in 100 yrs | Moderate  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Occasional        5-50 in 100 yrs  | Severe  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | <input type="checkbox"/> Frequent           >50 in 100 yrs  |   |                           |                          |                          |                          |
| <b>Final Evaluation</b>                        |   |   |                           |                          |                          |                          |
|  | All factor slight   | Slight  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | One or more factors moderate, none severe                   | Moderate  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  | One or more factors severe                                  | Severe  | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Score Part 1 \_\_\_\_\_ (Possible 27)      Score Part 2 \_\_\_\_\_ (Possible 16)      18      18      14  
**TOTAL SCORE** \_\_\_\_\_ (Possible 93)



# South Dakota Land & Homesite Judging

## Field Conditions

Field Number \_\_\_\_\_

- Original topsoil thickness was \_\_\_\_\_ inches
- Seasonal high water table depth at \_\_\_\_\_ inches
- Flooding occurs \_\_\_\_\_ times in 100 years
- Soil test levels are:  
\_\_\_\_\_ lbs/a N    \_\_\_\_\_ lbs/a P    \_\_\_\_\_ lbs/a K
- Livestock manure available (yes/no) \_\_\_\_\_
- Nutrient value of manure: at 10 tons/acre rate only  
\_\_\_\_\_ lbs/a N    \_\_\_\_\_ lbs/a P    \_\_\_\_\_ lbs/a K
- Crop/plant to be grown and nutrient requirements:

If Land Class I/II then: \_\_\_\_\_  
\_\_\_\_\_ lbs/a N    \_\_\_\_\_ lbs/a P    \_\_\_\_\_ lbs/a K

If Land Class III/IV then: \_\_\_\_\_  
\_\_\_\_\_ lbs/a N    \_\_\_\_\_ lbs/a P    \_\_\_\_\_ lbs/a K

If Land Class V/VI/VII then: \_\_\_\_\_  
\_\_\_\_\_ lbs/a N    \_\_\_\_\_ lbs/a P    \_\_\_\_\_ lbs/a K

- Other Considerations \_\_\_\_\_  
\_\_\_\_\_
- Pay no attention to practices on the field
- Consider the most intensive use of the land