NONAGRICULTURAL LAND INTERPRETATIONS

GENERAL

The purpose of these interpretative ratings is to help engineers, planners, and others understand how soil properties influence behavior when used for nonagricultural uses such as building site development or construction materials. Soils are rated for the uses expected to be important or potentially important to users of soil survey information.

Nonagricultural interpretations are displayed in reports generated from the Soil Data Mart, Web Soil Survey and the Soil Data Viewer as either "crisp ratings" (slight, moderate, or severe) or as "fuzzy ratings" (scale of 0 to 1) indicating the degree of limitation or suitability. A LIMITATION RATING of 1 equals the most restrictive (limiting) condition and 0 equals the least restrictive (limiting) condition. A SUITABILITY RATING of 1 equals the most suitable condition and 0 equals the least suitable condition. Notice they are opposite in their use of the scale. Fuzzy ratings are also known as approximate reasoning.

Ratings for proposed uses are given in terms of limitations and restrictive features; suitability and restrictive features; or only restrictive features. Only the most restrictive features are listed when using crisp ratings. Fuzzy ratings can list all reasons from most restrictive to least restrictive. In either rating program, features other than the most restrictive may need to be treated to overcome soil limitations for a specific purpose.

Soils are rated in their "natural" state; that is, no unusual modification of the soil, site, or material is made other than that which is considered normal practice for the rated use. Even though soils may have limitations, it is important to remember that engineers and others can modify soil features or can design or adjust the plans for a structure to compensate for most degrees of limitations. Most of these practices, however, are costly. The final decision in selecting a site for a particular use generally involves weighing the cost for site preparation and maintenance.

Limitation Rating

Slight – is the rating given to soils that have properties favorable for the proposed use. The degree of limitation is minor and can be overcome easily. Good performance and low maintenance can be expected.

Moderate – is the rating given to soils that have properties moderately favorable for the proposed use. This degree of limitation can be overcome or modified by special planning, design, or maintenance. During some part of the year, the expected performance is less desirable than for soils rated slight.

Severe – is the rating given to soils that have one or more properties unfavorable for the rated use, such as steep slopes, bedrock near the surface, flooding, high shrink-swell potential, a seasonal high water table, or low strength. This degree of limitation generally requires major soil reclamation, special design , or intensive maintenance, which in most situations is difficult and costly.

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Suitability Rating

Good or Well Suited – means the soil has properties favorable for the proposed use. Good performance and low maintenance can be expected. Vegetation or other attributes can easily be maintained, improved, or established.

Fair or Suited – means the soil is moderately favorable for the use. One or more soil properties make these soils less desirable than those rated good or well suited. Vegetation or other attributes can be maintained, improved, or established, but a more intense management effort is needed to maintain the resource base.

Poor or Poorly Suited – means the soil has one or more properties unfavorable for the use. Overcoming the unfavorable property requires special design, extra maintenance, or costly alteration. Vegetation or other attributes are difficult to establish or maintain.

REFERENCES

(1) National Soil Survey Handbook, Part 618 and 622.
http://soils.usda.gov/technical/handbook/detailedtoc.html

(2) Soil Data Mart
http://soildatamart.nrcs.usda.gov/Survey.aspx?State=WV

(3) Web Soil Survey
http://websoilsurvey.nrcs.usda.gov/app/