Land Classification Interpretations

Land Capability Classification

The land capability classification system is used to show, in a general way, the suitability of soils for cropland. The two highest categories, class and subclass, give broad perspective of the suitability of map units for certain crops or pasture. These categories indicate the degree and kinds of limitations for these uses. The system evaluates soils for mechanized farming systems that produce the more common cultivated field crops, such as corn, small grains, soybeans, and hay.

Capability Class

The highest category of the system is the capability class. The capability classes are groups of soils that have the same general suitability for the broad kinds of use common on farms and ranches. There are eight classes designated by Roman numerals I through VIII or Arabic numbers 1 through 8.

Classes I-IV (1-4) are suitable for mechanized production of common field crops if properly managed, and for production of pasture and woodland. The degree of limitation for production of cultivated crops increases progressively for class I (1) to class IV (4). Limitations may affect production as well as the risk of permanent soil deterioration, as by erosion.

Classes V-VII (5-7) are generally not suited to the mechanized production of common field crops without special management, but are suitable for permanent cover such as grasses and trees. The severity of the soil limitations for crops increases from class V (5) to class VII (7). Areas in class VIII (8) are generally not suitable for crops, pasture, or wood products without management that is impractical. Class VIII (8) areas may have potential for other uses, such as recreation or wildlife habitat.

Capability Subclass

The subclass identifies the dominant kind of limitation in the class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, IIe (2e). The letter e shows that the main limitation is risk of erosion unless a close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

There are no subclasses in class I (1) because the soils of this class have few limitations. The soils in class V (5) are subject to little or no erosion, but they have other limitations that restrict their use mainly to pasture, woodland, wildlife habitat, or recreation. Class V (5) contains only the subclasses indicated by w, s, or c.

Land Capability Classes and Subclasses for each soil map unit are located on the Irrigated and Nonirrigated Yields By Map Unit Component table in the Cropland Interpretations [Section II-(A)-e].