The value and use of the detailed soil survey and the information given in each type description, as a basis for choice of land for irrigation, may be easily understood when one has a clear idea of how land is classified for irrigation development.

For this purpose land is usually classified as, first-class and second-class irrigable land; third-class land, which is usually considered marginal for irrigation; and nonirrigable land. Two other classes include temporarily irrigable land and temporarily nonirrigable land.

First-class irrigable land: This includes land having soil that is 3 feet or more deep, comparatively easy to cultivate, has good drainage, is free from harmful accumulations of salts, is not too porous and leachy, and is free from underlying hardpan or semi-impervious material. The topographic features are such that a minimum of expense is required to prepare the land for irrigation. The slope is usually less than 6 percent.

Second-class irrigable land: This includes areas in which the physical characteristics are somewhat undesirable, or where from 18 inches to 3 feet of soil of a favorable texture overlies comparatively clean gravelly or sandy sediments through which drainage water will pass without severe restrictions. Land which has uneven topographic features or land of smooth surface, with a slope of more than 6 percent but less than 12 percent, is included in this class.

Third-class irrigable land: This class includes the least desirable soils that are capable of producing appreciable yields. Areas which have less than 18 inches of permeable soil overlying rather clean gravelly material and other coarse-textured soils which are excessively leachy or of very poor productivity are included. Most areas in which less than 3 feet but more than 2 feet of favorable topographic features of this third land are such that either much less is necessary or the slope is so steep that delivery of water to all parts of the land is expensive.

Fourth-class irrigable land: On a few projects a further separation has been made in the third-class land grading areas which have 6 inches of tillable soil overlying comparatively clean gravelly sediments. This has been done only where the soils which are 6 inches or less, 18 inches deep accompanied by otherwise favorable conditions, proved to give profitable yields. Adaptability of some special crop to this shallow soil is usually responsible for its profitable use.

Temporarily irrigable land: This includes irrigable areas that may become unproductive following irrigation development. They either contain large quantities of salts in the subsoil or occupy a position at the lower margin of slopes where it is very apparent that seepage waters will approach the surface and aggravate the accumulation of salts.

Temporarily nonirrigable land: Soil characteristics, drainage, alkali, or topographic features of land of this class are such that immediate development by application of irrigation is not feasible. This land may include sandy land where delivery of water to the necessity of lining canals or using pipe lines, or the cost of leveling would be out of proportion to returns received following development. If learned that canals can be constructed at a reasonable cost or if machinery developed that can be used to level rough areas without too much expense, the land may then be included as irrigable. Other lands having poor drainage or excessive accumulations of salts but which are capable of reclamation are included in this class.

Nonirrigable land: This includes all areas where conditions of any kind are such that development for irrigation is obviously impossible, or where conditions are of such character as to indicate that the labor and cost of correction would be out of all proportion to the benefits that would be derived. Adverse topographic features, physical conditions, etc., would have to be overcome in order to make land irrigable.