Soil Interpretations

Soil Interpretations
Basic soil properties are important to practitioners of many human endeavors, for example agriculture, forestry, land use planning and urban development. These properties can be interpreted—and mapped—for specific use by various industries or professions. Three such interpretive maps are shown on these pages.

Land Capability
Land Capability Classes are broad groupings of soils differing from one another according to two criteria: their limitations for sustained production of cultivated crops, permanent pasture and rangeland vegetation; and the risks of soil damage if mismanaged. Examples of soil limitations are excessive wetness, erosion potential, steep slope, shallow depth and stone content; any and all of these limitations make it more difficult to manage soil for crop production. Soil damage refers mainly to loss of the most important part of the soil resource, the topsoil, by erosion; a secondary meaning is the damage to soils and water bodies elsewhere by sediment deposition. Class I soils have essentially no limitations and pose the least risk of damage under intensive agricultural management. Both the number of limitations and the severity of their impact increase in successive classes. Soils in Classes I–IV can be used safely for crop production, but Class IV soils require major investments in conservation practices such as erosion control terraces, grassed waterways, minimum tillage and residue management. Risks of damage are too high for sustained crop production on Class VI and VII soils, but they can be used for hay, pasture and rangeland grazing enterprises.

Potential Prime Farmland
The U.S. Department of Agriculture Prime Farmland Classification system creates four very broad categories of agriculturally suitable soils: Prime Farmland, Unique Farmland, Farmland of Statewide Importance and Farmland of Local Importance. Prime Farmland soils are the very best and must meet several specific criteria—soil depth, pH, water holding capacity, erosion characteristics and moisture supply. Some soils meet all the requisite physical properties but occur in areas of