

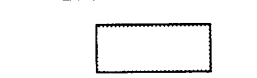
Explanation of Map Symbols

This map shades in those soil map units which contain either imperfect or poor drainage and is derived from map 3. For an explanation of the soil and topographic symbols, refer to BIOPHYSICAL SOILS map (No. 3).

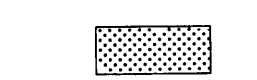
SOIL DRAINAGE CHARACTERISTICS

SHADING SYMBOL

Areas containing poor to very poor drainage due to high water tables.



Areas containing imperfect drainage due to seepage or seasonally high water tables.



Areas that are moderately well to very rapidly drained.



Note that the shaded units contain areas with poor or imperfect drainage and that the entire unit is not necessarily composed of poorly or imperfectly drained soils. Soils developed on floodplains are not necessarily imperfectly to poorly drained. (Areas subject to flooding are shown on Map 5).

Soil Drainage Classes

VERY RAPIDLY DRAINED -- Water is removed from the soil very rapidly in relation to supply. Excess water flows downward very rapidly if underlying material is pervious. There may be very rapid subsurface flow during the heavy rainfall provided there is a steep gradient. Soils have very low available water storage capacity (2.5-4 cm) within the control section, and are usually coarse textured, or shallow, or both. Water source is precipitation.

RAPIDLY DRAINED -- Water is removed from the soil rapidly in relation to supply. Excess water flows downward if underlying material is pervious. Subsurface flow may occur on steep gradients during heavy rainfall. Soils have low available water storage capacity (2.5-4 cm) within the control section, and are usually coarse textured, or shallow, or both. Water source is precipitation.

WELL DRAINED -- Water is removed from the soil readily but not rapidly. Excess water flows downward readily into underlying pervious material or laterally as subsurface flow. Soils have intermediate available water storage capacity (4-5 cm) within the control section, and are generally intermediate in texture and depth. Water source is precipitation. On slopes subsurface flow may occur for short durations but additions are equalled by losses.

MODERATELY WELL DRAINED -- Water is removed from the soil somewhat slowly in relation to supply. Excess water is removed somewhat slowly due to low perviousness, shallow water table, lack of gradient, or some combination of these. Soils have intermediate to high water storage capacity (5-6 cm) within the control section and are usually medium to fine textured. Precipitation is the dominant water source in medium to fine textured soils; precipitation and significant additions by subsurface flow are necessary in coarse textured soils.

IMPERFECTLY DRAINED -- Water is removed from the soil sufficiently slowly in relation to supply to keep the soil wet for a significant part of the growing season. Excess water moves slowly downward if precipitation is major supply. If subsurface water or groundwater, or both, is main source, flow rate may vary but the soil remains wet for a significant part of the growing season. Precipitation is main source if available water storage capacity is high; contribution by subsurface flow or groundwater flow, or both, increases as available water storage capacity decreases. Soils have a wide range in available water supply, texture, and depth, and are gleyed phases of well drained subgroups or gleyed subgroups.

POORLY DRAINED -- Water is removed so slowly in relation to supply that the soil remains wet for a comparatively large part of the time the soil is not frozen. Excess water is evident in the soil for a large part of the time. Subsurface flow or groundwater flow, or both, in addition to precipitation are main water sources; there may also be a perched water table with precipitation exceeding evapotranspiration. Soils have a wide range in available water storage capacity, texture, and depth, and are gleyed subgroups, Gleysols, and Organic soils.

VERY POORLY DRAINED -- Water is removed from the soil so slowly that the water table remains at or on the surface for the greater part of the time the soil is not frozen. Excess water is present in the soil for the greater part of the time. Groundwater flow and subsurface flow are major water sources. Precipitation is less important except where there is a perched water table with precipitation exceeding evapotranspiration. Soils have a wide range in available water storage capacity, texture, and depth, and are either Gleysols or Organic.

Notes

Soil drainage conditions are highlighted on this map since they effect biological productivity and the engineering uses of land.

Poorly to very poorly drained soils tend to have low to very low forest productivity. Drainage characteristics result in severe limitations for most engineering uses such as roads and dwellings. Erosion potential is moderate to high depending on slope.

Imperfectly drained soils have high to moderate forest and shrub productivity in lower elevations. Drainage characteristics result in moderate limitations for most engineering uses. Erosion potential is generally moderate to high depending on slope.

Moderately well drained soils have moderate to high forest and shrub productivity in lower elevations. These soils generally occur on fine-textured moraine (till) and lacustrine materials and on active fluvial (floodplain) materials with shallow tables. Drainage characteristic is considered a slight limitation for most engineering uses.

Well to rapidly drained soils tend to have moderate to low forest and shrub productivity. These soils generally occur on coarse-textured colluvial and inactive fluvial (including fluvio-glacial) materials with moderate to rapid permeability. Drainage characteristic is not a limitation for most engineering uses and is not a factor affecting erosion potential.

Credits

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Topographic base map provided by - Surveys and Mapping Branch,
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