

### APPENDIX III - Explanation of Soil and other Terms.

**Bleached:** Describes a soil horizon which has become light in colour due to leaching.

**Buckshot:** More or less rounded, hard ferruginous concretions varying from shot to marble size.

**Clay Surface:** Describes a thin layer of clay differing in nature from the soil or rock over which it forms an adhering skin.

**Colluvial, colluvium:** See Cone, colluvial cone.

**Colluvial terrace:** A terrace cut into a body of colluvium by stream action.

**Concretions:** Localized concentrations of certain chemical compounds deposited to form more or less rounded nodules of various sizes.

**Cone, colluvial cone:** A body of soil material moved downhill as a landslide or by water to form a roughly conical deposit of unsorted sedimentary material.

**Consistence:** This is an expression of the forces holding soil particles together, and is indicated by the behaviour of a soil and its resistance to deformation when manipulated in the hand. It is markedly affected by the moisture state of the soil. The following consistence terms are used in this report: coherent, crumbly, friable, hard, plastic, tough.

**Contemporary:** Refers to a process occurring at the present time as well as in the recent past. A contemporary sediment is a body of sedimentary material produced by such processes.

**Duplex profile:** A soil profile showing a marked difference in texture between the surface and subsoil horizons.

**Earthy peds:** Soil aggregates with rough surfaces which are visibly porous.

**Equant:** Measuring roughly the same in all directions.

**Erosion scarp:** A steep bank or step formed in a surface by erosion.

**Ferruginous:** Consisting essentially of oxides of iron

**Gleyed horizon:** A subsoil horizon with colours caused by prolonged waterlogging. Grey, yellow-grey and light grey mottling is common, sometimes with dark brown ferruginous concentrations.

**Gradational profile:** A soil profile showing distinct textural differences with only small changes in texture between successive horizons.

**Gravelly Profile:** A soil profile which has appreciable amounts of small sized granitic gravel in the subsoil and the deep subsoil.

**Illuviation:** The downward movement of material in a soil profile by water.

**Levee:** A natural levee is a deposit of alluvium raised above the general level of the banks of a stream and its flood plain. Man-made levee banks may be constructed along the courses of rivers and streams to contain flood waters.

**Mottled, mottling:** These terms refer to soil horizons in which two or more colours are present. The soil may differ in colour either within peds or aggregates, or between them. They do not refer to stains or coloured deposits on ped faces or the linings of cavities. **Diffusely mottled** implies that neighbouring colours are only slightly different; **moderately mottled** means that the colours are evidently different, but not strongly contrasting; while **strongly mottled** indicates the presence of markedly contrasting colours. The words **fine**, **medium** and **coarse**, when used in the description of mottling, refer to the size of the coloured aggregates or portions of aggregates.

**Morphology:** The physical constitution of the various horizons and their arrangement in the soil profile.

**Munsell colour:** This is the soil colour determined by matching against the Munsell colour chart. and expressed in its notation of hue, value and chroma. The notations given in this report refer to moist soils. These, in general, are about two intervals lower in value than is the case for dry soils. The written descriptions given for the surface soils refer to their dry state.

**Ped:** An individual natural soil aggregate.

**Point bar:** A curved bed of sediment deposited on the inside of a bend of a stream. It is usually coarse grained, variable in texture and inclined to the horizontal. Also the pattern of concentric ridges and depressions formed by a series of such beds.

**Porous peds:** Soil aggregates which when broken are visibly porous.

**Prior stream:** The course of a former stream responsible for the nearby sediments, and which does not now carry water other than local drainage.

**Remnant:** A small part of a terrace or cone left relatively untouched during the erosion process.

**Sand splay:** A variable sheet of sand deposited on the flood plain following the breaking of a natural levee bank.

**Shoal:** A bank of sediment in a stream course, other than a point bar. It can be parallel or transverse to the stream flow. Coarser in texture than a point bar.

**Soil horizon:** A layer of soil which is recognizably and consistently different in nature from adjacent layers. The horizon may be distinguished by differences in one or more of the following characteristics: colour, texture, structure, consistence, mottling, organic matter content, and the presence of visible products of weathering and leaching such as calcium carbonate, gypsum, iron oxides and ferruginous concretions.

**Soil profile:** This is the vertical section of a soil exposing the sequence of horizons from the surface to an arbitrary depth, in this case to at least 4 feet. The horizons referred to in "Description of Soil Types" are:

**Surface or A horizon:** The surface layer of the soil in which organic matter has accumulated and which may be partly leached of clay and soluble materials. It represents the zone of maximum biological activity and corresponds roughly to the soil layer affected by tillage.

**Subsoil or B horizon:** Situated below the surface or A horizon, and usually heavier in texture than that horizon. The B horizon represents the zone of accumulation of clay and iron oxides, mainly from the A horizon.

**Soil phase:** A modification of a soil type in which one feature is accentuated without alteration to the main features of the profile.

**Soil series:** A group of soil types differing in soil profile characteristics only in the texture of the surface layers, and formed from similar parent material. It is common for the members of a soil series having lighter surface textures to have rather deeper surface layers than those members of the series with surface layers of heavier textures. A series may consist of 1, 2 or more soil types.

**Soil type:** A soil type is recognized when substantially similar soil profiles occur over the whole of a significant area of soil. Although there may be only one occurrence, it is usual for a soil type to be recognized and mapped in a number of places. The soil type is the unit of soil mapping used over most of this survey.

**Structure:** Describes the way in which the primary soil particles are arranged into soil aggregates or peds. The descriptive terms used here are: crumb, blocky, angular blocky, subangular blocky, platy and structure, less. The size or grade of the aggregates may be fine, medium or coarse, while the structure may be weakly, moderately or strongly developed.

**Stratification:** The deposition of sediment in distinct, successive layers.

**Terrace, stepped terrace:** The remains of a flood plain now rarely if ever flooded by the parent stream which flows nearby at a relatively lower level. A stepped terrace shows a series of distinct small steps instead of the more usual level surface.

**Texture:** This is a soil property determined by the size distribution of the primary mineral particles. It is described in terms of texture classes; some examples are sand, sandy loam, clay loam, sandy clay, light clay, heavy clay. The field texture of a soil is the texture class rating determined by kneading the wetted soil in the hand. Its assessment depends primarily upon the cohesiveness, plasticity and particle size distribution, and is influenced by the presence of organic matter, calcium carbonate and gypsum.

**Toe:** The lower part of the surface of a cone or scarp, situated just above the change in slope separating the cone or scarp from the lower landscape.

**Variant:** A modification of a soil type in which the distinguishing features are almost important enough to define a new soil series.