Appendix 1a

DESCRIPTION OF MAP AND CROSS-SECTION UNITS

(modified and simplified after Breckenridge and Othberg, 1998, 1999, and Lewis et al., 2002).

ARTIFICIAL DEPOSITS

m

Made ground (Historical). Construction derived disturbed, transported and emplaced locally excavated and man-made materials. In many cases not included.

ALLUVIAL DEPOSITS

Qla

Alluvium and lacustrine sediments (Holocene)—Alluvial silt and sand deposits of Cougar Creek and Kidd Island Creek interfinger with lacustrine silt deposits of Coeur d'Alene Lake at deltas in Cougar Bay and Kidd Island Bay. Locally includes peat and bog deposits in the creek bottom wetlands. These deposits are located in the modern flood plain of the creeks and within the highwater elevation of Coeur d'Alene Lake. The normal pool elevation of the lake is 2,125'. Also silt and sand deposits of the Spokane River and Cable, Cedar, and Skalan creeks. Locally includes lenses of reworked outwash gravels and flood sediments. The deposits are within the modern flood plain. Thickness 1 to 5 feet.

Qal

Alluvial gravels (Holocene)—Sandy pebble to boulder gravels and sands. Mostly consist of reworked Pleistocene outwash and flood deposits. Forms a persistent terrace at 2,140 feet along the Spokane River above the Post Falls Dam. Forms a persistent terrace along the Spokane River above the Post Falls dam and a discontinuous terrace below the dam. Thickness 1 to 10 feet.

Tg

Alluvial Lag gravels on relict alluvial surfaces (Tertiary)—Cobble and pebble gravels consist of mature rounded quartzites and mixed lithologies derived from the Precambrian Belt Supergroup rocks and Mesozoic-Tertiary intrusives. Matrix of weathered saprolite. Exposed on flat upland surfaces in Cougar Creek and Kidd Island Creek valleys. The gravel surfaces probably are graded to the blockages caused by the Miocene plateau basalts. They range in elevation from 2,400 feet in Cougar Creek to 2,600 feet on Mica Flats. Generally the deposit is thin, 1 to 5 feet, and at depth grades into saprolite soils or Miocene paleosols.

MASS WASTING DEPOSITS

Qtl

Talus and landslide deposits of Columbia River Basalt Group (Holocene and late Pleistocene) — Poorly sorted and poorly stratified angular cobbles and boulders with mixed silts and clays. Mass movement slope deposits mainly associated with basalt rimrock and the interbedded sediments around the Coeur d' Alene Lake basin. Gradations from talus to landslide are present and difficult to distinguish. Thickness as much as 40 feet.

COLLUVIUM AND RESIDUUM

Qc

Colluvium and common small rock outcrops (Quaternary and Tertiary) — Colluvium is composed of angular pebble and cobble gravel in a sandy silt matrix that overlies relatively unweathered gneiss, schist, and quartzite. The unit is associated with quartzite ridges at higher elevations and areas partially eroded by Lake Missoula catastrophic floods. Typically lacks a mantle of loess and well-developed soil horizons (Weisel, 1981). Thickness is 1.5 to 6 feet.

Qcr

Colluvium and residuum of intermediate depth (Quaternary and Tertiary) — Colluvium is composed of pebble gravel in a clayey, silty sand matrix. The coarseness of the gravel typically increases with depth. Residuum is mostly a sandy silt saprolite that grades with depth into Precambrian granodiorite, tonalite, and diorite gneisses. The unit is predominant on steep slopes and is gradational with areas of common small rock outcrops (c), colluvium and bedrock that form linear, erosion-resistant ridges (cb), and debris-flow and solifluction deposits (ds). Residuum is thickest on south-facing, gentle slopes. Residuum is thinnest on south-facing steep slopes. Near Mica Flats, areas of gentle, south-facing slopes have a 3-foot or greater mantle of loess over buried, clayey soil horizons (Weisel, 1981) that are Pleistocene in age. A clayey buried soil typically occurs within 10 to 20 inches below the loess (Weisel, 1981) on gentle, stable slopes, but may be eroded from steeper slopes. Slopes are variable, and the steepest ones are typically located where stream incision has cut deeply into the regolith.