

ENGINEERING GEOLOGICAL ROLE OF ANCIENT BURIED EROSION CUTTINGS IN THE URBAN AREAS

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The ancient buried erosion cuttings affect significantly the engineering-geological conditions of the area, and both surface and underground engineering structures. The channels of the buried erosion cuttings occur 10--50 m below the modern river channels. They are mainly specified by the presence of various genetic complexes on the slopes, the sandy--clayey filling, and the interconnected aquifers. The interaction between the engineering structures and soils develops most intensely within the buried channels filled with the alluvium. It is favored by: (a) variable lithology of deposits filling the erosion cuttings and their heterogeneous particle-size composition (ranging from pebble to clay); (b) frequent water-saturated soil lenses and interlayers, which may deliquescent upon excavation; (c) the hydraulic connection between different aquifers through erosion cuttings, and as a result, the alteration of the ground-water level and the conditions of the enclosing soils and rocks (either water saturation or desiccation); and (d) possible development of suffosion and surface collapses, as well as landslides on slopes. Thus, the ancient buried erosion cuttings pose danger for engineering structures; therefore, their outlining and the comprehensive study are required.