

SOIL HYDROLOGICAL CHARACTERISTICS OF QUARRY-DUMP COMPLEXES WITH DIFFERENT SUBSTRATES

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The paper considers the main soil hydrological constants (hygroscopic moisture content, maximum hygroscopic content, maximum water holding capacity and field moisture capacity) of soil on different ecotopes of quarry-dump systems with different substrates. It has been found that magnitude of hydrophysical parameters was similar to the data from scientific literature and depended on the texture of the parent material. Absolute values of soil-hydrological constants, on average, were lower in the sandy quarries; calcareous sinter quarry and limestone quarries were characterized by medium values compared to sand and clay quarries. Nevertheless, methods of reclamation and the relief position can have a greater impact on the values of some indicators than the type of soil-forming material. For example, in areas with the application of an organic substrate, which was characterized by a high water-retaining capacity, the soils differed significantly in their hydrophysical properties from the soils of quarries where such material was not applied.

Key words: hygroscopic moisture, soil water capacity, reclamation of quarry-dump systems.