

EFFECTS OF LANDSLIDES IN THE CEKMECE LAKES ON LAND USAGE

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Slope stability problems occurred naturally or as a result of badly planned engineering applications to the west of Istanbul between Küçükçekmece and Büyükçekmece Lakes owing to geotechnical properties of the underlying units. Slopes of Gürpınar, Pekmez, Fener, Kavaklı, Yakuplu, Avcılar and Firuzköy facing the Büyükçekmece and Küçükçekmece lakes are common sites for landslides. In these areas of settlement, soil condition of the underlying Oligocene aged Gürpınar formation and the Upper Miocene aged Cukurcesme formation, the tectonic features of the study area and hydrological conditions are determined to be influential with landslides. In the investigation of slope stability and unstable areas, firstly, slope geomorphology, geology and geotechnical properties of the underlying units are determined. To determine physical properties, vertical electrode sounding, natural potential and electromagnetic-VLF are used as geophysical methods. Results are used to distinguish among stable areas, suitable areas with the condition of taking preventive measures for low-level settlement and unstable areas.