

Potential of Landslides Based On Maximum Monthly Rainfall in Sumber Sari Village Watershed Tirtomoyo Wonogiri Indonesia

Authors : Heny Pratiwi, Niken Silmi Surjandari, Noegroho Djarwanti

Abstract : This study was conducted to determine the potential for landslides as a result of monthly rainfall in a watershed. Rainfall data that will be used is rainfall from years 2007-2011. Research methods created by modeling the slope on some variation of angle in a row 30° , 45° , and 60° with a homogeneous layer of soil. Slope Stability Analysis using Method Fellenius. The results of the slope stability analysis without rain on slope 30° , 45° , and 60° respectively 1.3846, 1.0115, and 0.7284. Results in the absence of rain showed that the slope on the slope 45° are in critical condition and on a slope with a slope 60° already avalanche with safety factor value <1 . The results in the rainy conditions shows slopes 30° are in critical condition with a value factor <1 due to the intensity of monthly rainfall > 250 mm/month.

Keywords : slope stability, monthly rainfall, infiltration, safety factor, Fellenius method

Conference Title : ICSMGE 2014 : International Conference on Soil Mechanics and Geotechnical Engineering

Conference Location : Penang, Malaysia

Conference Dates : December 04-05, 2014