

## **ABSTRACT**

### **SLOPE STABILITY ANALYSIS OF CONSTRUCTION OF EMBUNG BUMI AYU PRINGSEWU REGENCY**

**BY**

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Water is a gift from Tuhan Yang Maha Esa as the basic needs of all human needs. The Natural water sources is rainwater available through by the hydrologic cycle. Characteristics of rains in Indonesia are supply many water and need to be overcome in order to be used during the dry season and stored during the rainy season. Many technologies developed to save water as an alternative water storage reservoir for example embung. Most of embung construction uses soil because of that soil very important role in this part.

This study aims to analyze slope stability embung Embung Bumi Ayu District of Pringsewu body by using Fellenius Method, Bishop Method and curve stability Morganstern. This study is useful to provide early information on disasters as a result of construction failure. Slope stability analyzes performed by laboratory soil test from the location such as Sieve Analysis Test, Moisture Test, Density Test, Weight Volume Test, Slide Jump Test and Atterberg Limits Test.

Analysis Results for normal water conditions obtained by Method Fellenius safety factor ranged from 2.409 to 2.457 and Bishop method obtained results ranged from 2.744 to 2.810. For condition of the water drops suddenly security safety factor obtained by Method Fellenius ranged from 0.786 to 0.821, Bishop method

obtained results ranged from 0.901 to 0.941 and method Stability Morganstern curve obtained 1.1. Based on the result analysis we concluded that Embung Bumi Ayu Pringsewu Regency is relatively safe to normal water conditions but should be vigilant when conditions decrease water suddenly that may cause landslides. This information is useful to the government for consideration of disaster mitigation activities.

Keywords: Soil, Fellenius Methods, Bishop Methods, Morganstern of Stability Curve.