

ABSTRACT

ANALYSIS OF INFILTRATION AND ITS INFLUENCE ON RUNOFF IN SOUTH SUB DISTRICT OF GORONTALO CITY

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South Sub District Gorontalo City of Gorontalo Province with approximately area wide is about 3,42 kilometers square, major land use for residential, clay soil, and relatively flat land topography. The development of residential land makes this areas are more density and more sensitively to natural disaster related to flood, to minimize that risk analysis of infiltration and its influence on runoff has being set out.

The method that has been used for this research is to collect the data, as a prime and secondary data to be analyzed using the equations that been given based on the theory such as rainfall analysis, statistical analysis, Horton's method for infiltration and the Soil Conservation Service equation for runoff.

The result shows with soil classification as a clay and sand (heap soil), relatively flatted topography, South Sub District of Gorontalo City has 3-15 cm/hour of infiltration rate and capacity, 35-280 mm of runoff depth within approximately rainfall for 2, 5, 10, 25 years return period.

Keywords: *Infiltration, Runoff, Land use.*