JATITAMBAN RESERVOIR PLANNING OF WRINGIN
SUB DISTRICT OF BONDOWOSO REGENCY

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Abstract

Embung is another name for little reservoir. Little reservoir is reservoir that is not eligible as big reservoir. Embung itself is function as mean of a water bath reservoirs. Embung Jatitamban located in sub – district Wringin Jatitamban regency village with an area of 6,354 km² watershed. Jatitamban village and around the village who do not enjoy edible raw water. Embung Jatitamban are embung which uses rainfed systems, so during rainy season its receiving rain water and can be used during dry season for benefit of local residents.

In this case, the discussion includes hydrology analysis, calculation of raw water needs for residents, planning effective capacity of embung technical, planning stability structure of embung, hydraulic analysis of spillway and its stability.

With Jatitamban embung manufacture is expected to fulfill the needs of raw water for residents in the surrounding hamlets so as to improve the lives of local people.

In the calculation performed its obtained population projections in 2044 as many as 43063 people needs of raw water per person 100 liters/person/day, reservoir capacity amount 1,640,694,938 m³, rainfall return period of 25 years is 213,981 mm, the discharge plan year return period amount 222,44 m³/sec, lighthouse spillway use Ogee Type I with elevation at +419.70 and flood water surface elevation at +420.416. Body dam using soil heap with upstream and downstream slope of dam body is 1:2, peak elevation at +423.00 dan base elevation at +414.00. Surveillance body height of 1,50 meter dam used. Body dam and
spillway declared safe for style that occurs. While the intake duct uses HDPE pipe with 0.20 m diameter which then housed in water tank.

Keywords: Embung; Bin Capacity; Raw Water