CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Based on the analysis result that has been conducted for Embung Facei design, several conclusions can be drawn as following:

1. Besides the initial design on Embung Facei that only for conservation purposes, there are runoff water that can be stored as support to fulfill the domestic water demand.
2. The unused water in Embung Facei catchment area is 0.065 l/sec, therefore the water will be supplied on wet season only, which has 1.429% level of service in public hydrant demand for 2025.
3. Embung Facei body height is designed with 100 return period which has 5.85-meter height including 0.75-meter of freeboard and has 41,801 m³ capacity including the sediment volume.
4. The spillway structure is design with 100 return period, the top point of spillway (mercu) is build on elevation 61.27 or 5.1 meter from the lowest reservoir floor and has 6-meter width of spillway.
5. The distribution pipe will be installed on elevation 57.91 meter above mean sea level or 1.21-meter height from the lowest reservoir floor.

5.2 Recommendations

Considering the possible weakness on completing this analysis, the following are suggestions needed to improve the quality of analysis results, as following:

1. Because its inaccurateness of data from the last consultant and digital elevation map that cannot be obtained, therefore will be better to do the field inspection in the Embung Facei design area, to get better accurateness on the data such as geological and topography data.
2. Planning to build a waterway diversion (*sudetan*) is a good option to expand the *Embung Facei* catchment area in the purpose to fulfill daily domestic water demand in North Ternate City.
REFERENCE


Harsanto. dkk. “Analisis Limpasan Langsung Dengan Model Distribusi dan Komposit”


Munajad, Rifai dkk. “Kajian Hujan-Aliran Menggunakan Model HEC-HMS di Sub Daerah Aliran Sungai Wuryantoro Wonogiri, Jawa Tengah”


United States Department of Agriculture. TR-55. Urban Hydrology for Small Watersheds, United States.

Wirosoedarmo, dkk. “Rate Infiltration Evaluation on Several Land Uses Using Infiltration Method of Horton at Sub DAS Coban Rondo Kecamatan Pujon Kabupaten Malang”