

UNIVERSITY OF BOLOGNA
Subject: Advanced Hydrology and Water Resources Management

Exercise – application of the time-area rainfall-runoff model

In a catchment whose area is 1214 km² rainfall data have been observed at hourly time scale for a period of 1 year. The related observations can be downloaded at the web address:

<http://distart119.ing.unibo.it/alberto/site/files/data/rain-evapo.txt>

By assuming that the runoff coefficient is equal to 0.5, it is required to model the rainfall-runoff transformation for the catchment by applying the linear reservoir method.

Note that evapotranspiration data are included in the above file which are not necessary to apply the linear reservoir if a runoff coefficient of 0.5 is assumed.

Explain in a brief report the above elaborations with the required graphs.