

DETERMINATION OF UNIT HYDROGRAPH FOR İKİZDERE SECTION OF RİZE İYİDERE SUBBASIN

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EXPERTISE THESIS ABSTRACT

In this study unit hydrograph has been produced for Rize İyidere Watershed İkizdere Section. For this purpose, first general information has been informed about the watershed characteristics and unit hydrograph, small explanation has been given about material and method that used in study, Unit Hydrograph elements for the watershed has been rated and finally the result of study has been given.

The study covered between the years of 1979 – 2009. The data of annual precipitation with regard to the watershed was obtained from station with the number 17626 of MGM and the data of runoff was obtained from runoff monitoring station with the number E22A018. According to the figures, the average of rainfall of the watershed is 740,1 mm; the average of runoff is 0,88 billion m³/year.

In this paper the peak discharge of one-hour unit hydrograph for İyidere Watershed İkizdere Section was calculated as 62,6 m³/sc, time peak $t_p= 2,4$ hours, time base $t_b= 14,6$ hours.

In the same watershed, the calculation of unit hydrograph was made through synthetic methods. The parameters of Snyder method used to obtain synthetically unit hydrographs have been calculated as $C_t= 0,857$ and $C_p= 0,222$ for the related watershed and the parameters of Mockus method also as $K=0,362$ and $H= 1,87$.

In this study, single runoff values, average values, and Unit Hydrograph elements for the watershed are given and they were compared with different synthetic methods.

Key Words: İyidere Creek, İkizdere, Watershed, Runoff, Unit Hydrograph.