

Flow Duration Curve Method to Evaluate Environmental Flow: Case Study of Gharasou River, Ardabil, Iran

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Abstract : Water flow management is one of the most important parts of river engineering. Non-uniformity distribution of rainfall and various flow demand with unreasonable flow management will be caused destroyed of river ecosystem. Then, it is very serious to determine ecosystem flow requirement. In this paper, flow duration curve indices method which has hydrological based was used to evaluate environmental flow in Gharasou River, Ardabil, Iran. Using flow duration curve, Q90 and Q95 for different return periods were calculated. Their magnitude were determined as 1-day, 3-day, 7-day, and 30 day. According the second method, hydraulic alteration indices often had low and medium range. In order to maintain river at an acceptable ecological condition, minimum daily discharge of index Q95 is 0.7 m³.s⁻¹.

Keywords : ardabil, environmental flow, flow duration curve, Gharasou river

Conference Title : ICCESE 2015 : International Conference on Civil, Environmental and Structural Engineering

Conference Location : Kuala Lumpur, Malaysia

Conference Dates : February 12-13, 2015