ASSESSMENT OF GROUND WATER RESOURCES IN SUSWA WATERSHED, DEHRADUN DISTRICT, UTTARAKHAND, INDIA

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ABSTRACT

In this paper an attempt has been made to assess the ground water resources of Suswa watershed, Dehradun District of Uttarakhand State, India. The ground water resource estimation has been carried out separately in the command and non-command areas of Suswa watershed for the year 2005-06 by using the 'Ground Water Estimation Methodology- 1997' (GEC'97) given by Central Ground Water Board, Ministry of Water Resources, Government of India (CGWB, 1997). However some minor changes have been made in the procedure of ground water assessment. The total command area considered in the study is of the order of 1996 ha whereas the non-command area is about 22684 ha. The annual ground water recharge for the year 2005-06 (with average annual rain-fall of 1668 mm) is worked out as 1608 ha-m for the command area and 10307 ha-m for the non-command area whereas the total draft is of the order of 300 ha-m in the command area and 3875 ha-m in the non-command area. The stage of ground water development in command and non-command area is found to be 18.68 % and 37.59 % respectively. The falling trend of depth to water table recorded in the study area combined with above mentioned stage of ground water development shows that the Suswa watershed falls under SAFE category. Therefore further ground water development in the area can be allowed.