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Project Report on

"Water resource Assessment and Management Plan Generation using Remote Sensing & Geographical Information System -A Case study of Doddamudavadi Micro Watershed"

Submitted in partial fulfillment of the requirement for the Award of Degree of

BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING

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ABSTRACT

A growing population and a growing economy have not only led to increasing demand for water, they are also threatening the available water resources and the sustainability of development. Water resources are distributed in time and space, and their availability may vary from time to time and place to place.

Hence, the identification of water resources becomes an immediate step apart from proper management, by augmenting the natural infiltration of precipitation into subsurface formation by some suitable method of recharge. Remote Sensing (RS) and Geographical Information System (GIS) are emerging tools for managing and analyzing the spatially distributed information's. ARCGIS,AUTOCAD MAP and ERDAS, the powerful software's to analyze, visualize, update the geographical information, and create quality presentations that brings the power of interactive mapping and analysis were used in the present study.

In the present study, an attempt was made for estimation of runoff for the catchment area considered using SCS model output which can be applied for planning of various conservation measures & water samples at various points throughout the watershed were analyzed.

Soil Conservation Service (SCS) model has been applied in the present study for the estimation of runoff for a micro watershed. Study area selected for the present analysis was Doddamudavadi watershed, a micro watershed of the Arkavathi basin. The micro watershed is located between 12°36' to 12°41'N and 77°22' to 77°25'E and is covered in the Survey of India topographical map no 57 H/6(1:50,000) with an area of 9.44 sq.km.

Study has being done to generate an action plan for rejuvenation & conservation of water resources both quantity & quality.