

PROJECT REPORT ON
**“Spatial Analysis of Water Quality Parameters of
alamadike Watershed, Pavagada Taluk, Tumkur District
using Geomatics”**

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Submitted in partial fulfillment of the requirements for award of degree of the

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ABSTRACT:

“Water is the essence of life.”

The applications of water and its necessity is no stranger to any man on earth. Perhaps the most important of them is drinking. In this project we have made an attempt to provide safe and portable drinking water to the people of **Nagalamadike Watershed area, Pavagada taluk, tumkur district**, by analyzing the present water quality of the area and determining the water quality parameters that make the water unfit for drinking. In the process we have made use of the technologies such as GPS(Global Positioning System) and GIS (Geographic Information System). We have also use latest equipment such as Water analyser 371(Make : systronics), AAS (Atomic Absorbtion Spectrometer) (Make GBC Avantha) etc. for the water quality analysis purpose. The analysis was done on the parameters:- **pH, Electrical Conductivity, total hardness, Iron Content, Nitrate, Chloride, Fluoride, Sodium and Total Dissolved Solids**. out of these parameters Fluoride, Nitrate and Sodium were found to be exceeding the permissible limits in most of the samples.

23 out of 25 samples were found having Fluoride content more than the permissible limit. Similarly 15 out of 25 and 20 out of 25 samples were found exceeding the nitrate content and sodium content respectively.

The use of software for showing the obtained results in a graphical way and also to create thematic maps was also a special attempt in this project. The use of iso-contour maps to show the affected areas makes it easy and user friendly for the reader. MapInfo (version 7.5 professional) and ArcView 3.2 for creating the thematic maps. The software was also used for overlaying of different maps showing probable reasons of the variation in the water quality parameters.