

Water Quality and Quantity in the Colorado River within the Hill County

Focus on the Austin and Lake Travis watershed

Status Report of the term project

Purpose

The goal of the project is to identify areas of groundwater and surface water features that are sensitive to development and other land use changes, and decide the factors that will affect the water quality of this area. Using the Geographic Information Systems, the Austin and Lake Travis watershed is identified by analyze the watershed, flowlines, flowdirection, flow accumulation, and etc. Applied the USGS data about the mean annual flow and precipitation data to calculate the runoff coefficient, combined with the spring information, the discharge and recharge of the area will be consider in order for further research. Finally, a detailed analysis will be carried out to help make suggestion of the water protection of the area.

Work completed

The initial stage of the project focused on data collection and data processing.

Firstly, the hydrology information about the surface and ground water of the area has been found.

Secondly, the watershed boundary data, NHD83 digital elevation data,

and the catchment data were downloaded from the NHDplus website.

Finally, some clues about the water vulnerability were found.

Work in process

In current status, I am concentrating on data analysis and interpretation. I am trying to figure out the flow direction and flow accumulation of the watershed, and I am also trying to explain the results.

Work planned

Data analysis and interpretation will continue throughout the whole project. After completion of analysis and interpretation, the main focus will be on preparation of the final report.

The following work will focus on the location of the spring sources according to the information that has already achieved. Furthermore, the human activity and land use type will be considered in order to decide the factors that will influence the water quality of this area.