SEASONAL GROUND-WATER LEVEL CHANGES (1990-93) AND FLOW PATTERNS IN THE FRUITSE STATE OF THE MARK TWAIN NATIONAL FOREST, SOUTHERN MISSOURI

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INTRODUCTION

A comprehensive reconnaissance of ground-water flow to the Frisco Unit of the Mark Twain National Forest in southern Missouri was begun in December 1990. This work was designed to test the effectiveness of the approach used by the U.S. Geological Survey (USGS) in determining the relationship between ground-water flow and stream recession and recharge to tributary streams in the Ozark Plateau by using the USGS computer model FRISCO. The technique combines a detailed hydrogeologic reconnaissance of the study area with a statistical analysis of long-term ground-water levels and stream flows. The USGS approach involves the development of a model of the ground-water flow system that includes a description of the aquifer and its boundaries, the flow path of ground water, and the interaction of ground water and surface water. This information is then used to estimate the amount of ground-water flow to tributary streams and to evaluate the potential for ground-water recharge to streams.

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