

2010 Team Presentation Problem

According to the Water-Resources Investigation Report 97-4241 by Paul E. Stackelberg, Jessica A. Hopple, and Leon J. Kauffman, the chemical quality of ground water is of particular concern in the **Glassboro study area in southern New Jersey** (because ground water provides most of the public and domestic supply). This is one of the fastest growing regions in New Jersey. Its population was more than 250,000 in 1990 and is expected to increase as suburban development continues (N.J. Department of Environmental Protection, 1993). Residential and commercial developments built within the last 3 decades occupy large tracts of land that previously were undeveloped or used for orchard and row-crop farming.

The NJDEP has identified serious water-supply problems in the Glassboro study area (N.J. Department of Environmental Protection, 1993). Historically, this region has relied heavily on the confined Potomac-Raritan-Magothy aquifer system for public-water supply. More recently, the NJDEP has restricted withdrawals from this aquifer system as a result of severe water-level declines (N.J. Department of Environmental Protection, 1996a). Increased withdrawals from the surficial Kirkwood-Cohansey aquifer system is one alternative to meet current and future water-supply demands. The aquifer system is vulnerable to contamination introduced at or near land surface because it consists of highly permeable unconsolidated sands and gravels. The chemical quality of water in the Kirkwood-Cohansey aquifer system is of concern because of the increasing reliance on this aquifer system for public and domestic supply.

The Borough of Glassboro is located in the heart of Gloucester County, New Jersey. It is a suburban community that prides itself on its hometown family makeup, yet remains an economically viable business district with a unique mix of non-profit, commercial and small businesses. Glassboro is home to 19,068 residents and also the home of Rowan University, serving 10,000 students and employer to over 1200 local residents.

Your team has been hired as an Environmental Consultant by the Planning Board in Glassboro to project future water supply demands, potential impacts of these demands on the Kirkwood-Cohansey aquifer system and ways to reduce contaminants in existing and future water supplies.

Carefully review this link <http://nj.usgs.gov/nawqa/linj/wri4241.html#HDR0> and present a long term plan for water allocation and conservation in Glassboro NJ. Consider the impacts of this plan and how it will affect the following:

- Agriculture in the Area
- Rowan University
- Residential Communities
- Future Construction