



## WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** 2002RI1B

**Title:** Hydrologic Relational Database for Rhode Island

**Project Type:** Research

**Focus Categories:** Management and Planning, Water Quality, Groundwater

**Keywords:** database, surface water, groundwater, Rhode Island, water quality

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**End Date:** 02/28/2003

**Federal Funds:** \$20,093

**Non-Federal Matching Funds:** \$40,652

**Congressional District:** 2

**Principal Investigators:**

Anne I. Veeger  
University of Rhode Island

Nasir Hamidzada  
University of Rhode Island

**Abstract**

The ability to store, retrieve and analyze hydrologic data is a key component of efficient planning and environmental management. In Rhode Island, existing hydrologic data are stored in a variety of U.S. Geological Survey, RI DEM, RI Department of Health, and individual investigator files and databases. Data collected through RI Water Resources (RIWRC) Center funded research for example, is stored in paper format in the form of a final report. This limits the potential application and usefulness of the data to State and local agencies and other investigators. The development of a multi-dimensional relational database management system, which will permit storage and retrieval of hydrologic data for sampling sites is proposed to address the need for unified and accessible data storage. The database will incorporate both spatial and non-spatial data by using a GIS approach. The spatial data will be stored in an ArcInfo Coverage and the non-spatial data will be stored in Access. Querying, display and analysis of data (including site location, field data, laboratory data) will be possible, thereby creating the capacity to complete spatial analysis of the data in a geographic information system (GIS). This database can be used by future investigators to submit hydrologic data in electronic format as part of their reporting procedure. This will ensure continued population of the relational database with up-to-date hydrologic information. The resulting Rhode Island hydrologic data coverages will be compatible with existing RIGIS coverages and will be an important planning and assessment tool for the State.