

FINAL REPORT

Watershed Water Quality and Source Water Vulnerability Assessment

Report prepared by
Pinnacle Consulting Group
A Division of North Wind, Inc.

Submitted to
Saluda-Reedy Watershed Consortium

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www.saludareedy.org

Project Objectives and Methods

The Pinnacle Consulting Group (Pinnacle) A Division of North Wind Inc. was tasked by the Saluda-Reedy Watershed Consortium (SRWC) to complete a Watershed Water Quality and Source Water Vulnerability Assessment for the Saluda-Reedy Watershed (SRW). This project consists of developing a Geographic Information System (GIS) based inventory of sites, activities, infrastructure, and resources that may pose a threat to water quality and to potable water sources in the watershed. This is a phased project begun in 2004 which will continue into 2005 and 2006 pending the availability of ongoing funding from Greenwood County.

This task builds upon the South Carolina Department of Health and Environmental Control (SCDHEC) Source Water Assessment and Protection Inventory performed by Pinnacle for SCDHEC in 2002. The GIS database constructed from that project will serve as the core data base for this project. Supplemental data will be added to update and complete the database to represent current conditions.

Sites to be mapped include any potential source of contamination that could potentially affect surface water quality or potable water supplies. Examples include: hazardous waste treatment, storage and disposal (TSD) locations; any of several categories of facilities with environmental permits; gas stations; fuel depots; wastewater treatment facilities; landfills; major infrastructure crossings of streams; fuel pipelines; legacy waste sites; and other potential spill locations.

All sites, referred to as Potential Contaminant Sources (PCS), in the SRW will be verified and new sites discovered

will be mapped using a Geographic Positioning System (GPS) to merge these new sites into a GIS.

The primary focus of this project is an assessment of features, factors and conditions that may affect the potable water supplies associated with Lake Greenwood. However, data compiled through this project will also likely have considerable value to Greenville Water System and other water purveyors in the SRW.

Specifically, the following tasks will be completed throughout the duration of this project:

1. Identify requirements for information to be captured into GIS,
2. Identify data sources to include SCDHEC, supplemental SCDHEC files, all Federal- and State-regulated facilities, National Pollution Discharge Elimination System (NPDES) facilities, hydrography, land use, related digital information sources,
3. Determine process for capturing data, updating data, and maintaining the database in the future,
4. Develop updated database,
5. Compile maps on representative areas,
6. Compile statistics on distribution of sites, sources, and issues potentially affecting various stream reaches,
7. Provide a review of relative vulnerability and risks associated with selected specific sites and categories of sites using standard vulnerability assessment techniques.
8. Develop custom data query tools and map resources for Lake Greenwood (Option available to Greenwood County),
9. Assess requirements for making database and resource available to

selected user groups online, to include online queries & searches, and

10. Develop final report, to include recommendations for online deployment.

Funding Partners

This project's funding is supported by the SRWC and Greenwood County. Greenwood County's funding was delayed until the 2005/2006 fiscal year. Therefore, this project has been postponed until the 2005/2006 fiscal year.

Project Progress

Due to the delay in funding from Greenwood County and the subsequent postponing of this project until the 2005/2006 fiscal year a reduced effort has been focused on this project. This effort has revolved around development of GIS database structure, research on data availability, development of the project approach, development of support from other funding sources, coordination with SCDHEC's source water program staff, and administrative and coordinative tasks necessary to get the SCDHEC 2002 database in a form that can be updated for this project.

Upcoming Work

The existing SCDHEC 2002 project originally completed by Pinnacle needs updating to fulfill this project's objectives. Necessary GIS files have been pulled from an archive server for the SCDHEC 2002 project and merged into the current project's file hierarchy. These data will be exported

into a database that can be readily transported into the field.

A Pinnacle scientist working in the field will have a laptop formatted with this project's GIS. A commercial grade GPS receiver will be linked into his GIS. The GPS's reception will be enhanced by the use of an external antenna. Due to this setup, the scientist will be able to have a GPS navigation system that will guide him through the SRW's roads and allow him to update Potential Contaminant Sources in the SRW.

This project is not intended to perform a comprehensive inventory of watershed-wide source water sites but to supplement and validate the data compiled from the 2002 survey.

Synthesis and Effect

This project will provide a valuable update to the SRW's Source Water Vulnerability database. When funding is received from Greenwood County it will be coupled with funding provided by the SRWC and this project will resume its track to completion.

Pinnacle will also explore the potential of other sources of funding. The key outcome of this project will be a working database made available to water resources managers with Greenwood County agencies to enhance their management of SRW resources.

Contact Information

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