



Lower Savannah

Environmental Quality Control District

Serving: Aiken, Allendale, Bamberg, Barnwell, Calhoun, and Orangeburg Counties

Promoting Health, Protecting the Environment

206 Beaufort Street, NE, Aiken, SC 29801

(803) 641-7670 Fax (803) 641-7675

August 12, 2002

Town of Denmark
Attn: Ms. Patricia Anduze
131 S. Palmetto Avenue
Denmark, South Carolina 29042

Re: Town of Denmark Sanitary Survey
Water System # 0510002
Bamberg County

Dear Ms. Anduze:

As you are aware, the South Carolina Department of Health and Environmental Control conducted a sanitary survey of Denmark's public water system on May 8, 2002. The intent of the sanitary survey is to evaluate Denmark's ability to provide a continuous supply of safe drinking water to its customers.

The Town of Denmark received an overall rating of **Needs Improvement**. Enclosed is a copy of the survey and a report which includes a description of Denmark's public water system, specific findings made during the sanitary survey, and recommendations for correcting any deficiencies. This survey and the report should be kept on file for no less than ten (10) years and be made available to the public or DHEC upon request. It is requested that all parties responsible for the operation and maintenance of the water system review this report promptly.

Please feel free to contact me at (803) 641-7670 if you should have any questions concerning the enclosed report.

Sincerely,

Jennifer R. Hughes
Drinking Water Manager
Lower Savannah EQC

cc: Susan Alder, Bureau of Water

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
LOWER SAVANNAH EQC

SANITARY SURVEY REPORT

*Town of Denmark
Water System # 0510002
Bamberg County*

Introduction

The South Carolina Department of Health and Environmental Control conducted a sanitary survey of the Town of Denmark public water system (Water System # 0510002). This survey consisted of a review of the Department files and an on-site inspection by Department personnel on May 8, 2002. The following persons participated in the on-site inspection:

Jennifer Hughes SCDHEC - Lower Savannah EQC
Tim Freeman Town of Denmark

This report includes a description of the water system, a list of findings and recommendations noted during the survey.

System Description

The Town of Denmark owns and operates a groundwater facility and associated potable water distribution system that serves approximately 3800 customers by approximately 1493 service connections. Information on the system's wells are given in the table below. The system has a current rated capacity of 748, 800 gallons per day.

Well Information

	Type	Horsepower	Yield	Regulated Capacity	Treatment
Well One Brooker Center	Turbine	60	250 gpm	240.00 TGD	Gaseous Chlorine
Well Two Voorhees	Turbine	60	270 gpm	259.20 TGD	Gaseous Chlorine
Well Three Clark Street	Turbine	60	260 gpm	249.60 TGD	Gaseous Chlorine

The Town of Denmark public water system is served by three (3) elevated storage tanks with a total volume of approximately 475,000 gallons.

Storage Capacity

Tank	Capacity (gallons)
City Hall Elevated Tank	100,000
Nibco Elevated Tank	250,000
Voorhees Elevated Tank	125,000

Currently, the Town of Denmark public water system has the following operators:

Name	License	Certification #	Class
Tim Freeman	Water	06651	D
	Distribution	01830	G
JP Robinson	Water	02418	D
	Distribution	00472	D
Lee Davis Jr.	Water	07448	T

Finding and Recommendations

- 1) The system maintained an Unsatisfactory rating for Fire Flow. The purpose of this item is to ensure that the water system can provide adequate flow to protect the integrity of their water system when fire protection is provided. Water systems must confirm their ability to provide fire protection by flow testing each fire hydrant a minimum of once every three years. The minimum flow for a hydrant for fire protection is 500 gpm. The substandard hydrants must be bagged or painted black and the fire department must be notified. As noted in last year's survey, the system has not tested all the fire hydrants. The system plans on hiring a contractor to come in and perform the tests. Once the hydrants are tested, submit the results to the Department.
- 2) The system maintained a Needs Improvement rating for Leak Detection and Repair Program. The system needs to implement a water audit. A water audit is a comparison of the amount of water produced with the amount of finished water sold plus the amount of water used for flushing, fire fighting activities, etc. A system should keep the average loss to no more than 10%. During the survey it was evident that the system has all the necessary components for a water audit, it just needs to be implemented and properly documented.
- 3) The system maintained a Needs Improvement rating for Storage Appurtances. The overflows on all three elevated storage tanks need to be extended within 12 to 24 inches of ground surface. The overflows should be addressed during the next scheduled tank maintenance periods.

- 4) The system maintained a Needs Improvement rating for Storage Maintenance. As noted in previous surveys, the Nibco tank has substantial rust on the exterior of the tank. The tank needs exterior painting and the interior needs to be evaluated. It is requested that the system submit to the Department a complete maintenance plan and schedule for addressing all storage tank deficiencies.

Conclusions

Within ninety (90) days the Town of Denmark should submit to the Department a plan and schedule for coming into compliance with all survey items with ratings of Needs Improvement and Unsatisfactory listed above. The system has done a good job of addressing many of the items mentioned on past surveys. Once the system tests all fire hydrants and submits a formal maintenance plan for the storage tanks the overall rating will be re-evaluated. The Department would like to thank Tim Freeman for his assistance in conducting the sanitary survey. The Department looks forward to working with the town in the future to ensure that the residents of Denmark continue to receive the highest quality of drinking water.