

Sewer study suggests improvements that would serve 50,000

By JODI DEAL, Staff Writer

October 25, 2005

Email to a friend Voice your opinion

BIG STONE GAP - A joint study of public sewer systems in three Southwest Virginia planning districts has identified the need for more than 55 projects in 11 counties that will cost more than \$321 million.

Presented at the Southwest Virginia Wastewater Summit Monday at Mountain Empire Community College's Goodloe Center, the study identified 14 Wise County locations and three Dickenson County areas for improvements and extensions of service.

The wastewater study comes three years after a similar public water service study, also a joint effort by the Lenowisco, Mount Rogers and Cumberland Plateau planning districts, Lenowisco PDC executive director Ron Flanary pointed out to the crowd.

The percentage of homes in the three planning districts with public water service has increased from 53 percent to 69 percent as a result of the water service study, Flanary said. Increased public water service makes the need for widespread public sewer service even greater than it was before, he added.

Currently, only 40 percent of the households in the three planning districts have access to public sewer service.

The projects identified could provide service to more than 50,000 residents in 16,000 households over the next 10-15 years. Flanary noted that about 145 projects were considered, but the most feasible projects were highlighted for in-depth study.

Thompson & Litton Inc. led the \$240,000 study, working with Maxim Engineering and Lane Engineering. It was funded through grants from the U.S. Department of Agriculture's Rural Utility Service, the Virginia Tobacco Indemnification and Community Revitalization Commission and the Virginia Department of Housing and Community Development.

OUT OF SIGHT, OUT OF MIND

Most of the localities identified in the study share common wastewater problems, Thompson & Litton representative Scott Wilson said. Current sewer systems are aging and reaching their capacity, limiting the service expansions necessary for growth.

Most of the sewer systems in Southwest Virginia have not had major repairs and improvements in more than 30 years. In addition to growing demand, most suffer from severe inflow and infiltration problems, or the flowing of rainfall and surface water into sewer systems. Inflow and infiltration can push treatment plants to capacity, Wilson said, causing raw sewage overflows and inadequate treatment.

The majority of homes in the three planning districts don't even have public sewer service, which causes a myriad of additional problems.

While some homes use septic systems in place of public sewer service, not all are adequate, Wilson noted, and some households discharge raw sewage directly into streams and rivers, a condition referred to as straight pipes.

Still other areas can't be served by traditional septic systems, at least not

without considerable expense. Rocky terrain impedes the installation of septic systems, and soil quality in some areas prevents the necessary percolation for the systems to work properly.

Sewer service is just as important as public water service, Flanary noted, but doesn't receive the same attention. While residents may notice poor drinking water quality, people may not be aware of the problems straight pipes or malfunctioning septic tanks create unless wastewater is backing up into their homes.

"If they flush the toilet and it goes away, many people don't care where it goes," Flanary said. Out of sight, out of mind.

The lack of public service and expense of installing private wastewater treatment facilities or septic systems prevent industry from locating in the area, Lenowisco planner Lou Ann Johnson pointed out. Lack of service also can create a major financial hardship for families who hope to build homes, she added.

Years working for the department of health as a sanitarian showed Johnson first hand how important public sewer systems are, she told the crowd.

"There's nothing as disheartening as telling a couple who are just starting out that their land won't perc," Johnson said, noting that improper percolation more than doubles the cost of installing septic systems. "We're losing residents because they can't afford to build homes here," she added.

Some of the problems in less rural areas can be fixed by installing and extending traditional centralized sewer systems. Other more rural areas can be reached by decentralized wastewater treatment systems, which are more cost effective and easier to install than traditional sewers.

WHAT SHOULD BE DONE?

In addition to the 44 centralized wastewater projects, or traditional large-scale sewers, 15 de-centralized or effluent systems were suggested.

Decentralized wastewater systems include a variety of collection, treatment and disposal methods that are often more practical for rural communities like those in Southwest Virginia. These alternative systems can serve a large number of households without the need for expensive, larger pipes and treatment facilities.

Some of the decentralized wastewater collection methods listed in the study include grinder pump systems, vacuum systems and conventional gravity collection. Treatment systems include sand filters, peat filters, textile filters and activated sludge plants. Disposal methods up for considerations are trench drainfields, gravelless trenches, drip dispersal and point discharge.

The study notes that a combination of the above could be used for effective treatment in rural areas without costly installation of traditional sewers.

Wilson noted that engineers put the centralized sewer projects in priority based on the number of customers served, the cost of each project per connection, the elimination of health hazards and water quality problems, construction feasibility, residential service growth potential and industrial or commercial growth potential.

Decentralized wastewater projects were put in priority based on health and environmental issues, whether the area to be served has public water service,

community involvement, willingness of the locality's utility service to try the new methods and the cost per connection.

©Coalfield.com 2005