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County and C-N-W seek new sewage sludge treatment

by KATIE DUNN • Staff Writer

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WISE — If all goes well, a proposed infrastructure project could vastly improve the sewage treatment process for Coeburn, Norton, Wise and Wise County while offering numerous environmental benefits.

The county Board of Supervisors and Coeburn-Norton-Wise Regional Wastewater Treatment Authority recently authorized a \$4.65 million application to the Virginia Department of Environmental Quality. They want to construct a regional septic and biosolids handling facility on a former surface mine site adjacent to the county landfill at Blackwood.

If the project comes together, C-N-W Executive Director Mark Hollyfield said it would improve the sludge treatment process and provide a more efficient and effective treatment of septic waste.

Hollyfield said the county and C-N-W board have studied the proposed project for a year now, with each agreeing to share in the cost of a preliminary engineering report being compiled by Lane Engineering and Thompson & Litton. Bill King, vice president of Thompson & Litton, said that report is now 95 percent complete.

PROJECT SCOPE

If the project advances, waste that is now hauled from residential and business septic tanks and treated at the wastewater treatment plant would move to the proposed facility. The separation of solids and liquids would occur in Blackwood, with the liquid then piped to the C-N-W plant for treatment.

The proposed facility would also offer a higher intensity sludge treatment process. Sludge is the solid material that remains after sewage has been treated.

The sludge would first be treated at the C-N-W plant and then trucked to the new facility for a second treatment that would involve heating and drying it at a high temperature to further reduce moisture and bacterial content.

King said this process would be accomplished by collecting, purifying and using landfill gases as the heat source. “The landfill gas, which is a byproduct of the waste as it decomposes, creates gas and about half of it is methane,” he explained.

The landfill gas collection facility, explained Hollyfield, is a separate component of the proposed project. He said the county has agreed to pursue this aspect, which involves building the facilities that will collect, purify and then transport landfill gases to the C-N-W facility next door. The funding application does not include this portion of the project, and Hollyfield said the county plans to seek funding separately for it.

King noted that this part of the project could be done along with the county's landfill expansion. Its capital improvement plan notes that the more than \$3 million expansion is slated to begin in fiscal 2013-14.

King said locating the proposed C-N-W facility adjacent to the county landfill has two main benefits: available space and an easily accessible energy source.

Hollyfield said once a planned expansion of the wastewater treatment plant outside Coeburn is finished, there will be no room for such a sludge treatment facility onsite.

OTHER BENEFITS

The sludge treatment aspect of the project also has numerous environmental and financial benefits, explained King.

C-N-W currently disposes of some material from the sludge, such as paper and plastic products, in the landfill; the rest is applied to permitted land for agriculture.

While use of this material is heavily regulated by DEQ, King said additional treatment will further decrease the sludge's bacterial content, so that it can then be sold or given away as a landscape product, fill material or cover material for the landfill, among other uses, with little to no regulation.

King mentioned that performing this process would also prolong the landfill's lifespan by eliminating the need to dispose of sludge there.

Depending on the amount of gas the landfill emits and the amount needed to treat the sludge, some of the gas could also be converted to compressed natural gas, which King said could open the door for future potential projects.

Harvesting the gas could also help the county better address future regulations related to the collection of landfill gases, he added.

"I think that there's a lot of positive things that could potentially come out of this project, although there's certainly a lot of things that still need to happen," he said.

NEXT STEPS

If DEQ offers an attractive funding package, Hollyfield said design work will commence. At this time, approval of the project would also be sought from the authority's members. Hollyfield said he expects an answer from DEQ within three to six months.