

200 attend septage disposal conference

GRANTVILLE — Failure of municipal officials to assume responsibility for treatment and disposal of septic tank wastes (septage) was identified by several speakers at the recent Septage Treatment and Disposal Conference at Grantville as a major problem in achieving satisfactory disposal of septage.

The conference, conducted by the Penn State Extension Service, was attended by 200 persons concerned with septage management. This included septic tank pumpers, engineer-consultants, Pa. Dept. of Environmental Resources field staff, municipal officials, sewage treatment plant personnel, sewage enforcement officers, Cooperative Extension staff, U.S. Environmental Protection Agency, and environmental protection agencies from four other states.

Opening remarks by Joseph Macialek, of Lackawanna County Extension, indicated that septic tanks will continue to be necessary for sewage treatment in rural areas. From 1970 to 1980, the number of housing units served by septic systems in Pennsylvania increased by 100,000 units.

However, according to a panel of septic tank service people, it is becoming very difficult to find disposal sites for septage. Many sewage treatment plants will not accept the material and there is much public opposition to land disposal. The haulers stated: (1) The regulations should provide more flexibility for farm land utilization of septage; (2) A permit for farm land utilization should not be superseded by local government; (3) Townships and boroughs should assume responsibility for satisfactory disposal of all wastes generated within the municipality; and (4) Enforcement of regulations should be uniform.

Some haulers have been required to get permits for farm land utilization while their competitors continue to operate at a much lower cost without a permit. One operator said he could spend

the money for engineering and legal fees to get a permit that would require pricing himself out of the market or he can operate without a permit and continue to look over his shoulder to see if anyone is watching.

Municipal responsibility

Donald Lazarchick, Director, Bureau of Solid Waste Management, Pa. DER, stated the Solid Waste Management Act requires municipalities to plan for the disposal of all solid wastes generated within their municipalities. (Septage is defined as a solid waste in the act.) However, few municipalities have assumed this responsibility. The exceptions cited were Bucks County, which is doing research on septage management and the Lake Wallenpaupack Watershed Management District which is planning to provide a publicly owned septage treatment and disposal facility.

The results of some of the Bucks County research is being put to use by Thomas Ferrero, Jr., Montgomery County. Ferrero stated that he leases some large tanks at an industrial facility, adds high calcium lime to the septage, and then stores the septage in the tanks. The lime raises the pH of the septage which destroys pathogens and bacteria which create odors and provides speedy settling of the solids. The supernatant liquid is pumped into the municipal sewage collection system and the sludge is used on farm land. Ferrero said he has treated 7 million gallons of septage in this facility with 96% (the supernatant) going to the sewage treatment plant and the balance used on farms. He said this greatly reduces the acreage of farm land necessary for disposal and permits much greater flexibility in working with the landowners.

Spray irrigation

Russell Tatman, Tatman and Lee Associates, Wilmington, Delaware, consultant to Bucks County and to Ferrero said another alternative for liquid disposal from

this lime stabilization process is spray irrigation. This liquid can be treated with chlorine and then sprayed on agricultural or forest land. The regulation permit application of much greater quantities of this liquid than septage and somewhat poorly drained soil can be used.

Another aspect of the Bucks County research described by Tatman was lime stabilization followed by a sand filter. The septage was treated by adding lime to it, stored for 24 hours and then spreading on a sand filter. The effluent was then treated at a sewage treatment plant. Tatman said this option has great flexibility. The sludge is dry enough to be removed within three days and then land applied or composted. The liquid can be treated at a sewage treatment plant, chlorinated and spray irrigated, or disposed of sub surface. It is a low technology operation and does not require skilled personnel to construct or operate the facility.

A farmland utilization project was described by Henry Yeska Jr., Nazareth. Yeska has a 120' diameter clay lined lagoon for septage storage. As tanks are pumped, the liquid is stored in the

lagoon until the soil is suitable for working. The septage is drained by gravity into a large injection tank towed by a farm tractor. The septage is injected into the soil to avoid odor and runoff. The septage saves about 20% of the cost of fertilizer and is used to grow barley, corn, soybeans, and wheat.

William Palkovics, Delaware College of Agriculture and Science, reported on research sponsored by Bucks County and financed by Pa.

Septage is lime stabilized and then applied to agricultural land, some spread on the surface and some is injected. Monitoring wells have been placed on the site and samples collected for laboratory analysis. Palkovics stated that lime stabilization very quickly destroyed fecal coliform and fecal streptococcus organisms. His research indicates that lime stabilized septage can be safely applied to somewhat poorly drained soils since there is little chance of live organisms in septage being carried off-site by erosion or into the ground water.

Composting operation

John Miller, A&M Composting, Lancaster, described his septage composting operation. A layer of wood chips and a finely ground wood waste is placed on an im-

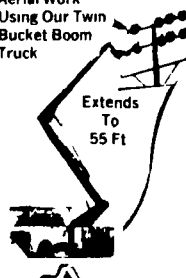
pervious surface. Septage is pumped onto the pile, thoroughly mixed, then placed in a pile with an air pipe inserted to draw air through the pile. Miller exhibited a sample of the finished product after it had gone through a 21 day compost cycle. His firm plans to package and sell this product for lawn and landscape work.

A new septage treatment facility at Wayland, Mass. was described by Ken Wiswall, Roy F. Weston Inc., West Chester. This facility, Wiswall said was built to treat 25,000 gallons of septage per day. As each load is emptied into the system, it is weighed, a sample is taken automatically and stored. The material is screened, dewatered, placed in a holding tank and metered into a clarifier and biological rotating disc facility. The effluent is transferred to a subsurface disposal system. The homeowner is charged for the treatment process at the rate of \$35.00 per 1,000 gallons.

Todd Giddings, Todd Giddings Associates, State College, described a method of streamlining the permitting process by assembling all the key personnel at one time at a land application site to review the

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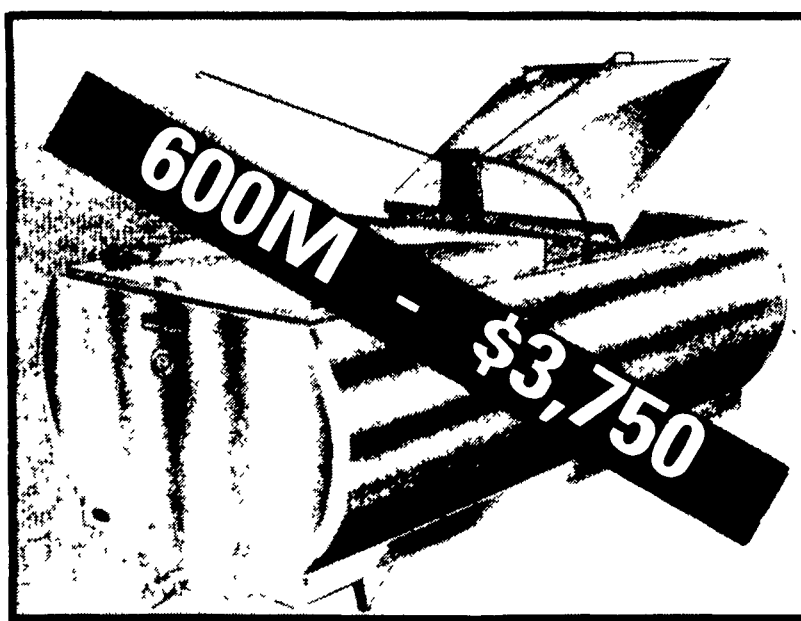
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