

# BIOSOLIDS NEWS

News and Information from the Virginia Biosolids Council • February 2009



Panel members met 12 times during their 18-month study of biosolids.

*“No link between biosolids and illness”*

## Expert Panel concludes biosolids are safe

The Expert Panel created by the Virginia General Assembly has concluded that the application of biosolids to farmland and forests in the Commonwealth represents little risk to human health or the environment and that biosolids should be viewed as a “resource,” rather than a waste product.

While the Panel observed that more research is always desirable, it said that during its 18-month study it had “uncovered no evidence or literature verifying a causal link between biosolids and illness.”

The Panel was created by the 2007 General Assembly and asked to answer a series of questions relating to biosolids, health and the environment. Its members, appointed by the Secretary of Natural Resources and the Secretary of Health and Human Resources, included physicians, public health educators, university researchers, sanitation professionals, environmental and public health officials, and private citizens.

Biosolids are a by-product of wastewater treatment and contain valuable nutrients and soil amendments that are recycled on Virginia farms and forests under a

program administered by the Virginia Department of Environmental Quality (DEQ). Biosolids must undergo extensive treatment, testing and monitoring processes approved by the U.S. Environmental Protection Agency (EPA) and DEQ.

### Farmers depend on biosolids

The Panel heard testimony about the benefits of biosolids, whether they are used as a soil amendment and fertilizer replacement on Virginia’s farms or in an emerging role as a potential source of renewable energy. The Panel observed that many of “Virginia’s farmers depend on biosolids to provide nutrients and organic matter that enhance soil and crop production, while reducing their fertilizer costs and ensuring the sustainability of their farming operations. Identifying alternatives to landfilling biosolids not only extends the life of landfill facilities, but with today’s economic issues and the high cost of fossil fuels and fertilizer, it is sensible to take advantage of the benefits of a product that is ever present and must be managed.”

*Continued on back...*



*The Virginia Biosolids Council supports the recycling of biosolids in Virginia through information and education on the beneficial use and safety of biosolids. The Council is supported by municipal wastewater treatment plants, land application companies and biosolids users, and is available as a resource to those who need information about the recycling of biosolids.*

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## Biosolids found to be safe

The Panel concluded that biosolids should “be viewed as a resource rather than a waste that uses landfill space, while minimizing health and environmental risk.”

Chris Peot, biosolids manager for the D.C. Water and Sewer Authority, served on the Panel and said its volunteer members took their assignment seriously and considered all viewpoints in reaching their conclusions. “Like other members,” he said, “I certainly don’t agree with every detail of this report, but I think it represents a comprehensive review of the issues regarding biosolids and provides the guidance that the General Assembly was seeking. To reach consensus, we had to ask ourselves: What is the overwhelming weight of scientific evidence and what verifiable facts do we have about land application in Virginia, as currently regulated by the Virginia Department of Environmental Quality and the U. S. Environmental Protection Agency?”

“As a result,” said Peot, “I believe the citizens of Virginia can have confidence that the Virginia biosolids program is protective of public health and the environment.”

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The Panel, which concluded its work in December and filed its report to the General Assembly in January, reviewed scientific studies on biosolids and their potential effects on human and animal health, on water and air quality and on property values. It also received testimony from individual citizens in support of and in opposition to biosolids, and from a number of outside experts, including researchers and state and federal environmental officials.

While the Panel heard from a number of individuals who claimed to have been adversely affected by biosolids, the Panel’s report observed that none of these claims were supported by evidence that health symptoms were related to biosolids. The report also cited an exhaustive survey by three epidemiologists of the available research on biosolids and health. The report, which was commissioned by the Virginia Department of Health, was cited as follows in the Panel report:

“Although much still needs to be learned about the content, bioavailability and fate of chemicals and pathogens in biosolids and their health effects, there

does not seem to be strong evidence of serious health risks when biosolids are managed and monitored appropriately. Human health allegations associated with biosolids usually lack evidence of biological absorption, medically determined human health effects, and/or do not meet the biological plausibility test.”

While finding no cause-effect link between biosolids and health, the Panel did recommend additional procedures for the Virginia biosolids program to respond to individuals who have health concerns. It recommended that all parties work “in a cooperative and consultative manner to seek reasonable accommodations to the concerns of neighbors...while balancing the legitimate interests of all parties and ensuring the orderly and efficient management of the program.”

## Highlights from the Report...

**Human Health.** The Panel “uncovered no evidence or literature verifying a causal link between biosolids and illness.”

**Odors, Health & Property Values.** The Panel could not confirm an impact of odor or the extent of such an impact “based on the current body of scientific literature and information presented directly to this Panel.”

**Food crops and livestock.** The Panel concluded “there is no scientific evidence of any toxic effect to soil organisms, plants grown in treated soils, or to humans via bio-accumulation pathways from inorganic trace elements (including heavy metals) found at the current concentrations in biosolids.”

**Water quality.** The Panel found no evidence that the use of biosolids has any more effect on water quality than other farming operations.

**Wildlife.** The evidence concerning the impact of biosolids on wildlife is mixed said the Panel, with some studies indicating a positive effect on wildlife populations as a result of the use of biosolids to restore wildlife habitat. However, the Panel cited other studies that have “suggested” potential long-term negative effects.

**Alternative Technology.** The Panel recommended state incentives for pilot studies and development of alternative technologies by private business.

*A link to the complete Report and supporting documents is at: [www.virginiabiosolids.com](http://www.virginiabiosolids.com)*



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