

Department of Legislative Services
Maryland General Assembly
2002 Session

FISCAL NOTE

House Bill 1057 (Delegate Zirkin)
Environmental Matters

Environment - Use of Chlorine in Wastewater Treatment Plants - Report

This bill requires the Maryland Department of the Environment (MDE) to prepare and submit a report to the Governor and the General Assembly detailing its findings and recommendations on the feasibility of eliminating the use of chlorine in State and local wastewater treatment plants and implementing the elimination within two years. The report is due by March 31, 2003.

The bill takes effect October 1, 2002 and sunsets September 30, 2003.

Fiscal Summary

State Effect: The bill's requirements could be handled with existing budgeted resources.

Local Effect: None.

Small Business Effect: None.

Analysis

Current Law: Except as otherwise prohibited, MDE may issue a permit that allows the use of chlorine or chlorine compounds in treatment of wastewaters discharged from any publicly or privately owned sewage treatment plant to any surface waters of the State. The treatment of the wastewaters must include dechlorination.

Background: According to the U.S. Environmental Protection Agency (EPA), chlorination has been used widely to disinfect wastewater prior to discharge from

treatment plants. In the years following the passage of the federal Clean Water Act, disinfected wastewater with significant levels of residual chlorine was routinely discharged into surface waters. However, it became evident that residual chlorine can be toxic to aquatic life, and that the reaction of chlorine with organic materials in the water can form cancer-causing compounds. As a result, wastewater was dechlorinated prior to its discharge. An alternative to dechlorination is to achieve disinfection without the use of chlorine. According to EPA, other means of disinfection, such as ozone and ultraviolet (UV) disinfection, have become increasingly prevalent.

Another concern related to the use of chlorine in the treatment of wastewater is security-related. Many wastewater treatment plants use chlorine gas. If released into the environment, the gas can have lethal effects. In light of increased security concerns, plant operators are raising questions about the advisability of storing large amounts of chlorine gas at facilities.

According to MDE, there are about 400 community wastewater treatment plants in the State (about 160 of which are publicly owned). MDE advises that about 85% of the treatment plants in the State currently use chlorine to disinfect wastewater.

In response to other concerns related to wastewater treatment plants, the Governor established a Task Force on Upgrading Sewerage Systems in the State. In its November 2001 report, the task force identified existing needs (not including retrofitting plants to other forms of disinfection) to be \$4.3 billion over the next 20 years. MDE advises that preliminary estimates to retrofit all wastewater treatment plants (both publicly and privately owned) to one alternative (UV disinfection) range from \$75 million to \$175 million statewide.

State Expenditures: MDE advises that costs would increase by approximately \$557,500 in fiscal 2003, which reflects the bill's October 1, 2002 effective date. MDE's estimate includes \$510,000 in contractual services to perform an evaluation of each of the estimated 136 publicly owned wastewater treatment plants that use chlorine. The estimate also reflects the cost to hire one public health engineer to oversee the studies and includes start-up costs and ongoing operating expenses. In the out-years, MDE advises that contractual services would total \$680,000 annually. These estimates assume that each evaluation, which will be conducted to develop detailed cost estimates for converting to a different technology, will cost \$5,000.

Legislative Services advises, however, that the bill does not define the scope of the work involved. The bill does not require MDE to perform a detailed evaluation of each plant that uses chlorine; rather, it provides only that MDE submit a report on the feasibility of eliminating the use of chlorine. Because MDE already has preliminary estimates of what

it would cost to upgrade facilities from chlorine to other disinfection uses (such as UV light), clearly MDE has some wealth of knowledge in this area. Accordingly, it is assumed that MDE could submit the required report using existing budgeted resources. Should a more detailed study be necessary, MDE may request additional resources through the annual budget process. In addition, because the report is due by March 31, 2003 and because the bill sunsets September 30, 2003, Legislative Services advises that the bill should result in only minimal, if any, costs in fiscal 2004 and no costs thereafter.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Maryland Department of the Environment, Washington Suburban Sanitary Commission, Department of Legislative Services

Fiscal Note History: First Reader - February 24, 2002
ncs/cer

Analysis by: Lesley Frymier

Direct Inquiries to:
John Rixey, Coordinating Analyst
(410) 946-5510
(301) 970-5510