

Presentation Title:

Impacts to Water Supply Wells from Closed Municipal Landfills in Maine

Primary Author: Richard H. Heath
Maine Department of Environmental Protection
Senior Environmental Hydrogeologist
Richard.H.Heath@maine.gov
207-287-7637

Secondary Author: Richard S. Behr
Robert Birk

Type of Category: Oral Presentation

Category: Land Use Impacts on Private Well Water Quality

Abstract:

Maine has approximately 414 municipal landfills including 15 currently licensed operating sites, 388 closed sites, and 11 inactive sites which have not undergone an approved closure. Many municipal landfills began operation in the 1950's and 60's. Hundreds of these unlined attenuation landfills continued operation until the early 1990's. Today many of these inactive or closed landfills threaten ground and surface water quality because of inappropriate siting, inadequate design or improper operation. In 1988 the Maine Legislature created the Landfill Closure and Remediation Program to oversee the closure and maintenance of landfills that pose threats to public health and the environment. Investigations performed under this program have revealed numerous instances where water supply wells have been impacted by landfill related contamination. Recent residential development of properties near closed landfills pose a threat to newly installed private water supplies.

Several case studies are presented where contaminants including volatile organic compounds, arsenic, and other landfill related constituents were present at private water supply wells. Remediation of these impacts included point of entry filtration, extension of public water supply lines, and purchase of properties.