

News from the New Hampshire Department of Environmental Services



29 Hazen Drive, Concord, NH 03302-0095
For information online, visit www.des.nh.gov
James P. Martin, Public Information Officer
(603) 271-3710; jmartin@des.state.nh.us

FOR IMMEDIATE RELEASE

DATE: January 2, 2008

CONTACT: Fred McGarry, (603) 271-4978

MtBE Widespread in New Hampshire's Groundwater

Concord, NH – The New Hampshire Department of Environmental Services Commissioner Thomas Burack today announced the release of the most comprehensive study to date of the prevalence of MtBE contamination in the state's groundwater. The study, conducted for DES by the U.S. Geological Survey, documents widespread MtBE contamination throughout the state in both public and private drinking water wells. The highest incidence was in those four counties with the greatest populations. Nearly half of the private wells tested in the higher population areas of Rockingham County contained MtBE.

MtBE, an abbreviation for "methyl tertiary butyl ether," is a chemical that oil companies added to New Hampshire's gasoline supplies beginning in 1979, and continuing until it was banned by the State in January 2007. From 1995 until the imposition of the ban, oil companies added greater amounts of MtBE -- 10% or more MtBE by volume -- to gasoline sold in the four southern counties of the state, Rockingham, Strafford, Hillsborough and Merrimack. The companies used MtBE to meet federal specifications for Reformulated Gasoline (RFG), which reduces air pollution, although ethanol has been used in RFG since the ban took effect.

"This study provides a more complete picture of state-wide MtBE contamination of our drinking water supplies. The New Hampshire ban on MtBE that became effective in January of 2007 will thankfully eliminate further MtBE from being released into our environment. DES will use the information in this report to determine how best to address this problem and to protect the health and welfare of our citizens and the environment from the residual MtBE that remains in our waters," said DES Commissioner Tom Burack.

MtBE can be found in groundwater wherever gasoline is used and has been found to easily escape from underground storage tank systems. It travels further and faster than other gasoline components, and does not easily break down, in groundwater. MtBE has appeared in drinking water wells throughout the state and has been found in surface waters where gasoline engines are used. The Attorney General has filed suit against the oil manufacturers and refiners that added MtBE to New Hampshire's gasoline supplies for restoration of the State's waters and damages.

New Hampshire has a health-based drinking water standard of 13 parts per billion for MtBE. Treatment of a water supply is required when the standard is exceeded. However, MtBE can cause taste and odor complaints at much lower levels. The study showed that a small percentage of the wells tested exceeded the health standard.

The study has been published in the technical journal *Environmental Science and Technology*. Overall, the results show that MtBE contamination persists in roughly 30% of public water supplies in the most populated counties and in 17% of private wells tested in those counties. In

Rockingham County, one in three private wells tested had MtBE at some level, while one of every two wells tested in highly populated areas had MtBE.

Public wells serving manufactured housing parks showed the highest incidence of contamination, with MtBE detected in 71% of the wells tested. In addition, 40% of large community water systems had MtBE contamination present. More than half of the wells serving gasoline station convenience stores had MtBE contamination. These wells are not required to be tested for the presence of MTBE unless there is a known gasoline spill.

Much of New Hampshire's water is derived from wells drilled into bedrock where groundwater generally travels very slowly. This, in addition to other factors such as New Hampshire's unique geologic formations, makes it uncertain how long MtBE will persist in the State's groundwater.

The USGS report, "Methyl tert-Butyl Ether (MtBE) in Public and Private Wells in New Hampshire: Occurrence, Factors and Possible Implications," is published in the journal *Environmental Science & Technology*. The abstract can be viewed at <http://pubs.acs.org/cgi-bin/abstract.cgi/esthag/asap/abs/es071519z.html> or for complete hardcopies of the report, please contact Jim Martin, DES Public Information Officer at (603) 271-3710 or James.Martin@des.nh.gov.

###