SECTION D

Additional Research on the Effects of Contamination on Hydrologic Systems and Related Ecosystems

This section contains papers on a variety of topics that relate to the development of new methods to study contamination from nonpoint sources and new analytical methods to measure and detect contaminants at levels significant for the environment. In some cases, the Toxic Substances Hydrology Program directly funds the research. In other cases, the research uses methods that were originally developed by the Program. Some of the papers are reporting the results of research on the fate of contaminants in the environment conducted by other U.S. Geological Survey programs.

A variety of contaminants are discussed in the papers, including widely used pesticides and their metabolites, antibiotics that are used in livestock production, organometallic compounds, oxygenated gasoline additives such as methyl tert-butyl ether (MTBE), and common halogenated organic compounds. The link between contaminants and environmental health are also addressed by looking at potential effects of some contaminants on the health of fish.

The fate of these contaminants is being studied in rivers, streams, lakes, and ground water. Some of the compounds have existed in the environment for many years. Others are either newly created compounds or their environmental relevance and adverse effects on aquatic life are just being recognized. Developing methods to study the fate of these "emerging" contaminants is one of the many areas of research that is supported by the Program. The information presented in these papers is useful for developing better land- and water-management practices.

For additional information contact:

David W. Morganwalp, USGS, Reston,
Virginia (email: dwmorgan@usgs.gov)