

especially mercury; (2) leaching of watersheds and corrosion of storage and distribution systems, leading to elevated levels of toxic metals; and (3) health implications of recreational activities in impacted waters.

The principal conclusions of the report are as follows:

Acidification of lakes is a concern because it may be related to increased mercury contamination of the food chain, thus increasing the health risks associated with high levels of consumption of contaminated organisms. A correlation exists between low pH in lakes and higher mercury concentrations in some species of fish, although the mechanism for this accumulation is not presently known. In addition to the effects produced by acidic deposition, the increased input of anthropogenic sources (air or water effluents) of mercury and other heavy metals may further complicate the issue and lead to health problems when affected fish are consumed by humans in large amounts.

Acidic deposition may liberate metals in some groundwaters, surface drinking water supply systems and cisterns. However, groundwater may also be acidic due to increased partial pressure of CO₂ at depths of a few metres or more. This should not be confused with acidity due to atmospheric deposition. Elevated metal concentrations in acidified drinking water supplies have been found. Lead levels in tap water from cisterns were much higher than those found in the source water; about 16% of the households sampled in one western Pennsylvanian county had tap water levels in excess of the United States drinking water standards. Surface drinking water supplies which are not treated (i.e., small communities or individual water supplies) are susceptible. No adverse health effects resulting from consumption of such water have been reported. Concern has been expressed that recreational activities in acidified waters, such as swimming, may prove to cause eye irritation. To date, no compelling evidence has been forthcoming that indicates that humans are being adversely affected by these waters in their current state.

With respect to the direct inhalation of transported air pollutants for which standards exist (i.e., particulate matter, photochemical oxidants, sulphur oxides, and nitrogen oxides), no adverse human health effects are anticipated, providing the ambient air quality standards are not exceeded (see Table 5-2). However, in regions where transboundary air pollution contributes to the violation of the standard, health related problems cannot be ruled out.

Although some concern has been expressed over the effects of acid sulphates on mortality/morbidity, the available data appear insufficient to single out this species as the sole pollutant of