

any given year deposition patterns could be quite different from a long-term average due to variations in meteorological parameters, such as the wind and precipitation fields.

Besides the natural variability of precipitation chemistry, the methods used to collect, transport, store, and analyze samples contribute to possible errors in the final data. The isopleths shown in Figures 6.1 and 6.2 were based on data from networks with different measurement techniques. Also, the level of quality assurance varied from network to network. With these considerations in mind, a rough estimate of error for individual data points used in the figures and for values in Table 6.1 can be made of hydrogen deposition to be as high as +50% and of sulfur deposition to be as high as +25%. As better quality assurance techniques are applied and a large statistical base established, error estimates can be refined.

One of the goals of this Canada - U.S. study is the quantitative evaluation of transport of material through the atmosphere and deposition on sensitive areas. The amount of wet deposition to sensitive areas can be estimated from recent monitoring data collected since 1977. Some such estimates of annual wet deposition of hydrogen and sulfate ion to specified sensitive areas are given in Table 6.1. As a more extensive record of measurements is compiled, both our confidence in average annual deposition values and our awareness of possible deviations of individual yearly values will increase.