

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

In the overall analysis of the issue of long-range transport of acidic and alkaline materials in the atmosphere, measurement of the final amounts deposited is an important part of the research. Past efforts to establish viable monitoring programs have generally achieved only limited success. In the last five years, the precipitation chemistry networks in North America have begun to produce high quality data sets. Though much has been done, there is still a need for closer cooperation between Canada and the United States so that a uniform precipitation chemistry data record can be developed to address questions about trends in acidic deposition and what changes would result from any control action that might be taken to limit, or reduce, acid precursor emissions.

Most of the efforts to date have been directed toward establishing monitoring systems to measure wet deposition on a routine basis. Advances have been made in network design, collection methods, and analysis techniques, but establishing a more rigorous quality assurance program should still be a goal of the North American monitoring networks.

The second part of the atmospheric deposition process is dry deposition, but there is, as yet, no simple method available to measure the dry component of the deposition. Several possible candidate techniques are discussed in this report. Understanding of the dry deposition process is vital to evaluating the overall question of atmospheric deposition.

Whatever the limitations of past and present data sets, it is important that they be evaluated for their potential value in modeling and control strategy. This report attempts to list what considerations must be taken into account when assessing data sets--such factors as representativeness of the values, uniform collection and analysis techniques, temporal resolution, and others. A summary list of active networks is provided.