

(1976), have all reported on oxidant levels with respect to transport over water and/or sea or lake breezes. The southern Great Lakes area may be especially important because of the appreciable  $\text{NO}_x$  concentration (Ludwig et al., 1977).

There remains a need for a better understanding of oxidants, especially with respect to their formation and relationship to precursor chemicals in the urban and rural areas. Several authors (Martinez et al., 1979; Jefferies et al., 1976; Dimitriadis, 1977; Singh et al., 1978) caution that control strategies established for urban areas may have little benefit or perhaps even detrimental effects on rural oxidant levels. Consequently, control strategies that might be implemented in an urban area of one country might increase ozone levels in rural areas of the other country.

Indications of transboundary movement of ozone into Ontario have been documented by Chung (1977) and Shenfeld et al. (1978). Mukammal (1964) reported on the relationship between "weather fleck" on tobacco and meteorological conditions associated with the buildup of ozone in an area immediately north of Lake Erie.

Since 1977, annual reports to the U.S.-Canada International Joint Commission (IJC) by the International Michigan-Ontario Air Pollution Board have commented on the long-range transport of ozone and precursor pollutants into the boundary area along the Detroit and St. Clair Rivers. The high ozone levels were noted to be associated with warm humid air moving into the area from the south and southwest directions. There is evidence that local emissions add to the levels of ozone downwind of the sources in the boundary area.

#### (c) Suspended Particulate Matter

Much of Detroit and Windsor experience unacceptably high levels of total suspended particulates. The Joint Air Pollution Study of St. Clair-Detroit River areas for the International Joint Commission (January, 1971), reported that based on a 1968 study "The dispersion model estimates show that the combined contribution of U.S. area and point sources to the annual average