Precipitation chemistry monitoring networks in Canada and the United States are of three types: global background, national trends and research support. The small number of global background sites are located in remote areas where there is little or no local or even regional pollution.

Such sites include American Samoa, Barrow, Alaska, and others. These stations identify long-term trends in the global spread of pollution.

Currently the national trends networks measure the composition of precipitation and wet deposition using wet-only collectors for both atmospheric and ecological purposes. They are long-term, country-wide, national networks: the Canadian Network for Sampling Precipitation (CANSAP), and the National Atmospheric Deposition Program (NADP), a cooperative program involving several U.S. agencies. Several other networks with similar objectives, including those of the Tennessee Valley Authority, EPA Region V, the Ontario Ministry of the Environment and the Great Lakes Precipitation Chemistry Network, are more regionally oriented.

Other networks, such as those of the Electric Power Research Institute (ERPI), of the Multi-State Atmospheric Power Production Pollution Study (MAP3S), Ontario Hydro and the Air and Precipitation Monitoring Network (APN), fall into the third category - research support networks. They are designed primarily to support studies in atmospheric transport, chemistry, and modeling.