Long-term wet deposition, particulate, and gas-phase sulfur and nitrogen measurements in New York State

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The New York State Department of Environmental Conservation (NYSDEC) has monitored air quality and wet deposition in urban, suburban, and rural areas across the state for decades. These long-term measurements are used to help evaluate the impacts of federal, regional, and state pollution control measures. The NYSDEC wet deposition network complements the NADP program in the state by capturing the effects of local sources and roadways, providing deposition data across a wider range of landscapes. Data records from the NYSDEC network are robust enough to infer trends and exhibit substantial declines in acid deposition and criteria pollutant concentrations. Here we present a comparison of deposition and concentration trends in sulfur and nitrogen species between urban and rural locations in New York. Consistent with findings from national monitoring programs such as the NADP, CASTNet, and IMPROVE, air concentrations and wet deposition of sulfur and nitrogen compounds across New York have decreased by about 40% or more over the past 2-3 decades.

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