

## **Effects of urbanization and tree species composition on nitrogen deposition and leaching**

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Forests of the northeastern United States receive elevated rates of atmospheric nitrogen deposition. However, most measurements of nitrogen deposition come from relatively undisturbed, rural locations. In this study, we examined rates of nitrogen deposition and leaching in urban forest stands in Boston, MA and surrounding rural areas to determine fluxes along an urban to rural gradient. Our measurements show that rates of nitrogen deposition are ten times greater within the city of Boston compared to surrounding areas and that some of this can be explained by long-distance transport of pollutants, as well as local sources. Results from this study suggest that additional measurements of atmospheric pollutants should be made within and adjacent to urban areas to better understand and constrain regional estimates of deposition.

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