

WATERSHED CYCLING OF MERCURY AND CONTROLS ON METHYLMERCURY PRODUCTION IN NORTHERN MINNESOTA LANDSCAPES

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Mercury is the number one contaminant in surface waters of the U.S. because of health concerns for both humans and other animals when they consume fish. The form of mercury that bioaccumulates in the food chain is an organically complexed form known as methylmercury. Over the past 20 years we have conducted research to understand the mercury cycle in Northern Minnesota landscapes. Notable studies have characterized how both total mercury and methyl mercury cycles in peatland watersheds, the controls on the production of methylmercury, the effect of increasing sulfate deposition on mercury fluxes in both water and biota, and the influence of forest fire on mercury cycles. We will discuss these studies and summarize the current state of knowledge on mercury cycling in these landscapes.

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