# Mercury retention in wetlands of the Adirondack Region, New York. (S10-demers092627-Poster)

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## Abstract:

Anthropogenic emissions of mercury have increased atmospheric mercury deposition and subsequently increased contamination of surface waters, resulting in toxic rates of mercury bioaccumulation. It is unclear whether surface waters could recover from such contamination, and it is possible that any effect of declining mercury deposition will be constrained by chronic accumulation and release of mercury from wetlands. This study investigates mercury retention in Adirondack wetlands. Total mercury (HgT) and methylmercury (MeHg) retained in peat was determined for 3 headwater and 3 riparian sites. Peat was collected along hydrologic gradients within each wetland and analyzed incrementally by depth. Data to date indicate a weak relationship between wetland type and mercury in the top 50 cm of peat ($p=0.08$, $n=3$). Within each wetland, a similar pattern of HgT retention along wetland flow paths and through the depth profile has begun to emerge. Wetlands could behave as long-term sources of MeHg. Quantifying wetland retention of HgT and potential export of MeHg will help address possible delays in recovery of mercury contaminated surface waters relative to reductions in mercury deposition.

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