

Publications and Presentations

Publications

Journal Papers

- Gabriel, M., R. Kolka, T. Wickman, L. Woodruff, and E. Nater. 2012. Latent effect of soil organic matter oxidation on mercury cycling within a southern Boreal ecosystem. *Journal of Environmental Quality*, 41:495-505.
- Woodruff, L.G. and W.F. Cannon. 2010. Forest fire effects on mercury in soils in forests in Northern Minnesota. *Environmental Science and Technology*, 44: 5371-5376..
- Witt, E.L., R.K. Kolka, E.A. Nater, and T.R. Wickman. 2009. Influence of the forest canopy on total and methyl mercury deposition in the boreal forest. *Water, Air, and Soil Pollution*, 199: 3-11.
- Witt, E.L., R.K. Kolka, E.A. Nater, and T.R. Wickman. 2009. Forest fire effects on mercury deposition in the boreal forest. *Environmental Science and Technology*, 43(6): 1776-1782.
- Gabriel M.C., R. Kolka, T. Wickman, E. Nater, and L. Woodruff. 2009. Evaluating the spatial variation of total mercury concentrations in young-of-year fish for watershed-lake systems within the southern Boreal Shield. *Science of the Total Environment*, 407(13): 4117-4126.

Theses

- Emma Witt, M.S., University of Minnesota, Department of Soil, Water and Climate. 2007.
Thesis Title: Atmospheric Deposition of Total and Methyl Mercury in Boreal Forests and Response to Forest Fire. 54 pp.

Presentations

- Kolka, R., E. Witt, M. Gabriel, E. Nater, T. Wickman, C. Mitchell, and S. Fraver. 2012. Influence of fire on mercury cycling in boreal forests. National Water Quality Monitoring Conference, Portland, OR.
- Wickman, T. and R. Kolka. 2012. Mercury dynamics and fire in the Boundary Waters Canoe Area Wilderness. Western Great Lakes Resource Management Conference. Ashland, WI.
- Kolka, R. 2012. Influence of fire on mercury cycling in boreal forests. Superior National Forest Research Forum. Duluth, MN.
- Kolka, R. 2011. Watershed cycling of mercury. Faculty of Natural Resources Management Seminar. Lakehead University, Thunder Bay, Ontario, Canada.
- Kolka, R., E. Witt, T. Wickman, and E. Nater. 2010. Effects of forest type and fire on mercury deposition in Boreal ecosystems. 7th National Water Quality Monitoring Conference, Denver, CO.
- Kolka, R. 2011. Watershed Cycling of Mercury: Lessons Learned from Research in Northern Minnesota. The Water Summit. Grand Rapids, MN.
- Kolka, R. 2011. Watershed Cycling of Mercury. Minnesota Association of Conservation Professionals. Brainerd, MN.
- Kolka, R. and T. Wickman. 2011. Influence of fire on mercury cycling. Webinar for the Lakes States Fire Sciences Consortium.
- Kolka, R., C. Mitchell, and S. Fraver. 2011. Influence of blowdown, fire and salvage logging on forest floor and soil mercury pools. The 10th International Conference on Mercury as a Global Pollutant, Halifax, Canada.

- Kolka, R., E. Witt, T. Wickman, and E. Nater. 2010. Effects of forest type and fire on mercury deposition in Boreal ecosystems. 7th National Water Quality Monitoring Conference, Denver, CO.
- Kolka, R. 2009. Controls on mercury cycling and speciation. Departmental Seminar for the Department of Soil, Water, and Climate, University of Minnesota.
- Kolka, R. 2009. Mercury cycling in northern Minnesota. Radio Interview. KAXE, Minnesota Public Radio.
- Nikolai, S.J., T.R. Wickman, R.K. Kolka, M. Gabriel, and T. Wellnitz. 2009. Fire effects on lake ecosystems: water chemistry and zooplankton community structure. UW Eau Claire Student Research Day, Eau Claire, WI.
- Kolka, R.K. 2009. Watershed cycling of mercury. Brainerd Lakes Area Audubon Society, Brainerd, MN.
- Gabriel, M., R. Kolka, T. Wickman, E. Nater, and L. Woodruff. 2009. Potential impact of organic soil losses on yellow perch (*Perca flavescens*) total mercury concentrations in a boreal ecosystem. Society of Wetland Scientists Meeting, Madison, WI.
- Kolka, R.K. 2008. Mercury in Minnesota watersheds. Natural Resources Seminar Series, University of Minnesota Research and Outreach Center, Grand Rapids, MN.
- Kolka, R., E. Witt, E. Nater, and T. Wickman. 2008. Forest fire effects on mercury deposition in a Boreal forest. Society of American Foresters, Reno, NV.
- Wickman, T., R. Kolka, K. Gebhart, and J. Butcher. 2008. Mercury monitoring across multiple media on the Superior National Forest. Great Lakes Mercury Workshop, La Crosse, WI.
- Kolka, R.K. 2008. Watershed cycling of mercury. Joint departmental seminar of Natural Resources Ecology and Management, and Geological and Atmospheric Sciences, Iowa State University.
- Woodruff, L., and W. Cannon. 2008. Influence of forest fires on levels of mercury in forest soils, Lake Superior Region. Sixth Annual Western Great Lakes Research Conference. Marquette, MI.
- Wickman, T., E. Witt, R. Kolka, and E. Nater. 2008. Effects of forest type and fire on mercury deposition in the Boundary Waters Canoe Wilderness Area. International Lake of the Woods Water Quality Forum. International Falls, MN.
- Kolka, R.K. 2007. Mercury cycling and land management impacts. USFS Air Program National Meeting. Grand Marais, MN.
- Wickman, T., M. Gabriel, R. Kolka, J. Butcher, K. Gebhardt, L. Woodruff, W. Cannon, and E. Witt. 2007. Influence of prescribed fire on the re-mobilization of mercury in the Boundary Waters Canoe Area Wilderness - Update. 2007 International Lake of the Woods Water Quality Forum, International Falls, MN.
- Wickman, T., M. Gabriel, and R. Kolka. 2006. Influence of prescribed fire on the re-mobilization of mercury in the Boundary Waters Canoe Area Wilderness. 2006 International Lake of the Woods Water Quality Forum, International Falls, MN.
- Witt, E., E. Nater and R. Kolka. 2006. Influence of fire on total and methyl mercury deposition in boreal landscapes. Mercury as a Global Pollutant Conference, Madison, WI.
- Gabriel, M., T. Wickman, R. Kolka, E. Nater, J. Butcher, K. Gebhardt. 2006. Influence of prescribed forest fire on the re-mobilization of mercury in the Boundary Waters Canoe Area Wilderness. Mercury as a Global Pollutant Conference, Madison, WI.

Wickman, T., J. Butcher, and R. Kolka. 2005. Influence of prescribed fire on fish and stream water mercury concentrations. 2005 International Lake of the Woods Water Quality Forum, International Falls, MN.

Butcher, J., T. Wickman, and R. Kolka. 2005. Prescribed fire influences on mercury pathways in the Boundary Waters Canoe Area Wilderness, Minnesota. Western Great Lakes Research Conference, Marquette, MI.

Wickman, T., R. Kolka, and J. Butcher. 2004. Effects of prescribed fire on mercury concentrations in water and fish in the Larch Lake watershed. Advancing the Fundamental Sciences Conference. San Diego, CA.