



Hubbard Brook Research Foundation, Hanover, NH

**For Immediate Release**

**Contact:** Judy Brown – 603-653-0390 x102; [jbrown@hbresearchfoundation.org](mailto:jbrown@hbresearchfoundation.org)

## **NEW STUDIES IDENTIFY CAUSES OF MERCURY POLLUTION HOTSPOTS**

### *Vermont Biological Mercury Hotspot Linked to Air Emissions and Reservoirs*

Hanover, NH – Scientists released the results of two new studies that identify five known and nine suspected biological mercury hotspots in northeastern North America and for the first time link them directly to causes. They report that coal-fired power plants in the U.S. are major contributors to the problem. One of the biological mercury hotspots occurs within the Upper Connecticut River of Vermont and New Hampshire and is linked to reservoirs manipulated for power production. The studies are the result of a three-year effort by the Hubbard Brook Research Foundation (HBRF) and are the cover story of the January issue of the peer-reviewed scientific journal *BioScience*.

The HBRF team of 11 scientists used an extensive data base of more than 7300 samples to quantify mercury levels in fish, loons and other wildlife at specific lakes and reservoirs from New York to Nova Scotia. “Statewide fish advisories are a blunt tool that are useful, but don’t demonstrate just how severely polluted some waters really are,” said Dr. David Evers, Executive Director of the BioDiversity Research Institute. According to Neil Kamman, Environmental Scientist with the Vermont Department of Conservation and a co-author of the studies, “Here in Vermont we see particularly high mercury levels in yellow perch within reservoirs along the Upper Connecticut River and Deerfield River, where concentrations are nearly twice the EPA human health criterion.”

The HBRF team linked the biological mercury hotspots to sources of mercury pollution and found that mercury emissions to the air are the leading cause. “The biological mercury hotspot in the Upper Connecticut River appears to be related to the combined effects of airborne mercury pollution and the substantial water level changes in the reservoir,” said Mr. Kamman. The authors report that the leading causes for other biological mercury hotspots including airborne mercury deposition amplified by watersheds made sensitive to mercury pollution by decades of acid rain and other characteristics and particularly high emissions from local sources such as near coal-fired power plants.”

In order to examine the impact of coal-fired power plants, the HBRF team conducted a case study of the biological mercury hotspot spanning southern New Hampshire and northeastern Massachusetts. “This modeling study supports a growing body of evidence that a significant fraction of the mercury that is emitted from coal-fired power plants is deposited in the area surrounding the plants,” said Dr. Thomas Holsen, Professor of Civil and Environmental Engineering at Clarkson University and co-author of the studies. This finding calls into question the appropriateness of the methods EPA used to dismiss the potential for mercury hotspots and justify the cap-and-trade policy of the new Clean Air Mercury Rule. The cap-and-trade approach

allows some units at coal-fired power plants to buy emissions allowances rather than reduce mercury emissions.

Importantly, the results of these studies have prompted the writing of new draft federal legislation aimed at tracking mercury pollution and its effects.

“There is still a lot that we don’t understand about mercury, but it is clear that biological mercury hotspots occur and that mercury emissions from sources in the U.S., as opposed to China and other countries overseas, are the leading cause. Mercury emissions will have to be reduced substantially from current levels if we are to see recovery in sensitive watersheds in the Northeast,” said Dr. Charles Driscoll, a lead author of one of the studies and the University Professor of Environmental Systems Engineering at Syracuse University.

###

**Available for interviews**

Neil Kamman - Environmental Scientist, VT Department of Environmental Conservation, Water Quality Tel. 802 241-3795, [Neil.Kamman@state.vt.us](mailto:Neil.Kamman@state.vt.us).

**For copies of the studies, B-roll, photos, or other supporting material please contact Judy Brown at: 603-653-0390 x102 or [jbrown@hbresearchfoundation.org](mailto:jbrown@hbresearchfoundation.org)**

**The studies and other material will be available on the HBRF website on Tuesday, January 9, 2007 at: [www.hubbardbrook.org/hbrf](http://www.hubbardbrook.org/hbrf)**