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National Water-Quality Assessment (NAWQA) Program

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Mercury in Stream Ecosystems

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The NAWQA Program is studying mercury cycling in watersheds across the Nation to build an understanding of how natural features and human activities affect the transformation, transport, and bioaccumulation of mercury in stream ecosystems. As of August 2008, mercury was the second leading cause of stream impairment throughout the Nation ([USEPA 303\(d\) list](#)). Methylmercury is a neurotoxin that is biomagnified in aquatic food webs so that piscivorous fish and wildlife, and humans that consume fish, are potentially at greater risk of exposure to methylmercury. USGS data and research may aid in the development of more rigorous models that relate water quality to mercury bioaccumulation, thereby enhancing capabilities for predicting mercury contamination in fish.



Mercury contamination is widespread globally, originating from natural and human-related sources, including air transport from coal combustion, waste incineration, and mining.

Featured Research

NEW [Report on mercury in fish, water, and sediment](#) shows widespread mercury contamination in U.S. streams.

[Press Release](#) | [Podcast](#) |
[Frequently Asked Questions](#) |
[Data and methods](#)

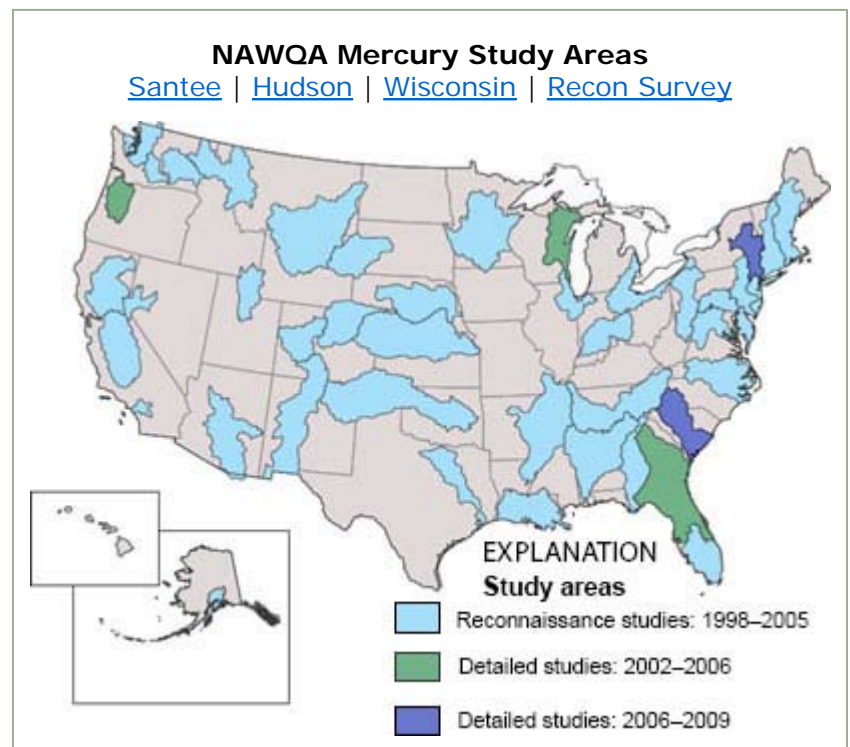
How Mercury Flows Downstream

features three papers on Mercury Cycling in Stream Ecosystems, published in the April 15, 2009 issue of Environmental Science & Technology. The papers summarize studies of 8 streams in Oregon, Wisconsin, and Florida, and are [available for free download](#) (ES&T subscription not required).

[Frequently Asked Questions](#) |
[Major findings](#)

Current studies: [On the trail of mercury in the Upper Hudson River watershed](#), Spruce Moose, Fall 2008, p. 9-11.

[Briefing Handout](#) from NAWQA Liaison Committee meeting, Washington D.C., 21 August 2009



Key Research Questions

- [What controls concentrations of mercury in stream water, sediment, and fish?](#)
 - [How do biological, chemical, and other environmental characteristics govern the methylation, transport, and bioaccumulation of mercury in streams?](#)
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Other USGS Sites with Information on Mercury in the Environment

- [Toxic Substances Hydrology Program](#)
- [Mercury in the Environment](#)

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