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## News Release

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### **Water quality in the Allegheny and Monongahela River Basins is generally good – with some exceptions**

Stream and groundwater quality in many areas of the Allegheny and Monongahela River Basins is improving and is, in many respects, better than or comparable to what is found nationally, according to the results of a 5-year investigation by the U.S. Geological Survey (USGS).

“The quality of rivers around Pittsburgh has really improved in the last 20 years, especially for fish,” said USGS biologist and principal author, Robert Anderson. “A lot of people still think of these rivers as polluted as they were in the 1960’s, but if someone wanted to go fishing for bass or walleye, they could do very well right in downtown Pittsburgh.”

Compliance with regulations that control water discharged from active coal mines has been a factor in the improvement. In addition, government agency and citizens groups have been very active in focusing funding and energy on treatment of water from abandoned coal mines in Pennsylvania, West Virginia, New York, and Maryland.

“Coal mining remains the largest single factor affecting water quality in a large part of the Allegheny and Monongahela River Basins,” said Steve McAuley, Project Chief. “We are not seeing new sources of highly acidic discharges but the water leaving coal mines does differ from water in unmined areas.” Where treatment has not occurred, the water is generally acidic (low pH), and contains elevated concentrations of metals and sulfate. Sulfate concentrations are five times greater in streams draining mined areas than in streams draining unmined areas. In addition, the diversity and abundance of aquatic organisms remain reduced in comparison to areas where there has been no coal mining. These results are based on well and stream samples from more than 180 sites in the coal-bearing region.

The region’s water quality is influenced by more than coal mining. Past pollution still lingers in the form of PCBs, chlordane, and DDT. The use of these compounds has been prohibited for two decades but they remain in fish tissue samples and in river sediments. For example, PCB’s were detected in 43 percent of the total stream sediment and fish samples tested.

Mixtures of currently used pesticides were detected in some agricultural and urban streams and well water. Concentrations of the individual compounds were usually lower than guidelines for drinking water or protection of aquatic life. The potential risk, however, can only be partially

addressed because standards and guidelines are not available for all measured compounds, and they do not consider exposure to mixtures of chemicals.

“Some areas in the Allegheny and Monongahela River Basins appear to be of much better quality than the national average. The amount and types of life living in some forested and agricultural areas are among the most diverse in the Nation,” said Anderson, “which is something to be proud of.”

Copies of the 38-page, color report, “Water Quality in the Allegheny and Monongahela River Basins, 1996-98,” by Robert M. Anderson, Kevin M. Beer, Theodore F. Buckwalter, Mary E. Clark, Steven D. McAuley, James I. Sams, III, and Donald R. Williams, published as USGS Circular 1202, are available free of charge from the USGS Branch of Information Services, Box 25286, Denver Federal Center, Denver, CO 80225, (303) 202-4700 (fax request to (303) 202-4693). The Circular may be viewed on the World Wide Web at <http://water.usgs.gov/nawqa>.

This assessment is part of the National Water Quality Assessment (NAWQA) Program conducted by USGS investigating water-quality conditions in more than 50 major river basins and aquifers. This program is currently releasing results on surface and ground water in 15 additional major river basins. Access the individual basin reports on the NAWQA website, in addition to other NAWQA publications and national data sets and maps.

Further detail on the effects of coal mining in the Allegheny and Monongahela River Basins can be obtained in USGS Water-Resources Investigations Report 99-4208, “Effects of Coal-Mine Drainage on Stream Water Quality in the Allegheny and Monongahela River Basins – Sulfate Transport and Trends,” by James I. Sams, III, and Kevin M. Beer, and in Water-Resources Investigations Report 98-4258, “Stream Water Quality in Coal Mined Areas of the Lower Cheat River Basin, West Virginia and Pennsylvania, During Low-Flow Conditions, July 1997,” by Donald R. Williams, Mary E. Clark, and Julianne Brown.

Further detail regarding pesticides and nutrients can be obtained from Water-Resources Investigations Report 00-4061, “Nutrients and Organic Compounds in Deer Creek and South Branch Plum Creek in Southwestern Pennsylvania, April 1996 through September 1998,” by Donald R. Williams and Mary E. Clark. These reports are available on the web at [http://pa.water.usgs.gov/pa\\_pubs.html](http://pa.water.usgs.gov/pa_pubs.html). A limited supply is available at the USGS office in New Cumberland at 215 Limekiln Road, New Cumberland, Pennsylvania 17070; telephone (717) 730-6916 and the USGS office in Pittsburgh at 1000 Church Hill Road, Suite 200, Pittsburgh, Pennsylvania 15205; telephone (412) 490-3800.

As the nation’s largest water, earth, and biological science and civilian mapping agency, the USGS works in cooperation with more than 2,000 organizations across the country to provide reliable, impartial, scientific information to resource managers, planners, and other customers. This information is gathered in every state by USGS scientists to minimize the loss of life and property from natural disasters, contribute to the sound conservation, economic and physical development of the Nation’s natural resources, and enhance the quality of life by monitoring water, biological, energy, and mineral resources.