

News Release

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Contaminants Found in Yellowstone River Basin, Sources Are Mixed

U.S. Geological Survey scientists studying the Yellowstone River Basin during a 3-year period have found dissolved minerals, radon, fecal coliform bacteria, pesticides, nutrients such as phosphorus, and trace elements such as selenium and arsenic in ground water and surface water.

"The Yellowstone River Basin's water quality is impacted by natural and human sources," stated project hydrologist, Dave Peterson. The study, which examined the Yellowstone River and its tributaries as well as the ground water in the basin, used land-use data to help decipher the water-quality data collected.

"In our study, water that exceeded guidelines for protection of human health and aquatic life was often impacted by a natural source such as geothermal features or erodible soils," Peterson noted. "While humans can sometimes accelerate these natural processes, our study indicates the primary sources for phosphorus, radon, arsenic and selenium in the streams and ground water we sampled were natural."

The study also frequently found pesticides and their break-down products in streams, ground water, and fish tissue, but the concentrations generally were less than standards. Peterson noted, "These data show that humans are impacting the water in the basin, but the pesticides are at a pretty low level when compared to the rest of the nation."

Concentrations of fecal coliform bacteria were highest in urban and agricultural streams among the 100 sites sampled in the basin. The concentrations varied seasonally and were most likely to exceed the recommended levels for contact recreation during the summer.

Copies of the USGS report, "Water Quality in the Yellowstone River Basin, Wyoming, Montana, and North Dakota, 1999–2001," published as USGS Circular 1234, are available free of charge by writing the USGS Branch of Information Services, Box 25286, Denver Federal Center, Denver, CO 80225, or by calling 1–888–ASK–USGS (1–888–275–8747). The report also can be accessed on the World Wide Web at http://water.usgs.gov/nawqa/nawqa_sumr.html.

The USGS assessment is part of a national program currently releasing results on streams and ground water in 14 additional major river basins and aquifer systems. Findings of regional and national interest are highlighted in a separate report "Water Quality in the Nation's Streams and Aquifers—Overview of Selected Findings, 1991–2001." Check the status and availability of these reports on the NAWQA Web site (<http://water.usgs.gov/nawqa/nawqasum/>), as well as accessibility to other publications and national data sets and maps.

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