Decrease in Metals Contamination Seen Over the Past 30 Years

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The U.S. report card on metals contamination in sediment is showing marked improvement. A new study has analysed the past three decades of environmental legislation and regulation, changing demographics and land-use practices on concentrations of metals, finding positive results. The study is published in the latest issue of *Environmental Toxicology and Chemistry*.

Researchers assessed metals accumulation in the sediment of 35 reservoirs and lakes across the United States. Sediments provide a long-term record of metal inputs because they act as a repository for metals released into aquatic systems.
Sediment contamination by metals has been a widespread problem, especially in urban areas. In the past 30 years, the American population has increased by 42%, urban land has increased by 90%, and the number of vehicle miles driven has increased by 150%.

Despite the numbers, efforts to control metals contamination are working, researchers found. Decreasing trends outnumbered increasing trends of metals contamination for all seven metals analysed: cadmium, chromium, copper, lead, mercury, nickel, and zinc. The greatest improvements were seen in urban areas.
Because of its removal from gasoline, not unexpectedly, lead showed the greatest drop, with decreases in 83% of the lakes sampled. Overall, lead had a median decrease of 46%, with chromium coming in next, with a median decrease of 34%. Increasing trends, however, outnumber decreasing trends in zinc in urban watersheds. Previous studies have

attributed this in part to increased vehicle traffic, particularly urban runoff from tires.

The findings of this study indicate that actions such as those taken in environmental regulation and technology have helped to curb the effects of a growing population on metals contamination of US water bodies. It is likely, researchers say, that other countries that have taken similar actions are also seeing positive trends.

Source: Alliance Communications Group