Scientists find link between sulfate, mercury

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When bacteria convert sulfate to hydrogen sulfide, “that’s when they make methyl mercury” out of otherwise benign elemental mercury that has fallen from the sky into waterways over the years, said Ed Swain, research scientist for the Minnesota Pollution Control Agency. “Any added sulfate has the potential to increase how much mercury is methylated.”

Len Anderson, a retired Cloquet science teacher who has studied sulfate and rivers, said the St. Louis River has unusually high levels of mercury and that the river is posted with fish-consumption warnings that urge people to eat fewer and smaller fish to reduce exposure to methyl mercury.

State, federal and tribal resource agencies are just starting a special mercury-reduction effort targeted at the St. Louis River watershed called a Total Maximum Daily Load project. Any industry that contributes to higher mercury levels eventually will be called to join in the effort.

“The state knows that the St. Louis River mercury problem can’t be solved unless they look at the relationship high sulfate has with high mercury,’’ Anderson said. “This problem isn’t going to be wished away by politicians waving a magic wand.”