

Fireworks cause environmental pollution

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U.S. government scientists say Fourth of July fireworks displays often held over lakes and other bodies of water can pollute the water with perchlorate.

The U. S. Environmental Protection Agency's Richard Wilkin and colleagues, who conducted the research, note concerns have arisen over the effects of environmental perchlorate on human health and wildlife. Sources of perchlorate range from lightning and certain fertilizers to the perchlorate compounds in rocket fuel and explosives.

Scientists long suspected community fireworks displays were another source, but few studies had been done on the topic.

Wilkin's group has now established fireworks displays as a source of perchlorate contamination by analyzing water in an Oklahoma lake before and after fireworks displays in 2004, 2005 and 2006. Within 14 hours after the fireworks, perchlorate levels rose 24 to 1,028 times above background levels. Levels peaked about 24 hours after the display, and then decreased to the pre-fireworks background within 20- to 80 days.

The study is detailed in the June 1 issue of the journal *Environmental Science & Technology*.

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