Media Release

Pyrethroid pesticides increase in latest pollution trends monitoring study of California stream bed sediments

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A popular form of insecticide is showing up in significantly higher levels in samples of California stream bed sediments, according to the latest Stream Pollution Trends monitoring program study.

The Stream Pollution Trends (SPoT) monitoring program is an annual assessment of a sample of large watersheds across California to determine how stream pollution concentrations are affected by urban and agricultural land use.

The pyrethroid pesticide residue was detected in 85 percent of the statewide samples taken in 2010, the latest samples analyzed. The pesticide was detected in 55 percent of the 2008 samples. Pyrethroids are a man-made pesticide used in many household insecticides and pet sprays, as well as in public mosquito control programs.

Concentrations of several other classes of organic chemicals, including DDT and PCB's in sediment decreased or remained unchanged in the SPoT program study. Metals in sediments were unchanged between 2008 and 2010.

The report also found that levels of most pollutants in stream sediment were higher in urban areas than in agricultural or open, undeveloped areas. Industrial compounds, some metals and many pesticides were found at higher concentrations in urban watersheds than in agricultural or open watersheds around the state.

The SPoT program measures contaminant concentrations and toxicity in stream sediments that accumulate in downstream reaches of large watersheds. The samples are analyzed for industrial compounds, pesticides, metals, and toxicity to aquatic organisms.

The first report that came out in 2012 assessed the status of large watersheds from the field year 2008. This report summarizes results of the 2009 and 2010 annual surveys and identifies chemicals of concern and the watershed land uses associated with their presence in streams. These data were compared to those of the 2008 SPoT sampling year, allowing a preliminary assessment of emerging trends.

The latest SPoT report is available on the State Water Quality Control Board's web site, at:
http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/workplans/spot9rpt.pdf

The SPoT program surveys are funded by the State Water Resources Control Board's Surface Water Ambient Monitoring Program and the United States Environmental Protection Agency. The survey was designed and is implemented in collaboration with the California Regional Water Quality Control Boards.

The monitoring is conducted by scientists from the University of California Davis' Marine Pollution Studies Laboratory at Granite Canyon, in cooperation with scientists from California State University's Moss Landing Marine Laboratories (MLML), California Department of Fish and Game's Water Pollution Control Laboratory, Rancho Cordova, and Trace Metal Laboratory at MLML, CSU Chico's Geographic Information Center, and the SWAMP program's data management and quality assurance teams.

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