Media Release

State Water Board Report Shows Highest Pollution and Toxicity Levels, Pesticide Contamination in Urban Watersheds

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Contact: Tim Moran
916-327-8239

Sacramento – Urban waterways in California have the highest levels of pollution from heavy metals and industrial organic compounds, according to an online report containing data and tests collected from all over the state by the State Water Resources Control Board (State Water Board).

The Stream Pollution Trends (SPoT) monitoring program is the first consistent assessment of large watersheds across California to determine how stream pollution concentrations are affected by urban and agricultural development.

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

The report examined samples collected in 2008 from 92 of the nearly 200 large watersheds in the state. It is part of a continuing statewide program to measure trends in pollution levels and toxicity in California streams.

The report is a first step in identifying stream pollution trends and measuring the effectiveness of efforts to protect California waterways. The State Water Board and the nine Regional Water Quality Control Boards (Regional Water Boards) administer a variety of programs to improve the state's waters. They include issuing discharge permits to commercial and industrial firms; setting limits on pollutants entering water bodies; and regulating agricultural waste water, storm water discharges, septic systems and municipal sewage system spills. The State Water Board also provides funding for various programs aimed at cleaning waterways.

The report provides specific data for the State's biennial Clean Water Act assessments, and will help determine chemicals of concern in impaired streams.

Storm water agencies and Regional Water Boards will use the data to determine compliance with water quality regulations, and evaluate the effectiveness of practices to improve water quality.

Other findings in the report include:

- Pyrethroid pesticides were found in 55 percent of the samples analyzed statewide. The highest pyrethroid concentrations were measured in sediments collected from urban watersheds, plus two agricultural watersheds along the Central Coast.

- Stream sediment concentrations of heavy metals, such as cadmium, copper, lead and zinc, tended to be highest in Los Angeles and San Francisco Bay area watersheds. These metals are released to the environment from brake pads, plumbing, industrial and commercial activities.

- Industrial organic compounds such as PCBs, PBDEs (flame retardants) and PAHs (hydrocarbons) were also generally highest in stream sediments from the Los Angeles and San Francisco Bay areas, although high concentrations were also measured in more remote locations.

- Mercury concentrations were highest in sediments from watersheds where it is geologically abundant and historically mined, although some urban streams also had relatively high mercury levels.

- The pesticide DDT, banned more than 40 years ago, was found in stream sediments from most urban and agricultural watersheds. Soil disturbances from development and tillage likely mobilizes DDT residues that persist in the sediment from applications four decades ago.

- Metals, industrial compounds, DDTs, and pyrethroid pesticides were all found at significantly higher concentrations in urban streams.

The Stream Pollution Trend (SPoT) program surveys are funded by the State Water 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 program 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.

www.CaWaterQuality.net
http://www.waterboards.ca.gov/mywaterquality/

The report, *Statewide Perspective on Chemicals of Concern and Connections between Stream Water Quality and Land Use*, is available on the SWAMP website at:
www.waterboards.ca.gov/water_issues/programs/swamp/

The State Water Resources Control Board's mission is to preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

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