



## State Water Resources Control Board

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### **Largest-Ever Survey Documents Extent of Contamination in Sport Fish in California Lakes**

**Sacramento** – The State Water Resources Control Board's Surface Water Ambient Monitoring Program (SWAMP) has released findings from California's largest ever survey of contaminants in sport fish from lakes and reservoirs. The survey found mercury and polychlorinated biphenyls (PCBs) are the two greatest concerns.

This report represents the end of a two-year survey and presents new data on 122 lakes sampled in 2008, adding to the database covering 150 lakes sampled in 2007 and reported last year. The survey focuses on sport fish because they provide information on human exposure and also represent the top of the aquatic food chain.

Mercury accumulation in fish is a persistent problem throughout much of the state. Twenty-one percent of the lakes surveyed had at least one fish species with an average mercury level that exceeded the Office of Environmental Health Hazard Assessment (OEHHA) threshold for considering a recommendation of no consumption for women of childbearing age and children. Methylmercury can affect the developing nervous system in children and adolescents, potentially leading to learning disabilities. Mercury contamination of California water bodies is largely a legacy of historic mercury and gold mining, but can also reach lakes from regional and global emissions to the atmosphere. However, the degree of mercury contamination in the state's lakes is comparable to the average condition observed across the U.S. in a recent national lakes survey.

PCBs were second to methylmercury as a potential health concern to consumers of fish caught from California lakes. However, only 1% of the lakes sampled had a species with an average concentration that exceeded OEHHA's threshold or considering a recommendation of no consumption. PCBs may cause cancer, damage the liver, digestive tract, and nerves; and affect development, reproduction, and the immune system. PCBs are persistent chemicals that are now banned, but were commonly used in electrical, industrial and other applications. Other pollutants, including dieldrin, DDT, chlordanes, and selenium, were also found, but generally at low levels.

The Lakes Survey focused on nearly 300 of the most popular fishing lakes in the state. Random sampling of an additional 50 of California's other 9,000 lakes was included to provide the basis for a statistical statewide assessment. This initial screening study was the first step in an effort to identify and quantify contaminants in California's lakes to provide a detailed evaluation of human and wildlife exposure. The Lakes Survey was paid for by funds supplied by the United States Environmental Protection Agency (USEPA) and monitoring fees paid to the State Water Board for waste discharge

permits. OEHHA will not be able to develop new consumption recommendations based solely on data from this screening study – more thorough sampling will be required.

The Lakes Survey was the first component of a new program that is tracking sport fish contamination in all California water bodies. Results from the first year of a two-year survey of contaminants in sport fish from California coastal waters will be available in May 2011.

The public can access results for individual fishing locations included in the Lakes Survey through the California Water Quality Monitoring Council's "My Water Quality" web portal at:

<http://www.waterboards.ca.gov/mywaterquality/>

Information on sport fish contamination can be accessed by clicking on "Is It Safe to Eat Fish and Shellfish from Our Waters?"

The Lakes Study Report is available on the SWAMP website at:

[http://www.waterboards.ca.gov/water\\_issues/programs/swamp/lakes\\_study.shtml](http://www.waterboards.ca.gov/water_issues/programs/swamp/lakes_study.shtml).

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.

## **Lakes Survey Fact Sheet**

### **How is this survey different from past research on contaminants in California's lakes?**

This two-year survey looks at accumulated contaminants at the top of the food chain in nearly 300 lakes statewide. It is the largest survey of its kind and should provide the most extensive data ever made available.

### **What did the survey find?**

21-percent of California's lakes are contaminated with levels of mercury that exceed thresholds set by the Office of Environmental Health Hazard Assessment (OEHHA) at or above levels at which OEHHA would recommending no consumption for women of child bearing age and children.

### **Will the survey result in such a determination?**

No. More sampling is required before OEHHA would make that kind of determination.

### **Is mercury the only contaminant found at those levels?**

No. Polychlorinated biphenyls (PCBs) were also found at unhealthy levels in one-percent of the lakes surveyed.

**Who actually performed the survey?**

The two-year survey was done by the San Francisco Estuary Institute on behalf of the State Water Board.

**What happens next?**

Results of the first year of a two-year survey of sport fish in coastal waters will be available in 2011.