Media Release

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Monitoring of Urban Coastal Areas Shows Widespread Moderate Methylmercury and PCB Contamination in Sport Fish

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

This report presents findings from 2009 - the first year of a two-year survey - including new data for 42 locations. The survey focuses on sport fish because they provide information on human exposure and also the condition of the aquatic food web. Monitoring in 2009 centered on areas near Los Angeles and San Francisco, including San Francisco Bay.

Methylmercury accumulation in fish is a persistent problem throughout much of the state. Eight of 42 locations sampled had at least one fish species with an average methylmercury concentration 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. At all but one of the locations the highest concentrations were observed in sharks, which have a tendency to accumulate high levels of methylmercury worldwide.

Most of the locations sampled (33 of 42) had a moderate degree of methylmercury contamination. Methylmercury can affect the developing nervous system in children and adolescents, potentially leading to learning disabilities. Methylmercury contamination of California coastal waters likely originates from multiple sources, including, historic mercury, gold, and silver mining, regional and global emissions to the atmosphere, and urban and industrial wastewater and stormwater.

PCBs were comparable to methylmercury as a potential health concern to consumers of fish caught from California's urban coastlines. Six of 42 locations sampled had at least one fish species with an average PCB concentration that exceeded the OEHHA threshold for considering a recommendation of no consumption.

San Francisco Bay and San Diego Bay stood out as having elevated concentrations. Most of the locations sampled (31 of 42) had a moderate degree of PCB contamination. Only five locations from more remote areas had concentrations lower than the lowest threshold. 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.

This initial screening study is the first step in an effort to identify and quantify contaminants in California's coastal waters to provide a detailed evaluation of human and wildlife exposure and to establish priorities for cleanup actions. 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 Coast Survey was funded by the State Water Resources Control Board's Surface Water Ambient Monitoring Program (SWAMP and the United States Environmental Protection Agency (USEPA). This survey was performed in close collaboration with the Southern California Bight Regional Monitoring Program and the Regional Monitoring Program for Water Quality in the San Francisco Estuary.

The Coast Survey is one component of a new program that is tracking sport fish contamination in all California water bodies. Results for another 27 coastal locations will be available in May 2012. Results from a statewide assessment of contaminants in sport fish from California rivers and streams will be available in May 2013.

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

www.CaWaterQuality.net

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

The Coast Survey Report is available on the SWAMP website at:

www.waterboards.ca.gov/water_issues/programs/swamp/coast_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.

Coast Survey FAQ

How is this survey different from past research on contaminants in California coastal waters?

This two-year survey is looking at accumulated contaminants at the top of the food chain in 69 coastal locations statewide. It is the largest survey of its kind and will provide the most extensive data ever made available.

What did the survey find?

19-percent of the urban coastal locations sampled are contaminated with levels of methylmercury that exceed thresholds set by the Office of Environmental Health Hazard Assessment (OEHHA) at or above levels at which OEHHA would consider 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 methylmercury the only contaminant found at those levels?

No. Polychlorinated biphenyls (PCBs) were also found at comparable levels in 14-percent of the locations surveyed.

Who actually performed the survey?

The two-year survey is a collaborative effort of the State Water Resources Control Board's Surface Water Ambient Monitoring Program (SWAMP), the Southern California Bight Regional Monitoring Program, and the Regional Monitoring Program for Water Quality in the San Francisco Estuary.

What happens next?

Results of the second year of this two-year survey of sport fish in coastal waters will be available in May 2012.