A FACT SHEET FROM

SAFE EATING GUIDELINES

for fish and shellfish from the Sacramento River and Northern Delta

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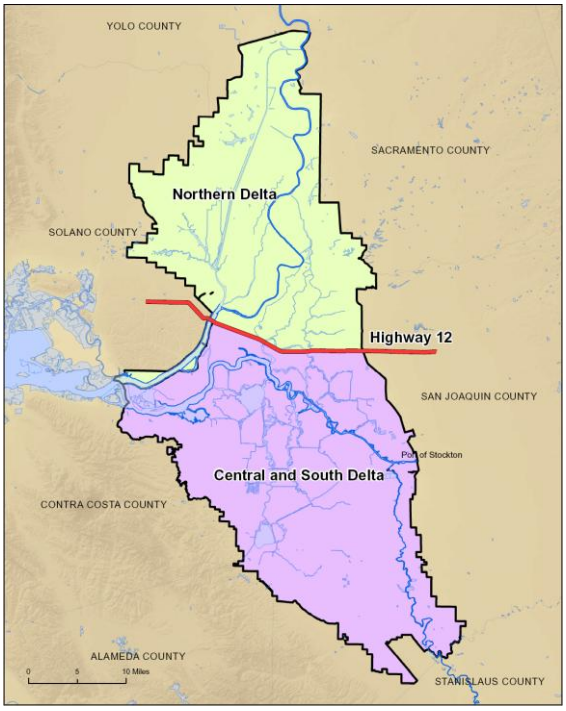
Why has OEHHA developed "Safe Eating Guidelines" for fish from the Sacramento River and Northern Delta?

The Fish Mercury Project, a large study funded by the California Bay-Delta Authority, studied mercury levels in fish and shellfish from water bodies in the Sacramento Valley. This project collected and tested fish in 2005–2007. The results showed that many fish and shellfish from this area contained mercury at levels that call for "safe eating guidelines" to protect health. A few fish species, including river-run salmon, trout, shad, and clams, contained very low mercury levels and can be eaten often as part of a healthy diet. Other fish studies were done in past years by the State Water Resources Control Board, CALFED Mercury Project, and University of California, Davis.

The Office of Environmental Health Hazard Assessment (OEHHA) is responsible for providing fish consumption guidelines for sport fish in California. OEHHA used the studies above to evaluate possible health effects from eating fish and shellfish from this area.

OEHHA issued a report in 2008 with safe eating guidelines for the Sacramento River from just below Shasta Lake to where it joins the San Joaquin River in Pittsburg, and for creeks, sloughs, and other water bodies in the "Northern Delta" – north of Highway 12. The guidelines are now being updated to add fish species that move between rivers, streams, estuaries, and coastal waters and can be caught in the Sacramento River and Northern Delta.



OEHHA also issued safe eating guidelines for the "Central and South Delta," including the San Joaquin River from the Sacramento River to the Port of Stockton; and other rivers, sloughs, and flooded tracts in the Delta, south of Highway 12, as shown in the map.

"Safe eating guidelines" give information to help people choose the safest fish to eat. The guidelines also recommend how often these fish can be eaten for the greatest health benefits. OEHHA recommends you choose low-mercury fish to eat, especially fish that are high in heart-healthy "omega-3s." One set of safe eating guidelines is for women ages 18–45 and children 1–17 years. The guidelines are meant to protect fetuses and children whose brains are more sensitive to methylmercury (the form of mercury in fish). A second set of guidelines is for women over 45 years and men, who are generally less sensitive to methylmercury.

Why are mercury levels higher in some fish than in others?

Much of the mercury in the environment comes from volcanoes and coal-burning power plants, which release mercury into the air. Mercury in air can be carried worldwide before it is deposited into oceans, lakes, and other water bodies. Mercury from old mercury mines or gold mining regions (where mercury was used to recover gold) also runs off into waterways. Mercury builds up in the mud and sand at the bottom of water bodies. Bacteria change the mercury into a more toxic form known as "methylmercury" that fish take in from their diet. This mercury can build up in fish to levels many thousands of times greater than mercury levels in the surrounding water.

Mercury levels in fish are affected by what fish eat, fish size, and their environment. Fish, such as bass, that mostly eat other fish tend to have the highest mercury levels. In the Sacramento River, for example, largemouth bass and Sacramento pikeminnow had higher mercury levels than many other fish and shellfish. It is better to eat smaller fish of a species, provided they are legal size, because fish build up mercury as they grow larger. Fish from more contaminated areas might also have higher mercury levels than fish from other places.

Why should fish be eaten if they might contain mercury or other chemicals?

Fish are a nutritious source of protein and heart-healthy fats called "omega-3s" that benefit the heart, brain, and eyes. That is why the American Heart Association recommends healthy adults eat at least two servings of fish each week. To benefit most from eating fish, it is important to eat fish low in contaminants and high in "omega-3s." The safe eating guidelines show which types of fish have high levels of "omega-3s."

"Omega-3s"are beneficial nutrients found in fish that are good for the heart, and also support brain development in babies.

What are the health effects from eating fish with mercury?

Mercury in fish can affect your health if you are exposed to large amounts over time. Mercury can harm fetuses and children while their brains are growing. Too much mercury can cause small changes in their learning ability, language skills, attention, or memory. These effects may occur through the teenage years while the nervous system continues to develop. Pregnant women can pass mercury to their babies through the placenta. For these reasons, OEHHA gives more cautious guidelines for women ages 18–45 and children 1–17 years.

Women ages 18–45 years, including pregnant and breastfeeding women, and children ages 1–17 should carefully follow guidelines for eating fish.

Do fish from stores and restaurants contain mercury?

Most ocean and freshwater fish contain some mercury, so consider all the fish you eat when making choices about how much and which types of fish to eat. The federal government advises women of childbearing age and children not to eat shark, swordfish, king mackerel, or tilefish. These ocean species tend to have very high mercury levels. Women of childbearing age and children can safely eat up to two average servings a week of a variety of other fish from stores or restaurants, but only if they do not eat sport fish from local water bodies in the same time period. Some low-mercury fish you can buy that are high in "omega-3s" are salmon, trout, herring, and sardines.

What about fish caught from other nearby locations?

The Fish Mercury Project also studied the San Joaquin River and Central and South Delta, where safe eating guidelines were issued in March 2007. Most fish in the Central and South Delta, except for striped bass and sturgeon, had low mercury levels, and can be safely eaten more often. You can use OEHHA's contact information and website given in this fact sheet to get more information. There are also advisories for fish and shellfish from the Lower Cosumnes and Lower Mokelumne Rivers, Lake Natoma, Folsom Lake, and other water bodies in northern California.

Are there other chemical contaminants in these fish?

Pesticides in fish and shellfish samples tested from this region were either not found or at very low levels. Some of the fish that swim between the ocean and rivers, including striped bass and sturgeon, have both mercury and PCBs. PCBs are a man-made chemical that might cause cancer. The levels of PCBs were also taken into account when developing advice for the species that had some PCBs.

Where can I get more information?

The safe eating guidelines for the Central and South Delta and the San Joaquin River can be found on OEHHA's Web site at the address below. For more information on mercury and other chemicals in sport fish in California, or fish advisories from other water bodies, contact:

Office of Environmental Health Hazard Assessment (OEHHA)
1515 Clay Street, 16th Floor
Oakland, California 94612
Telephone (510) 622-3170 FAX (510) 622-3218
Or visit the OEHHA Web site at: http://www.oehha.ca.gov (Click on "Fish")

For information on mercury in commercial fish, contact:

U.S. Food and Drug Administration
Center for Food Safety and Applied Nutrition
1 (888) SAFEFOOD

Or visit the U.S. EPA website at
http://water.epa.gov/scitech/swguidance/fishshellfish/outreach/advice_index.cfm

For information on the Fish Mercury Project, visit: http://www.sfei.org/cmr/fishmercury/