



SAFE EATING GUIDELINES

for fish from the Lower Feather River

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Why has OEHHHA developed a health advisory for fish from the Lower Feather River?

Studies by the State Water Resources Control Board, the CALFED Mercury Project, and the Sacramento River Watershed Program indicated that some species of fish in the Lower Feather River contain elevated levels of mercury and could pose a health risk to people who eat them frequently. The Office of Environmental Health Hazard Assessment (OEHHHA) evaluated the health effects of eating fish from this river and issued a report and health advisory with “safe eating guidelines” for the consumption of fish from these water bodies. For the purpose of this advisory, the Lower Feather River is defined as the entirety of the river downstream from the Fish Barrier Dam to the confluence of the Sacramento River. The guidelines are now being updated to add fish species that move between the rivers, streams, and coastal waters and can be caught in the Lower Feather River.

The safe eating guidelines identify fish containing low levels of mercury that can be eaten two or more times a week. The guidelines also include fish whose consumption should be limited to one serving a week or whose consumption is not recommended. One set of guidelines applies to women of childbearing age (18–45 years) and children ages 1–17, who are particularly sensitive to methylmercury (the most prevalent and toxic form of mercury in fish). A second set applies to women over 45 years and men.

Because methylmercury affects neurological development, women 18–45 years and children ages 1–17 and younger should carefully follow guidelines for eating these fish.

Does the water in the river pose a hazard?

No. As explained below, mercury tends to accumulate in fish, but not in the water itself. Physical contact with the water is safe.

Why is mercury found in fish from this region?

Mercury contamination of fish is a global problem. Emissions from coal-burning power plants and volcanoes release mercury into the air where it can be carried worldwide before being deposited in oceans, lakes, and rivers. In northern California water bodies, however, mercury is also a legacy of gold and mercury mining activities that began during the Gold Rush. Gold miners used mercury to extract gold from mined materials and discharged the waste into nearby water bodies, such as the Feather River, where the mercury accumulated in the sediment.

Once mercury accumulates in bottom sediments in lakes or other water bodies, bacteria convert it into a more toxic form, known as methylmercury, which fish take in from their diet. Methylmercury can build up in fish to concentrations many thousands of times greater than mercury levels in the surrounding water. Because methylmercury accumulates in fish slowly over time, larger fish of a species usually have higher concentrations of methylmercury than smaller fish from the same water body. Predatory fish, such as bass, generally contain more methylmercury than non-predatory fish, such as trout.

What are the human health effects of methylmercury found in these fish?

Developing fetuses and children are especially sensitive to methylmercury. Pregnant women and nursing mothers can pass on methylmercury to their fetuses or infants through the placenta and through breast milk. Excessive exposure to methylmercury can affect the nervous system in children, leading to subtle decreases in learning ability, language skills, attention, and memory. These effects may occur following exposure through adolescence as the nervous system continues to develop during this time. For this reason, a more conservative set of guidelines applies to women 18–45 years and children 1–17 years.

In adults, the most subtle symptoms of methylmercury toxicity are numbness and tingling sensations in the hands and feet or around the mouth. The levels of methylmercury found in fish from these lakes and rivers should not result in the health effects described above if OEHHA's guidelines are followed.

Can I still eat fish from this water body?

Yes. Fish are a nutritious part of your diet when eaten in moderate amounts. By following OEHHA's safe eating guidelines for eating fish from this water body, you can reduce your risk of health effects from exposure to methylmercury.

Because of the increased sensitivity to methylmercury during periods of neurological development, it is very important for women 18–45 years and children 1–17 years to follow the guidance provided. The Feather River has several species of fish that are very high in methylmercury and, as a result, this population group should be especially careful when choosing which fish to eat. In particular, striped bass, sturgeon, pikeminnow, catfish, largemouth, smallmouth, and spotted bass caught from the Feather River should not be eaten at all by women 18–45 years and children 1–17 years. Women 18–45 and children 1–17 years can eat one serving a week of sunfish species (e.g. bluegill or redear sunfish), carp, or Sacramento sucker, provided no other fish are eaten that week. Better choices are American shad, Chinook (king) salmon, or steelhead trout, because they are high in beneficial fats called "omega-3s." Women 18–45 years and children 1–17 years can eat two to three servings a week of these fish.

Choose fish that are low in mercury and high in omega-3s to continue to enjoy the benefits of eating sport fish.

There are more options for women over 45 years and men. The safe eating guidelines allow for this population group to eat up to seven servings a week of American shad, Chinook (king) salmon, or steelhead trout, or two servings a week of sunfish, Sacramento sucker, carp, or striped bass from the Feather River. This population should limit their consumption of largemouth, smallmouth, or spotted bass, catfish, or Sacramento pikeminnow to no more than one serving a week and not eat any other fish that week.

Because almost all ocean and freshwater fish contain some level of methylmercury, consider your total fish consumption when making choices about how much and which types of fish to eat. For example, the federal government advises women of childbearing age and children not to eat shark, swordfish, king mackerel, or tilefish, because these ocean species tend to have high mercury levels. Women 18–45 years and children 1–17 years can safely eat up to two servings a week of a variety of commercial fish, but only if they do not eat sport fish from local water bodies in the same time period. If you eat fish caught from other water bodies in California, check whether OEHHA has issued safe eating guidelines for that location. If there are no consumption guidelines for a specific water body, fish caught from that location should be eaten in limited amounts.

Where can I get more information?

For information on mercury and other contaminants in sport fish in California, contact:

Office of Environmental Health Hazard Assessment
Pesticide and Environmental Toxicology Branch
P.O. Box 4010, MS 12B, Sacramento, CA 95812-4010
(916) 327-7319 or <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