



INFORMATION ABOUT EATING FISH FROM THE LOWER MOKELUMNE RIVER (SACRAMENTO AND SAN JOAQUIN COUNTIES)

Office of Environmental Health Hazard Assessment (OEHHA)
California Environmental Protection Agency
November 2022

Why did OEHHA update the advisory for eating fish from the Lower Mokelumne River?

OEHHA updated the advisory for the Lower Mokelumne River in 2022 to include the revised advice for [fish that migrate](#). This advisory was developed because of mercury and polychlorinated biphenyls (PCBs) present in the fish caught from this water body. The Lower Mokelumne River flows through Sacramento and San Joaquin counties and is defined as both forks of the Mokelumne River downstream of [Camanche Reservoir](#) to the confluence of the [San Joaquin River](#). This advisory supersedes the previous advisory, released in 2012, for eating fish from the Lower Mokelumne River and is part of an ongoing effort by OEHHA to provide safe-eating advice for fish from different California water bodies.

Why should I eat fish?

- Low-contaminant fish are an important part of a healthy, well-balanced diet. The American Heart Association recommends eating at least two servings of fish each week.
- Fish are a good source of protein and vitamins, and are a primary dietary source of heart-healthy omega-3 fatty acids. Eating low-contaminant fish while pregnant may be beneficial to the baby's brain development.

Which contaminants are of concern for people eating these fish from the Lower Mokelumne River?

- Mercury
 - Mercury is a metal that comes from mining, air fallout from burning coal and other fuels, and from natural sources. It is the most commonly found contaminant of concern in fish.
 - Too much methylmercury, the form of mercury found in fish, can harm the brain, especially in fetuses, babies, and children. Mothers can pass methylmercury to their babies during pregnancy.
 - Because fetuses, babies, and children are especially sensitive to mercury, OEHHA has one set of advice for the amount of mercury-containing fish that women age 18–49 years and children should eat, and another set of advice for women 50 years and older and men 18 years and older.

- Polychlorinated Biphenyls (PCBs)
 - PCBs are industrial chemicals. While banned in the 1970s, they persist for many years in the environment and are still found in fish, sediment, and water as a result of spills, leaks, and improper disposal.
 - PCBs can increase cancer risk. PCBs may also harm the developing fetus, which can include effects on growth and learning. Women can pass PCBs on to their babies during pregnancy and breastfeeding.
 - PCBs can build up to very high levels in the skin, fat, and some internal organs of fish. That is why OEHHA recommends eating only the skinless fillet (meat) of fish.

How did OEHHA determine the consumption guidelines for eating these fish species from the Lower Mokelumne River?

- OEHHA compared contaminant levels in fish caught from the Lower Mokelumne River to levels that are considered safe for human consumption.
- OEHHA’s consumption guidelines balance the health benefits of fish consumption and the risks from the contaminants.

What does OEHHA recommend for people who want to eat these fish species from the Lower Mokelumne River?

- OEHHA recommends the types and amounts of fish that may be eaten each week as “servings.” A serving is about the size and thickness of your hand for fish fillets. Give children smaller servings. For smaller fish species, several individual fish may be required to yield a serving.
- Women 18–49 years and children 1–17 years
 - Should not eat black bass species, Sacramento Pikeminnow, Striped Bass, or White Sturgeon
 - May eat:
 - 1 total serving per week of catfish species or sunfish species, or
 - 2 total servings per week of American Shad, Chinook (King) Salmon, or Steelhead Trout
- Women 50 years and older and men 18 years and older
 - May eat:
 - 1 total serving per week of black bass species, Sacramento Pikeminnow, Striped Bass, or White Sturgeon, or
 - 2 total servings per week of catfish species or sunfish species, or
 - 5 total servings per week of Chinook (King) Salmon or Steelhead Trout, or
 - 7 total servings per week of American Shad
- For additional fish species found in the Lower Mokelumne River and not included in this advisory, OEHHA recommends following the [statewide advisory for eating fish from California’s rivers, streams, and creeks without site-specific advice.](#)

What else can I do to protect my health and the health of my family?

- Eat a variety of fish.
- Eat smaller (younger) fish of legal size.
- Eat only the skinless fillet or meat portion of fish.
- Thoroughly cook the fish and allow the juice to drain away.
- Learn about OEHHA's guidelines for eating sport fish in California:
 - Visit <https://oehha.ca.gov/fish/advisories>, or call OEHHA at (916) 324-7572 or (510) 622-3170
 - Check the Freshwater or Ocean Sport Fishing Regulations booklets from the California Department of Fish and Wildlife, or visit <https://www.wildlife.ca.gov/Regulations>



Women
(18-49 Years)

Children
(1-17 Years)

2 TOTAL
SERVINGS
A WEEK

OR

1 TOTAL
SERVING
A WEEK

0 DO NOT
EAT



California Office of
Environmental Health
Hazard Assessment

web www.oehha.ca.gov/fish
email fish@oehha.ca.gov
phone (916) 324-7572

A GUIDE TO EATING FISH *from the* LOWER MOKELUMNE RIVER*

(SACRAMENTO AND SAN JOAQUIN COUNTIES)

**WOMEN 18 - 49 YEARS AND
CHILDREN 1 - 17 YEARS**

Eat the Good Fish

Eating fish that are low in chemicals may provide health benefits to children and adults.



Avoid the Bad Fish

Eating fish with higher levels of chemicals like mercury or PCBs may cause health problems in children and adults.



Choose the Right Fish

Chemicals may be more harmful to unborn babies and children.



American Shad
♥ high in omega-3s



Chinook (King) Salmon*
♥ high in omega-3s



Steelhead Trout
♥ high in omega-3s



Catfish Species



Sunfish Species



Black Bass Species



Sacramento Pikeminnow



Striped Bass



White Sturgeon

Serving Size

A serving of fish is about the size and thickness of your hand. Give children smaller servings.

For Adults



For Children



Eat only the
skinless fillet



Some chemicals are higher in the skin, fat, and guts.

Eat only the meat



*Only in waters where take is permitted per CDFW regulations at www.wildlife.ca.gov.

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Women
(50+ Years)

Men
(18+ Years)

7 TOTAL
SERVINGS
A WEEK

OR

5 TOTAL
SERVINGS
A WEEK

OR

2 TOTAL
SERVINGS
A WEEK

OR

1 TOTAL
SERVING
A WEEK



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WOMEN 50 YEARS AND OLDER AND
MEN 18 YEARS AND OLDER

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♥ high in omega-3s



Chinook (King) Salmon*
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Steelhead Trout
♥ high in omega-3s



Catfish Species



Sunfish Species



Black Bass Species
♥ high in omega-3s



Sacramento Pikeminnow



Striped Bass
♥ high in omega-3s



White Sturgeon

Serving Size

A serving of fish is
about the size and
thickness of your
hand. Give children
smaller servings.

For Adults



For Children



Eat only the
skinless fillet



Some chemicals are higher in the skin, fat, and guts.

Eat only the meat



*Only in waters where
take is permitted per
CDFW regulations at
www.wildlife.ca.gov.

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