



## INFORMATION ABOUT EATING FISH FROM SAN FRANCISCO BAY

(ALAMEDA, CONTRA COSTA, MARIN, NAPA, SAN FRANCISCO, SAN MATEO,  
SANTA CLARA, SOLANO, AND SONOMA COUNTIES)

Office of Environmental Health Hazard Assessment (OEHHA)

California Environmental Protection Agency

April 2023

### Why did OEHHA update the advisory for eating fish from San Francisco Bay?

OEHHA updated the advisory for San Francisco Bay because additional data became available. This advisory supersedes the previous advisory released in 2011 for eating fish from San Francisco Bay and is part of an ongoing effort by OEHHA to provide safe-eating advice for fish from different California water bodies. This advisory includes the entire San Francisco Bay estuary, including San Pablo Bay, Suisun Bay, San Francisco Bay, and five other bays: Honker, Richardson, San Rafael, San Leandro, and Grizzly. The advisory also includes advice developed separately for [fish that migrate](#).<sup>1</sup> The “do-not-consume” advice from the 2011 advisory for all fish in the Lauritzen Channel located in Richmond Inner Harbor remains in effect. Separate advisories are available for the [Sacramento River and Northern Delta](#) and the [Central and South Delta](#).

### 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 San Francisco Bay?

- San Francisco Bay
  - 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-

<sup>1</sup> Steelhead Trout are not legal to take from the San Francisco Bay.

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.
- Lauritzen Channel
  - Dichlorodiphenyltrichloroethane and its byproducts (DDTs) and dieldrin
    - DDTs and dieldrin are pesticides. While banned in the 1970s and late 1980s, respectively, they may still be found in fish sampled from California water bodies.
    - High levels of DDTs and dieldrin can cause health problems including cancer or adverse effects on the nervous system.
    - DDTs and dieldrin can also build up to very high levels in the skin, fat, and some internal organs of fish.

### **How did OEHHA determine the consumption guidelines for eating these fish species from San Francisco Bay?**

- OEHHA compared contaminant levels in fish caught from San Francisco Bay and Lauritzen Channel 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 San Francisco Bay?**

- 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 Mississippi Silverside, Pacific Sardine, shark species, Shiner Perch, Striped Bass, Topsmelt, White Sturgeon, or any fish from the Lauritzen Channel.
  - May eat:

- 1 total serving per week of California Halibut, Jacksmelt, Northern Anchovy, Barred Surfperch, Black Perch, Rubberlip Surfperch, Walleye Surfperch, White Surfperch, or White Croaker, or
  - 2 total servings per week of American Shad or Chinook (King) Salmon
- Women 50 years and older and men 18 years and older
    - Should not eat Mississippi Silverside, Pacific Sardine, Shiner Perch, Topsmelt, or any fish from the Lauritzen Channel.
    - May eat:
      - 1 total serving per week of Northern Anchovy, shark species, Striped Bass, Walleye Surfperch, White Sturgeon, or White Croaker, or
      - 2 total servings per week of California Halibut, Jacksmelt, or
      - 3 total servings per week of Barred Surfperch, Black Perch, Rubberlip Surfperch, White Surfperch, or
      - 5 total servings per week of Chinook (King) Salmon, or
      - 7 total servings per week of American Shad

### How long is the advisory in effect?

This advisory is effective starting April 2023 and does not expire. Chemical contaminant levels in fish do not change much over time; the advisory remains in effect until an update is issued.

### 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](http://www.oehha.ca.gov/fish)  
email [fish@oehha.ca.gov](mailto:fish@oehha.ca.gov)  
phone (916) 324-7572

# A GUIDE TO EATING FISH *from* SAN FRANCISCO BAY

(ALAMEDA, CONTRA COSTA, MARIN, NAPA, SAN FRANCISCO, SAN MATEO, SANTA CLARA, SOLANO, SONOMA 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



California Halibut



Jacksmelt



Barred Surfperch



Black Perch



Walleye Surfperch



Northern Anchovy  
♥ high in omega-3s



Rubberlip Surfperch



White Surfperch



White Croaker

**Do Not Eat Any  
Fish from  
Lauritzen Channel**



Shark species



Striped Bass



Topsmelt



Mississippi Silverside



Pacific Sardine



Shiner Perch



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



Updated 04/2023



**Women**  
(50+ Years)

**Men**  
(18+ Years)

**7** TOTAL SERVINGS A WEEK

OR

**5** TOTAL SERVINGS A WEEK

OR

**3** TOTAL SERVINGS A WEEK

OR

**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](http://www.oehha.ca.gov/fish)  
email [fish@oehha.ca.gov](mailto:fish@oehha.ca.gov)  
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♥ high in omega-3s



**Barred Surfperch**



**Black Perch**



**Rubberlip Surfperch**



**White Surfperch**



**California Halibut**



**Jacksmelt**



**Northern Anchovy**  
♥ high in omega-3s



**Shark species**



**Striped Bass**  
♥ high in omega-3s



**Walleye Surfperch**



**White Sturgeon**



**White Croaker**

### Do Not Eat Any Fish from Lauritzen Channel



**Mississippi Silverside**



**Pacific Sardine**



**Shiner Perch**



**Topsmelt**

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### For Children



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Updated 04/2023



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(18 – 49 Years)

**Children**  
(1 – 17 Years)

**DO NOT  
EAT**



**Women**  
(50+ Years)

**Men**  
(18+ Years)

**DO NOT  
EAT**

## A GUIDE TO EATING FISH *from the*

### LAURITZEN CHANNEL

IN RICHMOND INNER HARBOR

(CONTRA COSTA COUNTY)

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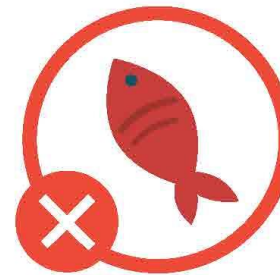
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# ALL FISH

