



# Fish Advisory Program



**GOOD CATCH**  
**CALIFORNIA**

*Your Fish Advisor*

*Lori Chumney*

*Office of Environmental Health Hazard Assessment  
for Tribal Advisory Committee Meeting 12/13/17*

# Chemicals of Concern and Health Risks

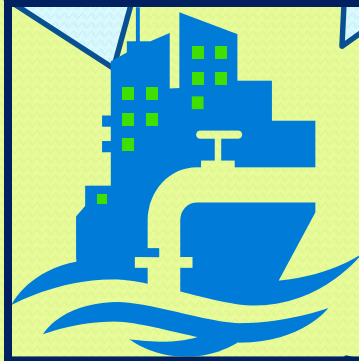


Mercury

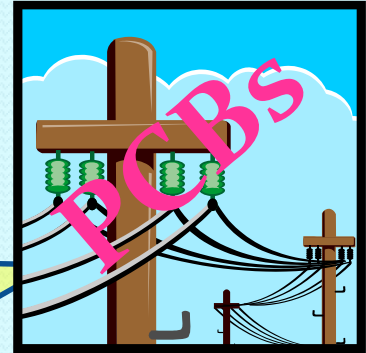


Mining, fossil fuels, volcanoes

Pictures from California Geological Survey and USGS



Discharges into  
sewer systems  
and waterways



Industrial lubricants

Chlordanes,  
DDTs,  
dieldrin,  
toxaphene



Legacy pesticides



Flame retardants

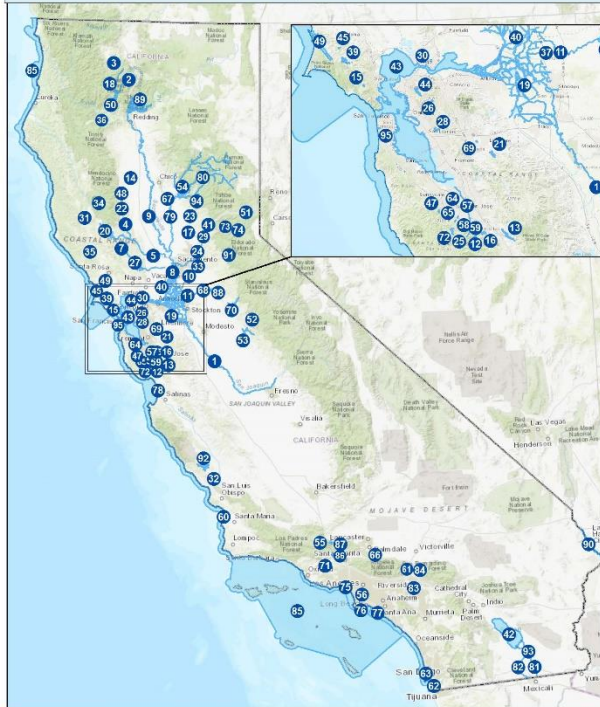


# Eat Fish • Eat Smart • Choose Wisely

## A Healthy Guide to Eating Fish in California



### California Water Bodies with Site-specific Advice



### Water Bodies with Fish Consumption Advice

59 Alamos Creek	78 Elkhorn Slough	54 Lake Oroville	41 Rollins Reservoir
81 Alamo River	23 Englebright Lake	34 Lake Pillsbury	9 Sacramento River
12 Almaden Reservoir	24 Folsom Lake	71 Lake Piru	42 Salton Sea
13 Anderson Reservoir	73 French Meadows Reservoir	92 Lake San Antonio	62 San Diego Bay
4 Bear Creek	58 Guadalupe Creek	35 Lake Sonoma	43 San Francisco Bay
14 Black Butte Lake	25 Guadalupe Reservoir	36 Lewiston Lake	1 San Joaquin River
15 Bon Tempe Reservoir	57 Guadalupe River	72 Lexington Reservoir	44 San Pablo Reservoir
5 Cache Creek	74 Hell Hole Reservoir	66 Little Rock Reservoir	76 Santa Monica Beach to Seal Beach
16 Calero Reservoir	91 Jenkinson Lake	37 Lodi Lake	77 Seal Beach to San Mateo Pt
68 Camanche Reservoir	26 Layette Reservoir	8 Lower American River	69 Shadow Cliffs Lake
64 Camden Ponds	27 Lake Berryessa	10 Lower Cosumnes River	89 Shasta Lake
17 Camp Far West Reservoir	28 Lake Chabot	79 Lower Feather River	61 Silverwood Lake
18 Canville Pond	29 Lake Combie	11 Lower Mokelumne River	45 SoulaJule Reservoir
85 Castaic Lagoon	83 Lake Evans	56 Magic Johnson Lakes	47 Stevens Creek Reservoir
87 Castaic Lake	84 Lake Gregory	63 Mission Bay	48 Stony Gorge Reservoir
20 Clear Lake	90 Lake Havasu	94 New Bullards Bar Reservoir	67 Thermaito Forebay / Afterbay
5 Coastal	30 Lake Herman	88 New Hogan lake	49 Tomales Bay
21 Del Valle Reservoir	52 Lake McClure	70 New Melones Reservoir	50 Trinity Lake
19 Delta, Central and South	53 Lake McSwain	82 New River	3 Trinity River
40 Delta, Northern	31 Lake Mendocino	39 Nicasio Reservoir	80 Upper Feather River Region
51 Dorner Lake	95 Lake Merced (North Lake)	60 Oso Flaco Lake	65 Vasoma Lake
2 East Fork Trinity River	32 Lake Nacimiento	7 Putah Creek	75 Ventura Harbor to Santa Monica Pier
22 East Park Reservoir	33 Lake Natoma	55 Pyramid Lake	93 Wast Lake

### Advisory for California Lakes and Reservoirs without Site-specific Advice

Women 18 - 45 and children 1 - 17

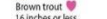


Rainbow trout

♥ = High in Omega-3s



Bullhead



Catfish



Brown trout 16 inches or less



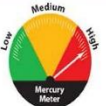
Bluegill and Other Sunfish



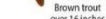
Carp



Brown trout over 16 inches



Bass



Carp



Brown trout over 16 inches

2 servings a week

OR

1 serving a week

OR

Do not eat

Women over 45 and men can safely eat more fish

6 servings a week

OR

2 serving a week

OR

1 serving a week

#### What is a serving?



For Adults For Children  
The recommended serving of fish is about the size and thickness of your hand. Give children smaller servings.

#### Why eat fish?

Eating fish is good for your health. Fish have Omega-3s that can reduce your risk for heart disease and improve how the brain develops in unborn babies and children.

#### What is the concern?

Some fish have high levels of mercury. Mercury can harm the brain, especially in unborn babies and children. Women over 45 and men have lower risk and can eat more fish.

For more information or details on site-specific advisories:  
[www.oehha.ca.gov/fish](http://www.oehha.ca.gov/fish) • (916) 324-7572 • [fish@oehha.ca.gov](mailto:fish@oehha.ca.gov)

### Why eat fish?

- Eating fish is good for your health
  - Reduces your risk for heart disease
  - Improves how the brain develops in unborn babies and children

### What is the concern?

- Some fish have high levels of the harmful chemicals mercury and PCBs

### What can I do?

- Eat only the skinless fillet
- Check OEHA's website ([www.oehha.ca.gov/fish](http://www.oehha.ca.gov/fish)) for advice on which sport fish to eat and how often
- Follow recommendations based on your age and gender
  - Women 18-45 years and children 1-17 years
  - Women 46+ years and men 18+ years

# How OEHHA Develops Advice

- Based on results of testing fish samples for certain chemicals
- How much fish can be safely eaten using advisory tissue levels (ATLs)
- ATLs based on studies of health effects of fish contaminants
  - If followed, keeps exposure at or below a safe level
- Need adequate sample sizes



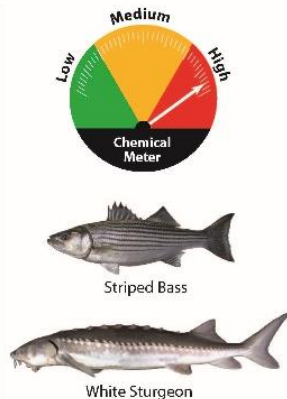
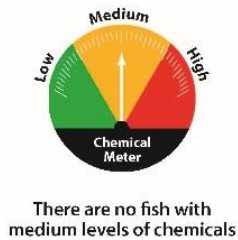
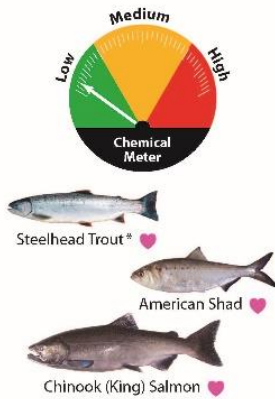
# What determines how and why testing of fish will occur?

For advisories at a specific water body:

- OEHHA relies on data collected by others (e.g., Water Board) for fish advisories and other purposes
  - E.g., Surface Water Ambient Monitoring Program (SWAMP)
- Suspected health hazard
- Other possible factors
  - Fishing pressure
  - Permit requirements
- Resource availability for sampling and analysis

A guide to eating American shad, Chinook (king) salmon, steelhead trout, striped bass, and white sturgeon caught in California rivers, estuaries, and coastal waters

Women ages 18 - 45 and children ages 1 - 17 years old



♥ = High in Omega-3s

**Safe to eat**  
2-3 servings per week

**Safe to eat**  
1 serving per week

**Do not eat**

Men over age 17 and women over age 45 can safely eat more fish

● **Safe to eat 7 servings per week** — American shad, Chinook (king) salmon, or steelhead trout OR

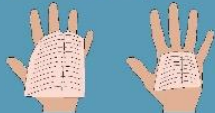
**Safe to eat 2 servings per week** — striped bass OR

● **Safe to eat 1 serving per week** — white sturgeon

What is the concern?

Some fish have high levels of mercury and PCBs. Mercury can negatively affect how the brain develops in unborn babies and children. It is especially important for women who are pregnant or breastfeeding to follow these guidelines. PCBs might cause cancer.

What is a serving?



For Adults For Children

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

These guidelines do not apply to these fish caught in lakes or reservoirs.

\* Note: It is only legal to keep hatchery steelhead and only in selected waters. Hatchery steelhead are identified by a missing adipose fin and healed scar in the location of the missing fin. All wild steelhead must be released unharmed.

Check California Department of Fish and Game Regulations ([www.dfg.ca.gov/regulations/](http://www.dfg.ca.gov/regulations/)) for salmon, steelhead, striped bass, and white sturgeon, including legal sizes, bag and possession limits, and seasons, which can vary from year to year.

Why eat fish?

Eating fish is good for your health. Fish have Omega-3s that can reduce your risk for heart disease and improve how the brain develops in unborn babies and children.

A Guide to Eating Fish from the California Coast

Advisory for Areas Without Site-specific Advice

Women 18 - 45 years and Children 1 - 17 years



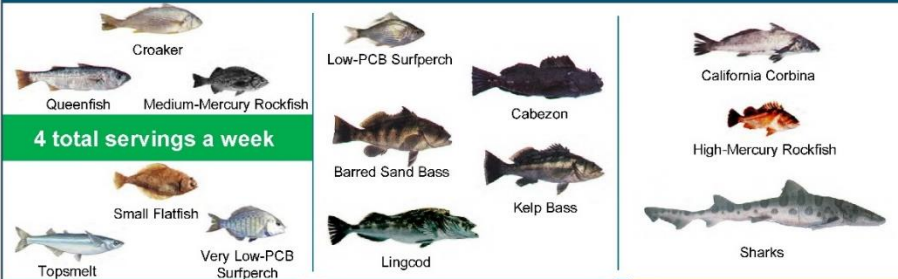
2 total servings a week

6 total servings a week

1 total serving a week

Do not eat

Women 46 years and older and Men 18 years and older



4 total servings a week

6 total servings a week

2 total servings a week

1 total serving a week

**Croaker species include:** White and Yellowfin  
**Small Flatfish species include:** Diamond Turbot, Longfin Sanddab, Speckled Sanddab, Spotted Turbot

**Medium-Mercury Rockfish species include:** Black Blue, Brown, Kelp, Olive, Rosethorn, and Vermilion  
**High-Mercury Rockfish species include:** Black and Yellow, China, Copper and Gopher

**Very Low-PCB Surfperch species include:** Barred, Black, Pile, Rainbow, Spottfin, and White  
**Low-PCB Surfperch species include:** Shiner, Silver, and Walleye

What is a serving?



For Adults For Children

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

Why eat fish?

Eating fish is good for your health. Fish have omega-3s that can reduce your risk for heart disease and improve how the brain develops in unborn babies and children.

What is the concern?





Some fish have high levels of mercury and PCBs. Mercury can harm the brain, especially in unborn babies and children. PCBs can cause cancer.

**Do not combine advice. If you eat 2 servings of fish from the "2 total servings per week group", do not eat any other fish that week from any source (caught or store bought).**

# www.oehha.ca.gov/fish/advisories

**Fish Advisories**   Chemicals in Fish   Health Benefits   Reports & Fact Sheets   Oil Spills & Seafood   Languages


Home » Fish » Fish Advisories

## Fish Advisories

### Safe Eating Guidelines

- How to Follow Advisories
- Statewide Advisory for Eating Fish from **California's Lakes and Reservoirs** without site-specific advice
- Statewide Advisory for Eating Fish from **California Coastal Locations** without site-specific advice
- Advisory for Fish that Migrate
- Women & Children
- General Tips




OEHHA's Fish Consumption Advisories and Safe Eating Guidelines:


**Waterbody**  
- Any -

**County**   **Species**  
- Any -   - Any -  

Advisory	County	Species
Advisory for Fish that Migrate		American shad Chinook (King) Salmon



Your Fish Adviser



### Fish Protocol Documents

- Advisory Tissue Levels for Multiple Chemicals
- Advisory Tissue Levels for PBDEs
- Seafood Risk Assessment Following Oil Spills
- Sport Fish Sampling and Analysis

### Fish - Quick Links

- Advice for Fish You Buy
- Fish - Laws and Regulations
- Fish Advisories**
- Fish Listserv
- General Tips
- Harmful Algal Blooms (HABs)
- Oil Spills & Seafood
- Recreational
- Video: How to Follow Advisories
- Video: Risks and Benefits of Eating Fish
- Women & children



## San Luis Reservoir

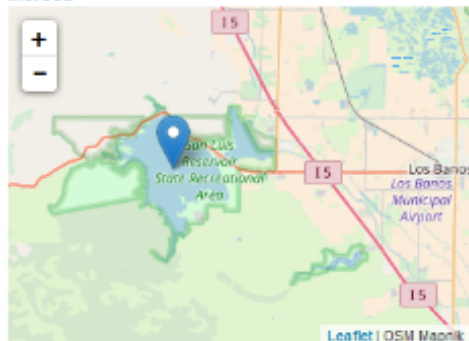
Oct 24, 2017

Advisory based on mercury and PCBs.

### Waterbody

## San Luis Reservoir

County:  
Merced



### Downloads

- Poster - San Luis Reservoir Fish Advisory Oct 24, 2017
- Poster - San Luis Reservoir Fish Advisory in Spanish (en Español) Oct 24, 2017
- Fact Sheet - San Luis Reservoir Fish Advisory Oct 24, 2017
- Report - San Luis Reservoir Fish Advisory Oct 24, 2017
- Press Release - San Luis Reservoir Fish Advisory Oct 24, 2017

### Women 18-45 Years and Children 1-17 Years

2 servings a week	OR	1 servings a week
Tule Perch	American shad	Striped Bass
		Carp
		DO NOT EAT

**GOOD CATCH**  
**CALIFORNIA**  
Your Fish Advisor



### Fish Protocol Documents

[Advisory Tissue Levels for Multiple Chemicals](#)  
[Advisory Tissue Levels for PBDEs](#)  
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### Fish - Quick Links

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[Harmful Algal Blooms \(HABs\)](#)  
[Oil Spills & Seafood](#)  
[Pescado](#)  
[Video: How to Follow Advisories](#)  
[Video: Risks and Benefits of Eating Fish](#)  
[Women & children](#)



### OEHHA Links

[About OEHHA](#)  
[Biomonitoring](#)





**Women**  
(18-45 Years)

**Children**  
(1-17 Years)

**2** TOTAL  
SERVINGS  
A WEEK

OR

**1** TOTAL  
SERVING  
A WEEK

**0** DO NOT  
EAT

### Serving Size

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

For Adults



For Children



**Women**  
(46+ Years)

**Men**  
(18+ Years)

**5** TOTAL  
SERVINGS  
A WEEK

OR

**2** TOTAL  
SERVINGS  
A WEEK

OR

**1** TOTAL  
SERVING  
A WEEK

# A GUIDE TO EATING FISH from SAN LUIS RESERVOIR (MERCED COUNTY)

### 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.



Tule Perch



American Shad

♥ high in Omega-3s



Striped Bass



Common Carp



Black Bass Species



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

Eat only the  
skinless fillet



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

Eat only the meat



# How can OEHHA and Tribes collaborate on advisories?

- Communicating advice
  - Pictorials are the easiest way to convey information
    - All advisories should have updated pictorials posted on our website by the end of 2018
    - We can assist with printing
- Advisory development
  - Open to Tribal input

# OEHHA and Tribal Collaboration

## Example: Clear Lake





## A Healthy Guide to Eating Fish and Shellfish from Clear Lake

Women 18-45 years and children 1-17 years



Inland silverside

Threadfin shad

Asian clam

Winged floater mussel



Blackfish

Bluegill or other sunfish

Bullhead

Carp

Catfish

Crappie

Crayfish

Hitch

Mosquitofish

Prickly sculpin



Largemouth Bass

3 servings a week OR  
7 servings a week—  
clams or mussels

OR

1 serving a week

Do not eat

What is a serving?



For adults For children

The recommended serving is the size and thickness of your hand. Give children smaller servings.

Why eat fish?

Eating fish is good for your health. Fish have Omega-3s that can reduce your risk for heart disease and improve how the brain develops in unborn babies and children.

What is the concern?

Some fish have high levels of mercury. Mercury can harm the brain, especially in unborn babies and children. Women over 45 years and men have lower risk and can eat more fish.

Inland silverside photo: North American Native Fishes Association  
Threadfin shad photo: Uland Thomas, Ohio Department of Natural Resources  
Mosquitofish photo: Hiroshi Senou, KPNH-NR 0240007

# Clear Lake Advisory

Please contact OEHHA  
with questions and  
concerns



# Questions/Comments?

- We want your input!
- How can we best serve Tribes in developing advisories and providing information to your community?
- For more information, please contact:
  - Susan Klasing: [susan.klasing@oehha.ca.gov](mailto:susan.klasing@oehha.ca.gov)
  - Lori Chumney: [lori.chumney@oehha.ca.gov](mailto:lori.chumney@oehha.ca.gov)

[www.oehha.ca.gov/fish/advisories](http://www.oehha.ca.gov/fish/advisories)