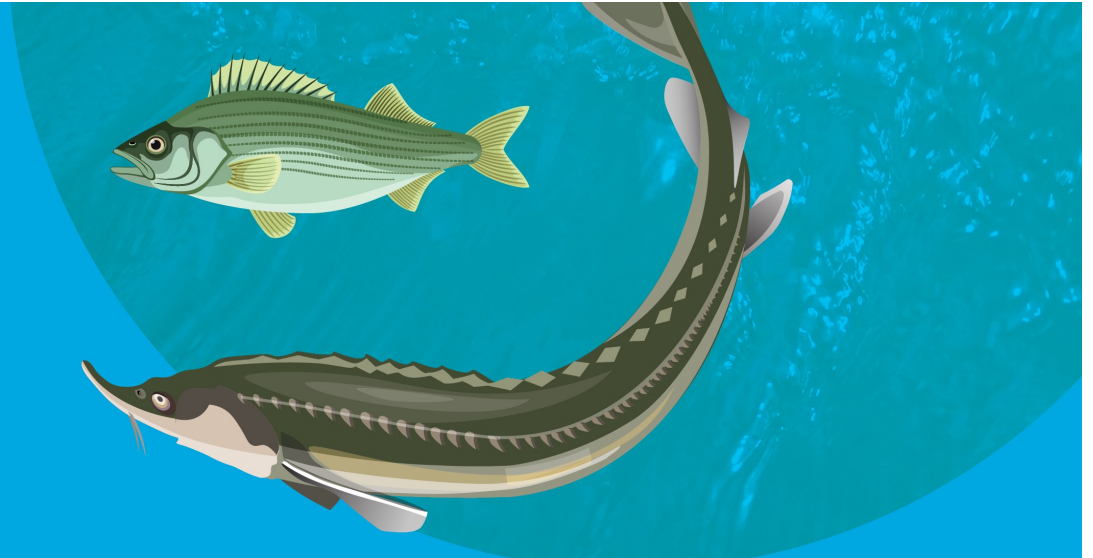


**PFAS**  
in  
San Francisco Bay  
Fish




**Jay Davis**  
**San Francisco Estuary Institute**

**Forum on PFAS in San Francisco Bay Fish**  
**February 4, 2022**

# The Bay Consumption Advisory

- Based on data from the Regional Monitoring Program (RMP)



**Women**  
(18-49 Years)

**Children**  
(1-17 Years)

## 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**

**2** TOTAL SERVINGS A WEEK


OR

**1** TOTAL SERVING A WEEK


**0** DO NOT EAT




Brown rockfish



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




Jacksmelt




Red rock crab

---




California halibut




White croaker


---




Sharks



White sturgeon




Surfperches




Striped Bass

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

**For Adults**




**For Children**





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

**Eat only the skinless fillet**



**Eat only the meat**

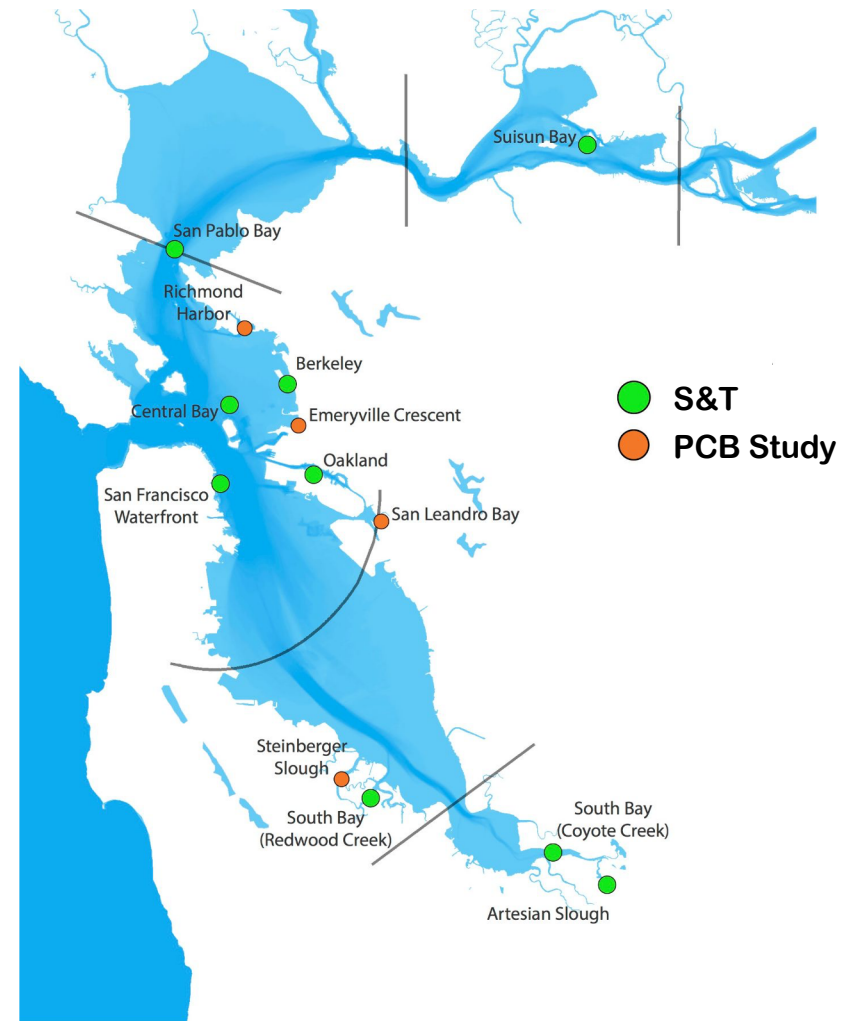



**California Office of Environmental Health Hazard Assessment**  
 web [www.oehha.ca.gov/fish](http://www.oehha.ca.gov/fish)  
 email [fish@oehha.ca.gov](mailto:fish@oehha.ca.gov)  
 phone (916) 324-7572



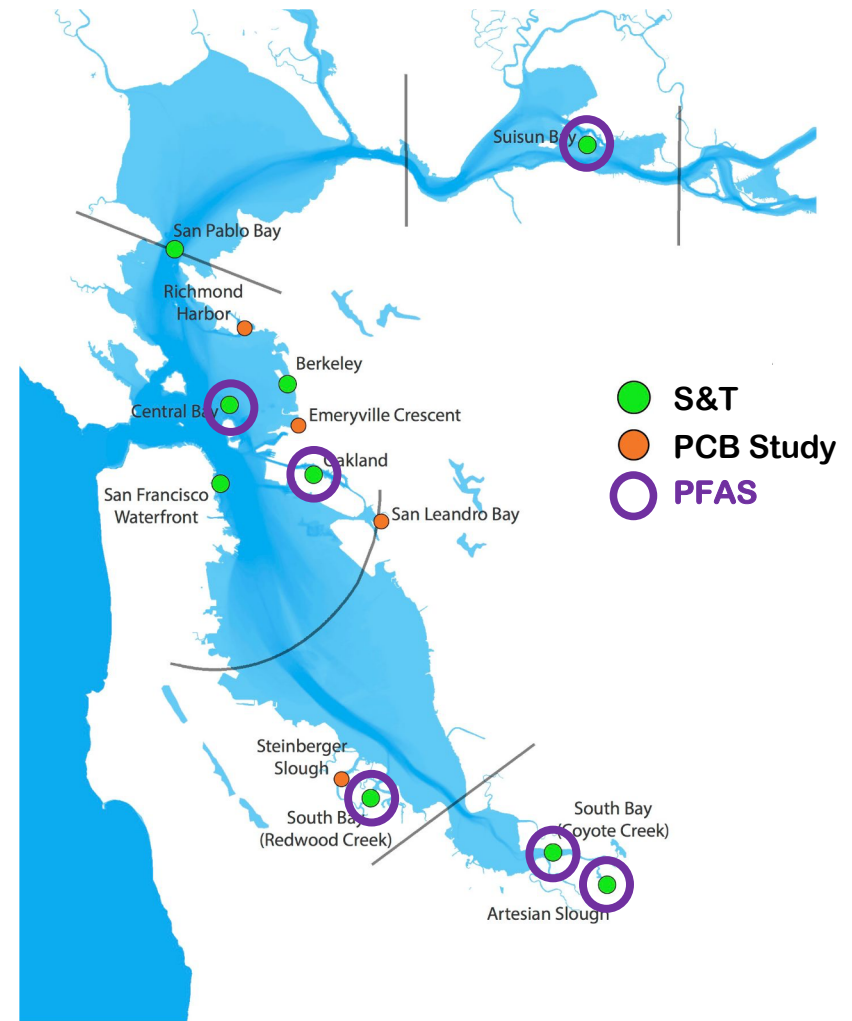
# RMP Fish Monitoring

- One of the best fish monitoring programs anywhere
- Began in 1994
- Most recent in 2019
  - 13 locations
  - 16 species
  - 1,306 fish
  - 152 samples
  - Many contaminants
- **BUT** there are still gaps



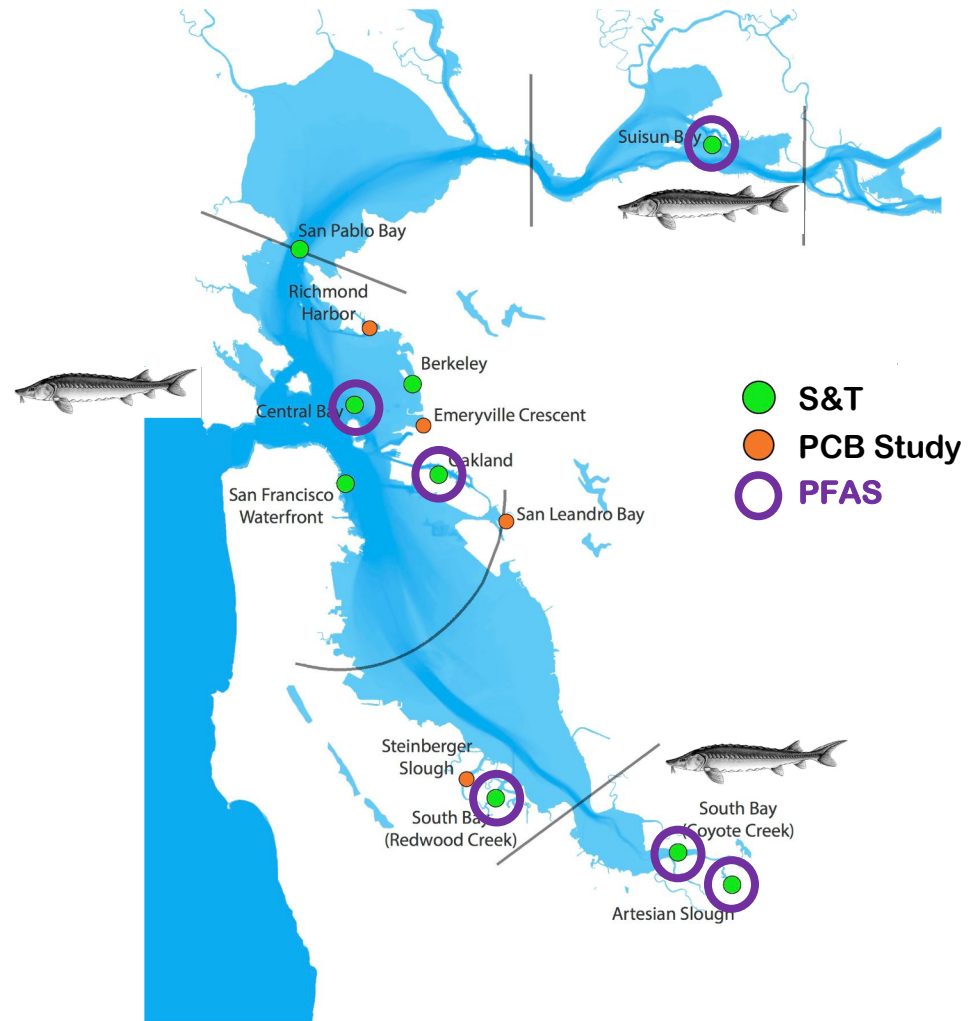
# PFAS RMP Fish Monitoring

- One of the best fish monitoring programs anywhere
- Began in ~~1994~~ 2009
- Most recent in 2019
  - ~~3~~ 6 locations
  - ~~6~~ 5 species
  - ~~1,206~~ 111 fish
  - ~~12~~ 16 samples
- BUT there are ~~still~~ even more gaps



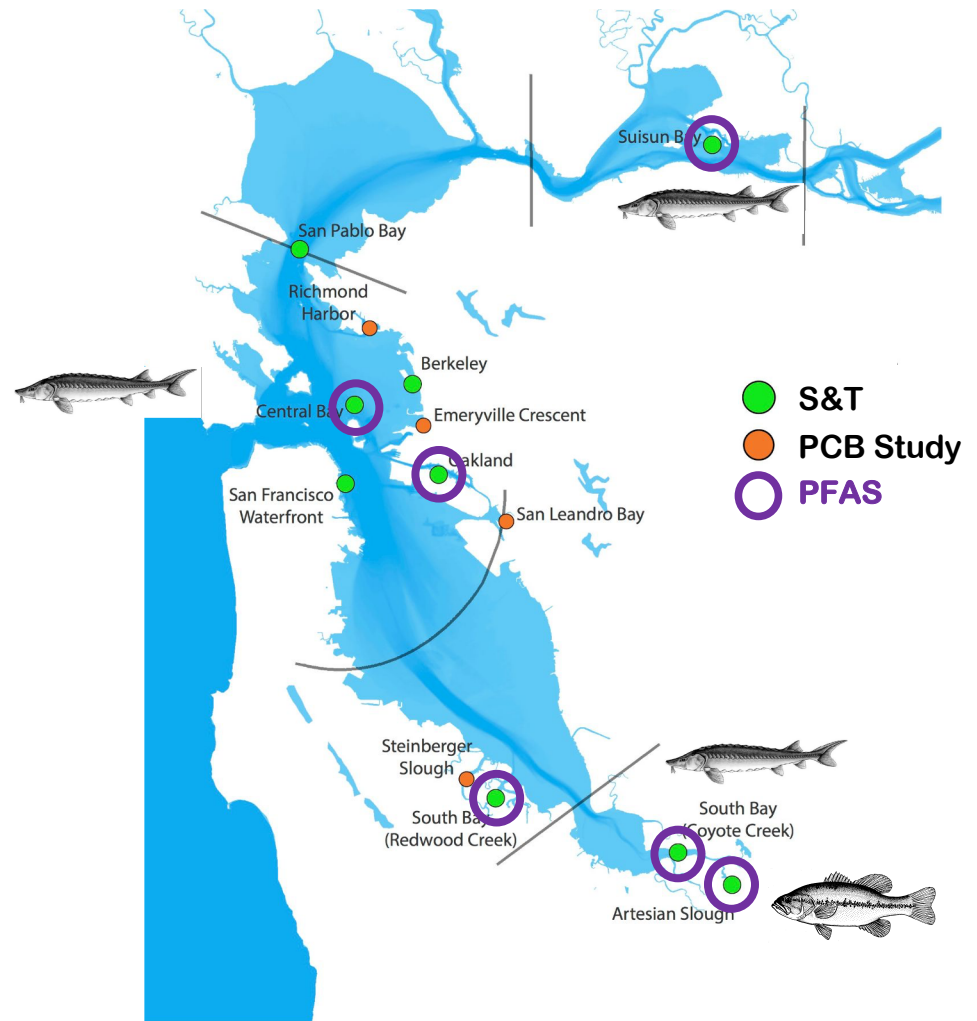
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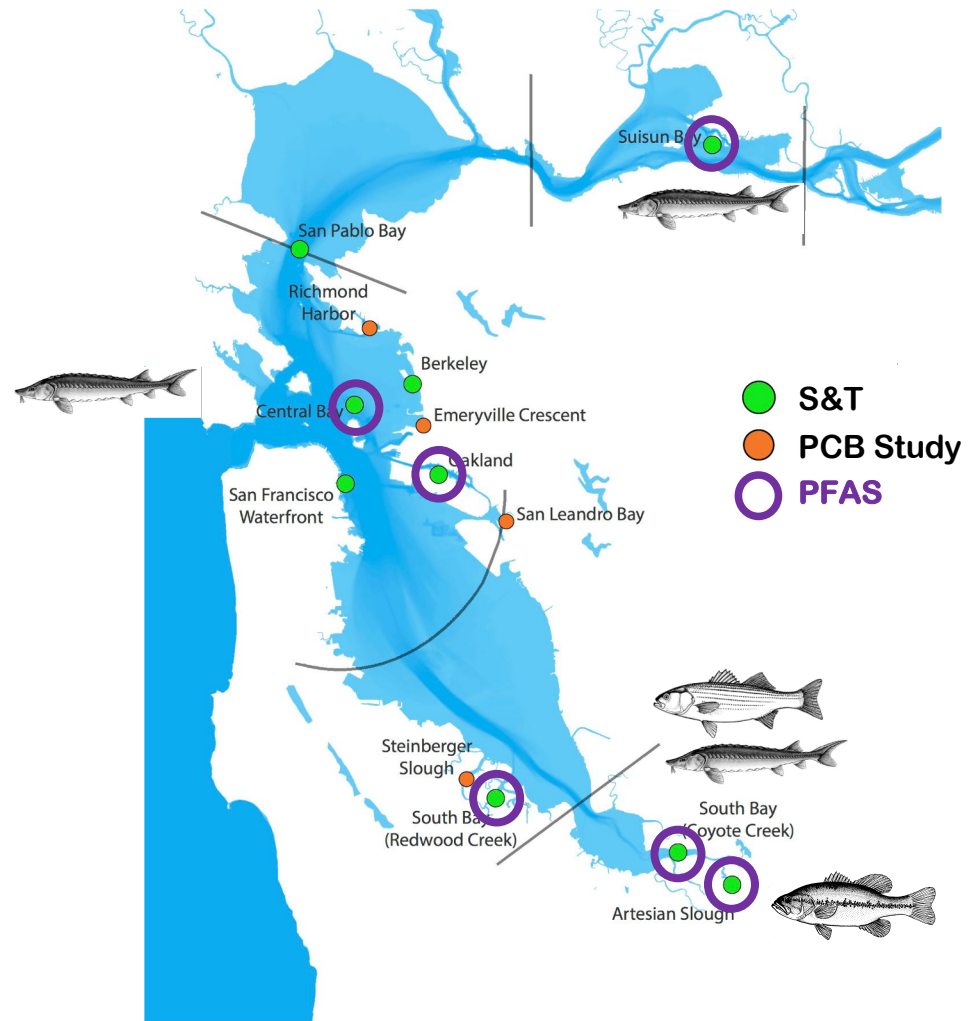
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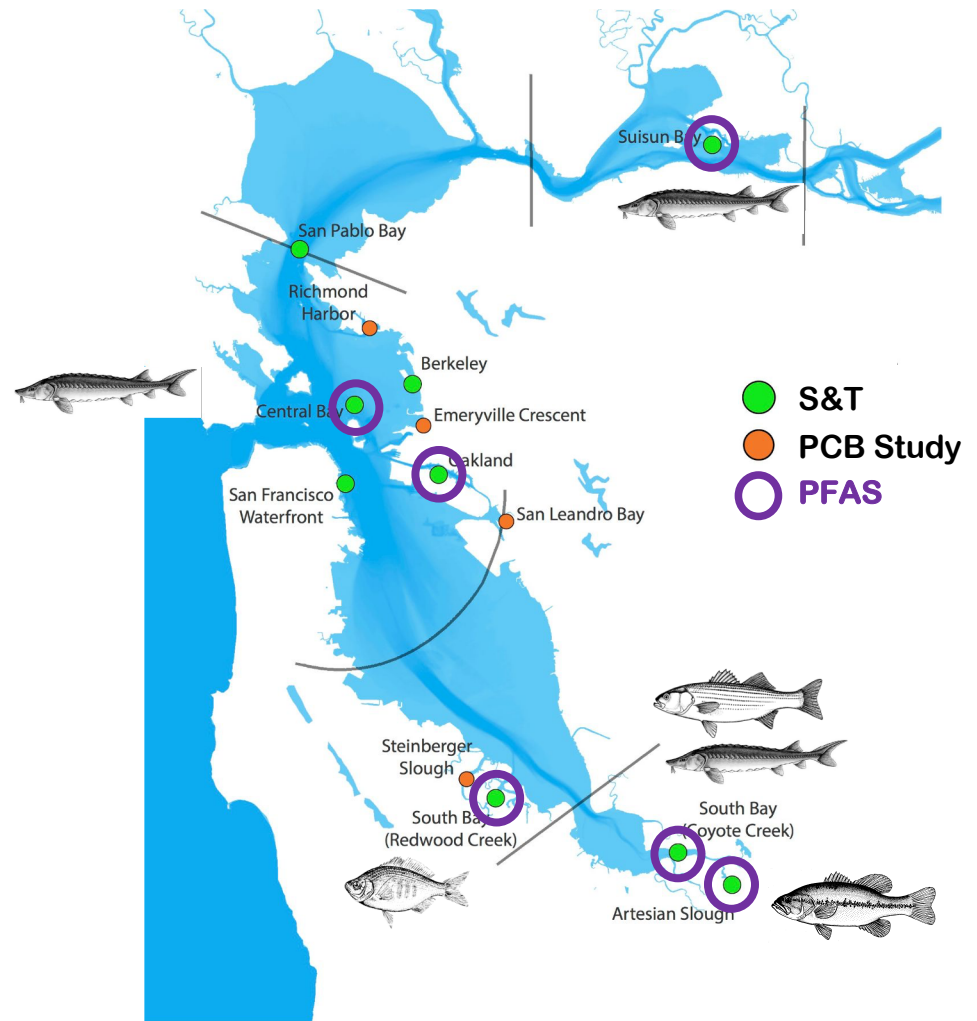
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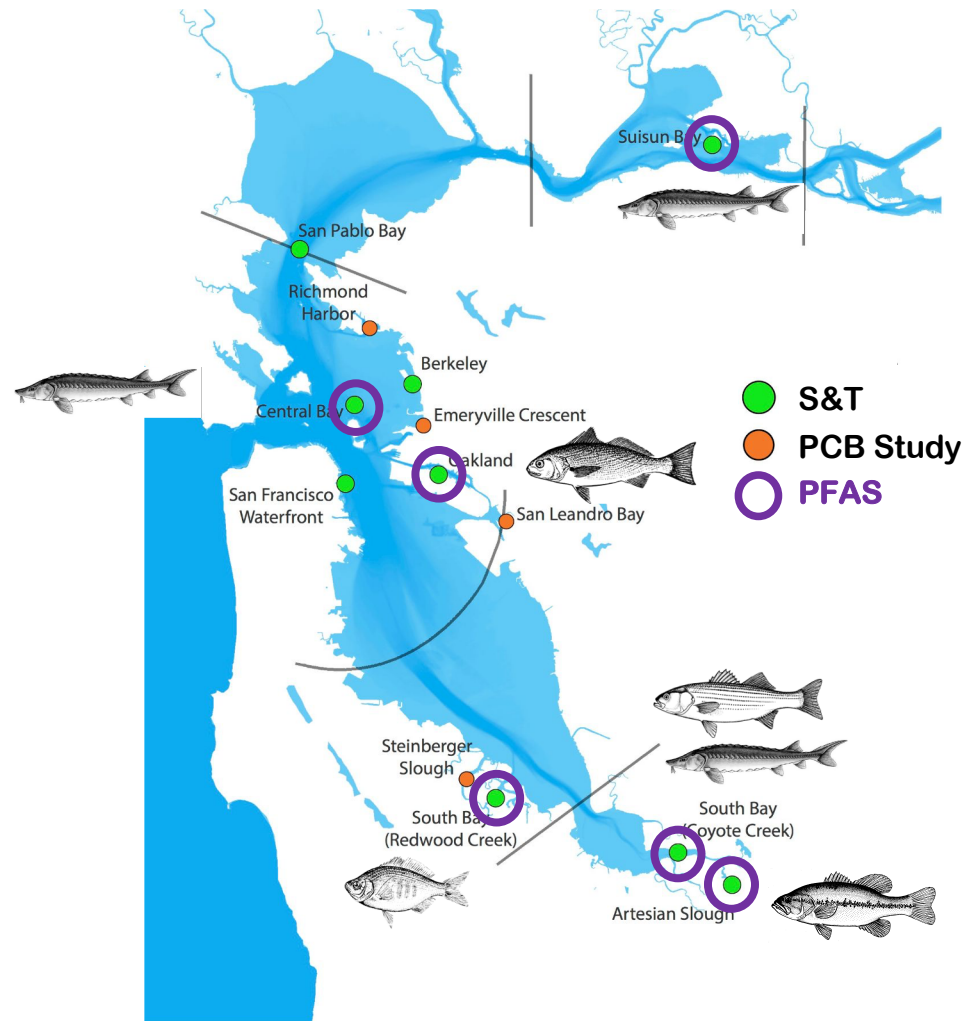
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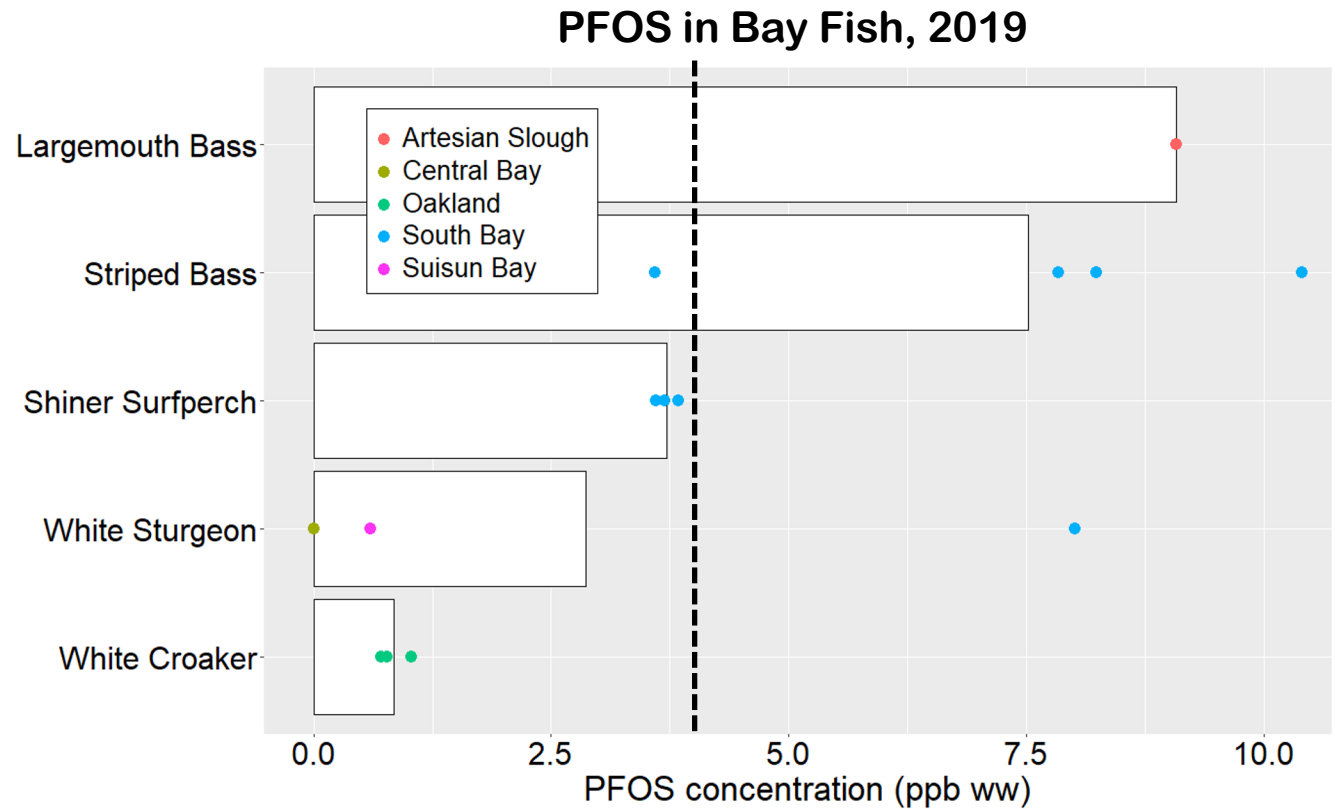
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# The Latest Data

- CA does not have a threshold
- Limited dataset
- We do have PFAS in Bay fish
- Several samples and 2 averages above a NJ threshold
- South Bay appears higher
- Note on shiner surfperch

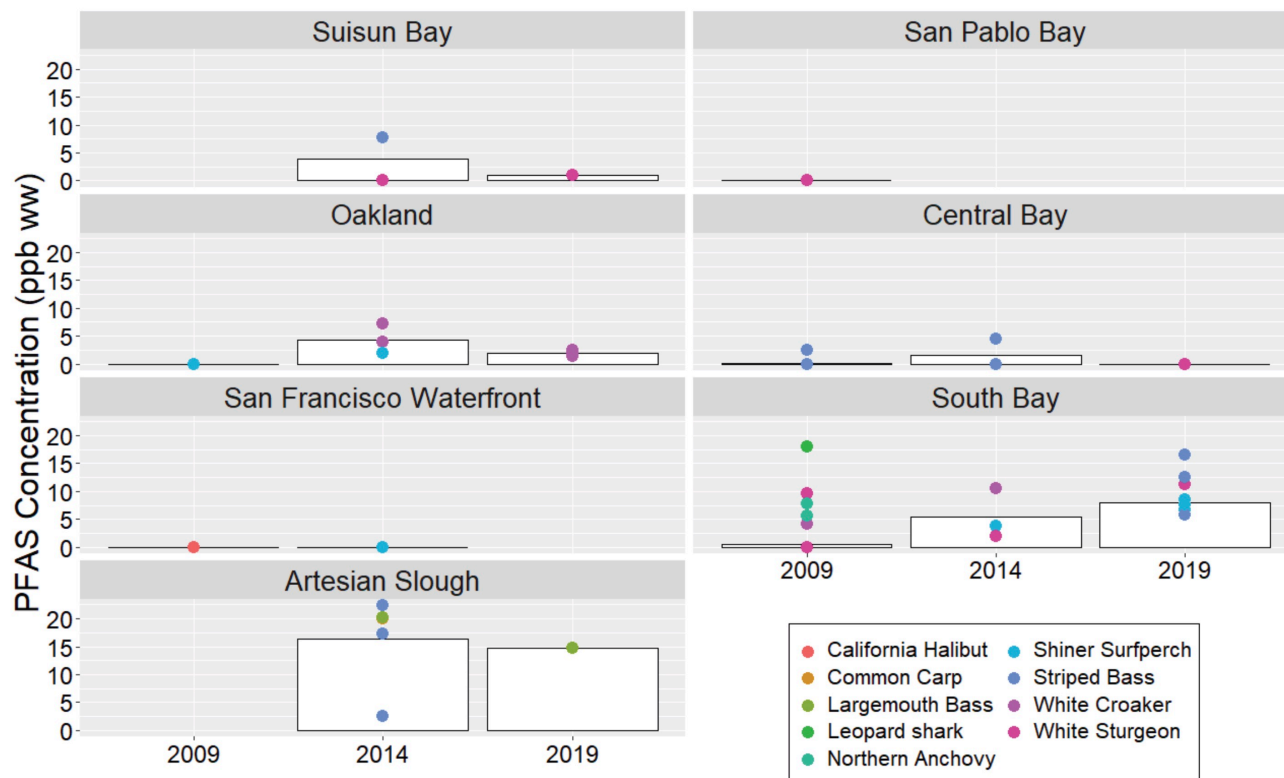


Threshold shown is from New Jersey: general population, one serving/week - 3.9 ppb ww

# The Long-term Dataset

- Analytical methods have improved
- We do measure a range of PFAS
- Earlier data also limited
- 2019 and 2014 results were similar

Sum of PFAS in Bay Fish, 2009-2019



## What's Next?

- Continued monitoring by the RMP (2024)
- Enhanced assessment of PFOS
  - More thorough monitoring



## What's Next?

- **Increased focus on groups with high consumption rates**
  - **African-Americans, tribes, other communities**
  - **New beneficial use definitions**
  - **Surveying subsistence fishers in the Bay**
  - **Community-guided monitoring by State Water Board (“Realignment”)**



Photograph by Joe Clark, All Positives Possible ([www.allpositivesp.org](http://www.allpositivesp.org))

## For More Information

### **Me**

- [jay@sfei.org](mailto:jay@sfei.org)

### **OEHHA Fish Advisories**

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

### **The full technical report on RMP fish monitoring**

- <https://www.sfei.org/documents/contaminant-concentrations-sport-fish-san-francisco-bay-2019>

### **RMP data on fish and other parameters**

- <https://cd3.sfei.org/>

### **The 2021 RMP Update (including a summary article on the 2019 RMP fish monitoring)**

- xx

### **SWAMP Bioaccumulation Realignment**

- [bit.ly/BioaccumulationPrgm\\_Realignment](http://bit.ly/BioaccumulationPrgm_Realignment)

### **My son's band's new song (Where I'm @ by Hot Flash Heat Wave)**

- xx





# Acknowledgements

## Report co-authors

- Nina Buzby
- Rebecca Sutton
- Don Yee
- Ezra Miller
- Adam Wong
- Marco Sigala
- Autumn Bonnema
- Wes Heim
- Richard Grace

## Others

- RMP Sport Fish Strategy Team
- Melissa Foley
- Ellen Plane
- Shira Bezalel (photos except for slide 16)

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- RMP
- USEPA

