Update on Contaminants in Bay Fish
Jay Davis, SFEI
RMP Annual Meeting 2021
A crucial indicator of Bay water quality

● Clean Water Act goal: fishable waters
● Clean fish an important food source
● RMP data support Bay advisory and TMDL cleanup plans
● In spite of efforts to date, the Bay is not entirely fishable and progress toward that goal has been slow
● Legacy contamination of Bay sediment is the primary problem
RMP data turned into information.
The Bay has one of the best fish contamination monitoring programs anywhere

- 8th round of Bay sport fish monitoring in 2019
- 13 locations
- 16 species
- 1,306 fish
- 152 samples
- Many contaminants
- BUT there are still gaps
Mercury
Mercury

Many species have average concentrations well above thresholds.
Mercury in Striped Bass in US Estuaries

The Bay has an exceptionally high degree of mercury contamination

- San Francisco Bay
- New Jersey
- South Carolina
- Chesapeake Bay
- Narragansett Bay
- Louisiana

* New Jersey sampled larger fish, which inflated their average
Mercury in Bay Striped Bass: 1971-2019

- **No change in 50 years!**
- **Mainly due to legacy mercury in Bay sediment**
PCBs
PCBs

Many species have average concentrations well above thresholds
PCBs in Shiner Surfperch in California, 2009-2010

The Bay has an exceptionally high degree of PCB contamination
PCBs in Shiner Surfperch by Location, 1994-2019

- Only limited signs of long-term decline
- Due to combination of continuing inputs and contaminated sediment in Bay margins
PFOS
PFOS

Persisting over time at levels near or above thresholds established by other states

PFOS in Bay Fish, 2019

Threshold shown is from New Jersey: general population, one serving/week - 3.9 ppb ww
What’s Next?

- Continued monitoring by the RMP (2024)
- Enhanced assessment of PFOS
  - More thorough monitoring
  - PFAS workshop on February 4
What’s Next?

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

Photograph by Joe Clark, All Positives Possible (www.allpositivesp.org)
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)

Funding
- RMP
- USEPA
For more information

The full technical report

RMP data on fish and other parameters
• https://cd3.sfei.org/

PFAS Workshop
• Email Dr. Rebecca Sutton (rebeccas@sfei.org)

SWAMP Bioaccumulation Realignment
• bit.ly/BioaccumulationPrgm_Realignment

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The RMP Update (including a summary article on the 2019 RMP fish monitoring)
• oehha.ca.gov/fish/advisories

OEHHA Fish Advisories
• oehha.ca.gov/fish/advisories

Monkeyface prickleback
• Wikipedia

My son’s band’s new song (Vampires by Hot Flash Heat Wave)
• https://youtu.be/i384yhdqQ64