CONTAMINANTS IN SPORT FISH: THE BAY IN A STATEWIDE CONTEXT

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RMP ANNUAL MEETING
Regional Monitoring Program
Pollutant Effects on Aquatic Life
10/4/11
Background

• Problem
  ➢ Lack of statewide information on contaminants in sport fish
  ➢ Lack of safe eating guidelines
• New SWAMP monitoring began in 2007
• $750,000 to $1 million per year
• Five-year program to cover all water body types
Study Design

Fishing Locations

- 69 for the state
- 42 in 2009, urban areas
- Near-shore (includes bays and estuaries)
- Five target species per location
San Francisco Bay and Coast

Northern California Fishing Locations

- 6 SF Bay
- 9 Coast
Statewide Assessment

Methylmercury

Coast Survey 2009
Methylmercury Concentrations in the Species with the Highest Average (Including Sharks)

- < 0.05 ppm (ATL - 2 servings/wk)
- 0.07 - 0.30 ppm
- 0.30 - 0.44 ppm
- > 0.44 ppm (ATL - no consumption)

Regional Water Quality Control Boards
Species Variation

Methylmercury Concentration (ppm)

San Francisco Bay

Methylmercury Concentration (ppm)

California Halibut  |  Jack Smelt  |  Leopard shark  |  Shiner Surfperch  |  Striped Bass

0.0  |  0.5  |  1.0  |  1.5  |  2.0  |
Southern California

Methylmercury
Lakes and Coast


California Coast (2009)

Percent Above Threshold

Methylmercury Concentration (ppm)
Statewide Assessment

PCBs

Coast Survey 2009
PCB Concentrations in the Species with the Highest Average
- < 3.6 ppb (FCG)
- 3.6 – 120 ppb
- > 120 ppb (ATL - no consumption)

Regional Water Quality Control Boards

N
0 50 100 Miles
Shiner Perch
San Francisco Bay

PCB Concentration (ppb)
Shiner Perch Statewide

PCBs (ppb)

- Tomales Bay
- San Pablo Bay
- Berkeley
- San Francisco
- Oakland
- South Bay
- Pillar Point Harbor
- Ventura to Rincon
- San Pedro Bay
- Newport Bay
- Dana Point Harbor
- Mission Bay
- San Diego North
- San Diego South
Shiner Perch
San Francisco Bay

PCB Concentration (ppb lipid)

- 1997
- 2000
- 2003
- 2006
- 2009

Oakland
San Francisco Waterfront
South Bay
Berkeley
San Pablo Bay
Highlights

• Widespread, moderate MeHg and PCB contamination in the Bay and southern California

• Sharks accumulate some of the highest MeHg concentrations

• Shiner perch are good spatial indicators

• Several species, particularly in southern California were below all the thresholds
“Safe to Eat Fish” Web Portal

www.waterboards.ca.gov/mywaterquality/safe_to_eat
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Link to Report:
www.waterboards.ca.gov/water_issues/programs/swamp
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