Item 1: Agenda Review

- Quick round of updates
- Sampling plan for the Bight
- San Diego Bay fish consumption study and monitoring plans
- Beach fishing
- Safe to Eat Portal revisions
Item 2: Quick Updates

- 2014 Clean Lakes report
- 2015 Bass Lakes data report
- 2016 Lakes data - update and timeline
- 2017 sampling - Gary (Attachment)
- Statewide Mercury Water Quality Objectives - adopted in May
- Mercury Control Program for Reservoirs - draft staff report out for peer review
- OEHHA advisories - new advisories, advisory priority list
- Datasets recently added to CEDEN
- Bay RMP 2014 sport fish report published in June
- Delta RMP mercury monitoring continues
2016 Lakes Data Timeline

- The final dataset is available to SFEI (this just happened)
- SFEI will produce the standard set of tables and figures, and review the data. We can do this within a few weeks of the dataset being available.
- Make the tables and figures available for BOG members to review (mid-December). I'm thinking it's particularly important for OEHHA to review them. We can give the BOG a few weeks to review the results.
- Make the data available on the Portal. Within 2 months of the complete dataset being available to SFEI, it will be posted to the Portal and available to the public (end of January).
Fish Datasets Recently Added to CEDEN

- 2014 RMP FISH
- RWB7_TMDL_2015_2016
- RWB1_RuR_Fish_2015 (RWB1 Russian River Fish)
Item 3: Discussion: Sampling Plan for the Bight in 2018

- Desired outcome: The BOG is apprised and provides input on the plans.
The Team

- Co-PIs: Jay Davis and Ken Schiff
- Moss Landing PI and Mercury Analysis PI: Wes Heim
- Tissue Logistics Coordinator: Autumn Bonnema
- Field Coordinator: Billy Jakl
- Fishing Guru: Gary Ichikawa
- Technical Oversight: The BOG and the BOG Review Panel
Coast Sampling – Round 2

- Recap of Round 1
  - 2 year survey
  - 68 zones
    - 27 in SoCal Bight
    - 6 in SF Bay
  - 5 species per zone
  - Hg, PCBs, OCs, Se in all species
Coast Sampling – Round 2

- Recap of Round 1
  - Widespread high mercury
Coast Sampling – Round 2

- Recap of Round 1
  - Widespread high mercury
  - A few spots with high PCBs
Coast Sampling – Round 2

- Assumptions for Round 2
  - 3 years
  - 62 zones (SF Bay is on its own)
  - 5 species per zone

- Bight Zones
  - 2018
  - SWAMP: Hg in 5 species
  - Bight Program: Organics in 5 species (including 3 replicates for 2 species)

- Other Zones
  - 2020, 2022
  - SWAMP: Hg in 5 species, organics in one comp from each of two species
Details and Decisions

- Budget
- Sample collection
- Zones
- Species
- Chemical analysis
## Details and Decisions: Budget

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<td>Sampling Year</td>
<td>2018</td>
<td>2019</td>
<td>2020</td>
<td>2021</td>
<td>2022</td>
<td>2023</td>
<td>2024</td>
<td>2025</td>
<td>2026</td>
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<td><strong>Rivers and Streams (Bass &amp; High Trout)</strong></td>
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<td><strong>Bass Lakes 2.1</strong></td>
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<td><strong>Trout Lakes</strong></td>
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<td><strong>Project management and coordination, peer review: SWAMP and CWQMC (SFEI)</strong></td>
<td>$75,000</td>
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<td><strong>Project management and coordination, monitoring design, data validation, infrastructure: SWAMP (MPSL)</strong></td>
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<td><strong>Clean Lakes Study</strong></td>
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<td><strong>Status and Trend Monitoring (Lakes, Coast, Rivers)</strong></td>
<td>$329,789</td>
<td>$424,789</td>
<td>$295,000</td>
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<td><strong>Coastal Fish (Round 2)</strong></td>
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<td><strong>Statewide Synthesis Report (SWAMP + Other)</strong></td>
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<td><strong>Upload, Maintenance, Minor Enhancements</strong></td>
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**Latest Estimated Cost of Current Year Monitoring** | $492,597 | $414,628 | $265,185 |

- Long-term plan – 3 years for the coast
- Funds for monitoring coming in
- Funds for monitoring being spent
- Challenge looming in 2020 – contract ends in March
- Tilting toward spending in 2018 and 2019
- **Decision:** Sample entire Bight in 2018
## Details and Decisions: Design Summary

<table>
<thead>
<tr>
<th>Task</th>
<th>Who</th>
<th>Cost per Zone</th>
<th>Total Cost for 27 Zones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect 5 species per zone: 15 kelp bass, 15 white croaker,</td>
<td>MPSL</td>
<td>13,800</td>
<td>372,600</td>
</tr>
<tr>
<td>chub mackerel, 10 Hg species Y, 5 species Z</td>
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<tr>
<td>Compositing and archiving</td>
<td>MPSL</td>
<td>1,584</td>
<td>42,678</td>
</tr>
<tr>
<td>Mercury Analysis: individuals in 20 fish; 3 composites</td>
<td>MPSL</td>
<td>1,932</td>
<td>52,164</td>
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<tr>
<td>Selenium Analysis: 5 composites</td>
<td>MPSL</td>
<td>895</td>
<td>24,165</td>
</tr>
<tr>
<td>Organics Analysis: 3 composites for kelp bass, white croaker,</td>
<td>Bight Labs</td>
<td>In-kind</td>
<td>In-kind</td>
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<tr>
<td>chub mackerel; one composite for species Y and Z</td>
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</tbody>
</table>

- $189K of PCB analysis; $189K of DDT analysis
- Bight may sample 3 zones – with intensified sampling
  - IACUC issue for MLML
- Other efforts to coordinate with? (San Diego Bay?)
Details and Decisions: Species

- **Bight Program preferences**
  - Primary
    - White Croaker
    - Kelp Bass
    - Pacific Chub Mackerel
  - Secondary
    - Barred Sand Bass
    - Spotted Sand Bass
    - Yellow Croaker
    - Olive Rockfish
    - Scorpionfish
    - Halibut
    - Shiner Perch
Figure 4-3. Average methylmercury concentrations (ppm) by fishing zone for three commonly occurring species in the Southern California Bight.
Figure 4-5. Average PCBs (ppb) by fishing zone for three commonly occurring species in the Southern California Bight.
Details and Decisions: Species

- BOG preferences
- Mercury trend indicator species
  - Kelp Bass
  - Barred Sand Bass
  - Spotted Sand Bass
  - Gopher Rockfish – statewide indicator
- Organics trend indicator species
  - Shiner Surfperch – statewide indicator
Details and Decisions: Species

OEHHA Data Gaps

We have collected these before and can target them.

<table>
<thead>
<tr>
<th>OEHHA Recommendations for Species Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIES</td>
</tr>
<tr>
<td>Finfish</td>
</tr>
<tr>
<td>California Halibut**</td>
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<tr>
<td>California Sheephead</td>
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<tr>
<td>Halfmoon**</td>
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<td>Opaleye**</td>
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<tr>
<td>Kelp Greenling</td>
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<tr>
<td>Pacific Halibut</td>
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<tr>
<td>Sharks (Shortfin Mako, Blue Shark Thresher)</td>
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<tr>
<td>Tuna species (Albacore, Bluefin, Yellowfin, Bignose)</td>
</tr>
<tr>
<td>Invertebrates</td>
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<tr>
<td>Rock Crab (Brown, Yellow)**</td>
</tr>
<tr>
<td>Spiny lobster</td>
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<tr>
<td>Pismo Clams</td>
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<tr>
<td>Littleneck Clams</td>
</tr>
</tbody>
</table>
Details and Decisions: Intercalibration

- Switch to Ken
Details and Decisions: Timeline

- Finalize draft design and prepare addendum to the 2009-2010 Sampling and Analysis Plan (January)
- BOG Review Panel Meeting (February)
**Item 4: Information: San Diego Bay Fish Consumption Study and Monitoring Plans**

- Desired outcome: The BOG is aware of the study and its findings, and considers the findings in designing the 2018 Bight sampling. BOG monitoring is coordinated with future San Diego Bay monitoring.
Figure 28. Percent of anglers who caught and kept fish species for consumption within the week they were surveyed. Fish caught 1% or less of the time are not listed. N = 134; N represents the number of local people (San Diego County only) who responded to the question: “What types of fish have you caught and kept for yourself, or someone else, to eat this week in San Diego Bay?”
Item 5: Discussion and Decision: Beach Fishing

- Desired outcome: Discussion of this issue and decision on whether to explore it further.

- Should this potentially be part of our long-term plan?
Motivation

- Mary Hamilton

“The Subsistence Fishermen in our Region are catching surfperch in some of the most contaminated places like the beach at Oso Flaco (where we have oil fields and the highest DDT in lake-fish in the nation). This community of fishermen need to be informed about the quality of the food they eat multiple times each week.”

“I was recently contacted by a researcher who is concerned about the lack of information available to beach fishermen, who fish several days a week and are eating surfperch etc. I wonder if a beach component could be considered for BOG to inform the subsistence fishing community. I know that this type of fishing is more challenging and time consuming but I feel that it is worth a conversation. Especially in light of the recent adoption of the Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions.”
GETTING STARTED

A few simple practices and gear choices can greatly enhance your enjoyment of Central California’s year-round surf perch fishing. Anglers also enjoy seasonal opportunities for striped bass, California halibut, jacksmelt and surf smelt, among others.

WHEN TO GO FISHING …

You are more likely to catch fish:
• In the early morning or an hour before dusk
• On an incoming high tide. The rising water level dislodges small invertebrates in sand bars, stimulating fish to feed.
• During mild to moderate surf
• EXCEPTIONS: Surf smelt and night smelt fishing are best in the daytime and evening respectively, on a falling high tide. Both species usually spawn on coarse-grained sandy beaches when the surf is mild.

CASTING TIPS …

• When you are beach fishing, cast to the edges of sand bars and drop-offs and be on the lookout for fish “highways,” or channels with transiting fish in search of food.
• If you are surf perch fishing, try casting near sand crab beds.
• If you are striped bass or halibut fishing, look for signs of baitfish, such as feeding birds and marine mammals, and cast into these areas.

<table>
<thead>
<tr>
<th>Species</th>
<th>Peak Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surf perch</td>
<td>October – June</td>
</tr>
<tr>
<td>Striped Bass</td>
<td>April – September</td>
</tr>
<tr>
<td>California Halibut</td>
<td>May – August</td>
</tr>
<tr>
<td>Jacksmelt</td>
<td>April – August</td>
</tr>
<tr>
<td>Night/Surf Smelt</td>
<td>February – August</td>
</tr>
</tbody>
</table>

Peak months for some favorite species in Central California.

ROD AND REEL TIPS

If you are heavy bait fishing or “plugging,” use a 10- to 12-ft rod rated for 2- to 8-oz casting, with spinning or conventional reels capable of holding 150 to 200 yds of 20- to 30-lb monofilament line.

If you are fly-fishing, try a 9- to 11-ft rod, rated for a 6- to 8-weight line, with matching reel and sink-tip or shooting head lines. Stripping baskets help manage line in the surf.

If you are light bait fishing or using Carolina-rigged grubs, try a 7- to 9-ft rod, with either a spinning or bait casting reel. Use a 6- to 12-lb test line that can comfortably cast a 1/2- to 1-oz egg sinker, depending on surf conditions.

NET FISHING

For surf smelt fishing along San Mateo County beaches, try cast or “throw” nets in the 6- to 8-ft range, with 1 to 1 1/2 lbs of lead per foot and 3/8-in webbing.

For night smelt fishing, try “A-frame” nylon webbing nets constructed of two rigid poles and a cross-member.

EQUIPMENT CHECKLIST

✔ Waders, hat, polarized sunglasses and sunblock. Besides protecting your eyes, polarized sunglasses will help you see fish in the shore break and run-up. Wear a U.S. Coast Guard approved personal flotation device if wading.

✔ Pack for fish, tackle, tape measure, and needle-nose pliers for removing hooks

✔ Bucket and scale to weigh catch, if fishing for night or surf smelt

Pack Out What You Pack In: Fishing Line, Hooks and Trash

To report lost fishing gear, visit
www.lostfishinggear.org

TURN IN POACHERS AND POLLUTERS.

Cheaters ruin the resource and your sport.

To bust them, make an anonymous call to CalTIP:
1 (888) DFG-CalTIP (1 (888) 334-2258)
COMMONLY CAUGHT CENTRAL CALIFORNIA SURF SPECIES

**Barred surfperch**
*Amphistichus argenteus*

**Walleye surfperch**
*Hyperprosopon argenteum*

**Striped bass**
*Morone saxatilis*

**Calico surfperch**
*Amphistichus koelzi*

**Silver surfperch**
*Hyperprosopon ellipticum*

**California halibut**
*Paralichthys californicus*

**Redtail surfperch**
*Amphistichus rhodoterus*

**Jacksmelt**
*Atherinopsis californiensis*

**Surf smelt**
*Hypomesus pretiosus*

**Night smelt**
*Spirinchus starksi*

For fish consumption advisories visit www.oehha.ca.gov/fish.html

For more information and current fishing regulations, visit the California Department of Fish and Game Website at: www.dfg.ca.gov/marine.
COMMONLY CAUGHT SOUTHERN CALIFORNIA SURF SPECIES

Barred surfperch
*Amphistichus argenteus*

California corbina
*Menticirrhus undulatus*

Leopard shark
*Triakis semifasciata*

Walleye surfperch
*Hyperprosopon argenteum*

Spotfin croaker
*Runchador stearnsii*

California halibut
*Paralichthys californicus*

Bat Ray
*Myliobatus californica*

Yellowfin croaker
*Umbrina roncador*

Shovelnose guitarfish
*Rhinobatos productus*

For fish consumption advisories visit www.oehha.ca.gov/fish.html

For more information and current fishing regulations, visit the California Department of Fish and Game Website at: www.dfg.ca.gov/marine.
Item 6: Discussion: Safe to Eat Portal Revisions (Attachment)

- Desired outcome: Input and approval from the BOG.
Bioaccumulation of Pollutants in Fish Tissue

Fish and shellfish are nutritious and good for you to eat. But some fish and shellfish may take in toxic chemicals from the water they live in and the food they eat. Some of these chemicals build up in the fish and shellfish - and in the humans that eat fish and shellfish - over time. Although the chemical levels are usually low, it is a good idea to learn about advisories and monitoring in water bodies where you fish, and for fish or shellfish you eat.

The interactive maps linked below display monitoring data, fish consumption advisories and waterbodies listed as impaired due to pollutant levels in fish.

**Fish Consumption Advisories**
*Can I eat fish or shellfish caught in my lake, stream or ocean location?*

The Office of Environmental Health Hazard Assessment (OEHHHA) evaluates contaminant levels in sport fish and issues Fish Consumption Advisories for water bodies in California. Click on the map icon to the left to see an interactive map of current fish consumption advisories issued by OEHHHA for specific lakes, rivers or coastal fishing areas. Fish consumption advice is also available for lakes, reservoir, and coastal areas that do not currently have site-specific advice, as well as for fish that migrate.

**Contaminant Levels and Long Term Trends in Sport Fish**
*What are the levels, trends and long-term trends in my lake, stream or ocean location?*

Click on the map icon to the left to see an interactive map that allows you to explore fish contaminant data for your favorite fishing locations. Data are available from extensive monitoring by the Surface Water Ambient Monitoring Program’s Bioaccumulation Monitoring Program and from other studies.

**Impaired Water Bodies**
*Which lakes, streams and ocean locations are listed by the state as impaired for fish or shellfish consumption?*

Click on the map icon to the left for an interactive map showing California waters placed on the 2006 Impaired Water Bodies list as impaired for uses related to fish or shellfish consumption.

Note: An updated version of this map that includes listings from 2010 – 2016 Integrated Reports is under development.

FOR MORE INFORMATION: Visit the Bioaccumulation Monitoring Program website for interpretative reports, fact sheets, monitoring plans, and more information about monitoring contaminants in sport fish.

QUESTIONS OR COMMENTS?  Contact Us
Safe to Eat Portal

- Feedback on the data and trends page?
Item 7: Timeline

- **December**
  - Final draft Clean Lakes
  - Final 2015 data report
  - Draft 2016 data report
- **January**
  - Draft sampling and analysis plan for 2018
- **February**
  - BOG meeting with Review Panel