San Francisco Estuary Institute

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RMP Fish Committee Meeting
San Francisco Estuary Institute
Meeting Minutes
November 9, 2005

In attendance at the meeting: Andy Jahn (Consultant), Reber Brown (HML-DTSC), Pete LaCivita (USACOE), Jeff Schinske (RTC-SFSU), Karen Taberski (Regional Board), Russell Fairey (MLML), Marco Sigala (MLML), Kathy Hieb (CDFG), Eric Dunlavey (City of San Jose), Jessie Denver (City of San Jose), Fred Hetzel (Regional Board), Margy Gasell (OEHHA), Laura Targgart (City of San Francisco), Diana Lee (DHS/EHIB), Paul Randall (BASMA), Mike Connor (SFEI), Jay Davis (SFEI), Jennifer Hunt (SFEI), Ben Greenfield (SFEI), and Meg Sedlak (SFEI)

I. Introductions

Ben Greenfield called the meeting to order and introductions were made.

II. Discussion of 2003 Fish Report

Jennifer Hunt provided a timeline for the completion of the 2003 fish report. A graphic draft of the report will be completed by the end of January 2006. The format will be similar to the Pulse of the Estuary. The draft will be sent to committee members for final comments.

III. Discussion of 2006 Sampling Program

a. Update on Regional Board information needs, other stakeholder needs
    i. The TRC committee met in December to approve the 2006 RMP program plan. The Regional Board outlined their needs regarding fish sampling:
        1. eliminate leopard shark sampling and increasesamples size of other species

2. decreasing sampling frequency (5 year cycle?) and enlarging sample size
3. sample Oakland Harbor on a less frequent basis than other sites
4. determine if fish could be used to evaluate endocrine disruption effects

ii. We reviewed other stakeholder needs. No new needs were presented.

b. Update on Power Analysis

i. Andy Jahn revisited his power analysis discussed at the Nov 9th meeting.

1. Fish sampled in this program show different contaminant patterns – have to look at each separately. Shiner perch PCB levels are site dependant – need to break analysis out by site (apportion by site)
2. Oakland Harbor average shiner PCB concentrations were higher than other sites – would OEHHA ever consider site specific advice? OEHHA could potentially develop site specific advice if there were sites where contaminant concentrations were lower than other sites.
3. For PCBs we are anticipating a 50% decline over 20 years. This is based on the decreasing PCB trend seen in the RMP/SMW bivalve time series – not sure if the same decline will be seen in fish. For PCB trend analysis – focus on a species where there is currently no trend (i.e. white croaker) – consider lab, site differences in the analysis.
4. Kathy Hieb mentioned that the bag limit/day for shiner perch has decreased to 10/day – there is no size limit for the catch and no seasonal closures. All other Bay perch species have seasonal closures on the fishery as a conservation measure.
5. Location and percent lipids were a significant source of variation of DDT concentrations in shiner perch. Lease square means, lipid normalized DDT concentrations were higher at Oakland Harbor than other sites. DDT seems to be declining and site is not a significant source of the variation. The upper 95% confidence bounds are well below the screening value.
6. Do we want to include the 1994 data in future power analyises? There is no reason not to include it.
7. Length is a significant source of the variation in log normalized Hg concentrations in leopard shark (my notes say that length is not a sig source but the ANOVA results has $p<0.001$ – can you clarify this?). This was a 1 tailed t-test so could miss any potential increases in Hg – 2 tail t-test would catch any increases in Hg due to wetland restoration projects. Recommend waiting a period of time before sampling leopards again.
8. There was no spatial variation in striped bass Hg concentrations. Most of the fish with high Hg are not the largest fish – there is a lot of variability – need to see if you can take the length-Hg relationship out of the data (??? Not sure what this means).
9. Length is a significant source of variation of Hg in croaker.
10. There is a lot of inter-year variability that can confound any long-term trends.

11. Future power analysis will look at regression vs. ANOVA model to detect trends. The 2006 sampling plan will not be based on the power analysis.

c. Coordination with FMP

   i. Budget scenarios C and E have FMP leveraging built in. The FMP will pay for Hg analysis for Delta and some Bay caught fish (2-3 out of the 10 FMP locations will be in the Bay) (striped bass and white sturgeon). The RMP will in turn pay for organics analysis (pest, pcb, pbde) of these same species. There are 2 scenarios: C – where additional bay caught bass and sturgeon will be analyzed for Hg by FMP and E where no additional Bay fish will be caught.

d. 2006 sampling and analysis budget

   i. The sampling/analysis budget for 2006 is $210k. 5 scenarios were presented A) S&T status quo B) modified 2003 sampling strategy C) modified 2003 with PBDE analysis of pilot study fish, FMP leveraging for Hg analysis of bass and sturgeon D) scenario based on power analysis E) modified (C) with no Bay sampling of bass and sturgeon. Sturgeon have seasonal migration from the ocean/Bay to the Delta therefore Delta caught fish are mostly representative of Bay populations.

   ii. Items considered/decisions (see attached budget)

      1. Oakland Harbor added back in for shiner surfperch for 2006 (3 composites). Since sampling crew will be in Oakland Harbor they will also look for white croaker there – if they aren't found all composites will be collected in the Central Bay area since site is an insignificant source of variation for Hg and organics in croaker.
      2. Potentially archive otoliths for future analysis.
      3. Prioritize trends indicators – RB has identified 1) croaker and 2) shiner as indicators for PCB trends and 1) striped bass and 2) shiner as indicators for Hg trends.
      4. We will not collect any leopard sharks this year.
      5. jacksmelt and CA halibut will not be sampled in 2006.
      6. stripers (9 comps) and sturgeon (4 comps) will be collected in the Bay. FMP monies will analyze for Hg – RMP will pay for organics analysis.

   iii. Other sampling programs

      1. EMAP – sampled 64 coastal and Bay locations over a 2 year period – 5 or 6 sites in SF Bay. Flat fish were analyzed for whole body burden. Species analyzed were sole, sandabs, halibut, and starry flounder.
      2. Sarah Cohen and Jeff Schinske are working with shiner perch to look at molecular evolved resistance to contaminants. They are looking at effects and also looking at molecular population structure. Comparisons will be made between fish living in more vs. less contaminated areas.

3. Montreux Settlement Restoration Project – this is a NOAA project looking at DDT and PCBs in fish – sampling occurred 3 years ago.
4. RMP small fish pilot project – sampling small fish (1-3 inch gobies (native and non-native) and silversides (native and non-native). Use small fish to measure short-term changes in Bay Hg levels particularly around restoration sites. Can also use this to measure smaller scale spatial patterns of Hg.

IV. **Action items for committee**:

a. Diana Lee will check the SERFS database to see about the popularity of rockfish species amongst anglers.
b. SFEI will prepared a mock-up of the 2003 fish report by the end of January to distribute to the committee.

Final RMP 2006 Budget

	Fish Collection	Fish Collection II	Dissect & Composite	Shipping	**SJSU Cost**	OC Analyses (PCBs, Pesticides)	PBDEs	PCBs only	Hg	Se	**CDFG Cost**	Total Cost
	1371	1870	119			988	474	494	120	120		
White Croaker	18		18		$ 26,820	18	18		0		$ 26,316	$ 53,136
Striped Bass	9		9		$ 13,410	20	20				$ 29,240	$ 42,650
Shiner Surfperch	15		15		$ 22,350	15	15				$ 21,930	$ 44,280
White Sturgeon	4		4		$ 5,960	5	5		0	12	$ 8,750	$ 14,710
Leopard shark					$ -						$ -	$ -
Brown Smoothhound	0		0		$ -			0	0		$ -	$ -
Chinook Salmon	3		3		$ 4,470		3	3	3		$ 3,264	$ 7,734
Walleye Surfperch		3	3		$ 5,967		3	3	3		$ 3,264	$ 9,231
Black Surfperch	3		3		$ 4,470			3	3		$ 1,842	$ 6,312
Brown Rockfish	3		3		$ 4,470		3	3	3		$ 3,264	$ 7,734
Anchovy	3		3		$ 4,470		3	3	3		$ 3,264	$ 7,734
Baseline Organisms												
Subtotals	58	3	61		$ 92,387	58	70	15	15	12	$101,134	$193,521
External QA						7	7		12	1	$ 11,794	$ 11,794
Total Count	58	3	61			65	77	15	27	13		
Total $	$ 79,518	$ 5,610	$ 7,259	$ 257	$ 92,644	$ 64,220	$ 36,498	$ 7,410	$ 3,240	$ 1,560	$112,928	$205,572
Total $ New Species Only					$ 23,847						$ 14,898	$ 38,745