



FCEC Commercial Fish Vendor Pilot Project Report

I. Overview

In an effort to expand the Commercial Outreach Component of FCEC, the Toxics Epidemiology Program and FCEC staff met with Environmental Health Program Managers at the beginning of 2005. The purpose of the meeting was to explore ways fish contamination information could be incorporated into standard inspection criteria. After much discussion it was decided that the most feasible and useful project would be exploration of the “gray market” with the use of Environmental Health Inspectors. The gray market is defined as the potential for fish to be sold to retail establishments by unlicensed or unapproved sources. Previous studies show white croaker is being sold to markets, but it is unknown if the fish are purchased from reputable sources. Health Inspectors routinely inspect markets and wholesalers and have the regulatory authority necessary to enforce laws pertaining to the purchase of food from licensed sources. Because of their expertise and authority, they were chosen to explore the possible fish contamination issues within the commercial vendor setting. As not to create too much additional work for the inspectors, fish contamination was incorporated into their routine inspection, asking them to spend approximately 30 minutes on this issue per market inspection.

Eight additional planning meetings took place to determine the scope and implementation process of the Commercial Fish Vendor Program. Environmental Health Managers reviewed the database of all markets throughout Los Angeles County. The approximate 470 independent fish markets and 65 wholesalers on the list were chosen as the target markets for the project. Furthermore, the Health Inspector role as a component of their routine inspection was established: 1) verify where the fish was purchased by reviewing invoices 2) disseminate educational materials on fish contamination and 3) take regulatory action when necessary.

Next, the Health Inspector training was designed to educate the Inspectors about fish contamination issues, fish identification, and the inspection process. The 4-hour training took place on June 23, 2005 with approximately 35 Health Inspectors present. The Inspectors who worked on the project were chosen by Environmental Health Management based on their years of experience, office location and workload.

The training was an impressive collaborative effort between FCEC, the California Department of Health Services, the Los Angeles County Department of Public Health and the Department of Fish and Game. The agenda included a pre-test, an overview of the various programs involved, commercial fish concerns, fish identification, the environmental health inspection process for fish markets and wholesalers, critical messages for market owners/managers, a practice exercise, and an evaluation.

A variety of tools were developed for the Inspectors in order to assist them with the inspection process. An inspection flow chart (attachment A) was devised to illustrate how the inspection should be conducted. The main document to be utilized during the inspection was the Vendor Survey (attachment B) which also includes instructions describing how to use the form. A critical messages sheet (attachment C) was also developed for Inspectors to utilize when talking with the market owners/managers about fish contamination.

II. Results:

Below is a narrative of the results from the Vendor Survey question by question.

A total of 470 fish markets were surveyed, 64 of these were wholesale markets. 55 of the facilities visited did not sell fish or no fish were observed during the visit, 6 of these were thought to be wholesale markets. Most of the fish markets are in SPA 2 (24.5%), the San Fernando Valley area, and SPA 4 (20.9%), metro Los Angeles.

	Number	Percentage
SPA 1 Antelope Valley	2	0.4%
SPA 2 San Fernando	115	24.5%
SPA 3 San Gabriel	72	15.3%
SPA 4 Metro	98	20.9%
SPA 5 West	0	0.0%
SPA 6 South	30	6.4%
SPA 7 East	47	10.0%
SPA 8 South Bay	48	10.2%
No Answer	58	12.3%
Total	470	100.0%

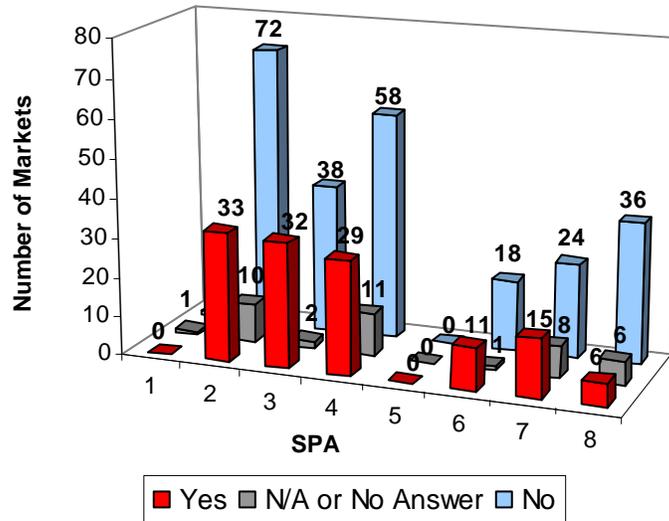
1. Is market owner aware of "Fish Contamination Issues" off the coast of Los Angeles County?

Only about one-third (29.1%) of the market owners in Los Angeles County are aware of fish contamination issues pertaining to fish caught off the coasts of Los Angeles County. This was fairly evenly distributed among the SPA regions (SPA 2 – 28.7%, SPA 4 – 29.6%, SPA 6 – 36.7%, SPA 7 – 31.9%). SPA 3 had a slightly better awareness with 44.4% of owners aware. On the other hand, only 12.5% of owners in SPA 8 are aware of the issues. No owners are aware in SPA 1 and 5, but only 2 markets were inspected in SPA 1 and none were inspected in SPA 5.

	Number	Percentage
Yes	137	29.1%
No	260	55.3%
N / A	21	4.5%
No Answer	52	11.1%
Total	470	100.0%

Table 1:

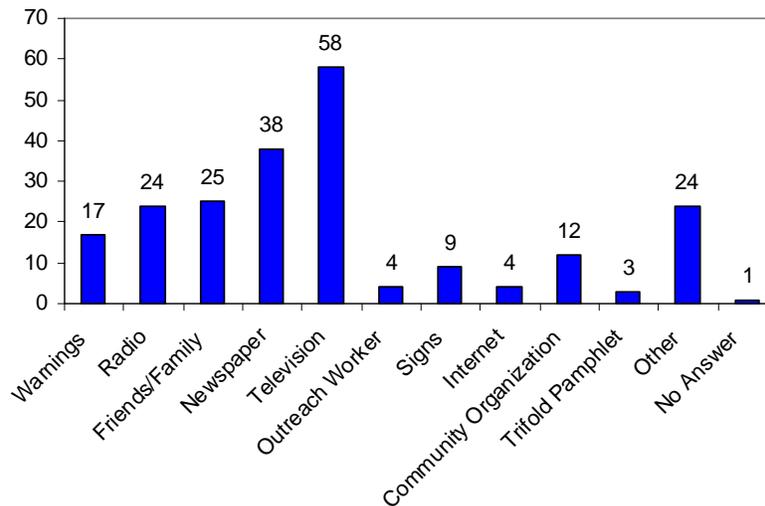
Was Owner Aware of Fish Contamination Issues?



2. If Yes, the owner is aware, then where did market/processor owner hear about the contaminated fish issues? (n=137)

The majority heard from the television (42.3%) or the newspaper (27.7%). Some heard from friends or family (18.2%), radio (17.5%), warnings (12.4%), or community organizations (8.8%). Only a few heard from signs (6.6%), outreach workers (2.9%), the internet (2.9%), or the tri-fold pamphlet (2.1%). Quite a few, 17.5%, said they heard about it from somewhere other than those listed. This included a variety of responses such as co-workers, other people in the industry, the Department of Fish and Game, etc.

Table 2:



3. Regarding identifying the presence of one of the following fish species. (n=470)

2 White Croakers were identified (0.4%). Note: One of these had been listed as "Other Available Fish" under the nickname Kingfish.

49 identified Other Croaker, the majority specifying "yellow croaker" (10.4%).

0 (0.0%) identified Queenfish, 1 (0.2%) California Corbina, 6 (1.3%) Bonito, 7 (1.5%) Pacific Chub Mackerel, 8 (1.7%) Scorpionfish (Sculpin).

The vast majority, 344 (73.2%), identified an "Other Available Fish" and 53 (11.3%) did not have a response to this question.

	Number	Percentage
White Croaker	2	0.4%
Other Croaker	49	10.4%
Queenfish	0	0.0%
California Corbina	1	0.2%
Scorpionfish (Sculpin)	8	1.7%
Pacific Chub Mackerel	7	1.5%
Bonito	6	1.3%
Other Available Fish	344	73.2%
No Answer	53	11.3%
Total	470	100.0%

3b. If "Other Available Fish" was selected, what were the most common other fish named? (n=344)

Note: Overlap in categories

	Number	Percentage
Catfish	57	16.6%
Salmon	52	15.1%
Snapper	23	6.7%
Tilapia	99	28.8%
Trout	24	7.0%
Tuna	20	5.8%
Whiting	14	4.1%
Other	93	27.0%
No Answer	14	4.1%
Total	396	

4. Invoice Information: Was the invoice on site, faxed over, not on site? If the invoice was not on site, did they present at OH (office hearing)?

A good majority 367 (78.1%) did have the invoice on site, 6 (1.3%) faxed the invoice over at a later time, and 29 (6.2%) did not have the invoice on site. 68 (14.5%) did not have a response to this question. Note: The 5 who 'Presented at OH' were all among those listed as 'Not On Site.'

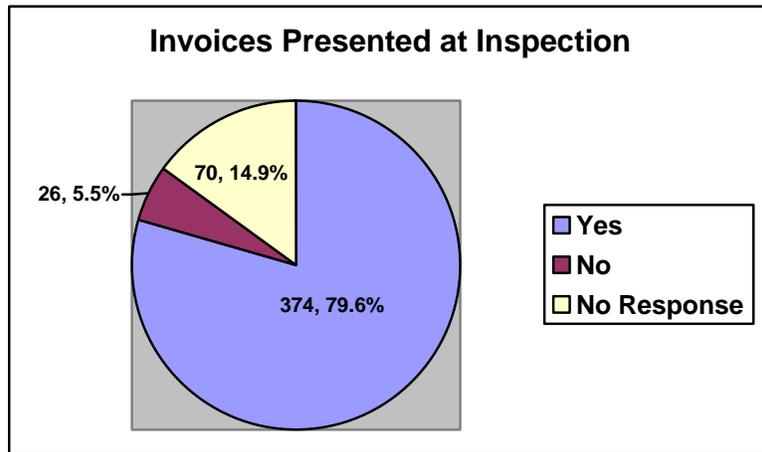
	Number	Percentage
On Site	367	78.1%
Not On Site	29	6.2%
Presented at OH	5	~
Not Presented at OH	0	0.0%
Faxed Over Invoice	6	1.3%
No Answer	68	14.5%
Total	470	100.1%

5. Invoice presented matches the fish checked above:

374 (79.6%) reported yes, the invoice matched the fish checked above. 26 (5.5%) reported no, and 70 (14.9%) did not respond to the question. For the 70 that had 'No Answer' for this, 40 were markets that do not sell fish or no fish was observed at the time of the inspection. Half of those markets that did not have an invoice, 13 also did not sell fish. On the other hand, 2 of the markets that did have invoices did not sell fish.

	Number	Percentage
Yes	374	79.6%
No	26	5.5%
No Answer	70	14.9%
Total	470	100.0%

Table 3:



6. All fish in the premises labeled with "Country of Origin", "Farmed" or "Wild":
 93 (19.8%) said yes, 303 (64.5%) said no, and 74 (15.7%) had no answer to the question.

	Number	Percentage
Yes	93	19.8%
No	303	64.5%
No Answer	74	15.7%
Total	470	100.0%

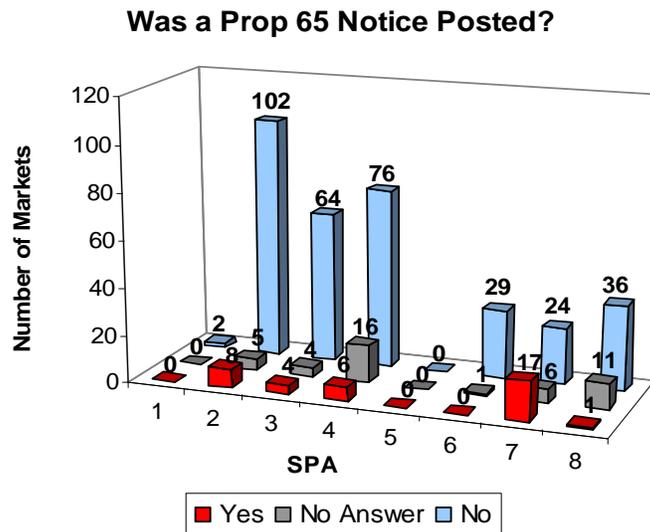
7. Was a "Prop 65 Notice" sign posted:

40 (8.5%) said yes, 354 (75.3%) said no, and 76 (16.2%) had no answer to the question. However, market owners are only required to post a Prop 65 warning if there are 10 or more employees. Unfortunately, information about the number of employees was not asked on the Vendor Survey.

	Number	Percentage
Yes	40	8.5%
No	354	75.3%
No Answer	76	16.2%
Total	470	100.0%

b. Is there any SPA correlation with compliance to post Prop 65 notices?

Table 4:



8. Market/processor sells shark, swordfish, tuna:

16 (3.4%) of the markets sell shark, 32 (6.8%) sell swordfish, and 80 (17.0%) sell tuna. There was quite a bit of overlap among these categories as markets often sold tuna and shark or shark and swordfish. 339 (72.1%) marked N/A for this question, perhaps meaning that they do not sell any of these kinds of fish, and 43 (9.1%) had no answer to this question.

	Number	Percentage
Shark	16	3.4%
Swordfish	32	6.8%
Tuna	80	17.0%
N/A	339	72.1%
No Answer	43	9.1%
Total	510	

9. Packet of educational materials given to market owner/manager:

408 (86.8%) said yes a packet was given, 28 (6.0%) said no packet was given, and 34 (7.2%) did not respond to this question.

	Number	Percentage
Yes	408	86.8%
No	28	6.0%
No Answer	34	7.2%
Total	470	100.0%

10. Indicate topics covered during visit:

427 (90.9%) reminder to buy from reputable sources, 409 (87.0%) ID of white croaker and reasons for concern, 415 (88.3%) catch ban and contaminated zones, 347 (73.8%) Prop 65, 390 (83.0%) health effects and populations at-risk, 47 (10.0%) other, and 34 (7.2%) did not answer the question.

Note: There is a lot of overlap with the answers to this question. Half of the markets in the 'No Answer or N/A' category (17) are from markets that do not sell fish or no fish was observed at the time of the inspection.

396 (84.3%) talked about 3 topics, reminder to buy from reputable sources, ID of white croaker and reasons for concern, & catch ban and contaminated zones.

333 (70.9%) talked about 4 topics, reminder to buy from reputable sources, ID of white croaker and reasons for concern, catch ban and contaminated zones & Prop 65.

329 (70.0%) talked about all 5, reminder to buy from reputable sources, ID of white croaker and reasons for concern, catch ban and contaminated zones, Prop 65 & health effects and populations at-risk.

Topic	Number	Percentage
Reminder to buy from reputable sources	427	90.9%
ID of white croaker & reasons for concern	409	87.0%
Catch ban & contaminated zones	415	88.3%
Prop 65	347	73.8%
Health effects & populations at-risk	390	83.0%
Other	47	10.0%
No Answer or N/A	34	7.2%
Total	2,069	

11. Violations:

412 (87.7%) reported N/A for violations, 3 (0.6%) noted unapproved sources, 22 (4.7%) noted labels-consumer foods, 2 (0.4%) noted misrepresentation, 17 (3.6%) had a hearing issued, and 31 (6.6%) a referral was made for.

Violation	Number	Percentage
26. Unapproved Sources	3	0.6%
35. Labels-consumer foods	22	4.7%
36. Misrepresentation	2	0.4%
94. Hearing Issued	17	3.6%
96. Referral Made	31	6.6%
No Answer or N/A	412	87.7%
Total	487	

III. Assessment

Overall, the logistics of the project ran extremely smooth. The programs involved communicated regularly to address any questions or concerns about the project. All of the inspections were completed by the due date of June 30, 2006. The Inspectors turned in their completed forms in a timely manner. The forms were then turned in to the Toxics Epidemiology Program monthly for data entry. Initially there were some problems with a couple of Inspectors not filling out the Vendor Surveys completely. Once the issue was brought to their attention the problem was resolved.

Because this project was the first of its kind for the programs involved, defining “success” was challenging. The goals of the Commercial Fish Vendor Pilot Project were to: 1) explore the presence of white croaker and other locally caught fish sold in markets and by wholesalers and 2) assess the record keeping quality of market owners. We ultimately wanted to know if white croaker was frequently sold in markets and if so were the fish purchased from a reputable source. While white croaker was only identified during two inspections, the record keeping quality was encouraging. Only approximately 5.5% of market owners did not have invoices for the fish

purchased, keeping in mind almost 15% did not answer the question. Ultimately, we were quite pleased with the number of market owners who had invoices which matched the fish being sold.

There were also limitations of the project to consider. While the Inspectors were trained to identify the various species of fish of concern, we suspect that there may have been some discrepancies with correctly identifying the fish during the inspection. Inspectors could have over or under identified white croaker in the markets. Furthermore, a question was asked on the Vendor Survey regarding the Prop 65 postings, which are required when there are 10 or more employees. According to the results, 75.3% of the markets inspected did not have the warning posted. However, we didn't ask how many workers the markets employs, therefore the market owner may not have been required to post the Prop 65 notice.

At this time the future of this project is unknown. There has been some discussion about EPA entering into a direct cooperative agreement with the Environmental Health Program to further explore the gray market. If such a plan materializes, then the Toxics Epidemiology Program will assist by providing data management, coordinating training needs and supplying health education materials.

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