



Mercury in Seafood: No Fair Warning

**How failure to post adequate mercury-in-seafood advisories is
threatening people's health
and violating Californians' right-to-know**



**GotMercury.Org
A Project of Turtle Island Restoration Network
March 2008**

Executive Summary

With the advent of health consciousness and the global industrialization of fishing, the rate of seafood consumption has doubled since the 1980s.ⁱ Today people in the U.S. eat about 16 pounds of fresh and frozen seafood every year. But they do so at their own risk. Because alongside greater seafood consumption, increasing levels of mercury air emissions are contaminating fish with the potent neurotoxin -- methyl mercury.



While ingestion of methyl mercury is known to cause neurological and cardiovascular problems, public agencies responsible for ensuring safe food supplies have done little to prevent mercury-contaminated seafood from reaching our store shelves and restaurant menus. In fact, even in the face of compounding evidence of human harm from mercury ingestion, the U. S. Food and Drug Administration (FDA) has scaled back efforts to test seafood imports for contaminants and refused to ban those imports that are unfit for consumption due to dangerous mercury concentrations.ⁱⁱ

This report explains how California's advocacy and regulatory efforts were shaped in the absence of effective federal efforts to protect seafood consumers. In the absence of federal leadership, California's residents, legislators and consumer advocates have attempted to protect seafood consumers with warnings about mercury in seafood at retail food establishments, specifically restaurants and supermarkets. California has had an advantage due to its strong consumer advocacy movement and Proposition 65 (Prop. 65), the Safe Drinking Water and Toxic Enforcement Act of 1986ⁱⁱⁱ. The Proposition was intended to protect California citizens and the state's drinking water sources from chemicals known to cause cancer, birth defects or other reproductive harm, and to inform citizens about exposures to such chemicals. Mercury is one such substance.

Here we detail the methodology and key findings in multiple statewide monitoring projects commissioned by Turtle Island Restoration Network and the Public Health Trust under California's Prop. 65. It also publishes new results from an unprecedented statewide survey conducted by community activists of restaurant compliance with court orders mandates to post advisory warnings—which found that legal action was the most effective way to get restaurants to alert diners to mercury in seafood. Finally, it provides policy recommendations for improving both federal and state policy to better protect people from mercury contamination in commercial seafood.

All the data points to one conclusion: seafood purveyors and public health officials are failing to provide health-minded seafood lovers with fair warning about the dangers of eating mercury-contaminated seafood. The solutions are simple: require mercury testing and ban products that exceed safe standards while requiring signage and labeling. Here we spell out how and why this should happen.

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Acknowledgements: GotMercury.Org thanks the Public Health Trust, The California Wellness Foundation and the 125 community activists who cared enough to monitor restaurants in their communities.

Got Mercury?



A Project of Turtle Island Restoration Network

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Key Findings

- ❖ Mercury levels of swordfish and tuna tested from California markets frequently exceed the FDA limit of 1ppm in fish tissue. In one sample the mercury levels were 230 percent over the FDA limit.^{iv}
- ❖ Among those monitored restaurants managing 10 or more branches the following were chronically out of compliance with Prop. 65, receiving a grade of C or below: Chili's, Claim Jumper, Outback Steakhouse, P.F. Chang's and The Cheesecake Factory.
- ❖ Generally, litigation has been more effective at enforcing Prop. 65 regulations than statutory notice alone in California. As a result of the *California v. Benihana et al.* lawsuit, over 50 percent of restaurants are in compliance with Prop. 65 requirements.^v
- ❖ When strictly surveying restaurants offering mercury-contaminated seafood and ordered to post consumer advisory warnings, the number of establishments in compliance rises to 81 percent.
- ❖ Overwhelmingly, restaurants maintained the same clientele prior to and after the Prop. 65 signs were posted, although insufficient data has been collected to precisely evaluate shifts in sales of types of seafood.
- ❖ 70 percent of California supermarkets either failed to post signs or posted signs in places that were difficult or impossible for consumers to notice when making purchases of mercury-contaminated seafood.

Policy Recommendations:

- ❖ The U. S. FDA must implement inspection and toxins testing of all commercial seafood imports and banning those with mercury in excess of the 1ppm regulatory action level.
- ❖ The FDA should require seafood companies and retailers to label their seafood products with the mercury levels found in order to assist consumers in deciding which fish is healthiest in their diet.
- ❖ The California Attorney General should enforce Prop. 65 more stringently with systematic monitoring efforts. All points of sale-- supermarkets, delis, fish markets, and restaurants included-- offering fish that contains unhealthy levels of mercury should be randomly monitored and fined successively on an increasing basis if out of compliance with Prop. 65. The signs must be posted where all mercury-laden seafood is stocked, be it frozen, fresh or packaged aisles.
- ❖ The State of California should enact new laws that require posting, monitoring and enforcement of mercury in seafood warning signs at every retail food outlet that sells fish contaminated with mercury.
- ❖ State legislators should pursue a exemption with federal agencies to replace the use of canned tuna with safer wild -caught canned salmon (as Hawaii has done) in WIC and other food programs to protect the health of its poorest citizens.
- ❖ The State of California should exercise its authority over federally funded school lunch program menus to warn school districts about mercury in seafood and recommend removing canned albacore and light tuna from children's lunches and school cafeterias.

- ❖ Like San Francisco, County Boards of Supervisors across the state and country should implement multi-lingual signage at points of sale to inform non-English speakers about mercury in seafood.
- ❖ County Departments of Health should systematically distribute seafood safety literature on how to stay healthy and protect oneself from mercury contamination. This information should include charts delineating which seafood is safe or unsafe to consume and in what quantities it can be safely consumed. All health clinics and locations where seafood is sold should provide Seafood Safety literature to clients.
- ❖ County Departments of Health should conduct consumer and epidemiological surveys to evaluate the effect of mercury-in-seafood consumer advisory warnings.

Failure of the U. S. FDA to Properly Warn People About Mercury-Laden Fish

In response to the American Medical Association's recommendations for greater distribution of consumer advisories and increased metals testing of seafood imports, the U. S. Food and Drug Administration (FDA) issued a consumer advisory and scaled back its metals testing program.^{vi} Charged with the duty to secure the purity, wholesomeness and sanitation of products entering the food supply, the FDA prepared consumer advisory warnings. In 2001, the FDA advisory warned women of childbearing age, pregnant and nursing women, children and infants to avoid those commercial and freshwater fish highest in mercury levels, such as swordfish, shark, tilefish (golden snapper), and king mackerel. Under intense criticism over the omission of American's favorite fish—canned tuna—the agency revised its advisory warning to also suggest a reduction of tuna consumption in 2004.^{vii}

Rather than heed advocates' call for a metals testing program, FDA officials responded that they would rely on the seafood industry to monitor their own imports for mercury and inform consumers of the risks associated with mercury contamination.^{viii}

Since the agency shifted its toxins monitoring program to the seafood industry, dwindling resources have been used to protect U.S. consumers from mercury contamination in seafood. The latest figures show that the FDA inspected less than two percent of the nearly 860,000 imported seafood shipments and that only 0.59 percent of those shipments were tested for contaminants in a laboratory.^{ix} Further the FDA has refused to ban or recall those tested imports that exceed the federal action levels of 1ppm.^x


This approach is hard to reconcile with the fact that rapid low-cost technology is available to the FDA for mercury screening without compromising the freshness of seafood.^{xi} Inexpensive and rapid metal testing can be performed at ports or on-site at points of sale without compromising the freshness of the fish.^{xii}

The FDA's efforts to protect consumers from mercury contamination have fallen short. Statistics show that public messaging without adequate distribution or regulatory schemes fall short of effectively informing consumers of public health risks. The Center for Science in the Public Interest depicted these shortfalls in their 2006 survey showing that 31 percent of pregnant women, women planning on becoming pregnant, and nursing mothers did not know that seafood with high mercury levels could be harmful in 2006.^{xiii}

California's Response Under Proposition 65

In the absence of adequate federal consumer protection, state and local governments, public health advocates, and business proprietors have instituted alternative programs to raise awareness about the benefits and risks of seafood consumption. In each case, parties have relied on public-private partnerships to more effectively distribute these public health messages. California may be uniquely positioned to reach targeted audiences due to Prop. 65. The passages below demonstrate just how effective Californians have been with this tool and where supplemental public and private efforts are still needed to compensate for the statutory limitations of the act.

Proposition 65, also known as California's Safe Drinking Water and Toxic Enforcement Act of 1986, requires large establishments that carry products known to cause cancer or birth defects, to notify the public about the presence of such toxins. California adopted a mercury-specific consumer advisory warning to adhere to the act's toxin-specific requirements. As a result, where establishments offering any of the mercury-laden fish identified by the FDA as unsafe for



WARNING!

Nearly all fish and shellfish contain some amount of mercury and related compounds, chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm. Certain fish contain higher levels than others.

Pregnant and nursing women, women who may become pregnant, and young children should not eat the following fish:

SWORDFISH • SHARK • KING MACKEREL • TILEFISH

They should also limit their consumption of other fish, including tuna.

Fish and shellfish are an important part of a healthy diet and a source of essential nutrients. However, the federal Food and Drug Administration ("FDA") and U.S. Environmental Protection Agency ("EPA") advise pregnant and nursing women, women who may become pregnant, and children to limit their weekly consumption of fish and to eat fish that are lower in mercury.

The California Department of Health Services recommends that these individuals:

- Eat a variety of different types of fish;
- Eat smaller fish rather than older, larger fish;
- Begin following these guidelines one year before becoming pregnant.

According to the FDA and EPA, fish or shellfish that tend to be lower in mercury include pollock, shrimp, and scallops. Mercury levels in tuna vary. Tuna steaks and canned albacore tuna have higher levels of mercury than canned light tuna.

For more information about the risks of mercury in fish and about the levels in various types of fish consult the following websites:
 U.S. Food and Drug Administration ("FDA") www.cfsan.fda.gov
 U.S. Environmental Protection Agency www.epa.gov/officeof/fish
 or call the FDA toll-free at **1-888-SAFEFOOD (1-888-723-3366)**.

consumption by vulnerable groups, proprietors would be required to post specific mercury-in-seafood consumer advisory signs.

Although California is revered for this consumer protection act, the law is limited in scope. Prop. 65 applies exclusively to establishments of 10 employees or more. More importantly, the law requires public participation in order to enforce its regulations. Proprietors will only be put on notice to comply with Prop. 65 if Californians file their grievances with the attorney general. Where proprietors choose to

disregard Prop. 65 requirements, either the attorney general or private parties must take legal action to secure enforcement of the law or penalties on points of sale that are unwilling to comply.

In 2003, California Attorney General Bill Lockyer recognized mercury contamination as a concern of state proportions and pursued several Prop. 65 mercury lawsuits targeting fresh and frozen seafood — *California vs. Safeway* and *California vs. Benihana Inc et al.* Additionally, the Attorney General expanded its consumer health litigation to target a major source of contaminated seafood, canned tuna. In *California vs. Tri-Union Seafood, LLC et al.*, the Attorney General sought advisories on the labels of world’s biggest canned tuna manufacturers—Bumble Bee, Chicken of the Sea and Starkist.

However, the FDA sent in a letter to the Attorney General in the case of *California vs. Tri-Union Seafood, LLC et al* stating that signs or store warnings for canned tuna were pre-empted by the Federal Food Drug and Cosmetic Act.^{xiv} With the support of FDA Commissioner Lester Crawford, the tuna industry persuaded the trial court to rule that California’s labeling requirements were in conflict with federal law and that the risk of mercury contamination from canned tuna was too minimal to trigger consumer advisory requirements.

So instead of securing the safety of the seafood supply, the FDA’s actions had the effect of quelling one of the most comprehensive state efforts to protect public health from mercury contamination yet.

While the *Tri-Union Seafood LLC* setback had the effect of “staying,” or freezing the *Safeway et al.* case, nearly 35 restaurants and one supermarket (for a total of 399 retail locations), settled the State of California Prop 65 lawsuit. Settling parties agreed to post mercury-in-seafood consumer advisory warnings at entries of their establishments in a visible, well-lit location. As part of the settlement agreement, the Public Health Trust received damage awards to commission monitoring and public education efforts statewide.

Restaurants Response to Lawsuit Settlement

In the spring of 2006, Got Mercury.Org began to solicit and train volunteers statewide to monitor restaurant and supermarket branches that settled the Prop. 65 lawsuits with the state of California. By Fall 2007, GotMercury.Org contacted over 50 organizations statewide and found 125 dedicated volunteers to survey settling parties throughout 27 California counties.

In all, 23 chain restaurants were included among settling parties. Of the restaurants that offered high-mercury fish, those most frequently out of compliance with Proposition 65 monitoring requirements included: Outback Steakhouse, Duke's, P.F. Chang's, Ruth's Chris Steakhouse, Fleming's Prime Steakhouse, The Cheesecake Factory, Claim Jumper, and The Yard House.

Monitoring project volunteers reached 85 percent of settling party restaurants for a total of 332 site visits. Overall, 19 percent of restaurants offering the fish highlighted in the FDA consumer advisory warning failed to carry or appropriately post the mercury-in-seafood signs.

If we were to include those monitored restaurants that do not offer the highlighted fish at all times nearly 50 percent of restaurants would have been found out of compliance with the Proposition 65 posting requirements.

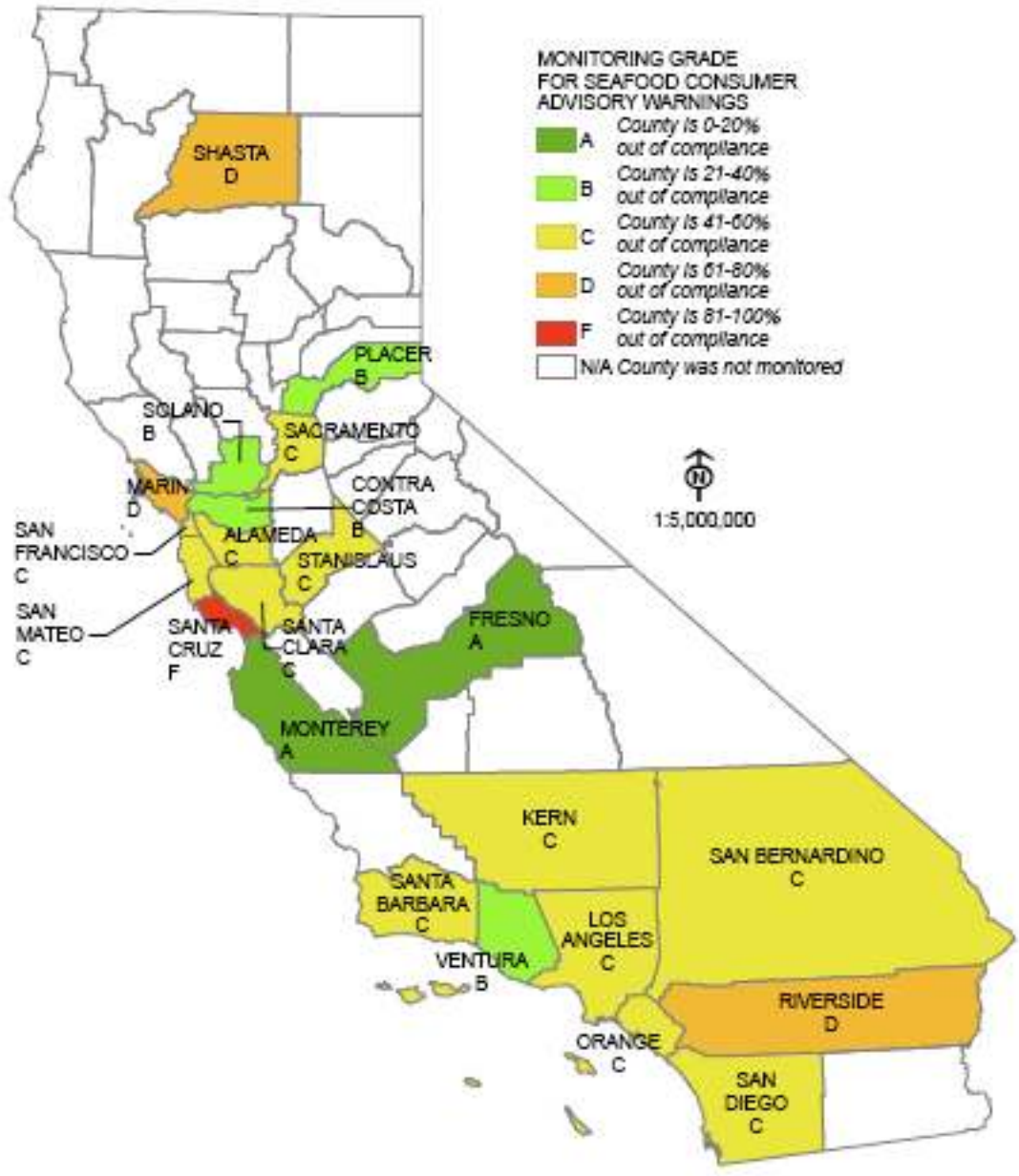
This is relevant because the restaurant may not carry a fish on the FDA's advisory every day and also because the FDA's warning is not exhaustive of fish frequently found with high levels of mercury. Depending on the location of the catch and the size of the fish, mercury levels may differ. Limiting surveys to those fish named in the FDA advisory does not meet Proposition 65's goal of informing consumers of potential mercury in a variety of seafood.

County-by-County Results

The table and California map below shows grade counties that were monitored received as a result of the number of establishments found out of compliance with Prop. 65 requirements.^{xv}

County	Violations	% Out of Compliance	Grade
Alameda	9	56%	C
Butte	0	0	0
Contra Costa	3	27%	B
Fresno	1	20%	A
Kern	3	60%	C
Los Angeles	44	54%	C
Marin	2	62%	D
Mono	0	0	0
Monterey	1	20%	A
Orange	24	57%	C
Placer	2	33%	B
Riverside	11	69%	D
Sacramento	5	45%	C
San Bernardino	10	53%	C
San Diego	13	50%	C
San Francisco	9	56%	C
San Joaquin	0	0	0
San Mateo	3	50%	C
Santa Barbara	1	50%	C
Santa Clara	17	68%	C
Santa Cruz	1	100%	F

Shasta	2	67%	D
Solano	2	40%	B
Sonoma	0	0	0
Stanislaus	3	75%	C
Tulare	0	0	0
Ventura	3	38%	B



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Restaurant Grades

Similar to the grading scale for counties, GotMercury.Org graded restaurants according to the number of branches found out of compliance with Prop. 65 warnings. In many cases, restaurants failed to comply with Prop 65 requirements because managers obscured signs with other objects or placed them where they were not visible to patrons. The table below demonstrates results for establishments that manage from 1 to 66 branches statewide.

Among those monitored restaurants managing 10 or more branches the following were chronically out of compliance with Prop 65, receiving a grade of C or below: **Chili's, Claim Jumper, Outback Steakhouse, P.F. Chang's and The Cheesecake Factory.**^{xvii}

Settling Parties	% Out of Compliance	Grade
Andronico's Supermarket	13%	A
Benihana	17%	A
Bennigan	50%	C
Café Pescatore, San Francisco	100%	F
Charthouse	43%	C
Chili's	47%	C
Claim Jumper	67%	D
Cozymel's, San Diego	0	A
Duke's	50%	C
Fifth Floor, San Francisco	100%	F
Fleming's Prime Steakhouse	80%	D
Grand Café, San Francisco	100%	F
Grand Lux Café, Los Angeles	0	A
Jake's	50%	C
Kuleto's	0	A
Maggiano's Little Italy	100%	F
McCormick & Schmick	50%	C
Morton's of Chicago	33%	B
Olive Garden	24%	B
Outback Steakhouse	42%	C
P.F. Chang's China Bistro	63%	D
Park Place, San Francisco	100%	F
Ponzu, San Francisco	100%	F
Porterhouse, Los Angeles	0	A
Postrio, San Francisco	100%	F
Pucci Pinetti, San Francisco	0	A
Red Lobster	18%	A
Romano's Macaroni Grill	30%	B
Roy's	67%	D
Ruth's Chris Steakhouse	57%	D

Scala's, San Francisco	0	A
Spenger's, Berkeley	100%	F
The Cheesecake Factory	62%	D
The Yard House	29%	B

Key statistics:

- Number of stores checked: 332
- Number of stores with wrong sign: 15
- Number of stores with no sign: 5
- Number of stores where Mercury in Seafood sign is obscured by another object or placed in an improper location: 20
- Number of stores where sign is not at eye level: 26
- Number of stores where sign is not clearly lit: 26

In many cases, restaurant managers attempted to comply with the regulations, but placed signs inconspicuously, presumably so as not to attract attention to them. Some of the eyewitness testimony that volunteers shared included:

- The sign is not in the restaurant, it is on the wall next to an elevator entry on the first floor while the restaurant is on the second floor.
- Signs were elevated 13 feet off the ground entering the bar area.
- Signs were behind plants near the floor.
- Signs were to the side of the bar, approaching a bathroom, obscured among many framed certificates.
- Both signs were at foot level in a window and blocked by a serving cart.
- Both signs were at knee level in a window covered by a bench.
- I have been there a few times, but never noticed the sign. I'll take a guess and say 99% of the people don't see the sign. It's hidden next to the restroom but it is posted on the wall.

Restaurant Managers and Warning Signs

Understanding the market-deterrent effect of warning signs, GotMercury.Org surveyed restaurant managers directly to evaluate the effects of the Prop. 65 signs on their business. An anonymous survey was sent to managers of all the monitored restaurants. From the limited but informative 3 percent response, GotMercury.Org learned that:

- ❖ Whereas restaurant employees were frequently well informed about mercury in seafood by a combination of the Prop. 65 consumer advisory signs *and* limited outside information, customers were frequently less informed.
- ❖ Customers rarely inquired about the Prop. 65 consumer advisory signs. Those restaurants receiving inquiries did so about once a month.
- ❖ More often than not, customers continued to eat the same seafood despite the newly posted Prop. 65 signs. Generally, managers were unable to notice a change in seafood ordering habits as a result of the Proposition 65 signs.
- ❖ Similarly, managers were unable to notice an effect on seafood sales overall. One manager replied that 20-30 percent of seafood sales consisted of tilapia (which is not highlighted in the FDA advisory sign). Another manager replied that there had been a 5 percent increase in seafood sales since the posting of Proposition 65 signs.

- ❖ Overwhelmingly, restaurants maintained the same clientele prior to and after the Proposition 65 signs were posted. In a couple of cases, managers noticed new customers coming in or regular customers dining more often. On the other hand, one manager said they lost customers as a result of the signs.

From these findings, GotMercury.Org deduced that the Prop. 65 consumer advisory warnings are not having a noticeable effect on restaurant business. The consumer advisory signs were, however, serving to better inform restaurant staff and customers about mercury in seafood. Thus, restaurant managers who chronically obscured or misplaced consumer advisory signs due to presumed effects of declining business did so at the expense of consumer’s health. In response, these statistics should encourage managers to improve business *and* consumer confidence by prominently posting consumer advisory warnings.

Evaluating Proposition 65

- ❖ Generally, litigation has been more effective at enforcing Prop. 65 regulations than statutory notice alone in California. As a result of the *California v. Benihana et al.* lawsuit, over 50 percent of restaurants are in compliance with Prop 65 requirements.^{xviii}
- ❖ When strictly surveying those restaurants that settled the lawsuit, the number of establishments in compliance rises to 81 percent.
- ❖ Data showed that restaurants in more populous counties demonstrated less regard for posting consumer advisory notices than those in smaller counties.

These findings demonstrate a marked improvement in Prop. 65’s effectiveness when legal action is carried out. Whereas previous surveys of supermarkets showed 30 percent compliance with Prop. 65 regulations once the Attorney General put establishments on notice; this survey demonstrates that 50 percent of parties settling a lawsuit were in compliance.

Previous Studies of Mercury-Contaminated Seafood & Consumer Advisory Warnings

In the fall of 2002, environmental health advocates from Turtle Island Restoration Network (“TIRN”) and the As You Sow Foundation launched a regional study of mercury-contaminated seafood and consumer advisory warnings present in major grocery stores found in Northern California. TIRN staff surveyed 109 individual supermarkets under the management of 19 different corporations found in the table below.^{xix}

Albertson’s Andronico’s Baron’s Marketplace Bell (Kroger) Costco Draefer’s Food 4 Less (Kroger) Gelson’s Good Earth Key Market	Molly Stone’s Ralph’s (Kroger) Raley’s Safeway Sam’s Club Stater Brothers Trader Joe’s United Market Von’s Winco Whole Foods
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Key Findings from initial studies included:

- ❖ Mercury levels of swordfish and tuna frequently exceeded the FDA limit of 1ppm in fish tissue. In one sample the mercury levels were 230 percent over the FDA limit.

- ❖ 73 percent of California supermarkets either failed to post signs or posted signs in places that were difficult or impossible for consumers to notice when making purchases of mercury-contaminated seafood. 41percent posted no mercury-in-seafood warning signs in their fresh/frozen fish sections at all.
- ❖ Kroger-owned markets reflected the highest levels of non-compliance with Proposition 65 requirements. 88% of Kroger stores—**Food 4 Less, Bell, and Ralph’s**— that were monitored posted no signs or signs that were not noticeable.
- ❖ Almost no stores posted consumer advisory signs in aisles where canned tuna was sold. In part, this act of non-compliance was in response to Del Monte’s (owner of Star-Kist) request to refrain from posting signs in tuna aisles and promise to indemnify grocers in any lawsuit that would hold them accountable for this Prop. 65 violation.^{xx}

TIRN and As You Sow Foundation used the toxins and consumer advisory warning data to initiate a Prop 65 lawsuit in December 2002. The California Attorney General, Bill Lockyer, put defendants on notice of the violations and the impending lawsuit shortly thereafter. As the Attorney General took over the case on behalf of residents of the state of California, TIRN followed up its monitoring survey to determine whether defendants had rectified violations. In the spring of 2004, TIRN visited 223 grocery stores, including those visited in the initial study, in search of mercury-in-seafood consumer advisory warnings.^{xxi}

Key findings included:

- ❖ 70% of grocery stores visited either failed to post signs or placed signed locations that were not noticeable by customers selecting seafood to purchase in the fresh or frozen seafood sections.
- ❖ Kroger stores—**Food 4 Less, Bell, and Ralph’s**— continued to top the data charts for failing to comply with Prop. 65 at 79%.

Despite legal pressure, the second study revealed a slight improvement in private efforts to inform consumers of the risks of mercury in seafood. Recognizing the deficiencies in the scope of state enforcement, TIRN advocates targeted local governments and points of sale to test whether more direct tactics would result in greater use of consumer advisory warnings.

Direct Consumer Pressure on Grocers

Given the lengthy nature of litigation, TIRN subsequently established GotMercury.Org to bring more immediate attention to campaign goals. In early 2005, GotMercury.Org published a full-page *New York Times* ad calling on Safeway CEO Stephen Burd to protect consumer health by posting mercury-in-seafood advisories. Readers sympathized with the contradiction that Safeway created by launching its “Ingredients for Life” campaign while refusing to post mercury-in-seafood consumer advisories. Safeway shoppers by the thousands, both inside the United States and abroad, responded with a wave of petitions demanding the warnings. To their credit, Safeway adopted the mercury-in-seafood signs. See Appendix C for an image of the ad.

This consumer pressure resulted in considerable success to get Safeway to post consumer advisory warnings in all of its California stores. However, coalition partners in other states were dissatisfied with the scope of Safeway’s commitment. Although Safeway promised to post signs in their stores internationally, only Californians noticed institutional change. In response, GotMercury.Org joined forces with a national coalition of consumer health advocates to secure corporate accountability. A second full-page ad called on major grocers—Safeway, Albertson’s, and Whole Foods—to post consumer advisory warnings.

Undertaking a national research study to determine grocer’s compliance with consumer demands, Washington DC-based Oceana found 19 percent of major grocery stores committed to informing consumers about mercury in seafood.^{xxii} The fifteen stores committed to informing their

customers about mercury in seafood totaled 12 percent of grocers' market share.^{xxiii} The national study showed promise but a small commitment from the grocer industry overall. This result demonstrated that private actors alone cannot be entrusted with the responsibility to protect consumer health.

County Regulations Reach More Diverse Constituencies: San Francisco County Ordinance

In an effort to galvanize the public-private partnership for consumer health, GotMercury.Org turned locally to the San Francisco Board of Supervisors to engender more stringent local public health policies. Campaign organizers worked with a district supervisor to promulgate a regional ordinance that would adopt Prop. 65 requirements for consumer advisory warnings and reach the diverse constituents of San Francisco. Supported by a national coalition of health advocates, the Board of Supervisors unanimously adopted the ordinance on November 1, 2005.^{xxiv}

Despite tuna industry pressure to dismiss advocates' concerns, the ordinance required mercury-in-seafood consumer advisory warnings in Spanish, Chinese and English at all stores and restaurants where seafood high in mercury was sold. Initially, the ordinance covered approximately 5,000 points of sale throughout the city and county of San Francisco. It also secured an enforcement mechanism, establishing routine health inspections by the San Francisco Department of Public Health. Examples of the Chinese and Spanish-language consumer advisory warnings can be found in the Appendix. They are also downloadable on-line.^{xxv}

San Francisco's ordinance has the potential to effectively reach vulnerable populations beyond the intended scope of Prop. 65. Medical studies have shown that women in urban areas, and Asian women in particular, have a tendency to carry higher blood mercury levels as a result of regular seafood diets.^{xxvi} By translating mercury-in-seafood consumer warnings into different languages, San Francisco encourages vendors catering to ethnic communities to post the advisory warnings in points of sale that would otherwise not be targeted by Prop. 65.

Policy Recommendations

This report details a comprehensive study of public, private and joint efforts to raise consumer awareness about the health risks of mercury in seafood. Through a variety of educational and political strategies, GotMercury.Org has found increasing public interest in not just Californians, but all consumers right to know about toxins in their food supply. After five years of expanding the reach of Prop. 65 regulations, GotMercury.Org provides an informed evaluation of the success and failures of consumer advisory warnings. GotMercury.Org makes the following recommendations for more effective food safety and consumer awareness plans:

- ❖ Federal enforcement of food safety levels is severely lacking and in need of an institutional overhaul. The FDA must implement seafood inspection and toxins testing of all commercial imports and banning those with mercury in excess of the 1ppm action level. It cannot shift its responsibility to the industry, which has no incentive to follow-through with import regulations.
- ❖ The FDA should subsequently require manufacturers to label their products with the mercury levels found in order to assist consumers in deciding which fish is healthiest in their diet. Inexpensive and rapid metal testing can be performed at ports or on-site at points of sale without compromising the freshness of the fish.
- ❖ The California Attorney General should enforce Prop. 65 more stringently with systematic monitoring efforts. All points of sale-- supermarkets, delis, fish markets, and restaurants included-- offering fish that contains unhealthy levels of mercury should be randomly monitored and fined on an increasing basis if found out of compliance with Prop. 65. The

- signs must be posted where all mercury-laden seafood is stocked, be it frozen, fresh or packaged aisles.
- ❖ The State of California should enact new laws that require posting, monitoring and enforcement of mercury in seafood warning signs at every retail food outlet that sells fish contaminated with mercury.
 - ❖ The State of California should exercise its authority over federally funded school lunch program menus to warn school districts about mercury in seafood and recommend removing canned albacore and light tuna from children's lunches and school cafeterias.
 - ❖ Like San Francisco, County Boards of Supervisors across the state and country should implement multi-lingual signage at points of sale to inform non-English speakers about mercury in seafood.
 - ❖ County Departments of Health should systematically distribute Seafood Safety literature on how to stay health and protect oneself from mercury contamination. This information should include charts delineating which seafood is safe or unsafe to consume and in what quantities it can be safely consumed. All health clinics and locations where seafood is sold should provide Seafood Safety literature to clients.
 - ❖ County Departments of Health should conduct consumer and epidemiological surveys to evaluate the effect of mercury-in-seafood consumer advisory warnings.

News and Developments

Since this report was compiled, several campaign developments, news stories and reports have further documented the mercury in seafood problem and the need for improved consumer warnings and regulation.

Mercury-Laden Canned Tuna Dropped from Family Food Program: Eight million low-income mothers and children will no longer receive mercury-contaminated canned albacore tuna for lunch. Instead, as called for by GotMercury.org, salmon, sardines, and mackerel will be new seafood choices in Women, Infant and Children's (WIC) food programs.

The tuna ban announced in December 2007 was part of the first major revision of menu standards in 30 years by the U.S. Department of Agriculture -- finally reflecting the prevailing science about mercury's high concentration in tuna and its harmful effects on fetal and infant brain development.

Unfortunately, canned "light" or "skipjack" tuna is still allowed in the WIC program and others even though it can contain as much mercury as bigger albacore tuna. That's because of big business: In recent years, the USDA bought over \$125 million worth of canned and pouched tuna for schools, Indian reservations, adult care and homeless programs.

The USDA should extend the tuna ban to all federal food assistance programs, particularly school lunch programs, as children are more vulnerable to the harmful affects of ingesting mercury.

Find out more at: www.gotmercury.org, www.seaturtles.org and <http://www.fns.usda.gov/cga/PressReleases/2007/PR-0361.htm>

Consumer Watch Investigative Report: In San Francisco, KPIX Channel 5 broadcast a three-part series on mercury in seafood on its Consumer Watch program. Reporter Sue Kwon found that her own body contained elevated levels of mercury, and that she was an avid fish eater. Kwon also highlighted the work of Dr. Jane Hightower, an obstetrician whose patients suffer from mercury poisoning. The new Safe Harbor testing system for seafood was also highlighted and its new certification program unveiled. Shoppers and diners supported the idea of testing and labeling of seafood so that they could make informed choices. To see the news program, go to: http://cbs5.com/seenon/Fish_safety_mercury.2.664739.html

New York Times: The newspaper published a story on Jan. 23, 2008, that found sushi in New York restaurants to contain levels of mercury that were higher than the FDA limit of 1 ppm. The newspaper utilized protocols previously employed by TIRN to test sushi from restaurants in New York and found high levels of mercury, as TIRN did in New York, Chicago and in unpublished results from Washington DC.

Oceana: The Washington DC based environmental organization Oceana, who has partnered with TIRN on the mercury in seafood campaign, recently published the results of a national survey of supermarkets for mercury-in-seafood warning signs. As a result, several supermarket chains volunteered to post mercury in seafood warning signs. See <http://www.oceana.org/index.php?id=90β>

ADVERTENCIA!

Casi todos los pescados y mariscos contienen cierta cantidad de mercurio y compuestos químicos relacionados, conocidos por el Estado de California como causantes del cáncer, defectos de nacimiento u otros daños en el sistema reproductivo. Algunos pescados tienen niveles más altos que otros.

Mujeres embarazadas, mujeres lactantes, mujeres que podrían quedar embarazadas y niños pequeños no deben comer las siguientes clases de pescado:

SWORDFISH - SHARK - KING MACKEREL - TILEFISH

Deben también limitar el consumo de otros pescados incluyendo el atún.

El pescado y mariscos son una parte importante de una dieta saludable y una fuente esencial de nutrición. Sin embargo, la Administración Federal de Alimentos y Medicina ("FDA") y la Agencia de Protección Ambiental, U.S. ("EPA"), aconseja a las mujeres embarazadas, a las mujeres lactantes, a las que podrían quedar embarazadas y a los niños, que limiten el consumo de pescado durante la semana y coman pescado con bajos niveles de mercurio.

El Departamento de Servicios de Salud de California (DHS), recomienda que estas personas:

- Coman una variedad de diferentes tipos de pescado.
- Coman pescado pequeño en lugar de pescado grande y avejentado.
- Comiencen siguiendo esta guía un año antes de salir embarazada

De acuerdo al FDA (Administración de Alimentos y Medicina) y la EPA (Agencia de Protección Ambiental), los pescados que tienden a tener poco o nada de mercurio incluyen: Camarones, pollock y scallops. Los niveles de mercurio en el atún varían. El steak de atún y el atún albacore tienen niveles más altos de mercurio, que el atún ligero en lata (light tuna).

Para más información acerca del riesgo de mercurio en el pescado y acerca de los niveles en varios tipos de pescado consulte a los siguientes sitios del internet:

www.cfsan.fda.gov (U.S. Food and Drug Administration "FDA")
www.epa.gov/ost/fish (U.S. Environmental Protection Agency)

O llamar gratis al FDA 1-888-SAFEFOOD (1-888-728-3366).

警告!

差不多所有的魚和貝類海產都含有業經加州政府宣佈會引致癌、令生育不健全或其他生殖受損的某程度數量水銀與相關化學物品。一些魚類比其他魚存有較高程度的水銀和化學物品。

**懷孕、正在哺乳、和預備懷孕的婦女、及
幼童都不應該食用下列魚類：**

劍魚 (SWORDFISH) • 鯊魚 (SHARK) • 大鯖魚 \ 青花魚 (KING MACKEREL) • 方頭魚 (TILEFISH)

他們亦應限制食用其他魚類，包括金槍魚 \ 鮪魚 (Tuna)

魚和貝類海產是健康飲食的重要部份和必須營養要素的來源。但是，聯邦食品及藥物管理局 (FDA) 和美國環境保護局 (EPA) 忠告懷孕、正在哺乳、及預備懷孕的婦女、和兒童應限制他們每星期的吃魚數量，及吃含水銀量低的魚類。

加州衛生局建議上述人士：

- 吃不同種類的魚；
- 吃細小的魚，而不要吃年歲較長和體積較大的魚；
- 在預備懷孕的一年前開始跟隨這些指引。

根據 FDA 和 EPA 的報告，含少量水銀的魚類和貝類海產包括狹鱈 (pollock)、小蝦和扇貝 (帶子)。不同類的金槍魚 \ 鮪魚含不同水銀程度。大的金槍魚 \ 鮪魚排及罐裝的長鱈金槍魚 (canned albacore tuna) 比罐裝 "輕" 金槍魚 \ 鮪魚 (canned "light" tuna) 含較高程度的水銀。

如需要更多有關魚產含水銀的害處和各種魚類存水銀等資料，請查閱下列網址：

美國食品及藥物管理局 (FDA) www.cfsan.fda.gov
美國環境保護局 www.epa.gov/ost/fish

或打 FDA 免費電話 1-888-SAFEFOOD (1-888-723-3366)。

Endnotes

- ⁱ Jacquet, J. and Pauly, D., “The Rise of Seafood Awareness Campaigns in an Era of Collapsing Fisheries,” Fisheries Centre-University of British Columbia (2006), (available at <http://www.fisheries.ubc.ca/members/dpauly/journalarticles/RiseSeafoodAwarenessCampaignsEraCollapsingFisheries.pdf>)
- ⁱⁱ *Import Alert, Government Fails Consumers, Falls Short on Seafood Inspections*, Food and Water Watch report, p.8 (July 2007).
- ⁱⁱⁱ See <http://www.oehha.org/prop65/p65faq.html>
- ^{iv} Peri, A., *Mercury Warning Sign Supermarket Compliance Survey Summary 2003*, Sea Turtle Restoration Project, p.4. (www.seaturtles.org) (Nov. 2003).
- ^v This statistic includes settling parties that no longer carry those fish highlighted by the FDA as containing high densities of mercury.
- ^{vi} *Mercury and Fish Consumption: Medical and Public Health Issues*, American Medical Association, Report 13 of the Council on Scientific Affairs (Apr. 2004) (Available at: www.ama-assn.org/ama/pub/article/print/2036-8669.html).
- ^{vii} See <http://www.cfsan.fda.gov/~dms/admehg3.html>
- ^{viii} Houlihan, J. and Wiles, R., Focus Pocus: The FDA Withholds Information from Pregnant Women on Mercury-Contaminated Fish, Citing “focus groups” as Justification, Environmental Working Group, p. 16 (Feb. 2002)
- ^{ix} *Import Alert, Government Fails Consumers, Falls Short on Seafood Inspections*, Food and Water Watch report, p.8 (July 2007).
- ^x 72 Fed Reg 48496, 48501. NMFS Final Rule on CCAMLR
- ^{xi} Consumer Watch, KPIX Channel 5, <http://cbs5.com/seenon/mercury.fish.2.668609.html> and <http://cbs5.com/seenon/Fish.safety.mercury.2.664739.html>
- ^{xii} See Safe Harbor testing and certification program at
- ^{xiii} *Is it High or Is it Low?*, Center for Science in the Public Interest, (Jul. 2006), (www.cspinet.org/new/2006071.html) (last visited Nov. 28, 2007)
- ^{xiv} *People of the State of California vs. Tri-Union Seafood, LLC et. al.*
- ^{xv} Supporting data can be accessed at <http://www.seaturtles.org/article.php?id=998>
- ^{xvi} Created by Dana Morawitz.
- ^{xvii} Supporting data can be accessed at <http://www.seaturtles.org/article.php?id=998>
- ^{xviii} This statistic includes settling parties that no longer carry those fish highlighted by the FDA as containing high densities of mercury.
- ^{xix} Peri, A., *Mercury Warning Sign Supermarket Compliance Survey Summary 2003*, Sea Turtle Restoration Project, pp.4 & 7, (www.seaturtles.org) (Nov. 2003).
- ^{xx} Del Monte letter on file with authors. Available upon request.
- ^{xxi} Peri, A., *Mercury Warning Sign Supermarket Compliance Survey Summary*, Sea Turtles Restoration Project. (May 2004) (available at: www.seaturtles.org)
- ^{xxii} *Vital Signs: The Status of Mercury Warning Signs in U.S. Grocery Stores*, Oceana p.8 (2007) (available at: <http://www.oceana.org/north-america/what-we-do/stop-seafood-contamination/reports-resources/vital-signs/>) (last visited 12/17/07).
- ^{xxiii} Ibid.
- ^{xxiv} National consumer health groups including As You Sow Foundation, Mujeres Unidas y Activas, the Sierra Club, Physicians for Social Responsibility – San Francisco, Community Toolbox for Children's Environmental Health, the Mercury Policy Project, California League for Environmental Enforcement Now, and more supported GotMercury.Org's efforts to pass the San Francisco Ordinance on mercury-in-seafood consumer advisory warnings.
- ^{xxv} Copies of Tri-lingual Mercury-in-Seafood Consumer Advisory Warnings are available on-line at the San Francisco Department of Health website. Go to <http://www.sfdph.org/dph/comupg/oprograms/EHS/Food/Prop65/default.asp>
- ^{xxvi} Hightower, J. et al., *Blood Mercury Reporting in NHANES: Identifying Asian, Pacific Islander, Native American, and Multiracial Groups*, *Enviro.Health Perspective*, Vol. 14:2 2, (Feb. 2006). This study shows that Asian, Pacific Islander, Native American and Multiracial Groups are 17 percent more likely to have elevated blood mercury levels.