



A Clear the Air Report:
Casting Doubt

Mercury Update:
Fish Consumption Advisory

California



A Clear the Air Report: Casting Doubt

Executive Summary

Across the U.S., mercury contaminates freshwater and saltwater fish populations, poses health risks to the people and wildlife consuming these fish and threatens the multi-billion dollar recreational and commercial fishing industries. State health departments in 40 states have issued advisories warning the public about consuming certain species of fish in certain water bodies. These advisories are attempts to balance the nutritional benefits of eating fish against the risk of mercury exposure.

While mercury pollution has been linked to a number of industrial sources, the only industry currently exempt from federal rules is the electric power industry. Not every mercury source is covered by EPA's rules, but the most glaring omission is the largest emitting source category: power plants. Without strict controls on power plants, we will have little chance of restoring a vital part of our food supply and of protecting the health of future generations.

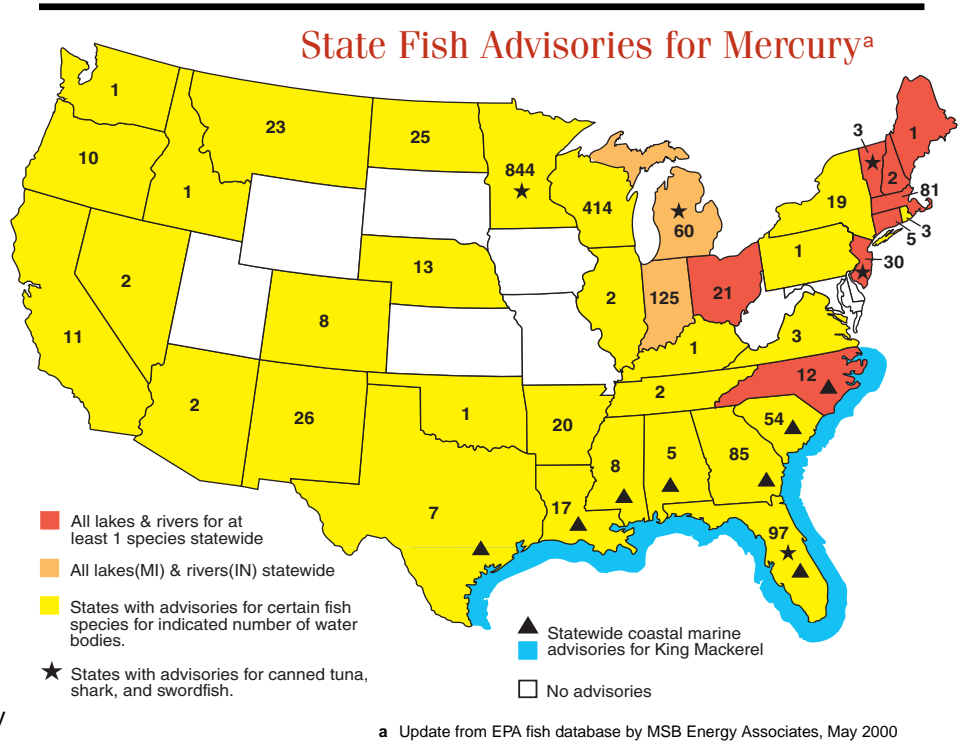
Summary of Findings

Mercury contamination in fish across the country is so high that health departments in 40 states have issued thousands of fish consumption advisories. These advisories recommend either limiting or avoiding consumption of certain fish from specific water bodies or from specific types of water body (e.g., all freshwater lakes or rivers).

Ten states even have issued statewide mercury fish consumption advisories, i.e., on every water body, and 13 states have advisories for certain saltwater species.

This report presents the most recent information on State advisories. Our survey found the number of States that have issued mercury advisories continues to rise steadily.

- There were 27 State advisories in 1993 and in 1997, the number had grown to 40.



- Since 1993, the number of mercury advisories has increased 128 percent (899 to 2,045).
- In 1999 alone, the number of advisories for mercury rose by 114 in 1999 to a total of 2,045, a 6 percent increase.
- For example, South Carolina has added 36 advisories since 1999.

Based on surveys of how much and what type of fish people eat, the EPA concluded:

- Four million women of childbearing age are consistently exposed to methylmercury at levels above what EPA considers safe. Of these four million women, about 380,000 are predicted to be pregnant in any given year.
- Nearly 3 million children between the ages of three and six are consistently exposed to methylmercury at levels above what EPA considers safe.
- Recreational anglers, Asian-Americans, members of some Native American Tribes, Native Alaskans and persons of Caribbean ethnicity may have methylm-

mercury exposures two to five times higher than exposures experienced by the average population.

While an increase in advisories does not necessarily demonstrate an increase in contaminant levels, it does demonstrate increased concern on the part of State health departments and vividly illustrates how widespread the problem is.

Surveys of anglers in the Northeast, Southeast and Great Lakes region have revealed that:

- for the most part, anglers continue to fish in areas where mercury advisories have been issued.
- In general, in all parts of the country, men are more aware of advisories than women, but the extent of knowledge also depends on educational level and ethnicity of the angler.
- Non-white populations and those with lower income levels fish more often, eat more fish and are generally less aware of advisories than other anglers.
- In a survey of more than 8,000 residents of the eight Great Lakes states, only half of the people who ate sport fish were aware of the fish consumption advisory about eating Great Lakes sport fish.
- Awareness of advisories in the Great Lakes states was especially low among women, one of the populations at risk.

Mercury contamination threatens the economic viability of recreational fishing. Nationally, in 1996, saltwater and freshwater recreational fishing:

- generated a total revenue of nearly \$109 billion,

- supported 1.2 million jobs, or slightly more than one percent of the country's civilian labor force, in all sectors of the economy,
- created household income (salaries and wages) totaling \$28.3 billion, which is roughly equivalent to almost half of the U.S. military payroll,
- added \$2.4 billion to state tax revenues, or nearly one percent of all annual state tax revenues combined, and
- generated \$3.1 billion in federal income taxes, which equates to nearly one-third of the entire federal budget for agriculture.

The EPA estimated that manmade emissions in the U.S. total 158 tons of mercury each year. Of that total, coal-fired power plants are estimated to emit about 52 tons per year, or about 33 percent of all U.S. emissions.

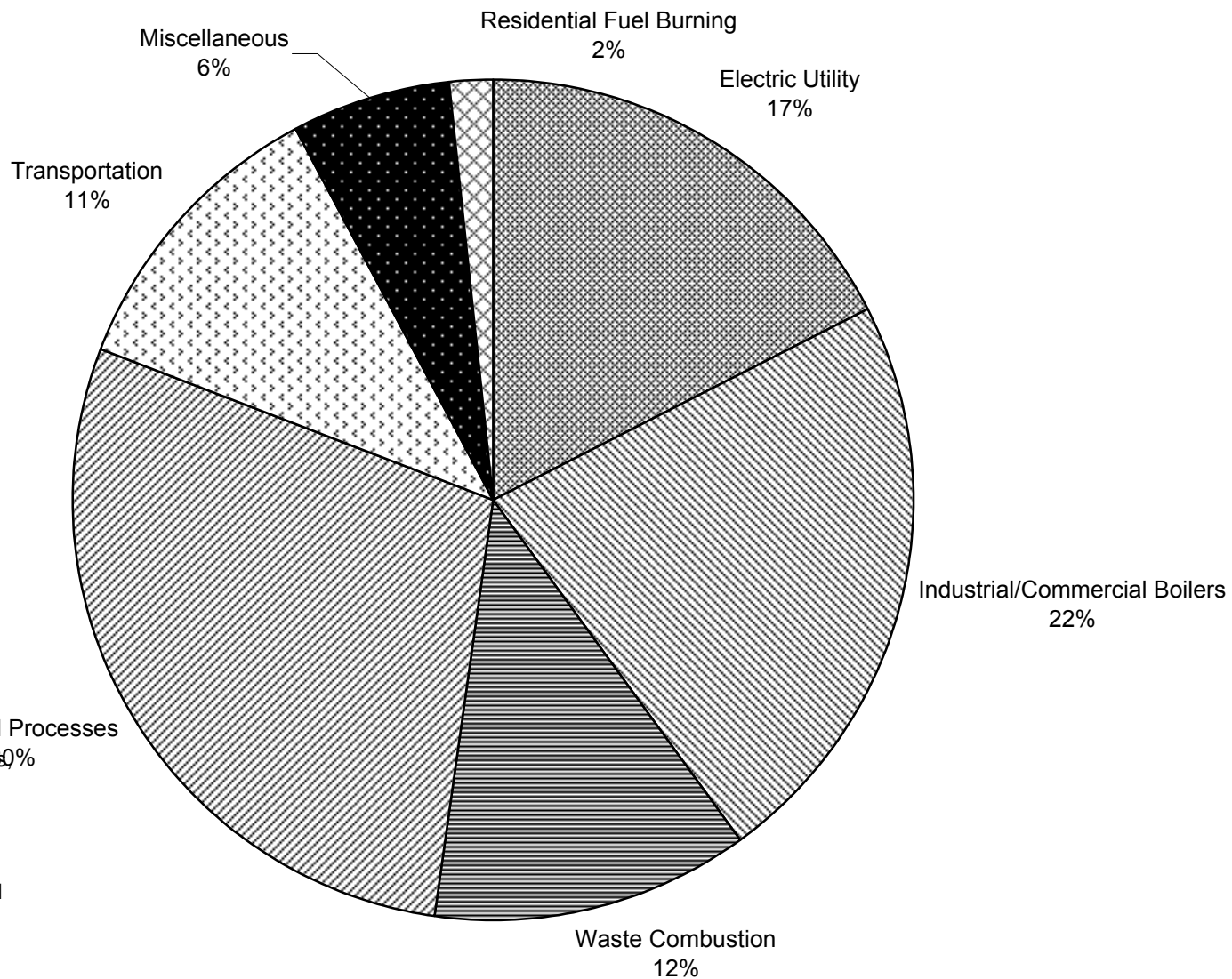
EPA has required other industries to reduce their mercury emissions. Regulatory requirements have been issued for municipal waste combustors, medical waste incinerators and hazardous waste combustors. *Mercury emissions from these sources will be reduced by an overall 80 percent by 2003.*

A critical exception in the Clean Air Act exempts power plants from these requirements until EPA issues a specific regulatory determination finding that controls are needed. EPA is under a court-ordered deadline to issue the regulatory determination for mercury and other hazardous air pollutants by December 2000.



While mercury pollution has been linked to a number of industrial sources, the only industry currently exempt from federal rules is the electric power industry. Not every mercury source is covered by EPA's rules, but the most glaring omission is the largest emitting source category: power plants.

Mercury Inventory -- California



Source: Prepared by MSB Energy Associates based on Data from USEPA National Toxics Inventory, Office of Air Quality Planning and Standards, Version 9901 (January 2000) and the USEPA Mercury Study Report to Congress, Volume II, EPA-452/R-97-004, December 1997 for medical and municipal waste incineration values.

California Fish Advisories for Mercury

Total Number of Fish Advisories due to Mercury: 11
 Total Number of River Miles Under Mercury Advisory: 40
 Total Number of Lake Acres Under Mercury Advisory: 63,987

AdvNum	Advisory	State	Advisory Extent	Issuer	Advisory Type	Advisory Size	Species	Species Size	Population	Status	Year
36	Alamitos Creek and associated percolation ponds	CA	Santa Clara County	State	River	12	all fish		NCGP	Active	1997
39	Almaden Reservoir	CA	Santa Clara County	State	Lake	51	all fish		NCGP	Active	1997
35	Calero Reservoir	CA	Santa Clara County (350 acres)	State	Lake	334	all fish		NCGP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	bass-largemouth		RGP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	blackfish-Sacramento		RGP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	bullhead-brown		RGP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	catfish-channel		RGP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	catfish-white		RGP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	crappie-black		RGP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	all fish		NCSP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	hitch		RGP	Active	1997
26	Clear Lake	CA	Lake County (43,000 acres)	State	Lake	39474	crappie-white		RGP	Active	1997
38	Guadalupe Creek and associated percolation ponds	CA	Santa Clara County (6 mi)	State	River	8	all fish		NCGP	Active	1997
34	Guadalupe Reservoir	CA	Santa Clara County (80 acres)	State	Lake	63	all fish		NCGP	Active	1997

California Fish Advisories for Mercury

37	Guadalupe River and associated percolation ponds	CA	Santa Clara County (12 mi)	State	River	20	all fish		NCGP	Active	1997
30	Lake Berryessa	CA	Napa County (20,700 acres)	State	Lake	18226	bass-largemouth		RGP	Active	1997
30	Lake Berryessa	CA	Napa County (20,700 acres)	State	Lake	18226	bass-smallmouth		RGP	Active	1997
30	Lake Berryessa	CA	Napa County (20,700 acres)	State	Lake	18226	catfish-channel		RGP	Active	1997
30	Lake Berryessa	CA	Napa County (20,700 acres)	State	Lake	18226	catfish-white		RGP	Active	1997
30	Lake Berryessa	CA	Napa County (20,700 acres)	State	Lake	18226	all fish		NCSP	Active	1997
30	Lake Berryessa	CA	Napa County (20,700 acres)	State	Lake	18226	trout-rainbow		RGP	Active	1997
32	Lake Herman	CA	Solano County (110 acres)	State	Lake	108	bass-largemouth		RGP	Active	1997
32	Lake Herman	CA	Solano County (110 acres)	State	Lake	108	all fish		NCSP	Active	1997
29	Lake Nacimiento	CA	San Luis Obispo County	State	Lake	5731	bass-largemouth		NCSP	Active	1997
29	Lake Nacimiento	CA	San Luis Obispo County	State	Lake	5731	bass-largemouth		RGP	Active	1997
27	San Francisco Bay Delta Region	CA		State	Estuary	0	all fish except salmon, anchovy, herring, smelt		RGP	Active	1997
27	San Francisco Bay Delta Region	CA		State	Estuary	0	bass-striped	> 35"	NCGP	Active	1997
27	San Francisco Bay Delta Region	CA		State	Estuary	0	all fish except salmon, anchovy, herring, smelt		RSP	Active	1997
27	San Francisco Bay Delta Region	CA		State	Estuary	0	shark	> 24"	NCSP	Active	1997
27	San Francisco Bay Delta Region	CA		State	Estuary	0	bass-striped	> 27"	NCSP	Active	1997

Notes:

The entries in the column describing the populations are defined as follows:

RSP Restricted Consumption -- Susceptible Populations (children, pregnant women, and women who may become pregnant)

NCSP No Consumption -- Susceptible Populations

California Fish Advisories for Mercury

RGP	Restricted Consumption -- General Population
NCGP	No Consumption -- General Population
CFB	Commercial Fishing Ban
IHA	Informational Health Advisory
NKZ	No Kill Zone
UC	Unlimited Consumption
PFB	Public Fishing Ban