Reel Danger:

Power Plant Mercury Pollution and the Fish We Eat

OSPIRG Foundation

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Executive Summary

Mercury emissions from coal-fired power plants and other industrial sources are making the fish in our lakes, rivers, and streams unsafe to eat. Coal-fired power plants are by far the nation's largest unregulated source of mercury emissions, contributing 41 percent of all U.S. mercury emissions. The mercury deposits in soil and surface waters, where bacteria convert it to a highly toxic form of mercury that bioaccumulates in fish, including popular sport and commercial fish. This report analyzes new data from the U.S. Environmental Protection Agency (EPA) to determine the extent to which fish in the nation's lakes are contaminated with mercury.

Mercury is a neurotoxin that is particularly damaging to the developing brain. In early 2004, EPA scientists estimated that one in six women of childbearing age in the U.S. has levels of mercury in her blood that are sufficiently high to put 630,000 of the four million babies born each year at risk of learning disabilities, developmental delays, and problems with fine motor coordination, among other problems. Mercury can affect multiple organ systems, including the nervous system, heart, and immune system, throughout an individual's lifespan.

This report analyzes the first available data from EPA's ongoing National Study of Chemical Residues in Lake Fish Tissue, a four-year study of 268 chemicals in fish from a representative sample of 500 lakes and reservoirs in the continental U.S. We analyze the first two years of EPA's quality-assured data, which includes fish from 260 lakes and reservoirs collected in 1999-2000 and 2001. In general, EPA collected two composite samples of one predator fish species and one bottom-dwelling fish species at each lake, for a total of 520 composite samples, or 2,547 fish.

Key findings include the following:

- All of the fish samples were contaminated with mercury.

- Fifty-five (55) percent of the fish samples were contaminated with mercury at levels that exceed EPA's "safe" limit for women of average weight who eat fish twice a week. In 29 states, mercury levels in at least half of the fish samples exceeded this limit.

- Seventy-six (76) percent of the fish samples exceeded the safe mercury limit for children of average weight under age three who fish twice a week; 63 percent of fish samples exceeded the limit for children ages three to five years; and 47 percent of the fish samples exceeded the limit for children six to eight years.

- Predator fish, or fish at the top of the aquatic food chain, had the highest average levels of mercury. Smallmouth bass, walleye, largemouth bass, lake trout, and Northern pike had the highest average mercury concentrations.

- Eighty (80) percent of the predator fish samples contained mercury levels exceeding EPA's safe limit for women. In 18 states, 100 percent of the predator fish samples exceeded this limit.

Mercury pollution is pervasive in the nation's lakes. Every fish sample EPA tested was contaminated with mercury, and the majority of the fish samples were contaminated with mercury at levels that could pose a public health risk. The results underscore the need to reduce mercury emissions to the greatest extent possible, as fast as possible.

Other industrial sources have reduced their mercury emissions by more than 90 percent within a few short years, but power plants continue to emit unlimited amounts of mercury into the air.

In January 2004, the Bush administration issued a severely flawed proposal for regulating mercury from power plants. EPA's proposal, which falls far short of what the Clean Air Act requires, would delay even modest reductions in mercury emissions from power plants until after 2025. In contrast, the Clean Air Act calls for the maximum achievable reductions by 2008.

To reduce mercury levels in fish and protect public health, the Bush administration should reverse course and require coal-fired power plants to reduce mercury emissions by at least 90 percent by 2008.

Health Effects of Mercury

Methylmercury, an organic form of mercury that accumulates in fish, is a potent neurotoxin. Eating contaminated fish is the primary way people are exposed to methylmercury in the U.S.[1]

When pregnant women eat mercury-contaminated fish, methylmercury crosses the placenta to the fetus. It then accumulates in the brain, where it interferes with the growth and migration of neurons and can cause irreversible damage to the developing central nervous system. Extremely high doses of methylmercury, such as those that occurred in Minamata, Japan starting in the 1950s[i] and Iraq in the early 1970s,[ii] can result in death and severe disabilities, including mental retardation, seizure disorders, cerebral palsy, blindness, and deafness, among children exposed in utero. At much lower doses, children exposed to methylmercury in utero can exhibit deficits in several brain functions, including attention, language, verbal memory, spatial function, and motor speed (reaction time).[2] These more subtle impairments are still evident at ages seven and 14 years, suggesting that the effect of mercury on the developing brain is irreversible.[3]

In a 2000 review of the health effects of mercury, the National Academy of Sciences Committee on the Toxicological Effects of Methylmercury found the evidence of the neurodevelopmental effects of methylmercury "extensive."[4] The panel stated, "Chronic, low-dose prenatal [methylmercury] exposure from maternal consumption of fish has been associated with more subtle end points of neurotoxicity in children. Those end points include poor performance on neurobehavioral tests, particularly on tests of attention, fine-motor function, language, visual-spatial abilities (e.g., drawing), and verbal memory."[5] The panel concluded, "The population at highest risk is the children of women who consumed large amounts of fish and seafood during pregnancy. The committee concludes that the risk to that population is likely to be sufficient to result in an increase in the number of children who have to struggle to keep up in school and who might require remedial classes or special education."[6]

In early 2004, EPA scientists estimated that one in six women of childbearing age in the U.S. has levels of methylmercury in her blood that are sufficiently high to put 630,000 of the four million babies born each year at risk of learning disabilities, developmental delays, and problems with fine motor coordination, among other problems. This figure is a doubling of previous estimates based on increasing evidence that methylmercury concentrates in the umbilical cord, exposing the developing fetus to higher levels of mercury than previously understood.[7] Leading researchers in the field suggest that the figure is still an underestimate.[8]

While the developing brain is thought to be most sensitive to the effects of methylmercury, mercury can affect multiple organ systems, including the nervous system, heart, and immune system, throughout an individual's lifespan.[9] Adults exposed to methylmercury from fish may experience neurocognitive deficits similar to those seen in children exposed prenatally.[10] In addition, higher mercury levels have been associated with an increased risk of heart attacks, leading researchers to conclude that "[h]igh mercury content may diminish the cardioprotective effect of fish intake."[11] These results point to the need to be concerned about the consumption of mercury-contaminated fish among people of all ages and genders.

[i] An epidemic of mercury poisoning, affecting people living near Minamata Bay in Japan, stemmed from a chemical plant's dumping of its waste sludge into the bay. Mercury in the sludge accumulated at very high levels in the fish, a staple of the local diet, and poisoned thousands of people over several decades.

[ii] The Iraqi government distributed 88,000 tons of seed grain treated with a fungicide containing methylmercury to Iraqi farmers. The wheat was used to bake bread and caused a short-lived epidemic of mercury poisoning. According to government statistics, about 450 people died as a result, though other estimates are as high as 5,000.

Sources of Mercury

Since mercury is an element, it cannot be created or destroyed. The same amount has existed on the planet since the earth was formed. Natural processes, such as weathering of rock containing mercury, and human activities, such as combustion of coal containing mercury, mobilize and release mercury and cause it to cycle in the environment.

Coal-fired power plants are by far the largest unregulated source of mercury emissions in the U.S. In 1999, they emitted 48 tons of mercury, or 41 percent of U.S. mercury emissions (see Table A).[12] The next largest source category is emissions from industrial and commercial boilers at 10 tons per year, or eight percent of emissions.

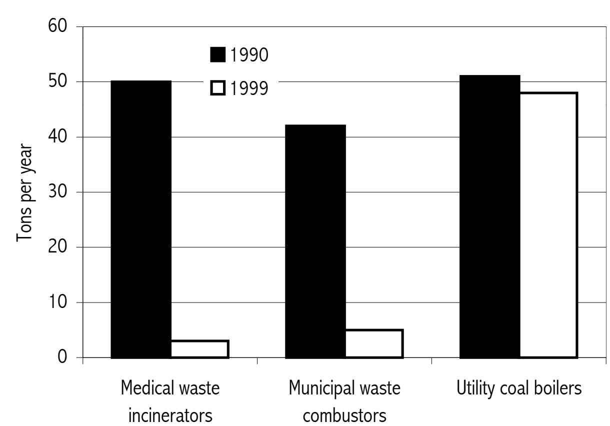
Table A. Mercury Emissions by Source, 1999[13]

Source	1999 Emissions (tons/year)	Percent of Total U.S. Emissions
Utility Boilers	48.7	41.6
Coal	47.8	40.8
Oil	0.5	0.4
Natural Gas	0.4	0.4
Municipal waste combustors	5.1	4.3
Commercial/industrial boilers	9.7	8.3
Medical waste incinerators	2.8	2.4
Hazardous waste combustors	2.9	2.5
Residential boilers	1.2	1.1
Coal	0.1	0.1
Oil	1.2	1.0
Wood-fired boilers	0.7	0.6
Crematories	0.1	0.1
Chlorine manufacturing	6.5	5.6
Portland cement	2.4	2.0
Pulp and paper	1.7	1.4
All other	35.4	30.0
Total	117.3	100

Unlike all other major sources of mercury emissions, power plants can emit unlimited amounts of mercury into the air. A decade ago, medical and municipal waste incinerators rivaled power plants in their mercury emissions (see Figure 1).[14] However, in the mid-1990s, EPA passed rules to reduce mercury emissions from these sources by 90 percent.[15]

In 1990, medical waste incinerators emitted 50 tons of mercury, or 26 percent of U.S. mercury emissions. By 1999, they generated 2.8 tons, or 2 percent of U.S. mercury emissions. In 1990, municipal waste incinerators emitted 42 tons of mercury, or 22 percent of U.S. mercury emissions. By 1999, they released 5.1 tons, or 4 percent of U.S. mercury emissions.[16]

Figure 1. Mercury Emissions from Major Industries in the United States



Source: EPA National Emissions Inventory for Hazardous Air Pollutants.

In contrast, power plant emissions of mercury have remained largely unchanged, and their contribution to total U.S. mercury emissions has increased from 26 to more than 40 percent over the past decade. In addition, power plant mercury emissions are expected to increase in the coming years due to a projected 26 percent increase in coal consumption by 2020.[17]

Among the states, Texas, Ohio, Pennsylvania, Indiana, and Illinois led the nation for the most mercury air emissions from power plants in 2002, the most recent year for which data are available.[18] Table B ranks the states by their power plant mercury air emissions. The Limestone Electric Generating Station in Jewett, Texas, released 1,800 pounds of mercury to the air in 2002, which is more than any other plant in the nation. Table C shows the top 25 mercury-emitting power plants. See Appendix A for the full list of power plants releasing mercury to the air in 2002.

Table B. Air Emissions of Mercury and Mercury Compounds from Electric Utilities by State, 2002

Rank	State	Air Emissions (pounds)	Rank	State	Air Emissions (pounds)
1	Texas	9,840.01	25	Oklahoma	1,254.50
2	Ohio	7,358.24	26	New Mexico	1,210.39
3	Pennsylvania	7,002.18	27	New York	1,113.40
4	Indiana	4,926.55	28	Montana	875.22
5	Illinois	4,318.07	29	Arkansas	819.70
6	Alabama	3,931.35	30	South Carolina	673.96
7	West Virginia	3,680.30	31	Mississippi	651.44
8	Kentucky	3,539.80	32	Nevada	524.00
9	North Carolina	3,434.17	33	New Jersey	476.70
10	Missouri	3,084.29	34	Utah	444.30
11	Georgia	2,748.80	35	Nebraska	413.69
12	Michigan	2,714.31	36	Colorado	355.80
13	Wisconsin	2,615.23	37	Hawaii	279.50
14	Florida	2,410.92	38	Delaware	266.10
15	North Dakota	2,364.50	39	Washington	265.00
16	Iowa	2,131.66	40	South Dakota	263.01
17	Tennessee	2,130.30	41	Massachusetts	190.10
18	Kansas	2,048.35	42	Oregon	143.40
19	Maryland	1,900.40	43	Connecticut	99.66
20	Wyoming	1,762.19	44	California	16.05
21	Minnesota	1,571.90	45	New Hampshire	15.60
22	Arizona	1,560.82	46	Alaska	11.20
23	Virginia	1,289.58			
24	Louisiana	1,262.00	Total		90,371.34

Source: EPA's Toxic Release Inventory, 2002.

Table C. Top 25 Power Plants for Mercury Air Emissions, 2002

Rank	Facility	City	State	Air Emissions (pounds)
1	LIMESTONE ELECTRIC GENERATING STATION	JEWETT	TX	1,800.00
2	TXU MONTICELLO STEAM ELECTRIC STATION & LIGNITE MINE	MOUNT PLEASANT	TX	1,324.00
3	AMERICAN ELECTRIC POWER CONESVILLE PLANT	CONESVILLE	OH	1,300.00
4	RELIANT ENERGY KEYSTONE POWER PLANT	SHELOCTA	PA	1,235.20
5	JEFFREY ENERGY CENTER	SAINT MARYS	KS	1,215.80
6	W.A. PARISH ELECTRIC GENERATING STATION	THOMPSONS	TX	1,100.00
7	ALABAMA POWER CO. MILLER STEAM PLANT	QUINTON	AL	1,076.80
8	MARTIN LAKE STEAM ELECTRIC STATION & LIGNITE MINE	TATUM	TX	1,027.00
9	AMERICAN ELECTRIC POWER H.W. PIRKEY POWER PLANT	HALLSVILLE	TX	1,000.00
10	GEORGIA POWER SCHERER STEAM ELECTRIC GENERATING PLANT	JULIETTE	GA	943.00
11	BIG CAJUN 2	NEW ROADS	LA	880.00
12	NORTHERN STATES POWER CO.	BECKER	MN	876.00
13	J. M. STUART STATION	MANCHESTER	OH	845.00
14	PLEASANT PRAIRIE POWER PLANT	KENOSHA	WI	838.46
15	GREAT RIVER ENERGY COAL CREEK STATION	UNDERWOOD	ND	832.60
16	L.C.R.A. FAYETTE POWER PROJECT	LA GRANGE	TX	811.10
17	ALABAMA POWER CO. GASTON STEAM PLANT	WILSONVILLE	AL	807.40
18	AMERICAN ELECTIC POWER ROCKPORT PLANT	ROCKPORT	IN	800.00
19	AMERICAN ELECTRIC POWER AMOS PLANT	WINFIELD	WV	790.00
19	BRUCE MANSFIELD	SHIPPINGPORT	PA	790.00
21	AMERENUE LABADIE POWER PLANT	LABADIE	MO	762.60
22	COLSTRIP STEAM ELECTRIC STATION	COLSTRIP	MT	760.00
23	DUKE ENERGY BELEWS CREEK STEAM STATION	BELEWS CREEK	NC	730.44
24	BRANDON SHORES & WAGNER COMPLEX	BALTIMORE	MD	708.50
25	U.S. TVA PARADISE FOSSIL PLANT	DRAKESBORO	KY	700.10

Source: EPA's Toxic Release Inventory, 2002.

Mercury Deposition

EPA has concluded that "[m]ost of the mercury currently entering U.S. water bodies and contaminating fish is the result of air emissions, which following atmospheric transport, deposit onto watersheds or directly to water bodies."[19]

When power plants burn coal, mercury is released from the coal into the air in three basic forms, including elemental mercury, oxidized mercury, and particulate-bound mercury. Depending on its form, mercury can deposit onto land or water bodies within 50 to 500 miles of its source (oxidized and particulate-bound mercury) or be transported long distances on air masses (elemental mercury).[20]

EPA estimates that 60 percent of the mercury deposited in the U.S. comes from domestic man-made sources; the remaining 40 percent comes from man-made sources outside of the U.S., re-emitted mercury from historic U.S. sources, and natural sources. Nationally, EPA estimates that 33 percent of total U.S. mercury deposition is from U.S. power plants.[21]

It is important to note that this estimate of national deposition obscures the impact of local sources on mercury hot spots, or areas with high levels of mercury deposition. The highest deposition rates in the U.S. occur in the southern Great Lakes, the Ohio Valley, the Northeast, and scattered areas in the South.[22] In regions where deposition is high, local and regional sources are the main cause of elevated mercury concentrations.[23] A 2003 analysis of EPA data found that local sources can account for 50 to 80 percent of mercury deposition at hot spots.[24]

In addition, recent research indicates that elemental mercury emissions from power plants can be rapidly converted to oxidized mercury and deposited locally or regionally as well, suggesting that power plants contribute even more to localized hot spots than previously thought.[25]

Mercury Levels in Fish

After mercury deposits in soil and on surface waters, bacteria convert it to methylmercury, a highly toxic form of mercury that accumulates in fish. Nearly 100 percent of the mercury that bioaccumulates in fish is methylmercury.[26]

Virtually all freshwater and ocean fish and shellfish are contaminated with methylmercury to varying degrees. As larger fish eat smaller ones, concentrations of the pollutant bioaccumulate in the bigger fish. The amount of methylmercury in predator fish at the top of the aquatic food chain can be 1 million to 10 million times greater than the concentration of methylmercury in the surrounding water.[27]

An EPA analysis of 1990-1995 data on mercury contaminant levels in freshwater fish from 36 states and DC found that average mercury levels in major fish species ranged from 0.01 parts per million (ppm) to 1.38 ppm (see Table D).[28] At the higher end of the range, a single serving of fish would far exceed EPA's "safe" consumption limit.[i]

The Food and Drug Administration (FDA) regulates commercially sold fish, but the agency conducts only limited testing for mercury, including for many of the most commonly eaten fish.[29] The FDA no longer conducts a domestic monitoring program for mercury in canned tuna, shark, or swordfish, which are among the species with the highest mercury concentrations.[30] Canned tuna alone accounts for about 20 percent of U.S. commercial fish and shellfish consumption.[31]

Table D. Range of Average Mercury Concentrations for Major Fish Species, 1990-1995

Fish species	Predator or Bottom Dweller	Range of Average Mercury Concentrations (ppm)
Largemouth bass	Predator	0.101 - 1.369
Walleye	Predator	0.040 - 1.383
Channel catfish	Bottom dweller	0.010 - 0.890
Smallmouth bass	Predator	0.094 - 0.766
Northern pike	Predator	0.084 - 0.531
White sucker	Bottom dweller	0.042 - 0.456
Brown trout	Predator	0.037 - 0.418
Carp	Bottom dweller	0.061 - 0.250

Source: EPA, Mercury Study Report to Congress, 1997.

Table E lists mean mercury concentrations in commercial fish and shellfish, as reported by the FDA in 2004.

[i] For more information on EPA's safe limit, see the next section.

Table E. Mean Mercury Levels in Commercial Fish and Shellfish, 1978-2003[32]

Species	Number of Samples	Mean Mercury Concentration (ppm)	Maximum Mercury Concentration (ppm)
Tilefish (Gulf of Mexico)	60	1.45	3.73
Shark	351	0.99	4.54
Swordfish	605	0.97	3.22
King Mackerel	213	0.73	1.67
Grouper	22	0.55	1.21
Orange Roughy	26	0.54	0.80
Marlin	16	0.49	0.92
Spanish Mackerel (Gulf of Mexico)	66	0.45	1.56
Tuna (Fresh/Frozen)	131	0.38	1.30
Tuna (Canned, Albacore)	179	0.35	0.85
Bluefish	22	0.31	0.63
Lobster (Northern/American)	88	0.31	1.31
White Croaker (Pacific)	15	0.29	0.41
Scorpionfish	78	0.29	1.35
Bass (Saltwater)	35	0.27	0.96
Halibut	32	0.26	1.52
Sea Trout	27	0.25	0.74
Sablefish	102	0.22	0.70
Buffalofish	4	0.19	0.43
Snapper	25	0.19	1.37
Spanish Mackerel (S. Atlantic)	43	0.18	0.73
Monkfish	81	0.18	1.02
Tilefish (Atlantic)	17	0.15	0.53
Carp	2	0.14	0.27
Perch (Freshwater)	5	0.14	0.31
Skate	56	0.14	0.36
Sheepshead	59	0.13	0.63
Tuna (Canned, Light)	131	0.12	0.85
Cod	20	0.11	0.42
Jacksmelt	16	0.11	0.50

Species	Number of Samples	Mean Mercury Concentration (ppm)	Maximum Mercury Concentration (ppm)
Lobster (Spiny)	9	0.09	0.27
Chub Mackerel (Pacific)	30	0.09	0.19
Shad (American)	59	0.07	0.22
Squid	200	0.07	0.40
Whitefish	25	0.07	0.31
Butterfish	89	0.06	0.36
Crab	59	0.06	0.61
Pollock	37	0.06	0.78
Catfish	22	0.05	0.31
Croaker (Atlantic)	21	0.05	0.10
Flatfish	22	0.05	0.18
Atlantic Mackerel (N. Atlantic)	80	0.05	0.16
Mullet	191	0.05	0.13
Scallops	66	0.05	0.22
Anchovies	40	0.04	0.34
Herring	38	0.04	0.14
Crawfish	21	0.03	0.05
Haddock	4	0.03	0.04
Trout (Freshwater)	17	0.03	0.13
Sardine	22	0.02	0.04
Hake	9	0.01	0.05
Salmon (Fresh/Frozen)	34	0.01	0.19
Tilapia	9	0.01	0.07
Clams	6	ND	ND
Oysters	34	ND	0.25
Ocean Perch	6	ND	0.03
Pickerel	4	ND	0.06
Salmon (Canned)	23	ND	ND
Shrimp	24	ND	0.05
Whiting	2	ND	ND

"ND" means the mercury concentration was below the level of detection of 0.01 ppm.

EPA's 'Safe' Dose of Mercury

EPA has established a reference dose, or "safe" daily dose of mercury, of 0.1 micrograms of methylmercury per kilogram of body weight per day.[33] This dose represents the amount of methylmercury that EPA believes can be ingested on a daily basis over the course of a lifetime without adverse health effects, based on current scientific knowledge. In 2000, the National Academy of Sciences affirmed that EPA's reference dose "is a scientifically justifiable level for the protection of public health."[34]

An individual's exposure to methylmercury depends on how much fish she eats, the methylmercury concentration of the fish, and her body weight. Table F lists EPA's monthly noncommercial fish consumption advice for adults of average weight (154 pounds).

Table F. EPA's Monthly Fish Consumption Limits for Methylmercury[35]

Fish Meals Per Month[i]	Fish Tissue Concentrations (ppm)
Unrestricted (>16)	0-0.029
16	>0.029-0.059
12	>0.059-0.078
8	>0.078-0.12
4	>0.12-0.23
3	>0.23-0.31
2	>0.31-0.47
1	>0.47-0.94
0.5	>0.94-1.9
None (<0.5)	>1.9

Women of childbearing age and young children are considered most at risk from exposure to methylmercury.

In its dietary guidelines, the American Heart Association recommends that adults eat fish at least twice a week.[36] According to EPA, the average U.S. woman weighs 143 pounds, and an average meal of fish is six ounces (cooked).[37] Based on EPA's reference dose, the "safe" limit of methylmercury in fish for U.S. women of average weight who eat two average meals of fish per week is 0.13 ppm.[ii] A woman who is pregnant, plans to become pregnant, or is nursing and eats fish with methylmercury levels that exceed 0.13 ppm may expose her baby to unsafe levels of methylmercury.

The "safe" limit varies for women of different weights. Heavier than average women, for instance, can consume fish with slightly higher levels of methylmercury without exceeding their safe limit. Table G lists the safe limit of methylmercury in fish for women of different weights who eat fish twice a week.

[i] The assumed meal size is eight ounces of uncooked fish or six ounces of cooked fish.

[ii] (0.1 ug mercury/kg body weight/day)*(1 day/0.049 kg fish)*(65 kg body weight) = 133 ug mercury/kg fish = 0.133 mg/kg (ppm).

Table G. Safe Limit of Mercury in Fish for Women of Various Weights Who Eat Fish Regularly[i]	
Body Weight (pounds)	Safe Limit of Mercury in Fish (ppm)
100	0.09
110	0.10
120	0.11
130	0.12
140	0.13
150	0.14
160	0.15
170	0.16
180	0.17
190	0.18
200	0.19

Because of their small body size, children can safely eat less mercury-contaminated fish than adults. According to EPA, an average meal of fish for young children is two ounces (cooked).[38] Table H lists the safe limit of methylmercury in fish for young children of average weight who eat two average meals of fish per week.

Table H. Safe Limit of Mercury in Fish for Children of Various Ages[ii]		
Age of Child	Average Body Weight (pounds)[39]	Safe Limit of Mercury in Fish (ppm)
Less than 3 years	26	0.07
3 to 5 years	37	0.10
6 to 8 years	55	0.15

[i] The benchmarks are calculated using EPA's reference dose and assuming that women eat two six-ounce meals of fish per week.

[ii] The benchmarks are calculated using EPA's reference dose and assuming that children of average weight eat two two-ounce meals of fish per week.

Mercury Consumption Advisories

EPA provides guidance on assessing methylmercury levels in fish to state officials who in turn issue consumption advisories for sport fish caught by recreational anglers. State authorities typically issue fish advisories for individual water bodies where fish are contaminated with methylmercury at a level that they deem unsafe for women of childbearing age or other sensitive populations in the state (e.g., nursing mothers).

As of 2002, agencies in 43 states[i] had issued fish consumption advisories due to methylmercury contamination. These advisories, which cover 12 million acres, or 30 percent, of the nation's lakes and 450,000 miles, or 13 percent, of its rivers, warn people to limit their consumption of certain types of fish or fish from specific water bodies. Nineteen states[ii] have statewide freshwater fish consumption advisories for methylmercury, and 11 states[iii] have statewide advisories for coastal waters.[40]

In March 2004, the FDA and EPA issued a joint advisory warning women who may become pregnant, pregnant women, nursing mothers, and young children to avoid or limit consumption of certain fish and shellfish due to methylmercury contamination. The recommendations are as follows:

(1) Do not eat shark, swordfish, king mackerel, or tilefish because they contain high levels of mercury;
(2) Eat up to 12 ounces, or two average meals, a week of a variety of fish and shellfish that are lower in mercury, such as shrimp, canned light tuna, salmon, pollock, and catfish;
(3) Eat up to six ounces, or one average meal, of albacore tuna or tuna steaks per week; and
(4) Check local advisories about the safety of fish caught by family and friends in local lakes, rivers, and coastal areas; if no advisory is available, eat up to six ounces, or one average meal, per week of fish caught from local waters but do not consume any other fish during that week.

For children, the advisory directs parents to follow the same recommendations "but serve smaller portions."[41]

While an improvement over past federal advisories, the FDA/EPA advisory still falls short of providing people the information they need to limit their methylmercury exposure. Remarkably, people who follow the guidelines may still be exposed to more methylmercury than EPA deems "safe," based on current scientific knowledge.

In addition, the FDA does not require companies that sell fish with unsafe levels of methylmercury to remove the fish from the market or to include warnings on product labels, such as on cans of tuna. Not surprisingly, most Americans do not know that women of childbearing age and children should avoid or limit their consumption of certain types of fish due to mercury contamination.[42] Given the limitations of national advisories posted on websites and in

[i] The seven states without advisories include Alaska, Hawaii, Iowa, Kansas, Oklahoma, Utah, and Wyoming. Of these states, Alaska, Hawaii, Kansas, Utah, and Wyoming did not have systems for issuing advisories as of April 2001. Of the five states without systems in place, only Kansas routinely monitored for mercury contamination. The Alaska Division of Public Health recommends the "unrestricted consumption of fish from Alaskan waters." For more information, see Environmental Working Group and the State PIRGs, Brain Food: What Women Should Know about Mercury Contamination of Fish, 2001.

[ii] The 19 states include Connecticut, Florida, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, North Dakota, New Hampshire, New Jersey, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

[iii] The 11 states include Alabama, Florida, Georgia, Louisiana, Maine, Massachusetts, Mississippi, North Carolina, Rhode Island, South Carolina, and Texas.

obscure government materials, in 2004 the American Medical Association recommended that the FDA require that fish consumption advisories be posted where fish, including canned tuna, are sold.[43]

California Sues Tuna Companies for Failing to Warn about Mercury

In June 2004, California Attorney General Bill Lockyer sued the nation's three largest canned tuna companies for failing to warn consumers that albacore and light tuna contain mercury. The companies include Tri-Union Seafoods (Chicken of the Sea), Del Monte (Starkist), and Bumble Bee Seafoods (Bumble Bee). Lockyer accuses the companies of violating Proposition 65, which requires businesses to provide "clear and reasonable" warnings before exposing people to known carcinogens or reproductive toxins. The lawsuit asks the court to prohibit the companies from selling tuna in California without warnings on product labels or posted in grocery store aisles.

In 2003, Lockyer also sued major grocery and restaurant chains for failing to post warnings about mercury in fresh or frozen shark, swordfish, and tuna; the cases are pending. In the meantime, several of the grocers and restaurants have posted an interim warning.

Source: Office of the California Attorney General, Attorney General Lockyer Files Lawsuit Against Canned Tuna Companies for Failing to Warn Consumers about Exposure to Mercury (press release), 21 June 2004, downloaded from http://caag.state.ca.us/newsalerts/2004/04-065.htm, 3 July 2004.

New Data: EPA's National Fish Tissue Study

This report analyzes the first available data from EPA's ongoing National Study of Chemical Residues in Lake Fish Tissue, or the National Fish Tissue Study, a four-year study of 268 chemicals in fish sampled from 500 lakes in the continental U.S. EPA's study is the first national fish contamination survey that is based on a random sampling design, which will allow EPA to develop national estimates of mean levels of chemicals in freshwater fish and establish a baseline to track progress in reducing contaminant levels. EPA initiated the study in 1998 and plans to complete its report in 2006.[44]

The basic parameters of EPA's study are as follows:

- EPA selected a representative sample of 500 of the estimated 270,000 lakes and reservoirs in the continental U.S., stratified to account for the spatial distribution of lakes of different sizes;
- At each lake, researchers collected composite samples of one predator species (e.g., bass) and one bottom-dwelling species (e.g., carp);
- Each composite consisted of approximately five adult fish of the same species and of similar size;
- Most fish composites were collected during the summer and fall of each sampling year (1999-2000, 2001, 2002, and 2003);
- Researchers used consistent methods nationwide to collect and analyze the samples; and
- Researchers analyzed fillets for the predator fish and whole bodies for the bottom-dweller fish to measure concentrations of 268 chemicals in the fish tissue.

More detailed information is available on the study's website at www.epa.gov/waterscience/fishstudy.

See Figure 2 for the locations of the 500 lakes and reservoirs included in the study.

Figure 2. Locations of the 500 Lakes and Reservoirs Included in EPA's Study[45]

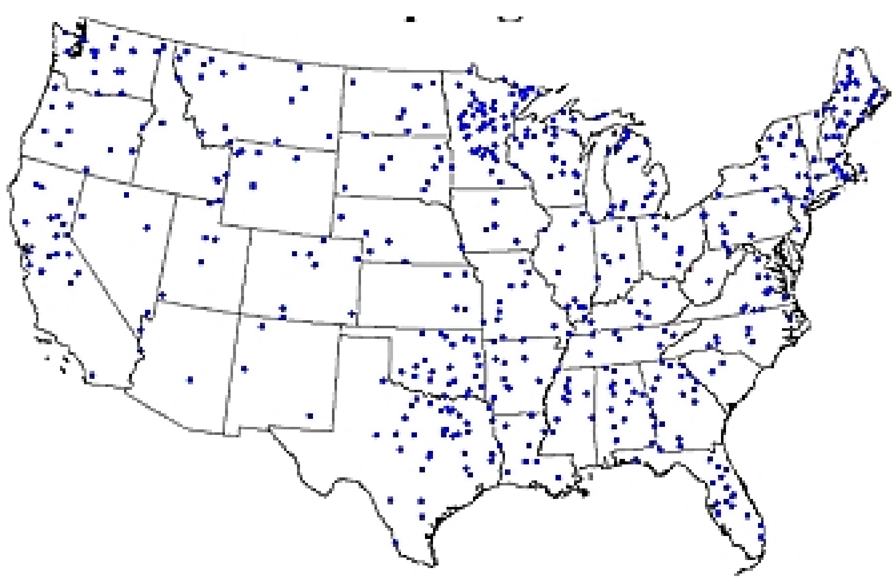


Figure 3. Distribution of the 500 Lakes by State[46]

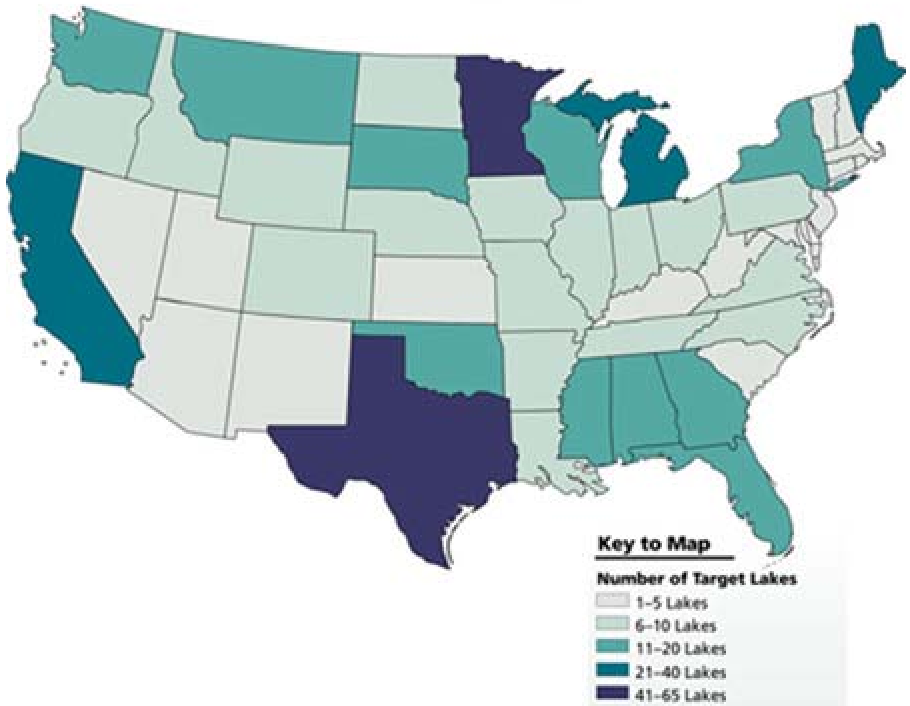


Figure 3 shows the distribution of the 500 lakes and reservoirs by state. Texas, Minnesota, Maine, Michigan, and California had the highest number of lakes sampled.

This report analyzes the first two years of EPA's quality-assured data, which includes fish from 260 lakes and reservoirs collected in 1999-2000 and 2001.[47] In general, two composite samples (one predator species and one bottom-dwelling species) were collected at each lake, for a total of 520 composite samples, or 2,547 fish. The fish were sampled from lakes in all but six states, excluding Alaska, Delaware, Hawaii, Maryland, Missouri, and Rhode Island.

EPA's data include average mercury levels for each of the 520 composite samples rather than for each of the 2,547 individual fish.[i] While this approach provides a good indication of the average mercury concentration of different fish species, it levels out peak concentrations in individual fish, which is significant as researchers have found that a pregnant woman who eats just a single serving of fish containing very high levels of mercury (2.0 ppm or higher) could expose her baby to dangerous levels of mercury.[48]

Findings: Mercury in Sport Fish from the Nation's Lakes

All of the fish samples EPA tested from the nation's lakes were contaminated with mercury.[ii] The mean mercury concentration of the 520 fish samples was 0.22 ppm, or nearly twice EPA's safe limit for women of average weight who eat fish twice a week (see pages 10-11). A white perch sample from Cuxabexis Lake in Maine had the highest average mercury concentration at 1.45 ppm. See Appendix B for data

[i] EPA tests for total mercury rather than methylmercury but assumes that all of the mercury is methylmercury.

[ii] The minimum level of quantification was .001 ppm.

for each of the 520 fish samples, including the sampling location.

Fifty-five (55) percent of the fish samples EPA tested contained mercury levels that exceed EPA's safe limit of 0.13 ppm for women of average weight who eat fish twice a week.

Moreover, 76 percent of the fish samples exceeded the safe mercury limit for children of average weight under age three who eat fish twice a week; 63 percent of fish samples exceeded the limit for children ages three to five years; and 47 percent of the fish samples exceeded the limit for children six to eight years (see pages 10-11).

Among the states, in 29 of the 44 states included in the study, at least half of the fish samples contained mercury levels exceeding EPA's safe limit for women (see Table I).

Table I. Percent of Fish Samples that Exceed Safe Limit for Women by State[i]

State	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Average Mercury Concentration of Composite Samples (ppm)	Percent of Composite Samples that Exceed Safe Limit for Women (0.13 ppm)
Alabama	14	64	0.17	0.53	36%
Arizona	5	24	0.13	0.28	40%
Arkansas	12	59	0.21	0.40	67%
California	7	33	0.27	0.59	86%
Colorado	10	53	0.12	0.23	60%
Connecticut*	4	20	0.42	1.10	75%
Florida	16	81	0.26	1.08	63%
Georgia	16	75	0.27	0.81	63%
Idaho	10	47	0.25	0.62	50%
Illinois	15	73	0.17	0.51	47%
Indiana	8	33	0.25	1.38	25%
Iowa*	4	20	0.12	0.31	25%
Kansas*	4	20	0.14	0.20	50%
Kentucky	5	24	0.12	0.17	60%
Louisiana	6	27	0.32	0.74	100%
Maine	27	134	0.45	1.45	89%
Massachusetts	8	40	0.35	0.92	75%
Michigan	27	139	0.19	0.59	56%
Minnesota	77	370	0.18	0.82	48%
Mississippi	5	23	0.29	0.42	100%
Montana	13	77	0.28	1.11	54%
Nebraska*	3	15	0.07	0.09	0%
Nevada*	4	20	0.26	0.38	75%
New Hampshire*	4	19	0.29	0.53	75%
New Jersey*	2	10	0.49	0.87	50%
New Mexico*	4	20	0.26	0.58	75%
New York	19	89	0.28	1.08	53%
North Carolina	8	40	0.27	0.81	88%

[i] Assumes women of average weight who eat fish regularly (i.e., two meals of fish per week).

State	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Average Mercury Concentration of Composite Samples (ppm)	Percent of Composite Samples that Exceed Safe Limit for Women (0.13 ppm)
North Dakota	9	47	0.26	0.55	67%
Ohio*	4	18	0.26	0.38	75%
Oklahoma	22	125	0.24	1.02	41%
Oregon*	2	20	0.05	0.06	0%
Pennsylvania	11	52	0.11	0.24	45%
South Carolina	8	40	0.14	0.43	38%
South Dakota	15	75	0.11	0.38	27%
Tennessee	9	45	0.19	0.54	56%
Texas	53	239	0.20	1.08	57%
Utah*	2	8	0.30	0.32	100%
Vermont*	2	10	0.55	0.86	100%
Virginia	18	82	0.19	0.54	44%
Washington	14	70	0.11	0.30	29%
West Virginia*	2	7	0.20	0.23	100%
Wisconsin	6	30	0.29	0.52	100%
Wyoming	6	30	0.09	0.18	33%
NATIONAL	520	2,547	0.22	1.45	55%

* EPA tested a limited number of fish (<5 composite samples).

Not surprisingly, predator fish, or fish at top of the aquatic food chain, had the highest average levels of mercury. The mean mercury concentration of the predator fish samples was 0.32 ppm. As detailed in Table J, the most contaminated fish species included bowfin, white perch, white bass, black bass, splake, spotted gar, chain pickerel, Atlantic salmon, smallmouth bass, spotted bass, walleye, largemouth bass, lake trout, and Northern pike. EPA tested from just one composite sample (five fish) to 131 composite samples (642 fish) of these species. Of the species with more than four composite samples, smallmouth bass, walleye, largemouth bass, lake trout, and Northern pike had the highest average mercury concentrations.

Eighty (80) percent of the predator fish samples contained mercury levels exceeding EPA's safe limit for women. In 18 of the 44 states, 100 percent of the predator fish samples exceeded EPA's safe mercury limit for women (see Table K).

In contrast, only two bottom dweller species – the largescale sucker and flathead catfish – were among the top 20 most polluted fish species sampled. Of the bottom dweller fish samples, the mean mercury concentration was 0.10 ppm, and 26 percent exceeded EPA's safe limit for women.

These data show that mercury pollution is extensive. Every fish sample EPA tested was contaminated with mercury, and the majority of the fish samples were contaminated with mercury at levels that could pose a public health risk. The results underscore the need to reduce mercury emissions to the greatest extent possible, as fast as possible.

Table J. Percent of Fish Samples that Exceed Safe Limit for Women by Fish Species[i]

Type of Fish	Predator or Bottom Dweller	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Average Mercury Concentration of Composite Samples (ppm)	Percent of Composite Samples that Exceed Safe Limit for Women (0.13 ppm)
Bowfin*	Predator	1	5	1.08	1.08	100%
White Perch*	Predator	3	15	1.03	1.45	100%
White Bass*	Predator	2	6	0.84	1.38	100%
Black Bass*	Predator	2	7	0.70	1.08	100%
Splake*	Predator	1	5	0.65	0.65	100%
Spotted Gar*	Predator	1	5	0.59	0.59	100%
Chain Pickerel*	Predator	4	20	0.54	0.78	100%
Atlantic Salmon*	Predator	1	5	0.54	0.54	100%
Smallmouth Bass	Predator	18	87	0.52	1.10	94%
Spotted Bass*	Predator	4	20	0.39	0.48	100%
Walleye	Predator	29	140	0.35	1.11	83%
Largemouth Bass	Predator	131	642	0.31	1.02	86%
Lake Trout	Predator	5	24	0.30	0.59	60%
Northern Pike	Predator	25	127	0.30	0.55	96%
Yellow Perch	Predator	7	40	0.27	0.73	43%
Largescale Sucker	Bottom Dweller	5	24	0.27	0.41	80%
Flathead Catfish*	Bottom Dweller	1	4	0.25	0.25	100%
Striped Bass*	Predator	4	18	0.23	0.27	100%
Rock Bass*	Predator	3	20	0.22	0.25	100%
Black Crappie	Predator	6	30	0.19	0.38	67%
Yellow Bullhead	Bottom Dweller	14	66	0.19	0.53	57%
Cutthroat Trout X Rainbow Trout*	Predator	1	5	0.18	0.18	100%
Saugeye*	Predator	1	4	0.16	0.16	100%
Mountain Whitefish*	Predator	1	5	0.15	0.15	100%
Gold Fish*	Bottom Dweller	1	3	0.13	0.13	100%
Brook Trout	Predator	5	32	0.13	0.17	60%
White Crappie	Predator	6	30	0.13	0.24	33%
Brown Trout*	Predator	1	3	0.13	0.13	0%
Redhorse Sucker*	Bottom Dweller	1	5	0.12	0.12	0%
Smallmouth Buffalo	Bottom Dweller	6	27	0.12	0.22	33%
Spotted Sucker*	Bottom Dweller	4	20	0.11	0.19	25%
Blue Catfish*	Bottom Dweller	2	8	0.11	0.18	50%
White Catfish*	Bottom Dweller	2	10	0.11	0.15	50%
Longnose Sucker*	Bottom Dweller	1	2	0.11	0.11	0%
White Sucker	Bottom Dweller	57	264	0.10	0.38	30%
Creek Chubsucker*	Bottom Dweller	1	5	0.10	0.10	0%
Rainbow Trout	Predator	8	39	0.10	0.21	25%
Silver Redhorse*	Bottom Dweller	2	10	0.09	0.11	0%
Channel Catfish	Bottom Dweller	33	160	0.09	0.28	24%

[i] Assumes women of average weight who eat fish regularly (i.e., two meals of fish per week).

Type of Fish	Predator or Bottom Dweller	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Average Mercury Concentration of Composite Samples (ppm)	Percent of Composite Samples that Exceed Safe Limit for Women (0.13 ppm)
Cutthroat Trout	Predator	5	26	0.09	0.21	20%
Black Bullhead	Bottom Dweller	11	58	0.08	0.25	18%
Common Carp	Bottom Dweller	66	319	0.08	0.29	17%
Bluegill	Predator	5	39	0.08	0.23	20%
Brown Bullhead	Bottom Dweller	19	87	0.08	0.19	26%
Yellowstone Cutthroat Trout*	Predator	1	5	0.08	0.08	0%
Lake Chubsucker	Bottom Dweller	5	21	0.08	0.13	0%
Utah Sucker*	Bottom Dweller	2	10	0.07	0.09	0%
Cisco*	Bottom Dweller	1	5	0.07	0.07	0%
Lake Whitefish*	Bottom Dweller	1	5	0.07	0.07	0%
Black Red Horse*	Bottom Dweller	1	5	0.06	0.06	0%
Kokanee*	Predator	2	20	0.05	0.06	0%
River Carpsucker*	Bottom Dweller	1	5	0.04	0.04	0%
TOTAL		520	2,547	0.22	1.45	55%

* EPA's testing of this fish species is limited (<5 composite samples).

Table K. Percent of Predator Fish Samples that Exceed Safe Limit for Women by State[i]

State	# of Composite Samples	Total # of Fish Tested	Avg. Mercury Conc. of Composite Samples (ppm)	% of Composite Samples Over Safe Limit for Women (0.13 ppm)
Alabama	7	34	0.27	57%
Arizona*	2	9	0.22	100%
Arkansas	6	29	0.31	100%
California*	4	20	0.36	75%
Colorado	6	33	0.17	83%
Connecticut*	2	10	0.63	100%
Florida	9	46	0.38	89%
Georgia	10	50	0.36	90%
Idaho	5	25	0.31	60%
Illinois	8	38	0.27	75%
Indiana*	4	14	0.45	50%
Iowa*	2	10	0.17	50%
Kansas*	2	10	0.18	100%
Kentucky*	3	17	0.12	67%
Louisiana*	4	20	0.40	100%
Maine	15	75	0.66	100%
Massachusetts	5	25	0.45	80%
Michigan	14	74	0.29	100%
Minnesota	37	187	0.29	86%
Mississippi*	4	19	0.30	100%
Montana	7	42	0.40	71%
Nebraska*	1	5	0.08	0%
Nevada*	3	15	0.33	100%

State	# of Composite Samples	Total # of Fish Tested	Avg. Mercury Conc. of Composite Samples (ppm)	% of Composite Samples Over Safe Limit for Women (0.13 ppm)
New Hampshire*	2	9	0.45	100%
New Jersey*	1	5	0.87	100%
New Mexico*	2	10	0.39	100%
New York	10	51	0.45	70%
North Carolina	5	25	0.34	80%
North Dakota	6	32	0.34	100%
Ohio*	3	13	0.33	100%
Oklahoma	12	65	0.36	67%
Oregon*	2	20	0.05	0%
Pennsylvania	6	31	0.15	83%
South Carolina*	4	20	0.20	75%
South Dakota	7	35	0.17	57%
Tennessee	5	28	0.28	80%
Texas	28	125	0.31	89%
Utah*	1	5	0.32	100%
Vermont*	1	5	0.86	100%
Virginia	10	47	0.24	60%
Washington	9	46	0.09	22%
West Virginia*	1	5	0.23	100%
Wisconsin*	3	15	0.43	100%
Wyoming	5	25	0.11	40%
NATIONAL	283	1,424	0.32	80%

* EPA tested a limited number of predator fish (<5 composite samples).

Supplemental State-Collected Data

Because EPA tested a limited number of fish in several states in its fish tissue study, we also analyzed an EPA database of state-collected mercury contaminant levels in freshwater fish. The database, which EPA released in 1999, includes data for 40 states, excluding Alaska, Colorado, Hawaii, Idaho, Montana, Nevada, North Dakota, South Dakota, Utah, and Wyoming.[49]

We limited our analysis to the five fish species of most concern – those of ample sample size with the highest average mercury levels, as identified above. The five fish species include smallmouth bass, walleye, largemouth bass, lake trout, and Northern pike. Most states tested some but not all five species.

Across the states, very high percentages of the five species contained mercury levels exceeding EPA's safe limit for women. See Appendix C for the state-collected data by state and species.

[i] Assumes women of average weight who eat fish regularly (i.e., two meals of fish per week).

Solving the Problem at the Source: Reducing Power Plant Mercury Emissions

Reducing mercury emissions from power plants is critical to reduce unsafe levels of mercury in commonly eaten fish. In the mid-1990s, EPA passed standards to reduce mercury emissions from medical and municipal waste incinerators by 90 percent.[50] As a result, mercury emissions from these sources declined sharply within a few short years, and we have already seen the results. For instance, in the Florida Everglades, local emissions of mercury have declined by more than 90 percent as a result of federal and state mercury limits on waste incinerators. Over the same period, mercury concentrations in largemouth bass declined by approximately 80 percent.[51] Reducing mercury emissions from power plants – the largest unregulated industrial source – will lead to rapid reductions in mercury concentrations in fish and, in turn, Americans' exposure to the toxin.

In 2000, after years of delay and review, EPA determined that it is necessary and appropriate to regulate power plant mercury emissions.[52] "[M]ercury emissions from power plants pose significant hazards to public health and must be reduced," stated EPA in its announcement.[53] This determination triggered the regulatory process for EPA to set tight limits on power plant mercury emissions under the Clean Air Act's maximum achievable control technology (MACT) standard for hazardous air pollutants. Such controls must be in place no later than three years after EPA finalizes the regulation. The MACT standard is a more stringent standard than is required for conventional air pollutants, such as smog and soot, because relatively small amounts of air toxics can pose a substantial public health threat.

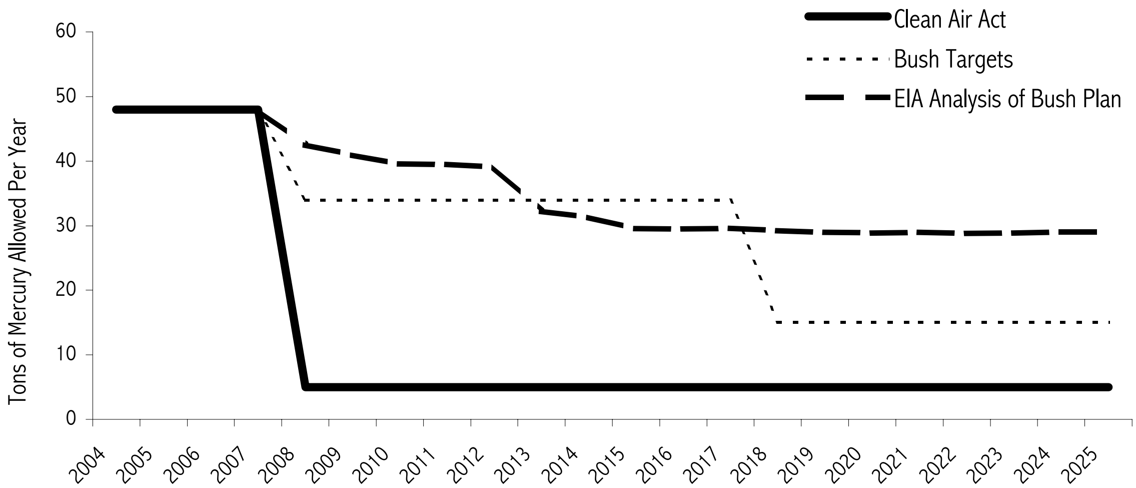
In a 2001 presentation to the Edison Electric Institute, the electric utilities' trade association, EPA told industry that the agency had three options under the law – to reduce mercury emissions by 89, 90, or 98 percent by December 2007.[54] Such a rule would reduce emissions from 48 tons to about 5 tons per year.

The Bush Administration's Plan: A Step Backward

In January 2004, the Bush administration issued a severely flawed proposal for regulating mercury from power plants.[55] EPA proposed three regulatory options, all of which fall far short of what the Clean Air Act requires.

EPA's preferred approach would delay even modest reductions in mercury from power plants until after 2025. The proposal would cap power plant mercury emissions at 34 tons in 2010 and 15 tons in 2018, which represent 29 percent and 69 percent reductions, respectively. The Administration's own analysis, however, shows that even these weak targets would not be met on EPA's timeline, if ever (see Figure 4).[56] A May 2004 Energy Information Administration (EIA) analysis found that "mercury emissions are not projected to reach the 2010 or 2018 cap levels."[57] EIA explains, "The use of early credits allows [energy companies] to delay meeting the 2010 34-ton mercury emissions cap until 2013. In the longer term…mercury emissions are projected to remain above the 15-ton emission target that takes effect in 2018 throughout the projections [to 2025]."[58]

Figure 4. Bush Plan Fails to Meet Clean Air Act Goals



Source: Adapted from Energy Information Administration, 2004.

The Technology to Reduce Mercury Pollution Is Available Today

Power plants today, absent any legal requirement, are achieving mercury reductions simply by controlling other pollutants, as well as by employing mercury-specific control technologies that are in various stages of development. In 2000, EPA stated, "EPA has found that there are cost-effective ways of controlling mercury emissions from power plants. Technologies available today and technologies expected to be available in the near future <u>can eliminate most of the mercury from utilities</u> at a cost far lower than one percent of utility industry revenues" (emphasis added).[59] In a review of mercury-control technologies, the Northeast States for Coordinated Air Use Management concluded, "Simply put, the principal barrier to the development of cost-effective controls for mercury emissions from power plants has been EPA's failure to date to establish an appropriate MACT standard for this sector, and we have no doubt that the documented history of regulatory-driven technology innovation and cost reduction will repeat itself if and when EPA does establish an appropriately stringent mercury MACT standard."[60]

A February 2004 Congressional Research Service report noted that the Bush administration's "concerns with regard to the availability and cost of technology appear to be at odds with the views of many experts," including the U.S. Department of Energy.[61]

Indeed, in response to a request for information from five manufacturers of mercury emission control technologies in late 2003, Senator James Jeffords of Vermont found the following: "Two of the companies are confident their technologies could reduce mercury emissions from power plants by at least 80-90% from all types of coal combustion. One of these two technologies can achieve even greater than 90% capture of mercury from the harder-to-control western sub-bituminous and lignite coals. Three out of the five companies responding indicate that their technologies are currently available commercially, while the remaining two plan to enter the market in 2004 and 2005….[S]tringent control of utility mercury emissions…is economically feasible and technically achievable for even the dirtiest fuel types. These technologies are available for application now and within the next two years."[62]

In order to move forward with such a weak standard, the Bush administration would rescind EPA's 2000 determination that power plants must be regulated under the Clean Air Act's MACT standard for hazardous air pollutants. Rather than regulate mercury as a toxic chemical, EPA would use less prescriptive requirements. EPA would allow power plants to avoid reducing their mercury emissions by buying credits from other plants in different locations. Trading mercury credits is "very risky," according to prominent scientists in the field, and likely would contribute to mercury hot spots, or areas with high levels of mercury deposition.[63]

The bottom line is that power plants would emit far more mercury for far longer than the Clean Air Act allows.

Since EPA released the proposal, reporters, health and environmental advocates, and EPA employees have revealed numerous, serious irregularities in how the Bush administration developed the proposal, which all underscore the enormous access and influence of the electric utilities. In March 2004, the Los Angeles Times reported, "Political appointees in the Environmental Protection Agency bypassed agency professional staff and a federal advisory panel last year to craft a rule on mercury emissions preferred by the industry and the White House, several longtime EPA officials say. The EPA staffers say they were told not to undertake the normal scientific and economic studies called for under a standing executive order."[64] EPA's proposal contains numerous paragraphs taken verbatim from memos written by Latham & Watkins, a law firm whose clients include several large electric utilities, and West Associates, a research and advocacy group representing 20 power and transmission companies in Western states.[65] In addition, White House officials scrubbed language in the proposal to downplay the scientific evidence about the hazards of mercury pollution.[66] In May 2004, the EPA Inspector General opened an investigation into how the Administration developed the proposal.[67]

The Bush administration's proposal has sparked unprecedented public opposition. A record number of Americans – at least 606,660 – wrote to EPA about its proposed rule during the five-month public comment period, calling for real action to reduce power plant mercury emissions.[68] EPA's own Children's Health Protection Advisory Committee wrote that the proposal "does not go as far as is feasible to reduce mercury emissions from power plants, and thereby does not sufficiently protect our nation's children."[69] Medical and health groups,[70] labor unions,[71] hunting and fishing groups,[72] churches and other faith organizations,[73] and environmental and conservation groups,[74] among others, oppose the plan. Forty-five U.S. Senators, including seven Republicans,[75] 184 members of the U.S. House of Representatives, including 23 Republicans,[76] and 13 attorneys general[77] have urged the Bush administration to drop its plan and instead move forward with a rule that protects children's health and complies with the law.

Recommendation

To reduce mercury levels in fish and protect public health, EPA should require coal-fired power plants to reduce mercury emissions by at least 90 percent by 2008, as is required by the Clean Air Act.[i]

[i] An analysis by the Clean Air Task Force found that a MACT standard that complied with the Clean Air Act would require power plants to reduce mercury emissions by more than 90 percent. See Comments of the Clean Air Task Force et al, on EPA's mercury proposal, 29 June 2004, available at www.catf.us/advocacy/legal/UHAPR.

States Act to Reduce Power Plant Mercury Emissions

In the absence of federal standards, states are acting to reduce mercury emissions from coal-fired power plants. In July 2004 testimony before the U.S. Senate, Bradley Campbell, the New Jersey Commissioner of Environmental Protection, explained the states' motivation as follows: "We did not originally plan to propose a New Jersey-only rule for power plant mercury emissions. It was only after it became apparent that EPA would be proposing a weak rule with an extended timeframe that New Jersey and other states were put in a position of having to do their own rules."[78]

In May 2004, Massachusetts adopted a rule that calls for an 85 percent reduction in mercury emissions from the state's coal-fired power plants by 2008 and a 95 percent reduction by 2012. Connecticut passed a law in 2003 requiring coal-fired power plants to achieve either an emissions standard of 0.6 pounds of mercury per trillion Btu or 90 percent efficiency in technology installed to control mercury emissions by 2008. The law also directs the Connecticut Department of Environmental Protection to evaluate the need for additional mercury reductions from stationary sources in 2012. In June 2004, the Wisconsin Department of Natural Resources approved a plan that requires power plants to reduce mercury emissions by 40 percent in 2010 and by 75 percent in 2015.

In December 2003, New Jersey proposed a rule to require the state's 10 coal-fired power plants to reduce mercury emissions by 90 percent by 2007. The proposal provides plants the option of meeting the standard by 2012 if they also reduce their emissions of sulfur dioxide, nitrogen oxides, and fine particulates. Using pollution control technology "about a decade old," two coal-fired power plants in New Jersey already have reduced their mercury emissions by more than 90 percent compared with uncontrolled levels.[79]

Several other states, including Delaware, Illinois, Indiana, Maryland, Michigan, North Carolina, and New Hampshire, are considering state policies to reduce mercury emissions from power plants.

Sources: Massachusetts Department of Environmental Protection, Mercury Emission Limits for Coal-Fired Power Plants (fact sheet), May 2004; State of Connecticut, House Bill 6048, downloaded from http://www.cga.state.ct.us, 3 July 2004; Lee Bergquist, "Board Approves Mercury-Reduction Proposal," Milwaukee Journal Sentinel, 24 June 2003; New Jersey Department of Environmental Protection, DEP Proposes New Measures to Protect Communities from Mercury Exposure (press release) 10 December 2003, downloaded from http://www.state.nj.us/dep/newsrel/releases/03_0175.htm, 3 July 2004.

Appendix A. Electric Utilities Reporting Airborne Mercury Emissions, 2002

Rank	Facility	City	State	Air Emissions (pounds)
1	LIMESTONE ELECTRIC GENERATING STATION	JEWETT	TX	1,800.00
2	TXU MONTICELLO STEAM ELECTRIC STATION & LIGNITE MINE	MOUNT PLEASANT	TX	1,324.00
3	AMERICAN ELECTRIC POWER CONESVILLE PLANT	CONESVILLE	OH	1,300.00
4	RELIANT ENERGY KEYSTONE POWER PLANT	SHELOCTA	PA	1,235.20
5	JEFFREY ENERGY CENTER	SAINT MARYS	KS	1,215.80
6	W.A. PARISH ELECTRIC GENERATING STATION	THOMPSONS	TX	1,100.00
7	ALABAMA POWER CO. MILLER STEAM PLANT	QUINTON	AL	1,076.80
8	MARTIN LAKE STEAM ELECTRIC STATION & LIGNITE MINE	TATUM	TX	1,027.00
9	AMERICAN ELECTRIC POWER H.W. PIRKEY POWER PLANT	HALLSVILLE	TX	1,000.00
10	GEORGIA POWER SCHERER STEAM ELECTRIC GENERATING PLANT	JULIETTE	GA	943.00
11	BIG CAJUN 2	NEW ROADS	LA	880.00
12	NORTHERN STATES POWER CO.	BECKER	MN	876.00
13	J. M. STUART STATION	MANCHESTER	OH	845.00
14	PLEASANT PRAIRIE POWER PLANT	KENOSHA	WI	838.46
15	GREAT RIVER ENERGY COAL CREEK STATION	UNDERWOOD	ND	832.60
16	L.C.R.A. FAYETTE POWER PROJECT	LA GRANGE	TX	811.10
17	ALABAMA POWER CO. GASTON STEAM PLANT	WILSONVILLE	AL	807.40
18	AMERICAN ELECTIC POWER ROCKPORT PLANT	ROCKPORT	IN	800.00
19	AMERICAN ELECTRIC POWER AMOS PLANT	WINFIELD	WV	790.00
19	BRUCE MANSFIELD	SHIPPINGPORT	PA	790.00
21	AMERENUE LABADIE POWER PLANT	LABADIE	MO	762.60
22	COLSTRIP STEAM ELECTRIC STATION	COLSTRIP	MT	760.00
23	DUKE ENERGY BELEWS CREEK STEAM STATION	BELEWS CREEK	NC	730.44
24	BRANDON SHORES & WAGNER COMPLEX	BALTIMORE	MD	708.50
25	U.S. TVA PARADISE FOSSIL PLANT	DRAKESBORO	KY	700.10
26	GEORGIA POWER BOWEN STEAM ELECTRIC GENERATING PLANT	CARTERSVILLE	GA	697.00
27	CP&L ROXBORO STEAM ELECTRIC PLANT	SEMORA	NC	670.21
28	ENTERGY WHITE BLUFF GENERATING PLANT	REDFIELD	AR	669.70
29	O.W. SOMMERS/J.T. DEELY/J.K. SPRUCE GENERATING COMPLEX	SAN ANTONIO	TX	661.10
30	AMERICAN ELECTRIC POWER GAVIN PLANT	CHESHIRE	OH	660.00
31	RELIANT ENERGY SHAWVILLE STATION	SHAWVILLE	PA	631.60
32	DUKE ENERGY MARSHALL STEAM STATION	TERRELL	NC	621.10
33	DETROIT EDISON MONROE POWER PLANT	MONROE	MI	618.00
34	GIBSON GENERATING STATION	PRINCETON	IN	594.80
35	TUCSON ELECTRIC POWER SPRINGERVILLE GENERATING STATION	SPRINGERVILLE	AZ	592.00
36	SAN JUAN GENERATING STATION	WATERFLOW	NM	591.30
37	FOUR CORNERS STEAM ELECTRIC STATION	FRUITLAND	NM	590.59
38	AMERICAN ELECTRIC POWER CARDINAL PLANT	BRILLIANT	OH	560.00
39	EME HOMER CITY GENERATION L.P.	HOMER CITY	PA	545.00

Rank	Facility	City	State	Air Emissions (pounds)
40	W. H. SAMMIS PLANT	STRATTON	OH	540.00
41	EDISON INTL. POWERTON GENERATING STATION	PEKIN	IL	527.00
42	MINNKOTA POWER COOPERATIVE INC. MILTON R YOUNG STATION	CENTER	ND	502.00
43	AMERENUE RUSH ISLAND POWER STATION	FESTUS	MO	501.60
44	PACIFICORP DAVE JOHNSTON PLANT	GLENROCK	WY	497.70
45	RELIANT ENERGY CONEMAUGH POWER PLANT	NEW FLORENCE	PA	496.10
46	IPL PETERSBURG	PETERSBURG	IN	492.60
47	COLUMBIA ENERGY CENTER	PARDEEVILLE	WI	491.29
48	PROGRESS ENERGY CRYSTAL RIVER ENERGY COMPLEX	CRYSTAL RIVER	FL	491.00
49	U.S. TVA KINGSTON FOSSIL PLANT	HARRIMAN	TN	480.10
50	SOUTHERN CO. BARRY STEAM PLANT	BUCKS	AL	476.00
51	R. M. SCHAHFER GENERATING STATION	WHEATFIELD	IN	470.00
52	JEA ST. JOHNS RIVER POWER PARK/NORTHSIDE GENERATING STATION	JACKSONVILLE	FL	465.00
53	PACIFICORP JIM BRIDGER PLANT & BRIDGER COAL CO.	POINT OF ROCKS	WY	461.00
54	AMERICAN ELECTRIC POWER WELSH POWER PLANT	PITTSBURG	TX	450.00
55	JOLIET GENERATING STATION (#9 & #29)	JOLIET	IL	431.00
56	CHALK POINT GENERATING STATION	AQUASCO	MD	428.00
57	DYNEGY MIDWEST GENERATION INC. BALDWIN ENERGY COMPLEX	BALDWIN	IL	427.00
58	BIG BROWN STEAM ELECTRIC STATION & LIGNITE MINE	FAIRFIELD	TX	424.02
59	FORT MARTIN POWER STATION	MAIDSVILLE	WV	420.70
60	ALLEGHENY ENERGY INC. HATFIELD POWER STATION	MASONTOWN	PA	420.60
61	BASIN ELECTRIC POWER CO-OP. ANTELOPE VALLEY STATION	BEULAH	ND	420.00
62	ALABAMA POWER CO. GORGAS STEAM PLANT	PARRISH	AL	416.90
63	U.S. TVA CUMBERLAND FOSSIL PLANT	CUMBERLAND CITY	TN	410.10
64	BASIN ELECTRIC POWER CO-OP. LARAMIE RIVER STATION	WHEATLAND	WY	410.00
65	LA CYGNE	LA CYGNE	KS	400.00
66	AVON LAKE POWER PLANT	AVON LAKE	OH	398.16
67	KENTUCKY UTILITIES CO. GHENT STATION	GHENT	KY	393.20
68	AMERICAN ELECTRIC POWER MOUNTAINEER PLANT	NEW HAVEN	WV	390.00
68	MT. STORM POWER STATION	MOUNT STORM	WV	390.00
68	OHIO VALLEY ELECTRIC CORP. KYGER CREEK STATION	CHESHIRE	OH	390.00
71	MORGANTOWN GENERATING STATION	NEWBURG	MD	387.20
72	EDISON MOHAVE GENERATING STATION	LAUGHLIN	NV	386.00
73	AMEREN ENERGY GENERATING NEWTON POWER STATION	NEWTON	IL	376.80
74	J. H. CAMPBELL GENERATING PLANT	WEST OLIVE	MI	370.00
75	KINCAID GENERATION L.L.C.	KINCAID	IL	369.00
76	AN ELECTRIC POWER MUSKINGUM RIVER PLANT	BEVERLY	OH	360.00
77	CINERGY ZIMMER GENERATING STATION	MOSCOW	OH	359.30
78	CHESTERFIELD POWER STATION	CHESTER	VA	359.00
79	CINERGY MIAMI FORT GENERATING STATION	NORTH BEND	OH	356.20
80	EDISON WILL COUNTY GENERATING STATION	ROMEOVILLE	IL	353.00
81	ELECTRIC ENERGY INC.	JOPPA	IL	351.40
82	U.S. TVA WIDOWS CREEK FOSSIL PLANT	STEVENSON	AL	350.10
83	MIDAMERICAN ENERGY CO. GEORGE NEAL NORTH	SERGEANT BLUFF	IA	350.00
84	WANSLEY STEAM ELECTRIC GENERATING PLANT	ROOPVILLE	GA	349.20
85	DAIRYLAND POWER CO-OP. ALMA SITE	ALMA	WI	348.90

Rank	Facility	City	State	Air Emissions (pounds)
86	GIBBONS CREEK STEAM ELECTRIC STATION	CARLOS	TX	348.00
87	NAVAJO GENERATING STATION	PAGE	AZ	347.73
88	CINERGY BECKJORD GENERATING STATION	NEW RICHMOND	OH	347.30
89	MOUNT CARMEL COGEN FACILITY	MARION HEIGHTS	PA	327.00
90	LOUISVILLE GAS & ELECTRIC CO. MILL CREEK STATION	LOUISVILLE	KY	326.60
91	AMERICAN ELECTRIC POWER TANNERS CREEK PLANT	LAWRENCEBURG	IN	320.00
91	EASTLAKE PLANT	EASTLAKE	OH	320.00
91	MIDAMERICAN ENERGY CO. COUNCIL BLUFFS ENERGY CENTER	COUNCIL BLUFFS	IA	320.00
91	OG&E MUSKOGEE GENERATING STATION	FORT GIBSON	OK	320.00
95	ALABAMA POWER CO. GREENE COUNTY STEAM PLANT	FORKLAND	AL	317.00
96	SPURLOCK POWER STATION	MAYSVILLE	KY	316.00
97	DETROIT EDISON-BELLE RIVER POW ER PLANT	CHINA TOWNSHIP	MI	311.20
98	OTTER TAIL POWER CO. COYOTE STATION	BEULAH	ND	310.00
99	SUNBURY GENERATION L.L.C.	SHAMOKIN DAM	PA	308.80
100	GEORGIA POWER BRANCH STEAM ELECTRIC GENERATING PLANT	MILLEDGEVILLE	GA	303.10
101	CLIFTY CREEK STATION	MADISON	IN	300.00
101	U.S. TVA JOHN SEVIER FOSSIL PLANT	ROGERSVILLE	TN	300.00
103	PPL BRUNNER ISLAND STEAM ELECTRIC STATION	YORK HAVEN	PA	298.00
104	ALLEGHENY ENERGY INC. HARRISON POWER STATION	HAYWOOD	WV	297.70
105	BOSWELL ENERGY CENTER	COHASSET	MN	297.00
106	AMERICAN ELECTRIC POWER MITCHELL PLANT	MOUNDSVILLE	WV	290.00
106	MIDAMERICAN ENERGY GEORGE NEAL SOUTH	SALIX	IA	290.00
108	TWIN OAKS POWER L.P.	BREMOND	TX	282.07
109	ALCOA POWER GENERATING INC.	NEWBURGH	IN	280.00
109	AMERICAN ELECTRIC POWERBIG SANDY PLANT	LOUISA	KY	280.00
109	MIDAMERICAN ENERGY COMPANY-LOUISA GENERATING STATION	MUSCATINE	IA	280.00
109	NEW MADRID POWER PLANT	MARSTON	MO	280.00
109	U.S. TVA BULL RUN FOSSIL PLANT	CLINTON	TN	280.00
114	PPL MONTOUR STEAM ELECTRIC STATION	DANVILLE	PA	277.00
115	LAWRENCE ENERGY CENTER	LAWRENCE	KS	270.30
116	U.S. TVA JOHNSONVILLE FOSSIL PLANT	NEW JOHNSONVILLE	TN	270.10
117	TRANSALTA CENTRALIA GENERATION / MINING	CENTRALIA	WA	265.00
118	THOMAS HILL ENERGY CENTER POWER DIV.	CLIFTON HILL	MO	263.00
119	AMERICAN ELECTRIC POWER PHILIP SPORN PLANT	NEW HAVEN	WV	260.00
119	CP&L MAYO ELECTRIC GENERATING PLANT	ROXBORO	NC	260.00
119	TAMPA ELECTRIC CO. GANNON STATION	TAMPA	FL	260.00
122	DICKERSON GENERATING STATION	DICKERSON	MD	258.50
123	WAUKEGAN GENERATING STATION	WAUKEGAN	IL	257.00
124	DETROIT EDISON ST. CLAIR POWER PLANT	EAST CHINA TOWNSHIP	MI	251.50
125	BIG STONE PLANT	BIG STONE CITY	SD	250.10
126	DUNKIRK STEAM STATION	DUNKIRK	NY	250.00
127	ALLEGHENY ENERGY INC. ARMSTRONG POWER STATION	KITTANNING	PA	246.70
128	NEW CASTLE POWER PLANT	WEST PITTSBURG	PA	240.07
129	CONSUMER ENERGY DE KARN JC WEADOCK GENERATING PLANT	ESSEXVILLE	MI	240.00
129	HUNTLEY GENERATING STATION	TONAWANDA	NY	240.00
131	DOLET HILLS POWER STATION	MANSFIELD	LA	238.00

Rank	Facility	City	State	Air Emissions (pounds)
132	DUKE ENERY PLANT ALLEN	BELMONT	NC	237.60
133	OTTUMWA GENERATING STATION	OTTUMWA	IA	237.00
134	CORONADO GENERATING STATION	SAINT JOHNS	AZ	233.00
135	SANDOW STEAM ELECTRIC STATION	ROCKDALE	TX	230.02
136	AMERICAN ELECTRIC POWER NORTHEASTERN STATION	OOLOGAH	OK	230.00
136	NEBRASKA PUBLIC POWER DISTRICT GERALD GENTLEMAN STATION	SUTHERLAND	NE	230.00
136	U.S. TVA GALLATIN FOSSIL PLANT	GALLATIN	TN	230.00
139	ALLIANT ENERGY EDGEWATER GENERATING STATION	SHEBOYGAN	WI	222.32
140	AMERICAN ELECTRIC POWER KAMMER PLANT	MOUNDSVILLE	WV	220.00
140	TRACTEBEL POWER INC. RED HILLS POWER PLANT	ACKERMAN	MS	220.00
142	INTERMOUNTAIN POWER GENERATING STATION	DELTA	UT	219.00
143	GRAND RIVER DAM AUTHORITY COAL FIRED COMPLEX	CHOUTEAU	OK	217.50
144	AMEREN SIOUX POWER STATION	WEST ALTON	MO	216.90
145	CHOLLA POWER PLANT	JOSEPH CITY	AZ	213.00
146	CAYUGA GENERATING STATION	CAYUGA	IN	210.80
147	SOONER GENERATING STATION	RED ROCK	OK	210.00
148	MEROM GENERATING STATION	SULLIVAN	IN	209.50
149	RELIANT ENERGY NILES POWER PLANT	NILES	OH	203.89
150	LOUISVILLE GAS & ELECTRIC CO. TRIMBLE COUNTY STATION	BEDFORD	KY	203.70
151	DETROIT EDISON-TRENTON CHANNEL POWER PLANT	TRENTON	MI	201.50
152	REID/GREEN/HMP&L STATION II	ROBARDS	KY	198.80
153	STANTON ENERGY CENTER	ORLANDO	FL	196.00
154	R. D. MORROW SR. GENERATING PLANT	PURVIS	MS	193.44
155	SIKESTON POWER STATION	SIKESTON	MO	191.00
156	U.S. TVA COLBERT FOSSIL PLANT	TUSCUMBIA	AL	190.10
157	CHARLES R. LOWMAN POWER PLANT	LEROY	AL	190.00
157	IATAN GENERATING STATION	WESTON	MO	190.00
159	KENTUCKY UTILITIES CO. E. W. BROWN STATION	HARRODSBURG	KY	188.30
160	CHESWICK POWER PLANT	CHESWICK	PA	186.76
161	GULF POWER CO. PLANT CRIST	PENSACOLA	FL	186.20
162	OAK CREEK POWER PLANT	OAK CREEK	WI	184.80
163	WESTERN FARMERS ELECTRIC COOP	HUGO	OK	183.00
164	BLACK RIVER POWER ELECTRIC GENERATING FACILITY	FORT DRUM	NY	181.00
165	WILLIAMS STATION - GENCO	GOOSE CREEK	SC	180.20
166	U.S. TVA SHAWNEE FOSSIL PLANT	WEST PADUCAH	KY	180.10
167	PACIFICORP WYODAK PLANT	GILLETTE	WY	178.40
168	ALLEGHENY ENERGY INC. PLEASANTS/WILLOW ISLAND POWER STATIONS	WILLOW ISLAND	WV	176.20
169	DAYTON POWER & LIGHT CO. KILLEN STATION	MANCHESTER	OH	175.00
170	AMEREN ENERGY GENERATING COFFEEN POWER STATION	COFFEEN	IL	174.30
171	MORGANTOWN ENERGY ASSOCIATES	MORGANTOWN	WV	172.00
172	BASIN ELECTRIC POWER CO-OP LELAND OLDS STATION	STANTON	ND	170.00
173	CINERGY WABASH RIVER GENERATING STATION	WEST TERRE HAUTE	IN	169.30
174	AMEREN MERAMEC POWER STATION	SAINT LOUIS	MO	168.20
175	BREMO POWER STATION	BREMO BLUFF	VA	168.00
176	GEORGIA POWER YATES STEAM ELECTRIC GENERATING PLANT	NEWNAN	GA	167.30
177	IPL HARDING STREET STATION	INDIANAPOLIS	IN	162.70

Rank	Facility	City	State	Air Emissions (pounds)
178	AMERICAN ELECTRIC POWER CLINCH RIVER PLANT	CLEVELAND	VA	160.00
178	AMERICAN ELECTRIC POWER OKLAUNION POWER STATION	VERNON	TX	160.00
178	CHESAPEAKE ENERGY CENTER	CHESAPEAKE	VA	160.00
178	U.S. TVA ALLEN FOSSIL PLANT	MEMPHIS	TN	160.00
182	RELIANT ENERGY SEWARD POWER PLANT	NEW FLORENCE	PA	156.10
183	CRAWFORD GENERATING STATION	CHICAGO	IL	153.00
184	ARIZONA ELECTRIC POWER COOPERATIVE INC.	COCHISE	AZ	151.00
184	HAWAIIAN ELECTRIC INDS. INC. KAHE GENERATING STATION	KAPOLEI	HI	151.00
186	AMERICAN ELECTRIC POWER FLINT CREEK POWER PLANT	GENTRY	AR	150.00
186	TAMPA ELECTRIC CO. BIG BEND STATION	APOLLO BEACH	FL	150.00
188	EDGE MOOR/HAY ROAD POWER PLANTS	WILMINGTON	DE	148.10
189	PSEG POWER L.L.C. HUDSON GENERATING STATION	JERSEY CITY	NJ	145.10
190	CLECO POWER L.L.C. RODEMACHER POWER STATION	LENA	LA	144.00
191	MICHIGAN CITY GENERATING STATION	MICHIGAN CITY	IN	143.00
192	WATEREE STATION - S.C.E.& G.	EASTOVER	SC	142.80
193	EXELON FAIRLESS HILLS STEAM GENERATING STATION	FAIRLESS HILLS	PA	141.40
194	PACIFICORP NAUGHTON PLANT	KEMMERER	WY	139.30
195	CENTRAL ILLINOIS LIGHT CO. (DBA AMEREN CILCO)	BARTONVILLE	IL	139.00
196	STATE LINE GENERATING L.L.C.	HAMMOND	IN	138.00
197	BOARDMAN PLANT	BOARDMAN	OR	137.30
198	COOPER POWER STATION	BURNSIDE	KY	137.10
199	DUKE ENERGY CLIFFSIDE STEAM STATION	MOORESBORO	NC	136.80
200	ADM COGEN DECATUR	DECATUR	IL	134.70
201	C.D. MCINTOSH JR. POWER PLANT	LAKELAND	FL	131.00
202	T.E.S. FILER CITY STATION	FILER CITY	MI	130.95
203	PSEG POWER L.L.C. MERCER GENERATING STATION	HAMILTON TOWNSHIP	NJ	130.80
204	AMERICAN ELECTRIC POWER COLETO CREEK POWER PLANT	FANNIN	TX	130.00
204	CP&L-L. V. SUTTON STEAM ELECTRIC PLANT	WILMINGTON	NC	130.00
204	MUSCATINE POWER & WATER GENERATION	MUSCATINE	IA	130.00
204	TRI-STATE GENERATION & TRANSMISSION CRAIG STATION	CRAIG	CO	130.00
208	CP&L ASHEVILLE PLANT	ARDEN	NC	129.00
209	B.L. ENGLAND GENERATING STATION	BEESLEYS POINT	NJ	128.80
210	REID GARDNER STATION	MOAPA	NV	128.00
211	ALLEGHENY ENERGY INC. ALBRIGHT POWER STATION	ALBRIGHT	WV	126.30
212	HAWTHORN GENERATING FACILITY	KANSAS CITY	MO	125.00
213	USGEN NEW ENGLAND INC.	SOMERSET	MA	124.00
214	PACIFICORP HUNTER PLANT	CASTLE DALE	UT	123.70
215	DETROIT EDISON RIVER ROUGE POWER PLANT	RIVER ROUGE	MI	122.90
216	CINERGY EAST BEND GENERATING STATION	UNION	KY	122.10
217	MISSISSIPPI POWER CO. PLANT DANIEL	ESCATAWPA	MS	120.80
218	BAYSHORE PLANT	OREGON	OH	120.00
219	MISSISSIPPI POWER CO. PLANT WATSON	GULFPORT	MS	117.20
220	RELIANT ENERGY PORTLAND POWER PLANT	PORTLAND	PA	115.10
221	SIGECO A. B. BROWN GENERATING STATION	MOUNT VERNON	IN	113.90
222	COLEMAN	HAWESVILLE	KY	111.60
223	DUKE ENERGY RIVERBEND STEAM STATION	MOUNT HOLLY	NC	110.40

Rank	Facility	City	State	Air Emissions (pounds)
224	CP&L-LEE PLANT	GOLDSBORO	NC	110.00
224	MONTROSE	CLINTON	MO	110.00
224	R. E. BURGER PLANT	SHADYSIDE	OH	110.00
227	CINERGY GALLAGHER GENERATING STATION	NEW ALBANY	IN	108.80
228	GEORGIA POWER HAMMOND STEAM ELECTRIC GENERATING PLANT	ROME	GA	108.50
229	EXELON GENERATING CO. EDDYSTONE GENERATING STATION	EDDYSTONE	PA	106.40
230	LGE ENERGY WILSON STATION	CENTERTOWN	KY	104.00
231	RIVERSIDE GENERATING PLANT	MINNEAPOLIS	MN	103.50
232	LANSING BOARD OF WATER & LIGHT- ECKERT	LANSING	MI	102.30
233	SIGECO F. B. CULLEY GENERATING STATION	NEWBURGH	IN	100.40
234	DOMINION RESOURCES INC. YORKTOWN POWER STATION	YORKTOWN	VA	100.00
234	POSSUM POINT POWER STATION	DUMFRIES	VA	100.00
236	GREAT RIVER ENERGY STANTON STATION	STANTON	ND	99.90
237	SAMUEL CARLSON GENERATING STATION	JAMESTOWN	NY	99.20
238	AMERICAN ELECTRIC POWER KANAWHA RIVER PLANT	GLASGOW	WV	99.00
239	NELSON DEWEY GENERATING STATION	CASSVILLE	WI	98.53
240	DAIRYLAND POWER CO-OP. GENOA SITE	GENOA	WI	97.30
241	RAWHIDE ENERGY STATION	WELLINGTON	CO	96.00
242	RICHARD H. GORSUCH GENERATING STATION	MARIETTA	OH	95.00
243	MCDONOUGH/ATKINSON STEAM ELECTRIC GENERATING PLANT	SMYRNA	GA	94.90
244	AES SHADY POINT L.L.C.	PANAMA	OK	94.00
245	ALLIANT ENERGY BURLINGTON GENERATING STATION	BURLINGTON	IA	93.48
246	RUSSELL STATION	ROCHESTER	NY	91.00
246	TAMPA ELECTRIC CO. POLK POWER STATION	MULBERRY	FL	91.00
248	PRESQUE ISLE POWER PLANT	MARQUETTE	MI	90.14
249	BAILLY GENERATING STATION	CHESTERTON	IN	90.00
250	DUKE ENERGY BUCK STEAM STATION	SALISBURY	NC	89.00
251	TECUMSEH ENERGY CENTER	TECUMSEH	KS	88.40
252	WPS WESTON POWER PLANT	ROTHSCHILD	WI	88.20
253	VIRGIN ISLANDS WATER & POWER AUTHORITY	SAINT THOMAS	VI	86.00
254	ALABAMA POWER CO. GADSDEN STEAM PLANT	GADSDEN	AL	85.30
255	ADM CORN PROCESSING	CEDAR RAPIDS	IA	85.00
255	VIRGIN ISLANDS WATER & POWER AUTHORITY	CHRISTIANSTED	VI	85.00
257	B.C. COBB GENERATING PLANT	MUSKEGON	MI	84.80
258	DYNEGY HAVANA POWER STATION	HAVANA	IL	84.50
259	GAINESVILLE REGIONAL UTILITIES DEERHAVEN GENERATING STATION	GAINESVILLE	FL	84.00
260	CANADYS STATION	CANADYS	SC	83.90
261	C.P. CRANE GENERATING STATION	BALTIMORE	MD	82.30
262	SEMINOLE GENERATING STATION	PALATKA	FL	82.00
263	DYNEGY WOOD RIVER POWER STATION	ALTON	IL	81.30
264	LOUISVILLE GAS & ELECTRIC CO. CANE RUN STATION	LOUISVILLE	KY	80.70
265	WPS PULLIAM POWER PLANT	GREEN BAY	WI	80.50
266	JR WHITING GENERATING PLANT	ERIE	MI	80.30
267	EDISON INTL. FISK GENERATING STATION	CHICAGO	IL	80.00
268	CP&L CAPE FEAR PLANT	MONCURE	NC	79.00
268	DALE POWER STATION	FORD	KY	79.00

Rank	Facility	City	State	Air Emissions (pounds)
268	SIBLEY GENERATING STATION	SIBLEY	MO	79.00
271	HOOSIERENERGY FRANK E. RATTS GENERATING STATION	PETERSBURG	IN	77.50
272	IPL EAGLE VALLEY	MARTINSVILLE	IN	77.00
273	NRG ENERGY INC. INDIAN RIVER GENERATING STATION	MILLSBORO	DE	73.00
274	RELIANT ENERGY TITUS POWER PLANT	BIRDSBORO	PA	72.10
275	DYNEGY HENNEPIN POWER STATION	HENNEPIN	IL	72.00
276	JAMES RIVER POWER STATION	SPRINGFIELD	MO	71.00
277	POTOMAC RIVER GENERATING STATION	ALEXANDRIA	VA	70.90
278	A. S. KING GENERATING PLANT	BAYPORT	MN	70.40
279	PREPA AGUIRRE POWER GENERATI ON COMPLEX	AGUIRRE	PR	69.10
280	LANSING POWER STATION	LANSING	IA	68.85
281	AES SOMERSET L.L.C.	BARKER	NY	67.00
281	HAWAIIAN ELECTRIC CO. INC. WAIAU GENERATING STATION	PEARL CITY	HI	67.00
281	HIGH BRIDGE GENERATING PLANT	SAINT PAUL	MN	67.00
284	SOUTHWEST POWER STATION	BROOKLINE STATION	MO	66.00
285	AMERICAN ELECTRIC POWER GLEN LYN PLANT	GLEN LYN	VA	65.00
286	DUKE ENERGY LEE STEAM STATION	PELZER	SC	63.80
287	ASHTABULA	ASHTABULA	OH	63.00
288	GULF POWER CO. PLANT LANSING SMITH	SOUTHPORT	FL	62.20
289	ALLIANT ENERGY M.L. KAPP GENERATING STATION	CLINTON	IA	62.14
290	HOLCOMB UNIT 1	HOLCOMB	KS	62.00
291	AMEREN ENERGY GENERATING MEREDOSIA POWER STATION	MEREDOSIA	IL	61.60
292	OWENSBORO MUNICIPAL UTILITIES ELMER SMITH STATION	OWENSBORO	KY	61.40
293	RELIANT ENERGY INC. ELRAMA POWER PLANT	ELRAMA	PA	60.85
294	J.E. CORETTE STEAM ELECTRIC STATION	BILLINGS	MT	59.02
295	SOUTHERN ILLINOIS POWER COOPERATIVE	MARION	IL	56.00
296	CENTRAL ILLINOIS LIGHT CO.(DBA AMEREN CILCO)	CANTON	IL	55.00
296	PLATTE GENERATING STATION	GRAND ISLAND	NE	55.00
296	VALLEY POWER PLANT	MILWAUKEE	WI	55.00
299	PRAIRIE CREEK GENERATING STATION	CEDAR RAPIDS	IA	54.40
300	AES-CAYUGA L.L.C.	LANSING	NY	54.00
300	CP&L H.B. ROBINSON STEAM ELECTRIC PLANT	HARTSVILLE	SC	54.00
302	AES - PUERTO RICO COGENERATION PLANT	GUAYAMA	PR	52.60
303	BLACK HILLS CORP. - NEIL SIMPSON COMPLEX	GILLETTE	WY	52.16
304	SOUTHWESTERN PUBLIC SERVICE CO. HARRINGTON STATION	AMARILLO	TX	52.00
305	DYNEGY VERMILION POWER STATION	OAKWOOD	IL	51.30
306	KENTUCKY UTILITIES CO. GREEN RIVER STATION	CENTRAL CITY	KY	50.40
307	AES THAMES L.L.C.	UNCASVILLE	CT	50.00
307	PPL MARTINS CREEK STEAM ELECTRIC STATION	BANGOR	PA	50.00
309	INTERSTATE POWER & LIGHT CO. SUTHERLAND PLANT	MARSHALLTOWN	IA	49.00
310	BLACK DOG GENERATING PLANT	BURNSVILLE	MN	48.00
311	O. H. HUTCHINGS STATION	MIAMISBURG	OH	47.00
312	TACONITE HARBOR ENERGY CENTER	SCHROEDER	MN	46.00
313	AES BEAVER VALLEY L.L.C.	MONACA	PA	45.00
313	NRG ENERGY CENTER DOVER	DOVER	DE	45.00
313	OMAHA PUBLIC POWER DISTRICT NEBRASKA CITY STATION	NEBRASKA CITY	NE	45.00

Rank	Facility	City	State	Air Emissions (pounds)
316	MITCHELL POWER STATION	COURTNEY	PA	44.10
317	AES WESTOVER	JOHNSON CITY	NY	44.00
318	LEWIS & CLARK STATION	SIDNEY	MT	43.20
318	PORT WASHINGTON POWER PLANT	PORT WASHINGTON	WI	43.20
320	LAKESHORE PLANT	CLEVELAND	OH	43.00
321	MIDAMERICAN ENERGY RIVERSIDE GENERATING STATION	BETTENDORF	IA	42.00
322	PACIFICORP CARBON PLANT	HELPER	UT	41.90
323	SOUTH CAROLINA ELECTRIC & GAS CO. COPE STATION	COPE	SC	40.10
324	CP&L W.H. WEATHERSPOON PLANT	LUMBERTON	NC	40.00
325	AMEREN ENERGY GENERATING HUTSONVILLE POWER STATION	HUTSONVILLE	IL	39.00
325	HUNLOCK CREEK ENERGY VENTURES (FORMERLY UGI DEVELOPMENTCO.)	HUNLOCK CREEK	PA	39.00
325	OMAHA PUBLIC POWER DISTRICT NORTH OMAHA STATION	OMAHA	NE	39.00
328	SOUTHWESTERN PUBLIC SERVICE CO. TOLK STATION	SUDAN	TX	38.00
329	PSEG POWER CONNECTICUT L.L.C. BRIDGEPORT HARBOR STATION	BRIDGEPORT	CT	37.74
330	WPS WESTWOOD GENERATION L.L.C.	TREMONT	PA	37.10
331	AES-GREENIDGE L.L.C.	DRESDEN	NY	36.00
332	R. PAUL SMITH POWER STATION	WILLIAMSPORT	MD	35.90
332	PACIFICORP HUNTINGTON PLANT	HUNTINGTON	UT	35.90
334	PREPA SOUTH COAST POWER PLAN T	GUAYANILLA	PR	34.70
335	RELIANT ENERGY WARREN STATION	WARREN	PA	34.50
336	SAVANNAH ELECTRIC PLANT KRAFT	PORT WENTWORTH	GA	33.90
337	COGENTRIX OF ROCKY MOUNT	BATTLEBORO	NC	33.17
338	SALEM HARBOR STATION/USGEN NEW ENGLAND INC.	SALEM	MA	32.90
339	WHITEWATER VALLEY GENERATING STATION	RICHMOND	IN	32.55
340	CEDAR BAY GENERATING CO.	JACKSONVILLE	FL	32.00
340	OTTER TAIL POWER CO. HOOT LAKE PLANT	FERGUS FALLS	MN	32.00
342	DEEPWATER GENERATING STATION	PENNSVILLE	NJ	30.80
342	CROMBY GENERATING STATION	PHOENIXVILLE	PA	30.80
344	MAALAEA GENERATING STATION	KIHEI	HI	30.00
344	R.M. HESKETT STATION	MANDAN	ND	30.00
346	PREPA PALO SECO STEAM PLANT	TOA BAJA	PR	29.30
347	TRI-STATE GENERATION & TRANSMI SSION ESCALANTE STATION	PREWITT	NM	28.50
348	SAVANNAH ELECTRIC PLANT MCINTOSH	RINCON	GA	28.20
349	ALLEGHENY ENERGY INC. RIVESVILLE POWER STATION	RIVESVILLE	WV	28.10
350	DUKE ENERGY DAN RIVER STEAM STATION	EDEN	NC	27.70
350	LANSING BOARD OF WATER & LIGHT-ERICKSON	LANSING	MI	27.70
352	INDIANTOWN COGENERATION L.P.	INDIANTOWN	FL	27.00
353	CITY WATER LIGHT & POWER CITY OF SPRINGFIELD	SPRINGFIELD	IL	26.00
353	EBENSBURG POWER CO.	EBENSBURG	PA	26.00
355	CINERGY EDWARDSPORT GENERATING STATION	EDWARDSPORT	IN	25.40
356	JAMES RIVER COGENERATION CO. INC.	HOPEWELL	VA	25.30
357	AMERICAN ELECTRIC POWER PICWAY PLANT	LOCKBOURNE	OH	25.00
357	CITY OF PAINESVILLE POWER PLANT	PAINESVILLE	OH	25.00
359	SCANA URQUHART STATION	BEECH ISLAND	SC	24.80
360	LOVETT GENERATING STATION	TOMKINS COVE	NY	24.60
361	IRVINGTON GENERATING STATION	TUCSON	AZ	24.09

Rank	Facility	City	State	Air Emissions (pounds)
362	FLORIDA POWER & LIGHT CO. MARTIN POWER PLANT	INDIANTOWN	FL	24.05
363	BONANZA POWER PLANT	VERNAL	UT	23.80
364	MITCHELL STEAM ELECTRIC GENERATING PLANT	ALBANY	GA	23.70
365	BLACK HILLS CORP. OSAGE POWER PLANT	OSAGE	WY	23.63
366	CITY OF FREMONT DEPARTMENT OF UTILITIES LON D. WRIGHT POWER	FREMONT	NE	22.98
367	COMMONWEALTH CHESAPEAKE POWER STATION	NEW CHURCH	VA	22.20
368	FLORIDA CRUSHED STONE CO. CPL	BROOKSVILLE	FL	22.02
369	XCEL ENERGY - WISCONSIN (FRENCH ISLAND)	LA CROSSE	WI	22.00
370	MOBILE ENERGY SERVICES L.L.C.	MOBILE	AL	21.75
371	MIRANT CANAL L.L.C.	SANDWICH	MA	21.70
372	ASBURY GENERATING STATION	ASBURY	MO	21.00
372	PUBLIC SERVICE CO. OF COLORADO COMANCHE STATION	PUEBLO	CO	21.00
374	ALLIANT ENERGY INTERSTATE POWER LIGHT 6TH ST. GENERATING STA	CEDAR RAPIDS	IA	20.80
375	AMERICAN BITUMINOUS POWER PARTNERS L.P.	GRANT TOWN	WV	20.10
376	CITY OF AMES	AMES	IA	19.30
377	LASKIN ENERGY CENTER	AURORA	MN	19.00
377	PROGRESS ENERGY FLORIDA ANCLOTE POWER PLANT	HOLIDAY	FL	19.00
377	PUBLIC SERVICE CO. OF COLORADO PAWNEE STATION	BRUSH	CO	19.00
380	RAY D. NIXON POWER PLANT	FOUNTAIN	CO	18.30
381	MANITOWOC PUBLIC UTILITIES	MANITOWOC	WI	18.23
382	TRIGEN-CINERGY TUSCOLA GENERATING FACILITY	TUSCOLA	IL	18.10
383	COGENTRIX OF NORTH CAROLINA SOUTHPORT	SOUTHPORT	NC	18.00
383	MARQUETTE BOARD OF LIGHT & POWER	MARQUETTE	MI	18.00
385	SCE&G SRS AREA D D-AREA SAVANNAH RIVER FACILITY	AIKEN	SC	17.90
386	COLORADO SPRINGS UTILTITIES MARTIN DRAKE POWER PLANT	COLORADO SPRINGS	CO	17.20
387	SOUTH CAROLINA ELECTRIC & GAS CO. MCMEEKIN STATION	COLUMBIA	SC	16.50
388	DUBUQUE POWER PLANT	DUBUQUE	IA	16.13
389	AQUILA LAKE ROAD STATION	SAINT JOSEPH	MO	16.00
389	GRAND HAVEN BOARD OF LIGHT & POWER	GRAND HAVEN	MI	16.00
391	NORTHERN STATES POWER CO. - WISCONSIN (BAY FRONT)	ASHLAND	WI	15.50
392	BERGEN GENERATING STATION	RIDGEFIELD	NJ	15.20
393	CROSS GENERATING STATION	PINEVILLE	SC	15.00
393	MAUI ELECTRIC CO. LTD. KAHULUI GENERATING STATION	KAHULUI	HI	15.00
395	PREPA SAN JUAN STEAM PLANT	PUERTO NUEVO	PR	14.99
396	HOPEWELL COGENERATION FACILITY	HOPEWELL	VA	14.98
397	ASTORIA GENERATING STATION	ASTORIA	NY	14.00
397	CAMBRIA COGEN CO.	EBENSBURG	PA	14.00
397	CHAMOIS POWER PLANT	CHAMOIS	MO	14.00
400	FPL FORT LAUDERDALE POWER PLANT	FORT LAUDERDALE	FL	13.67
401	FAIR STATION	MUSCATINE	IA	13.56
402	PG&E NATL. ENERGY GROUP NORTHAMPTON GENERATING PLANT	NORTHAMPTON	PA	13.40
403	JEFFERIES GENERATING STATION	MONCKS CORNER	SC	13.11
404	CLOVER POWER STATION	CLOVER	VA	13.00
404	COLSTRIP ENERGY L.P. ROSEBUD POWER PLANT	COLSTRIP	MT	13.00
404	EAGLE POINT COGENERATION PARTN ERSHIP (EPCP)	WESTVILLE	NJ	13.00
404	HAWAII ELECTRIC LIGHT CO. INC. HILL GENERATING STATION	HILO	HI	13.00

Rank	Facility	City	State	Air Emissions (pounds)
404	MICHIGAN SOUTH CENTRAL POWER AGENCY	LITCHFIELD	MI	13.00
404	PUBLIC SERVICE CO. OF COLORADO ARAPAHOE STATION	DENVER	CO	13.00
404	TRI-STATE GENERATION & TRANSMISSION - NUCLA STATION	NUCLA	CO	13.00
404	WINYAH GENERATING STATION	GEORGETOWN	SC	13.00
412	BLACK HILLS CORP. BEN FRENCH POWER PLANT	RAPID CITY	SD	12.91
413	GULF POWER CO. PLANT SCHOLZ	SNEADS	FL	12.90
414	POSDEF POWER CO. L.P.	STOCKTON	CA	12.37
415	NEBRASKA PUBLIC POWER DISTRICT SHELDON STATION	HALLAM	NE	12.00
415	VANDOLAH POWER PROJECT	WAUCHULA	FL	12.00
417	NEW HAVEN HARBOR STATION	NEW HAVEN	CT	11.93
418	FLORIDA POWER & LIGHT CO. FORT MYERS POWER PLANT	FORT MYERS	FL	11.89
419	COGENTRIX OF RICHMOND INC.	RICHMOND	VA	11.70
419	COGENTRIX VIRGINIA LEASING CORP.	PORTSMOUTH	VA	11.70
421	WYANDOTTE DEPARTMENT OF MUNICIPAL SERVICES	WYANDOTTE	MI	11.20
421	GOLDEN VALLEY ELECTRIC ASSOC. INC. HEALY POWER PLANT	HEALY	AK	11.20
423	MADISON GAS & ELECTRIC CO.	MADISON	WI	11.00
423	MERRIMACK STATION	BOW	NH	11.00
425	HARDEE POWER STATION	BOWLING GREEN	FL	10.97
426	CINERGY NOBLESVILLE GENERATING STATION	NOBLESVILLE	IN	10.30
427	KEYSPAN ENERGY NORTHPORT POWER STATION	NORTHPORT	NY	10.00
427	NORTH VALMY STATION	VALMY	NV	10.00
427	PREPA CAMBALACHE COMBUSTION TURBINE PLANT	ARECIBO	PR	10.00
427	RIVERTON GENERATING STATION	RIVERTON	KS	10.00
431	FLORIDA POWER & LIGHT CO. SANFORD POWER PLANT	DE BARY	FL	9.72
432	WHELAN ENERGY CENTER	HASTINGS	NE	9.71
433	PROGRESS ENERGY - P.L. BARTOW PLANT	SAINT PETERSBURG	FL	9.30
434	PSEG POWER L.L.C. BURLINGTON GENERATING STATION	BURLINGTON	NJ	9.20
435	ESCANABA GENERATING STATION	ESCANABA	MI	9.00
435	PUBLIC SERVICE CO. OF COLORADO CHEROKEE STATION	DENVER	CO	9.00
437	DETROIT EDISON CO. HARBOR BEACH POWER PLANT	HARBOR BEACH	MI	8.70
438	PUBLIC SERVICE CO. OF COLORADO HAYDEN STATION	HAYDEN	CO	8.00
438	RELIANT ENERGY INDIAN RIVER POWER PLANT	TITUSVILLE	FL	8.00
440	SHELBY MUNICIPAL LIGHT PLANT	SHELBY	OH	7.68
441	AUSTIN UTILITIES NORTHEAST POWER STATION	AUSTIN	MN	7.40
442	HOLLAND BPW JAMES DE YOUNG GENERATION STATION	HOLLAND	MI	7.12
443	COGENTRIX OF NORTH CAROLINA ROXBORO	ROXBORO	NC	7.09
444	COLVER POWER PROJECT	COLVER	PA	7.00
445	KENTUCKY UTILITIES CO. TYRONE STATION	VERSAILLES	KY	6.70
446	NORTHEAST GENERATION SERVICES MT. TOM STATION	HOLYOKE	MA	6.50
447	CITY OF INDEPENDENCE	INDEPENDENCE	MO	6.10
447	U.S. DOE BONNEVILLE POWER ADMIN. CELILO CONVERTER STATION	THE DALLES	OR	6.10
449	HIBBING PUBLIC UTILITIES COMMISSION	HIBBING	MN	5.60
450	TRIGEN-NATIONS ENERGY CO. L.L.L.P.	GOLDEN	CO	5.30
451	MEADWESTVACO NORTH CHARLESTON OPS.	NORTH CHARLESTON	SC	5.20
451	CITY OF ORRVILLE DEPT. OF PUBLIC UTILITIES ELECTRIC DEPT	ORRVILLE	OH	5.20
453	SOMERSET POWER L.L.C.	SOMERSET	MA	5.00

Rank	Facility	City	State	Air Emissions (pounds)
454	BIRCHWOOD POWER FACILITY	KING GEORGE	VA	3.70
455	GRAINGER GENERATING STATION	CONWAY	SC	3.65
456	AES HAWAII INC.	KAPOLEI	HI	3.50
457	AQUILA INC. W.N. CLARK STATION	CANON CITY	CO	3.00
458	COLUMBIA MUNICIPAL POWER PLANT	COLUMBIA	MO	2.89
459	CHAMBERS COGENERATION L.P.	CARNEYS POINT	NJ	2.60
459	TRIGEN-SYRACUSE ENERGY CORP.	SYRACUSE	NY	2.60
459	V.H. BRAUNIG A. VON ROSENBERG POWER PLANTS	SAN ANTONIO	TX	2.60
462	CITY OF HAMILTON POWER PLANT	HAMILTON	OH	2.51
463	GREEN POWER KENANSVILLE L.L.C.	KENANSVILLE	NC	2.45
464	PG&E SCRUBGRASS GENERATING PLANT	KENNERDELL	PA	2.40
464	NEWINGTON STATION	NEWINGTON	NH	2.40
466	ACE COGENERATION FACILITY	TRONA	CA	2.32
467	ROANOKE VALLEY ENERGY FACILITY	WELDON	NC	2.20
467	SCHILLER STATION	PORTSMOUTH	NH	2.20
469	EXELON CROYDON GENERATING STATION	CROYDON	PA	2.10
470	PUBLIC SERVICE CO. OF COLORADO VALMONT STATION	BOULDER	CO	2.00
470	SOUTHAMPTON POWER STATION	FRANKLIN	VA	2.00
472	PACIFIC GAS & ELECTRIC CO. HUNTERS POINT POWER PLANT	SAN FRANCISCO	CA	1.36
473	NORTHEASTERN POWER CO.	MC ADOO	PA	1.30
474	LOGAN GENERATING CO. L.P.	SWEDESBORO	NJ	1.20
475	QUINDARO POWER STATION	KANSAS CITY	KS	1.11
476	UAE MECKLENBURG COGENERATION L.P.	CLARKSVILLE	VA	1.10
477	ALTAVISTA POWER STATION	ALTAVISTA	VA	1.00
477	MAYAGUEZ GAS TURBINES POWER PLANT	MAYAGUEZ	PR	1.00
477	PUBLIC SERVICE CO. OF COLORADO CAMEO STATION	PALISADE	CO	1.00
480	NEARMAN CREEK POWER STATION	KANSAS CITY	KS	0.74
481	PANTHER CREEK PARTNERS	NESQUEHONING	PA	0.62
482	NORTH BRANCH POWER STATION	GORMANIA	WV	0.20
483	SAN MIGUEL ELECTRIC CO-OP. INC.	CHRISTINE	TX	0.10
484	GILBERTON POWER CO.	FRACKVILLE	PA	0.08
485	SOYLAND POWER CO-OP INC. PEARL STATION	PEARL	IL	0.07
TOTAL				90,371.34

Appendix B. All Fish Composites Sampled by EPA in Years 1 and 2 of National Fish Tissue Study: By State

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Alabama	Houston	Pine Lake	Largemouth Bass	Predator	5	0.53
Alabama	Russell	Clark's Lake	Largemouth Bass	Predator	5	0.52
Alabama	Walker	Lewis Smith Lake	Spotted Bass	Predator	5	0.35
Alabama	Henry	Walter F. George Reservoir	Largemouth Bass	Predator	5	0.18
Alabama	Cullman	Lewis Smith Lake	Channel Catfish	Bottom Dweller	5	0.14
Alabama	Russell	Clark's Lake	Lake Chubsucker	Bottom Dweller	1	0.13
Alabama	Houston	Pine Lake	Lake Chubsucker	Bottom Dweller	5	0.12
Alabama	Wilcox	William "Bill" Dannelly Reservoir	Largemouth Bass	Predator	4	0.11
Alabama	Lauderdale	Wheeler Reservoir	Largemouth Bass	Predator	5	0.10
Alabama	Walker	Unnamed Lake	Largemouth Bass	Predator	5	0.09
Alabama	Wilcox	William "Bill" Dannelly Reservoir	Blue Catfish	Bottom Dweller	4	0.03
Alabama	Lauderdale	Wheeler Reservoir	Channel Catfish	Bottom Dweller	5	0.02
Alabama	Henry	Walter F. George Reservoir	Channel Catfish	Bottom Dweller	5	0.02
Alabama	Walker	Unnamed Lake	Yellow Bullhead	Bottom Dweller	5	0.02
Arizona	Maricopa	Apache Lake	Largemouth Bass	Predator	5	0.28
Arizona	Mohave	Lake Mohave	Largemouth Bass	Predator	4	0.17
Arizona	Maricopa	Apache Lake	Common Carp	Bottom Dweller	5	0.09
Arizona	Mohave	Lake Mohave	Common Carp	Bottom Dweller	5	0.05
Arizona	Mohave	Lake Mohave	Common Carp	Bottom Dweller	5	0.05
Arkansas	Clark	Rereg Lake	Largemouth Bass	Predator	5	0.40
Arkansas	Cleburne	Greers Ferry Lake	Largemouth Bass	Predator	4	0.40
Arkansas	Baxter	Norfolk Lake	Largemouth Bass	Predator	5	0.39
Arkansas	Clark	Rereg Lake	Largemouth Bass	Predator	5	0.35
Arkansas	Clark	Rereg Lake	Spotted Sucker	Bottom Dweller	5	0.19
Arkansas	Franklin	Ozark City Lake	Largemouth Bass	Predator	5	0.18
Arkansas	Cleburne	Greers Ferry Lake	Common Carp	Bottom Dweller	5	0.18
Arkansas	Crittenden	Horseshoe Lake	Striped Bass	Predator	5	0.14
Arkansas	Baxter	Norfolk Lake	Common Carp	Bottom Dweller	5	0.13
Arkansas	Clark	Rereg Lake	Spotted Sucker	Bottom Dweller	5	0.11
Arkansas	Franklin	Ozark City Lake	Spotted Sucker	Bottom Dweller	5	0.10
Arkansas	Crittenden	Horseshoe Lake	Channel Catfish	Bottom Dweller	5	0.01
California	Lake	Clear Lake	Largemouth Bass	Predator	5	0.59
California	Butte	Lake Oroville	Spotted Bass	Predator	5	0.48
California	Fresno	Pine Flat Reservoir	Largemouth Bass	Predator	5	0.24
California	Butte	Lake Oroville	Common Carp	Bottom Dweller	5	0.16
California	Fresno	Pine Flat Reservoir	White Catfish	Bottom Dweller	5	0.15
California	Lake	Clear Lake	Gold Fish	Bottom Dweller	3	0.13

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
California	Tuolumne	Jewelry Lake	Rainbow Trout	Predator	5	0.13
Colorado	Weld	Willow Creek Reservoir	Bluegill	Predator	9	0.23
Colorado	Grand	Williams Fork Reservoir	Northern Pike	Predator	5	0.20
Colorado	Rio Grande	Fuchs Reservoir	Brook Trout	Predator	5	0.17
Colorado	Baca	Turk's Pond	Saugeye	Predator	4	0.16
Colorado	Yuma	Stalker Lake	Largemouth Bass	Predator	5	0.15
Colorado	Grand	Williams Fork Reservoir	White Sucker	Bottom Dweller	5	0.14
Colorado	Arapahoe	Cherry Creek Reservoir	Walleye	Predator	5	0.11
Colorado	Yuma	Stalker Lake	Channel Catfish	Bottom Dweller	5	0.02
Colorado	Baca	Turk's Pond	Black Bullhead	Bottom Dweller	5	0.02
Colorado	Arapahoe	Cherry Creek Reservoir	Common Carp	Bottom Dweller	5	0.01
Connecticut	Litchfield	Barkhamsted Reservoir	Smallmouth Bass	Predator	5	1.10
Connecticut	Litchfield	Barkhamsted Reservoir	White Sucker	Bottom Dweller	5	0.32
Connecticut	Fairfield	Rainbow Lake	Largemouth Bass	Predator	5	0.17
Connecticut	Fairfield	Rainbow Lake	White Sucker	Bottom Dweller	5	0.08
Florida	Union	Lake Butler	Bowfin	Predator	5	1.08
Florida	Marion	Mill Dam Lake	Spotted Gar	Predator	5	0.59
Florida	Citrus	Lake Tsala Apopka	Chain Pickerel	Predator	5	0.44
Florida	Palm Beach	Lake Okeechobee	Largemouth Bass	Predator	5	0.43
Florida	Hillsborough	Long Pond	Largemouth Bass	Predator	5	0.32
Florida	Walton	Unnamed Lake	Channel Catfish	Bottom Dweller	5	0.25
Florida	Marion	Mill Dam Lake	Yellow Bullhead	Bottom Dweller	5	0.24
Florida	Citrus	Lake Tsala Apopka	Chain Pickerel	Predator	5	0.19
Florida	Broward	West Pasadena Lake	Largemouth Bass	Predator	5	0.16
Florida	Walton	Unnamed Lake	Largemouth Bass	Predator	5	0.16
Florida	Orange	Lake Apopka	Largemouth Bass	Predator	6	0.07
Florida	Palm Beach	Lake Okeechobee	White Catfish	Bottom Dweller	5	0.07
Florida	Union	Lake Butler	Lake Chubsucker	Bottom Dweller	5	0.06
Florida	Citrus	Lake Tsala Apopka	Lake Chubsucker	Bottom Dweller	5	0.04
Florida	Citrus	Lake Tsala Apopka	Lake Chubsucker	Bottom Dweller	5	0.02
Florida	Orange	Lake Apopka	Brown Bullhead	Bottom Dweller	5	0.00
Georgia	White	Qualatchee Lake	Largemouth Bass	Predator	5	0.81
Georgia	Washington	Washington Co.-pond-town Of Harrison	Largemouth Bass	Predator	5	0.49
Georgia	White	Qualatchee Lake	Largemouth Bass	Predator	5	0.48
Georgia	Bartow	Allatoona Lake	Largemouth Bass	Predator	5	0.47
Georgia	Washington	Washington Co.-pond-town Of Harrison	Yellow Bullhead	Bottom Dweller	3	0.36
Georgia	Madison	Reservoir 29	Largemouth Bass	Predator	5	0.35
Georgia	Elbert	Unnamed Lake	Largemouth Bass	Predator	5	0.28
Georgia	Mcduffie	J Strom Thurmond Reservoir	Largemouth Bass	Predator	5	0.26
Georgia	Mcduffie	J Strom Thurmond Reservoir	Largemouth Bass	Predator	5	0.18
Georgia	Carroll	Fairfield Plantation	Largemouth Bass	Predator	5	0.14
Georgia	Mcduffie	J Strom Thurmond Reservoir	Channel Catfish	Bottom Dweller	4	0.10

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Georgia	Bartow	Allatoona Lake	Channel Catfish	Bottom Dweller	3	0.10
Georgia	Putnam	Lake Sinclair	Largemouth Bass	Predator	5	0.10
Georgia	Madison	Reservoir 29	Spotted Sucker	Bottom Dweller	5	0.05
Georgia	Putnam	Lake Sinclair	Channel Catfish	Bottom Dweller	5	0.04
Georgia	Mcduffie	J Strom Thurmond Reservoir	Channel Catfish	Bottom Dweller	5	0.03
Idaho	Washington	Brownlee Reservoir	Smallmouth Bass	Predator	5	0.62
Idaho	Washington	Brownlee Reservoir	Smallmouth Bass	Predator	5	0.50
Idaho	Washington	Brownlee Reservoir	Largescale Sucker	Bottom Dweller	5	0.41
Idaho	Washington	Brownlee Reservoir	Largescale Sucker	Bottom Dweller	5	0.31
Idaho	Bear Lake	Bear Lake	Cutthroat Trout	Predator	5	0.21
Idaho	Bonner	Priest Lake	Lake Trout	Predator	5	0.13
Idaho	Bonner	Priest Lake	Longnose Sucker	Bottom Dweller	2	0.11
Idaho	Bonneville	Palisades Reservoir	Utah Sucker	Bottom Dweller	5	0.09
Idaho	Bonneville	Palisades Reservoir	Yellowstone Cutthroat Trout	Predator	5	0.08
Idaho	Bear Lake	Bear Lake	Utah Sucker	Bottom Dweller	5	0.05
Illinois	Macoupin	Otter Lake	Largemouth Bass	Predator	5	0.51
Illinois	Tazewell	Unnamed Lake	Largemouth Bass	Predator	4	0.48
Illinois	De Kalb	Buck Lake	Largemouth Bass	Predator	5	0.37
Illinois	Williamson	Unnamed Lake	Largemouth Bass	Predator	5	0.25
Illinois	Rock Island	Shooks Pond	Largemouth Bass	Predator	4	0.21
Illinois	De Kalb	Buck Lake	White Sucker	Bottom Dweller	5	0.14
Illinois	Franklin	Rend Lake	Largemouth Bass	Predator	5	0.13
Illinois	Cook	Wolf Lake	Largemouth Bass	Predator	5	0.12
Illinois	Macoupin	Otter Lake	Largemouth Bass	Predator	5	0.11
Illinois	Franklin	Rend Lake	Common Carp	Bottom Dweller	5	0.08
Illinois	Macoupin	Otter Lake	Common Carp	Bottom Dweller	5	0.06
Illinois	Macoupin	Otter Lake	Common Carp	Bottom Dweller	5	0.05
Illinois	Williamson	Unnamed Lake	Yellow Bullhead	Bottom Dweller	5	0.05
Illinois	Rock Island	Shooks Pond	Common Carp	Bottom Dweller	5	0.04
Illinois	Cook	Wolf Lake	Common Carp	Bottom Dweller	5	0.02
Indiana	Putnam	Baire Lake	White Bass	Predator	1	1.38
Indiana	Kosciusko	Winona Lake	Walleye	Predator	5	0.23
Indiana	Hamilton	Geist Reservoir	Largemouth Bass	Predator	5	0.10
Indiana	Sullivan	Turtle Creek Reservoir	Largemouth Bass	Predator	3	0.08
Indiana	Sullivan	Turtle Creek Reservoir	Common Carp	Bottom Dweller	5	0.06
Indiana	Putnam	Baire Lake	Channel Catfish	Bottom Dweller	4	0.05
Indiana	Hamilton	Geist Reservoir	Common Carp	Bottom Dweller	5	0.05
Indiana	Kosciusko	Winona Lake	White Sucker	Bottom Dweller	5	0.02
Iowa	Fremont	Percival Lake	Largemouth Bass	Predator	5	0.31
Iowa	Fremont	Percival Lake	Common Carp	Bottom Dweller	5	0.11
Iowa	Wright	Morse Lake	Yellow Perch	Predator	5	0.03
Iowa	Wright	Morse Lake	Common Carp	Bottom Dweller	5	0.02
Kansas	Pottawatomie	Tuttle Creek Lake	Largemouth Bass	Predator	5	0.20
Kansas	Pottawatomie	Tuttle Creek Lake	Largemouth Bass	Predator	5	0.17

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Kansas	Pottawatomie	Tuttle Creek Lake	Common Carp	Bottom Dweller	5	0.10
Kansas	Pottawatomie	Tuttle Creek Lake	Common Carp	Bottom Dweller	5	0.09
Kentucky	Nelson	Unnamed Lake	Largemouth Bass	Predator	7	0.17
Kentucky	Boyle	Herrington Lake	Channel Catfish	Bottom Dweller	2	0.16
Kentucky	Boyle	Herrington Lake	Largemouth Bass	Predator	5	0.15
Kentucky	Livingston	Unnamed Slough	Channel Catfish	Bottom Dweller	5	0.06
Kentucky	Livingston	Unnamed Slough	White Crappie	Predator	5	0.06
Louisiana	Webster	Lake Bisteneau	Largemouth Bass	Predator	5	0.74
Louisiana	Calcasieu	Salt Lake	Largemouth Bass	Predator	5	0.56
Louisiana	Webster	Lake Bisteneau	Common Carp	Bottom Dweller	2	0.16
Louisiana	St John The Baptist	Lac Des Allemans	Largemouth Bass	Predator	5	0.15
Louisiana	St John The Baptist	Lac Des Allemans	Common Carp	Bottom Dweller	5	0.15
Louisiana	Tensas	Lake St. Joseph	Black Crappie	Predator	5	0.14
Maine	Piscataquis	Cuxabexis Lake	White Perch	Predator	5	1.45
Maine	Hancock	Upper Middle Branch Pond	White Perch	Predator	5	0.91
Maine	Hancock	Green Lake	Smallmouth Bass	Predator	5	0.83
Maine	Washington	Little River Lake	Chain Pickerel	Predator	5	0.78
Maine	Hancock	Stiles Lake	Chain Pickerel	Predator	5	0.77
Maine	Oxford	Mooselookmeguntic Lake	Yellow Perch	Predator	5	0.73
Maine	Androscoggin	Middle Range Pond	White Perch	Predator	5	0.72
Maine	Piscataquis	Moosehead Lake	Yellow Perch	Predator	5	0.70
Maine	Piscataquis	Ragged Lake	Splake	Predator	5	0.65
Maine	Aroostook	Wallagrass Lakes	Atlantic Salmon	Predator	5	0.54
Maine	Cumberland	Moose Pond	Smallmouth Bass	Predator	5	0.50
Maine	Lincoln	Mccurdy Pond	Smallmouth Bass	Predator	5	0.48
Maine	Oxford	Little Pond	Largemouth Bass	Predator	5	0.45
Maine	Washington	Little River Lake	White Sucker	Bottom Dweller	5	0.38
Maine	Piscataquis	Cuxabexis Lake	White Sucker	Bottom Dweller	5	0.35
Maine	Aroostook	Wallagrass Lakes	White Sucker	Bottom Dweller	5	0.28
Maine	Oxford	Mooselookmeguntic Lake	White Sucker	Bottom Dweller	5	0.25
Maine	Hancock	Green Lake	White Sucker	Bottom Dweller	5	0.24
Maine	Androscoggin	Middle Range Pond	White Sucker	Bottom Dweller	4	0.22
Maine	Oxford	Little Pond	White Sucker	Bottom Dweller	5	0.19
Maine	Somerset	Healds Pond	Brook Trout	Predator	5	0.17
Maine	Somerset	Healds Pond	Brook Trout	Predator	5	0.15
Maine	Hancock	Upper Middle Branch Pond	White Sucker	Bottom Dweller	5	0.14
Maine	Piscataquis	Moosehead Lake	White Sucker	Bottom Dweller	5	0.14
Maine	Piscataquis	Ragged Lake	White Sucker	Bottom Dweller	5	0.12
Maine	Somerset	Healds Pond	White Sucker	Bottom Dweller	5	0.06
Maine	Somerset	Healds Pond	White Sucker	Bottom Dweller	5	0.05
Massachusetts	Bristol	North Watuppa Pond	Smallmouth Bass	Predator	5	0.92
Massachusetts	Worcester	Bents Pond	Largemouth Bass	Predator	5	0.64
Massachusetts	Worcester	Rockwell Pond	Yellow Bullhead	Bottom Dweller	5	0.42
Massachusetts	Worcester	Rockwell Pond	Lake Trout	Predator	5	0.32

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Massachusetts	Worcester	Carbuncle Pond	Largemouth Bass	Predator	5	0.24
Massachusetts	Barnstable	Seymour Pond	Brown Bullhead	Bottom Dweller	5	0.14
Massachusetts	Barnstable	Seymour Pond	Yellow Perch	Predator	5	0.11
Massachusetts	Worcester	Carbuncle Pond	Yellow Bullhead	Bottom Dweller	5	0.04
Michigan	Antrim	Torch Lake	Lake Trout	Predator	4	0.59
Michigan	Lapeer	West Lake	Largemouth Bass	Predator	5	0.55
Michigan	Roscommon	Houghton Lake	Walleye	Predator	5	0.39
Michigan	Emmet	Walloon Lake	Smallmouth Bass	Predator	5	0.32
Michigan	Berrien	Lake Chapin	Smallmouth Bass	Predator	5	0.27
Michigan	Cheboygan	Burt Lake	Walleye	Predator	5	0.27
Michigan	Emmet	Lake Paradise	Smallmouth Bass	Predator	5	0.27
Michigan	Ogemaw	Horseshoe Lake	Rock Bass	Predator	7	0.25
Michigan	Ogemaw	Horseshoe Lake	Rock Bass	Predator	7	0.23
Michigan	Jackson	Norvell Lake	Largemouth Bass	Predator	5	0.23
Michigan	Jackson	Norvell Lake	Largemouth Bass	Predator	5	0.21
Michigan	Oakland	White Lake	Rock Bass	Predator	6	0.18
Michigan	Emmet	Lake Paradise	Smallmouth Bass	Predator	5	0.18
Michigan	Antrim	Torch Lake	White Sucker	Bottom Dweller	5	0.17
Michigan	Kalamazoo	Wintergreen Lake	Largemouth Bass	Predator	5	0.16
Michigan	Houghton	Lake Roland	White Sucker	Bottom Dweller	5	0.12
Michigan	Lapeer	West Lake	Common Carp	Bottom Dweller	5	0.12
Michigan	Berrien	Lake Chapin	Common Carp	Bottom Dweller	5	0.08
Michigan	Emmet	Walloon Lake	White Sucker	Bottom Dweller	5	0.07
Michigan	Cheboygan	Burt Lake	White Sucker	Bottom Dweller	5	0.06
Michigan	Jackson	Norvell Lake	Common Carp	Bottom Dweller	5	0.06
Michigan	Roscommon	Houghton Lake	Common Carp	Bottom Dweller	5	0.06
Michigan	Jackson	Norvell Lake	Common Carp	Bottom Dweller	5	0.05
Michigan	Emmet	Lake Paradise	White Sucker	Bottom Dweller	5	0.05
Michigan	Emmet	Lake Paradise	White Sucker	Bottom Dweller	5	0.04
Michigan	Oakland	White Lake	Brown Bullhead	Bottom Dweller	5	0.04
Michigan	Kalamazoo	Wintergreen Lake	Brown Bullhead	Bottom Dweller	5	0.03
Minnesota	Scott	O'dowd Lake	Walleye	Predator	3	0.82
Minnesota	St. Louis	White Iron Lake	Walleye	Predator	5	0.61
Minnesota	St Louis	Namakan Lake	Walleye	Predator	5	0.58
Minnesota	Douglas	Lake Carlos	Largemouth Bass	Predator	5	0.53
Minnesota	Lake	South Mcdougal Lake	Walleye	Predator	5	0.47
Minnesota	Beltrami	Fox Lake	Northern Pike	Predator	5	0.47
Minnesota	Pine	Sturgeon Lake	Northern Pike	Predator	5	0.41
Minnesota	Pine	First Lake	Northern Pike	Predator	5	0.38
Minnesota	Cook	Mora Lake	Northern Pike	Predator	5	0.37
Minnesota	Cass	Woman Lake	Walleye	Predator	3	0.34
Minnesota	Otter Tail	North Turtle Lake	Northern Pike	Predator	5	0.34
Minnesota	Itasca	Pokegama Lake	Northern Pike	Predator	5	0.33
Minnesota	Wright	Charlotte Lake	Northern Pike	Predator	5	0.32

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Minnesota	Itasca	Pokegama Lake	Northern Pike	Predator	5	0.32
Minnesota	Crow Wing	White Sand Lake	Northern Pike	Predator	5	0.32
Minnesota	Wright	Bass Lake	Northern Pike	Predator	5	0.31
Minnesota	St Louis	Moberg Lake	Northern Pike	Predator	5	0.31
Minnesota	Beltrami	Cass Lake	Walleye	Predator	4	0.29
Minnesota	St Louis	Linwood Lake	Northern Pike	Predator	5	0.29
Minnesota	Wright	Bass Lake	Northern Pike	Predator	5	0.27
Minnesota	Stearns	Rice Lake	Northern Pike	Predator	5	0.26
Minnesota	Otter Tail	East Leaf Lake	Northern Pike	Predator	5	0.25
Minnesota	Hubbard	Lasalle Lake	Northern Pike	Predator	5	0.25
Minnesota	St Louis	Lac La Croix	Walleye	Predator	5	0.24
Minnesota	Sherburne	Cantlin Lake	Northern Pike	Predator	5	0.24
Minnesota	Hubbard	Long Lake	Largemouth Bass	Predator	4	0.24
Minnesota	Wright	Charlotte Lake	Yellow Bullhead	Bottom Dweller	5	0.21
Minnesota	Becker	Fox Lake	Walleye	Predator	5	0.19
Minnesota	Pine	First Lake	Black Bullhead	Bottom Dweller	4	0.19
Minnesota	Crow Wing	Hubert Lake	Northern Pike	Predator	5	0.18
Minnesota	St. Louis	White Iron Lake	White Sucker	Bottom Dweller	5	0.18
Minnesota	Otter Tail	North Turtle Lake	Yellow Bullhead	Bottom Dweller	5	0.16
Minnesota	Otter Tail	Dead Lake	Walleye	Predator	5	0.15
Minnesota	Cass	Woman Lake	Walleye	Predator	5	0.14
Minnesota	Crow Wing	Hubert Lake	Yellow Bullhead	Bottom Dweller	5	0.14
Minnesota	Kandiyohi	Florida Lake	Walleye	Predator	5	0.14
Minnesota	St Louis	Fish Lake Reservoir	Northern Pike	Predator	5	0.13
Minnesota	Cook	Dick Lake	Smallmouth Bass	Predator	4	0.12
Minnesota	Aitkin	Blind Lake	Northern Pike	Predator	5	0.11
Minnesota	Wright	Bass Lake	Yellow Bullhead	Bottom Dweller	5	0.11
Minnesota	Stearns	Rice Lake	White Sucker	Bottom Dweller	5	0.10
Minnesota	Becker	Many Point Lake	Brown Bullhead	Bottom Dweller	5	0.10
Minnesota	Crow Wing	Agate Lake	Yellow Bullhead	Bottom Dweller	5	0.10
Minnesota	Wright	Bass Lake	Yellow Bullhead	Bottom Dweller	5	0.10
Minnesota	Lake	South Mcdougal Lake	White Sucker	Bottom Dweller	5	0.10
Minnesota	Cook	Mora Lake	White Sucker	Bottom Dweller	5	0.09
Minnesota	Cook	Dick Lake	White Sucker	Bottom Dweller	2	0.09
Minnesota	Becker	Many Point Lake	Brown Bullhead	Bottom Dweller	5	0.09
Minnesota	St Louis	Fish Lake Reservoir	White Sucker	Bottom Dweller	5	0.08
Minnesota	Scott	O'dowd Lake	Black Bullhead	Bottom Dweller	5	0.07
Minnesota	St Louis	Namakan Lake	Cisco	Bottom Dweller	5	0.07
Minnesota	St Louis	Lac La Croix	Lake Whitefish	Bottom Dweller	5	0.07
Minnesota	Crow Wing	Agate Lake	Bluegill	Predator	10	0.07
Minnesota	Lincoln	Hendricks Lake	Common Carp	Bottom Dweller	5	0.06
Minnesota	St Louis	Moberg Lake	White Sucker	Bottom Dweller	1	0.06
Minnesota	Hubbard	Lasalle Lake	White Sucker	Bottom Dweller	3	0.05
Minnesota	Otter Tail	East Leaf Lake	White Sucker	Bottom Dweller	2	0.05

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Minnesota	Kandiyohi	Florida Lake	Black Bullhead	Bottom Dweller	5	0.05
Minnesota	Pine	Sturgeon Lake	White Sucker	Bottom Dweller	5	0.05
Minnesota	Becker	Many Point Lake	Bluegill	Predator	7	0.04
Minnesota	St Louis	Linwood Lake	White Sucker	Bottom Dweller	4	0.04
Minnesota	Beltrami	Fox Lake	White Sucker	Bottom Dweller	5	0.04
Minnesota	Becker	Many Point Lake	Bluegill	Predator	7	0.04
Minnesota	Sherburne	Cantlin Lake	Black Bullhead	Bottom Dweller	6	0.04
Minnesota	Otter Tail	East Leaf Lake	White Sucker	Bottom Dweller	3	0.04
Minnesota	Itasca	Pokegama Lake	White Sucker	Bottom Dweller	5	0.03
Minnesota	Douglas	Lake Carlos	Common Carp	Bottom Dweller	5	0.03
Minnesota	Cass	Woman Lake	White Sucker	Bottom Dweller	5	0.03
Minnesota	Hubbard	Long Lake	White Sucker	Bottom Dweller	5	0.03
Minnesota	Crow Wing	White Sand Lake	Brown Bullhead	Bottom Dweller	5	0.03
Minnesota	Beltrami	Cass Lake	White Sucker	Bottom Dweller	5	0.02
Minnesota	Aitkin	Blind Lake	Black Bullhead	Bottom Dweller	3	0.02
Minnesota	Cass	Woman Lake	White Sucker	Bottom Dweller	5	0.02
Minnesota	Itasca	Pokegama Lake	White Sucker	Bottom Dweller	5	0.02
Minnesota	Becker	Fox Lake	White Sucker	Bottom Dweller	5	0.02
Minnesota	Otter Tail	Dead Lake	White Sucker	Bottom Dweller	5	0.02
Minnesota	Freeborn	Lake Geneva	Common Carp	Bottom Dweller	5	0.01
Mississippi	Claiborne	Hollis Lees' Lake	Largemouth Bass	Predator	5	0.42
Mississippi	Lauderdale	Lake Lucille	Largemouth Bass	Predator	5	0.28
Mississippi	Carroll	Bailey Lake	Largemouth Bass	Predator	5	0.25
Mississippi	Panola	Sardis Reservoir	Flathead Catfish	Bottom Dweller	4	0.25
Mississippi	Panola	Sardis Reservoir	Largemouth Bass	Predator	4	0.23
Montana	Big Horn	Bighorn Lake	Walleye	Predator	5	1.11
Montana	Valley	Fort Peck Reservoir	Walleye	Predator	5	0.77
Montana	Liberty	Tiber Reservoir(Lake Elwell)	Walleye	Predator	5	0.32
Montana	Big Horn	Bighorn Lake	Common Carp	Bottom Dweller	5	0.29
Montana	Carter	Laird Pond	Black Bullhead	Bottom Dweller	10	0.25
Montana	Liberty	Tiber Reservoir(Lake Elwell)	Walleye	Predator	5	0.23
Montana	Garfield	Krieder's Pond	Rainbow Trout	Predator	5	0.21
Montana	Valley	Fort Peck Reservoir	Common Carp	Bottom Dweller	5	0.13
Montana	Beaverhead	Rape Creek Reservoir	White Sucker	Bottom Dweller	5	0.12
Montana	Liberty	Tiber Reservoir(Lake Elwell)	White Sucker	Bottom Dweller	5	0.10
Montana	Mineral	Clear Lake	Brook Trout	Predator	11	0.09
Montana	Missoula	Upper Cold Lake	Cutthroat Trout	Predator	6	0.05
Montana	Liberty	Tiber Reservoir(Lake Elwell)	White Sucker	Bottom Dweller	5	0.02
Nebraska	Lincoln	Jeffrey Reservoir	Common Carp	Bottom Dweller	5	0.09
Nebraska	Scotts Bluff	Lake Minatare	Walleye	Predator	5	0.08
Nebraska	Scotts Bluff	Lake Minatare	White Sucker	Bottom Dweller	5	0.05
Nevada	Elko	Ruby Lake	Largemouth Bass	Predator	5	0.38
Nevada	Elko	Ruby Lake	Largemouth Bass	Predator	5	0.33
Nevada	Clark	Lake Mead	Striped Bass	Predator	5	0.27

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Nevada	Clark	Lake Mead	Common Carp	Bottom Dweller	5	0.06
New Hampshire	Carroll	Lake Winnepesaukee	Largemouth Bass	Predator	4	0.53
New Hampshire	Grafton	Newfound Lake	Lake Trout	Predator	5	0.37
New Hampshire	Grafton	Newfound Lake	Brown Bullhead	Bottom Dweller	5	0.17
New Hampshire	Carroll	Lake Winnepesaukee	Brown Bullhead	Bottom Dweller	5	0.11
New Jersey	Camden	Unnamed Lake	Largemouth Bass	Predator	5	0.87
New Jersey	Camden	Unnamed Lake	Creek Chubsucker	Bottom Dweller	5	0.10
New Mexico	Rio Arriba	Navajo Reservoir	Smallmouth Bass	Predator	5	0.58
New Mexico	Eddy	Brantley Reservoir	Walleye	Predator	5	0.20
New Mexico	Rio Arriba	Navajo Reservoir	White Sucker	Bottom Dweller	5	0.14
New Mexico	Eddy	Brantley Reservoir	Channel Catfish	Bottom Dweller	5	0.11
New York	Franklin	Tupper Lake	Walleye	Predator	5	1.08
New York	Franklin	Little Wolf Pond	Smallmouth Bass	Predator	5	0.84
New York	Warren	Brant Lake	Largemouth Bass	Predator	4	0.76
New York	Putnam	Southern South Lake	Largemouth Bass	Predator	5	0.52
New York	Oswego	Whitney Pond	Largemouth Bass	Predator	5	0.45
New York	Fulton	Northville Lake	Largemouth Bass	Predator	5	0.45
New York	Columbia	Copake Lake	Largemouth Bass	Predator	5	0.19
New York	Franklin	Tupper Lake	Brown Bullhead	Bottom Dweller	5	0.19
New York	Franklin	Little Wolf Pond	Brown Bullhead	Bottom Dweller	4	0.17
New York	Fulton	Northville Lake	White Sucker	Bottom Dweller	5	0.15
New York	Greene	Colgate Lake	Brown Trout	Predator	3	0.13
New York	Greene	Colgate Lake	White Sucker	Bottom Dweller	4	0.08
New York	Oswego	Whitney Pond	White Sucker	Bottom Dweller	5	0.08
New York	Warren	Brant Lake	Brown Bullhead	Bottom Dweller	5	0.06
New York	Chautaqua	Chautauqua Lake	Yellow Perch	Predator	10	0.04
New York	Chautaqua	Chautauqua Lake	Brown Bullhead	Bottom Dweller	4	0.03
New York	St Lawrence	Sylvia Lake	Rainbow Trout	Predator	4	0.03
New York	Columbia	Copake Lake	White Sucker	Bottom Dweller	1	0.01
New York	St Lawrence	Sylvia Lake	Brown Bullhead	Bottom Dweller	5	0.01
North Carolina	Washington	Lake Phelps	Largemouth Bass	Predator	5	0.81
North Carolina	Chatham	Lake B Everett Jordan	Largemouth Bass	Predator	5	0.29
North Carolina	Cleveland	Kings Mt. Reservoir	Largemouth Bass	Predator	5	0.26
North Carolina	Warren	Lake Gaston	Largemouth Bass	Predator	5	0.22
North Carolina	Warren	Lake Gaston	Common Carp	Bottom Dweller	5	0.18
North Carolina	Chatham	Lake B Everett Jordan	Common Carp	Bottom Dweller	5	0.18
North Carolina	Cleveland	Kings Mt. Reservoir	Common Carp	Bottom Dweller	5	0.13
North Carolina	Gaston	Mt. Island Reservoir	Largemouth Bass	Predator	5	0.11
North Dakota	Mcintosh	Dry Lake	Northern Pike	Predator	5	0.55
North Dakota	Williams	Epping - Springbrook Dam	Northern Pike	Predator	5	0.55
North Dakota	Ramsey	Devils Lake	Walleye	Predator	5	0.33
North Dakota	Kidder	Horsehead Lake	Northern Pike	Predator	5	0.24
North Dakota	Kidder	Long Lake	Walleye	Predator	5	0.22
North Dakota	Ramsey	Dry Lake	Northern Pike	Predator	7	0.14

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North Dakota	Ramsey	Devils Lake	Black Bullhead	Bottom Dweller	5	0.13
North Dakota	Williams	Epping - Springbrook Dam	White Sucker	Bottom Dweller	5	0.08
North Dakota	Kidder	Long Lake	Common Carp	Bottom Dweller	5	0.06
Ohio	Marion	Darrell Rose's Pond	Smallmouth Bass	Predator	3	0.38
Ohio	Licking	Tom Porter's Pond	Largemouth Bass	Predator	5	0.37
Ohio	Vinton	Lake Rupert	White Crappie	Predator	5	0.24
Ohio	Vinton	Lake Rupert	Channel Catfish	Bottom Dweller	5	0.05
Oklahoma	Osage	Unnamed Lake	Largemouth Bass	Predator	5	1.02
Oklahoma	Coal	Coalgate City Lake	Largemouth Bass	Predator	8	0.75
Oklahoma	Mcclain	Unnamed Lake	Largemouth Bass	Predator	4	0.56
Oklahoma	Mccurtain	Broken Bow Lake	Spotted Bass	Predator	5	0.48
Oklahoma	Coal	Coalgate City Lake	Largemouth Bass	Predator	8	0.37
Oklahoma	Johnston	Camp Simpson Lake	Largemouth Bass	Predator	5	0.35
Oklahoma	Mayes	Lake Hudson	Largemouth Bass	Predator	5	0.26
Oklahoma	Coal	Coalgate City Lake	Channel Catfish	Bottom Dweller	10	0.21
Oklahoma	Creek	Keystone Lake	White Crappie	Predator	5	0.20
Oklahoma	Mccurtain	Broken Bow Lake	Redhorse Sucker	Bottom Dweller	5	0.12
Oklahoma	Choctaw	Hugo Lake	White Crappie	Predator	5	0.12
Oklahoma	Choctaw	Hugo Lake	Channel Catfish	Bottom Dweller	5	0.11
Oklahoma	Creek	Keystone Lake	Channel Catfish	Bottom Dweller	5	0.09
Oklahoma	Canadian	Lake El Reno	Walleye	Predator	5	0.09
Oklahoma	Rogers	Oologah Lake	White Crappie	Predator	5	0.08
Oklahoma	Coal	Coalgate City Lake	Channel Catfish	Bottom Dweller	10	0.08
Oklahoma	Mayes	Lake Hudson	Common Carp	Bottom Dweller	5	0.08
Oklahoma	Caddo	Fort Cobb Lake	Walleye	Predator	5	0.07
Oklahoma	Johnston	Camp Simpson Lake	Black Red Horse	Bottom Dweller	5	0.06
Oklahoma	Caddo	Fort Cobb Lake	Channel Catfish	Bottom Dweller	5	0.05
Oklahoma	Canadian	Lake El Reno	Channel Catfish	Bottom Dweller	5	0.05
Oklahoma	Rogers	Oologah Lake	Channel Catfish	Bottom Dweller	5	0.05
Oregon	Klamath	Crater Lake	Kokanee	Predator	10	0.06
Oregon	Klamath	Crater Lake	Kokanee	Predator	10	0.05
Pennsylvania	Wayne	Whitney Lake	Largemouth Bass	Predator	5	0.24
Pennsylvania	Pike	Pike Lake #3	Yellow Perch	Predator	5	0.23
Pennsylvania	Bradford	Unnamed Pond	Largemouth Bass	Predator	5	0.16
Pennsylvania	Armstrong	Crooked Creek Lake	Largemouth Bass	Predator	5	0.14
Pennsylvania	Mercer	Shenango River Reservoir	Largemouth Bass	Predator	5	0.14
Pennsylvania	Mercer	Shenango River Reservoir	Common Carp	Bottom Dweller	5	0.09
Pennsylvania	Armstrong	Crooked Creek Lake	Common Carp	Bottom Dweller	4	0.08
Pennsylvania	Pike	Pike Lake #3	Brown Bullhead	Bottom Dweller	5	0.05
Pennsylvania	Wayne	Whitney Lake	Brown Bullhead	Bottom Dweller	5	0.04
Pennsylvania	Bradford	Unnamed Pond	Brown Bullhead	Bottom Dweller	2	0.04
Pennsylvania	Franklin	Unnamed Pond	Bluegill	Predator	6	0.02
South Carolina	Newberry	Lake Murray	Largemouth Bass	Predator	5	0.43
South Carolina	Fairfield	Lake Wateree	Largemouth Bass	Predator	5	0.14

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South Carolina	Oconee	Lake Hartwell	Largemouth Bass	Predator	5	0.14
South Carolina	Fairfield	Lake Wateree	Common Carp	Bottom Dweller	5	0.10
South Carolina	Fairfield	Lake Wateree	Largemouth Bass	Predator	5	0.10
South Carolina	Oconee	Lake Hartwell	Common Carp	Bottom Dweller	5	0.09
South Carolina	Fairfield	Lake Wateree	Common Carp	Bottom Dweller	5	0.06
South Carolina	Newberry	Lake Murray	Common Carp	Bottom Dweller	5	0.04
South Dakota	Douglas	Corsica Lake	Black Crappie	Predator	5	0.38
South Dakota	Douglas	Corsica Lake	Black Crappie	Predator	5	0.32
South Dakota	Perkins	Shade Hill Reservoir	Walleye	Predator	5	0.13
South Dakota	Stanley	Hayes Lake	Black Crappie	Predator	5	0.13
South Dakota	Stanley	Hayes Lake	Black Crappie	Predator	5	0.11
South Dakota	Davison	Lake Mitchell	Black Crappie	Predator	5	0.09
South Dakota	Douglas	Corsica Lake	Common Carp	Bottom Dweller	5	0.08
South Dakota	Stanley	Hayes Lake	Black Bullhead	Bottom Dweller	5	0.08
South Dakota	Kingsbury	Mud Lake	Common Carp	Bottom Dweller	5	0.07
South Dakota	Perkins	Shade Hill Reservoir	Common Carp	Bottom Dweller	5	0.07
South Dakota	Douglas	Corsica Lake	Common Carp	Bottom Dweller	5	0.07
South Dakota	Stanley	Hayes Lake	Black Bullhead	Bottom Dweller	5	0.06
South Dakota	Davison	Lake Mitchell	Common Carp	Bottom Dweller	5	0.04
South Dakota	Codington	Pelican Lake	Black Bullhead	Bottom Dweller	5	0.03
South Dakota	Codington	Pelican Lake	Yellow Perch	Predator	5	0.03
Tennessee	Union	Norris Lake	Largemouth Bass	Predator	3	0.54
Tennessee	Robertson	Ridgetop Lake	Largemouth Bass	Predator	10	0.40
Tennessee	Clay	Dale Hollow Lake	Spotted Bass	Predator	5	0.25
Tennessee	Union	Norris Lake	Channel Catfish	Bottom Dweller	2	0.15
Tennessee	Davidson	J Percy Priest Res	Largemouth Bass	Predator	5	0.14
Tennessee	Henderson	Pine Lake	Largemouth Bass	Predator	5	0.10
Tennessee	Davidson	J Percy Priest Res	Common Carp	Bottom Dweller	5	0.09
Tennessee	Henderson	Pine Lake	Channel Catfish	Bottom Dweller	5	0.05
Tennessee	Clay	Dale Hollow Lake	White Sucker	Bottom Dweller	5	0.02
Texas	Tyler/jasper	B A Steinhagen Lake	Black Bass	Predator	2	1.08
Texas	Montgomery	Rogers Lake	Largemouth Bass	Predator	5	0.75
Texas	Young	Unnamed Lake	Largemouth Bass	Predator	4	0.70
Texas	Travis	Lake Travis	Largemouth Bass	Predator	5	0.60
Texas	Navarro	Lake Logan	Largemouth Bass	Predator	3	0.48
Texas	Bell	Lake Belton	Largemouth Bass	Predator	1	0.40
Texas	Coleman	Lake Coleman	Largemouth Bass	Predator	4	0.38
Texas	Hopkins	Unnamed Lake	Largemouth Bass	Predator	5	0.34
Texas	Smith	Unnamed Lake	Largemouth Bass	Predator	5	0.32
Texas	Bell	Stillhouse Hollow Lake	Black Bass	Predator	5	0.31
Texas	Sabine	Toledo Bend Reservoir	White Bass	Predator	5	0.30
Texas	Coke	E V Spence Reservoir	Largemouth Bass	Predator	5	0.27
Texas	Collins	Lake Lavon	Striped Bass	Predator	3	0.26
Texas	Live Oak	Lake Corpus Christi	Largemouth Bass	Predator	4	0.24

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Texas	Comanche	Lake Proctor	Striped Bass	Predator	5	0.24
Texas	Childress	Lake Childress	Largemouth Bass	Predator	5	0.22
Texas	Sabine	Toledo Bend Reservoir	Smallmouth Buffalo	Bottom Dweller	5	0.22
Texas	Coke	E V Spence Reservoir	Largemouth Bass	Predator	4	0.22
Texas	Houston	Arnold Lake	Largemouth Bass	Predator	5	0.20
Texas	Necogdoches	Unnamed Lake	Largemouth Bass	Predator	5	0.19
Texas	Stephens	Hubbard Creek Reservoir	Largemouth Bass	Predator	5	0.19
Texas	Tyler/jasper	B A Steinhagen Lake	Blue Catfish	Bottom Dweller	4	0.18
Texas	Henderson	Lake Palestine	Largemouth Bass	Predator	5	0.15
Texas	Lamar	Lake Pat Mayse	Largemouth Bass	Predator	5	0.15
Texas	Stephens	Hubbard Creek Reservoir	Smallmouth Buffalo	Bottom Dweller	4	0.15
Texas	Clay	Lake Arrowhead	Largemouth Bass	Predator	5	0.15
Texas	Lamar	Lake Pat Mayse	Largemouth Bass	Predator	5	0.14
Texas	Lamar	Lake Pat Mayse	Common Carp	Bottom Dweller	2	0.13
Texas	Bell	Stillhouse Hollow Lake	Common Carp	Bottom Dweller	5	0.13
Texas	Grayson	Lake Texoma	Largemouth Bass	Predator	5	0.13
Texas	Henderson	Lake Palestine	Largemouth Bass	Predator	5	0.12
Texas	Hunt	Lake Tawakoni	Largemouth Bass	Predator	5	0.11
Texas	Zavala	Lake Caballo	White Crappie	Predator	5	0.10
Texas	Comanche	Lake Proctor	Smallmouth Buffalo	Bottom Dweller	5	0.10
Texas	Collins	Lake Lavon	Common Carp	Bottom Dweller	5	0.10
Texas	Childress	Lake Childress	Channel Catfish	Bottom Dweller	5	0.09
Texas	Bell	Lake Belton	Smallmouth Buffalo	Bottom Dweller	4	0.09
Texas	Travis	Lake Travis	Common Carp	Bottom Dweller	5	0.09
Texas	Young	Unnamed Lake	Common Carp	Bottom Dweller	5	0.08
Texas	Houston	Arnold Lake	Smallmouth Buffalo	Bottom Dweller	5	0.08
Texas	Coleman	Lake Coleman	Common Carp	Bottom Dweller	3	0.08
Texas	Montgomery	Rogers Lake	Common Carp	Bottom Dweller	5	0.07
Texas	Hopkins	Unnamed Lake	Common Carp	Bottom Dweller	3	0.07
Texas	Grayson	Lake Texoma	Smallmouth Buffalo	Bottom Dweller	4	0.07
Texas	Hunt	Lake Tawakoni	Channel Catfish	Bottom Dweller	5	0.05
Texas	Clay	Lake Arrowhead	Common Carp	Bottom Dweller	5	0.05
Texas	Navarro	Lake Logan	Channel Catfish	Bottom Dweller	5	0.05
Texas	Henderson	Lake Palestine	Common Carp	Bottom Dweller	5	0.04
Texas	Coke	E V Spence Reservoir	Common Carp	Bottom Dweller	5	0.04
Texas	Coke	E V Spence Reservoir	River Carpsucker	Bottom Dweller	5	0.04
Texas	Zavala	Lake Caballo	Common Carp	Bottom Dweller	5	0.04
Texas	Henderson	Lake Palestine	Common Carp	Bottom Dweller	5	0.03
Texas	Live Oak	Lake Corpus Christi	Common Carp	Bottom Dweller	5	0.01
Utah	Washington	Gunlock Reservoir	Largemouth Bass	Predator	5	0.32
Utah	Washington	Gunlock Reservoir	Channel Catfish	Bottom Dweller	3	0.28
Vermont	Windham	Lake Whitingham	Smallmouth Bass	Predator	5	0.86
Vermont	Windham	Lake Whitingham	White Sucker	Bottom Dweller	5	0.24
Virginia	Caroline	Unnamed Pond	Largemouth Bass	Predator	5	0.54

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Virginia	Henrico	Griggs Pond	Yellow Bullhead	Bottom Dweller	3	0.53
Virginia	Henrico	Griggs Pond	Largemouth Bass	Predator	6	0.44
Virginia	Prince William	Unnamed Lake	Largemouth Bass	Predator	6	0.40
Virginia	Caroline	Unnamed Lake	Largemouth Bass	Predator	2	0.36
Virginia	Halifax	Banister Lake	Largemouth Bass	Predator	5	0.21
Virginia	Halifax	Banister Lake	Largemouth Bass	Predator	5	0.15
Virginia	Suffolk	Lone Star Lake	Channel Catfish	Bottom Dweller	5	0.14
Virginia	Halifax	Big Lake	Largemouth Bass	Predator	5	0.13
Virginia	Halifax	Banister Lake	Silver Redhorse	Bottom Dweller	5	0.11
Virginia	Louisa	Lake Anna	Largemouth Bass	Predator	3	0.10
Virginia	Prince William	Unnamed Lake	Channel Catfish	Bottom Dweller	5	0.09
Virginia	Halifax	Banister Lake	Silver Redhorse	Bottom Dweller	5	0.07
Virginia	Suffolk	Lone Star Lake	Largemouth Bass	Predator	5	0.06
Virginia	Suffolk	Lone Star Lake	Largemouth Bass	Predator	5	0.06
Virginia	Caroline	Unnamed Pond	Brown Bullhead	Bottom Dweller	2	0.05
Virginia	Suffolk	Lone Star Lake	Channel Catfish	Bottom Dweller	5	0.04
Virginia	Louisa	Lake Anna	Channel Catfish	Bottom Dweller	5	0.03
Washington	Yakima	Rimrock Lake	Largescale Sucker	Bottom Dweller	4	0.30
Washington	Kittitas	Keechelus Lake	Largescale Sucker	Bottom Dweller	5	0.28
Washington	Kittitas	Keechelus Lake	Mountain Whitefish	Predator	5	0.15
Washington	Grant	Frenchman Hills Lake	Largemouth Bass	Predator	5	0.15
Washington	Yakima	Rimrock Lake	Rainbow Trout	Predator	5	0.13
Washington	Chelan	Lake Chelan	Lake Trout	Predator	5	0.12
Washington	King	Lake Dorothy	Brook Trout	Predator	6	0.09
Washington	Grant	Potholes Reservoir	Common Carp	Bottom Dweller	5	0.07
Washington	Grant	Potholes Reservoir	Walleye	Predator	5	0.06
Washington	Island	Lone Lake	Rainbow Trout	Predator	5	0.06
Washington	Chelan	Lake Chelan	Largescale Sucker	Bottom Dweller	5	0.05
Washington	Island	Lone Lake	Rainbow Trout	Predator	5	0.04
Washington	Grant	Frenchman Hills Lake	Common Carp	Bottom Dweller	5	0.04
Washington	Clallam	Cresent Lake	Cutthroat Trout	Predator	5	0.02
West Virginia	Nicholas	Summersville Lake	Smallmouth Bass	Predator	5	0.23
West Virginia	Nicholas	Summersville Lake	Channel Catfish	Bottom Dweller	2	0.17
Wisconsin	Adams/Juneau	Castle Rock Flowage/castle Lake	Walleye	Predator	5	0.52
Wisconsin	Waushara	Irogami (fish) Lake	Largemouth Bass	Predator	5	0.40
Wisconsin	Iron	Turtle Flambeau Flowage	Smallmouth Bass	Predator	5	0.37
Wisconsin	Adams/Juneau	Castle Rock Flowage/castle Lake	Common Carp	Bottom Dweller	5	0.19
Wisconsin	Iron	Turtle Flambeau Flowage	Brown Bullhead	Bottom Dweller	5	0.15
Wisconsin	Waushara	Irogami (fish) Lake	Yellow Bullhead	Bottom Dweller	5	0.14
Wyoming	Fremont	Lake 79	Cutthroat Trout X Rainbow Trout	Predator	5	0.18
Wyoming	Park	Buffalo Bill Reservoir	Rainbow Trout	Predator	5	0.14

State	County	Sampling Site	Type of Fish	Predator or Bottom Dweller	Number of Fish in Composite	Average Mercury Concentration of Composite Sample (ppm)
Wyoming	Fremont	Baptiste Lake	Cutthroat Trout	Predator	5	0.08
Wyoming	Fremont	Baptiste Lake	Cutthroat Trout	Predator	5	0.07
Wyoming	Johnson	Lake De Smet	Rainbow Trout	Predator	5	0.06
Wyoming	Johnson	Lake De Smet	White Sucker	Bottom Dweller	5	0.04

Appendix C. Supplemental Data from EPA's National Survey of Mercury Concentrations in Fish, 1999

State	Type of Fish	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Average Mercury Concentration of Composite Samples (ppm)	Percent of Composite Samples that Exceed Safe Limit for Women[i] (0.13 ppm)
Alabama	Largemouth bass	180	914	0.44	1.63	77%
Arizona	Largemouth bass	35	35	1.37	2.62	100%
Arkansas	Largemouth bass	440	1,190	0.74	3.17	95%
Arkansas	Smallmouth bass	8	32	0.27	0.60	75%
Arkansas*	Walleye	1	2	0.82	0.82	100%
California	Largemouth bass	86	517	0.37	1.80	60%
California	Smallmouth bass	8	28	0.34	0.56	88%
Connecticut	Largemouth bass	511	511	0.51	2.64	97%
Connecticut	Smallmouth bass	22	22	0.65	2.32	100%
Delaware*	Largemouth bass	4	14	0.11	0.20	25%
District of Columbia	Largemouth bass	11	11	0.15	0.46	45%
Florida	Largemouth bass	2,000	2,000	0.64	4.36	92%
Georgia	Largemouth bass	206	968	0.30	2.29	65%
Georgia*	Walleye	3	14	0.41	0.90	100%
Illinois	Largemouth bass	71	305	0.19	0.88	49%
Illinois	Smallmouth bass	5	23	0.09	0.20	20%
Illinois	Walleye	5	22	0.11	0.19	40%
Illinois*	Lake trout	2	10	0.21	0.24	100%
Indiana	Lake trout	9	9	0.29	0.44	89%
Indiana	Largemouth bass	24	61	0.29	0.69	96%
Indiana	Smallmouth bass	24	96	0.27	0.81	71%
Indiana*	Northern pike	4	4	0.10	0.15	25%
Indiana*	Walleye	1	1	0.18	0.18	100%
Iowa	Largemouth bass	9	38	0.19	0.48	56%
Iowa*	Northern pike	2	6	0.28	0.33	100%
Iowa*	Smallmouth bass	2	6	0.18	0.22	100%
Iowa*	Walleye	1	5	0.04	0.04	0%
Kansas*	Largemouth bass	1	4	0.38	0.38	100%
Kentucky	Largemouth bass	37	120	0.62	1.46	100%
Kentucky	Walleye	35	35	0.51	1.71	91%
Kentucky*	Smallmouth bass	1	1	0.17	0.17	100%
Louisiana	Largemouth bass	452	452	0.39	1.88	78%
Maine	Lake trout	16	59	0.57	1.21	94%
Maine	Largemouth bass	30	137	0.64	1.34	97%

[i] Assumes women of average weight who eat fish regularly (i.e., two meals of fish per week).

State	Type of Fish	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Average Mercury Concentration of Composite Samples (ppm)	Percent of Composite Samples that Exceed Safe Limit for Women[i] (0.13 ppm)
Maine	Smallmouth bass	34	137	0.83	2.57	100%
Maryland	Largemouth bass	11	46	0.02	0.05	0%
Maryland	Smallmouth bass	14	44	0.12	0.27	50%
Maryland*	Walleye	2	10	0.13	0.16	50%
Massachusetts	Largemouth bass	152	152	0.40	1.10	97%
Massachusetts	Smallmouth bass	14	14	0.39	0.81	93%
Michigan	Lake trout	261	261	0.31	1.57	86%
Michigan	Largemouth bass	363	363	0.43	1.15	98%
Michigan	Northern pike	399	399	0.51	2.60	95%
Michigan	Smallmouth bass	124	124	0.29	0.81	92%
Michigan	Walleye	723	763	0.39	1.74	88%
Minnesota	Lake trout	264	790	0.32	2.00	76%
Minnesota	Largemouth bass	70	199	0.31	1.10	86%
Minnesota	Northern pike	3,314	7,707	0.36	4.40	84%
Minnesota	Smallmouth bass	131	449	0.27	1.30	81%
Minnesota	Walleye	2,735	7,468	0.38	2.90	80%
Mississippi	Largemouth bass	203	606	0.73	2.63	99%
Missouri	Largemouth bass	24	106	0.30	0.61	88%
Missouri	Walleye	5	29	0.34	0.43	100%
Missouri*	Smallmouth bass	3	6	0.15	0.21	67%
Nebraska	Largemouth bass	44	182	0.36	0.92	95%
Nebraska	Walleye	15	54	0.15	0.76	47%
Nebraska*	Northern pike	4	14	0.39	0.46	100%
New Hampshire	Lake trout	9	9	0.12	0.15	44%
New Hampshire	Largemouth bass	35	35	0.57	1.40	100%
New Hampshire	Smallmouth bass	14	14	0.77	2.47	86%
New Jersey	Lake trout	7	7	0.43	0.79	86%
New Jersey	Largemouth bass	173	173	0.66	8.94	80%
New Jersey	Northern pike	6	6	0.24	0.41	67%
New Jersey	Smallmouth bass	21	21	0.24	0.51	76%
New Jersey*	Walleye	1	1	0.17	0.17	100%
New Mexico	Lake trout	5	5	0.12	0.18	20%
New Mexico	Largemouth bass	33	33	0.43	1.00	88%
New Mexico	Northern pike	10	10	0.27	0.47	100%
New Mexico	Smallmouth bass	5	5	0.36	0.49	100%
New Mexico	Walleye	67	67	0.87	3.00	94%
New York	Lake trout	108	108	0.16	0.86	42%
New York	Largemouth bass	53	53	0.46	0.95	92%
New York	Northern pike	27	27	0.48	0.75	96%
New York	Smallmouth bass	40	40	0.63	3.34	98%
New York	Walleye	6	6	0.84	1.49	100%
North Carolina	Largemouth bass	1,327	1,569	0.54	3.60	87%

[i] Assumes women of average weight who eat fish regularly (i.e., two meals of fish per week).

State	Type of Fish	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Average Mercury Concentration of Composite Samples (ppm)	Percent of Composite Samples that Exceed Safe Limit for Women[i] (0.13 ppm)
North Carolina*	Smallmouth bass	4	16	0.36	0.75	100%
Ohio	Largemouth bass	113	323	0.16	0.98	49%
Ohio	Smallmouth bass	236	716	0.18	0.74	64%
Ohio	Walleye	21	47	0.17	0.41	48%
Ohio*	Northern pike	4	7	0.19	0.32	50%
Oklahoma	Largemouth bass	47	221	0.68	2.70	83%
Oklahoma	Walleye	6	28	0.23	0.50	67%
Oklahoma*	Smallmouth bass	2	8	0.28	0.34	100%
Oregon	Largemouth bass	116	120	0.38	0.98	90%
Oregon	Smallmouth bass	71	95	0.44	2.54	83%
Pennsylvania	Largemouth bass	32	139	0.32	0.75	81%
Pennsylvania	Smallmouth bass	50	191	0.25	0.58	78%
Pennsylvania	Walleye	21	88	0.59	1.63	90%
Rhode Island	Largemouth bass	41	41	0.52	1.26	76%
South Carolina	Largemouth bass	403	505	1.06	3.33	100%
Tennessee	Largemouth bass	64	64	0.26	0.83	88%
Tennessee*	Smallmouth bass	2	2	0.19	0.23	100%
Texas	Largemouth bass	23	58	0.26	0.66	78%
Texas*	Smallmouth bass	2	2	0.17	0.17	100%
Texas*	Walleye	2	2	0.43	0.46	100%
Vermont	Lake trout	32	32	0.54	0.99	97%
Vermont	Largemouth bass	11	93	0.34	1.20	100%
Vermont	Northern pike	9	30	0.40	0.77	100%
Vermont	Smallmouth bass	25	38	0.60	1.47	84%
Washington*	Largemouth bass	4	20	0.14	0.35	25%
West Virginia	Smallmouth bass	7	34	0.24	0.60	71%
West Virginia*	Largemouth bass	2	2	0.60	0.60	100%
Wisconsin	Largemouth bass	345	346	0.37	1.50	90%
Wisconsin	Northern pike	478	491	0.31	1.60	84%
Wisconsin	Smallmouth bass	191	194	0.34	1.00	90%
Wisconsin	Walleye	1,183	1,218	0.45	1.80	92%

* The state tested a limited number of fish (< 5 composite samples).

[i] Assumes women of average weight who eat fish regularly (i.e., two meals of fish per week).

End Notes

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[13] Adapted from NESCAUM, 2003.
[14] Joint comments of 36 environmental scientists, coordinated by the Hubbard Brook Research Foundation, to EPA Administrator Mike Leavitt, on EPA's proposals to regulate mercury from power plants, 26 April 2004.
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[18] U.S. EPA, 2002 Toxics Release Inventory, downloaded from http://www.epa.gov/triexplorer, 24 June 2004.
[19] 65 Fed. Reg. 79825, 20 December 2000, 79827.
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[28] U.S. EPA, 1997.
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