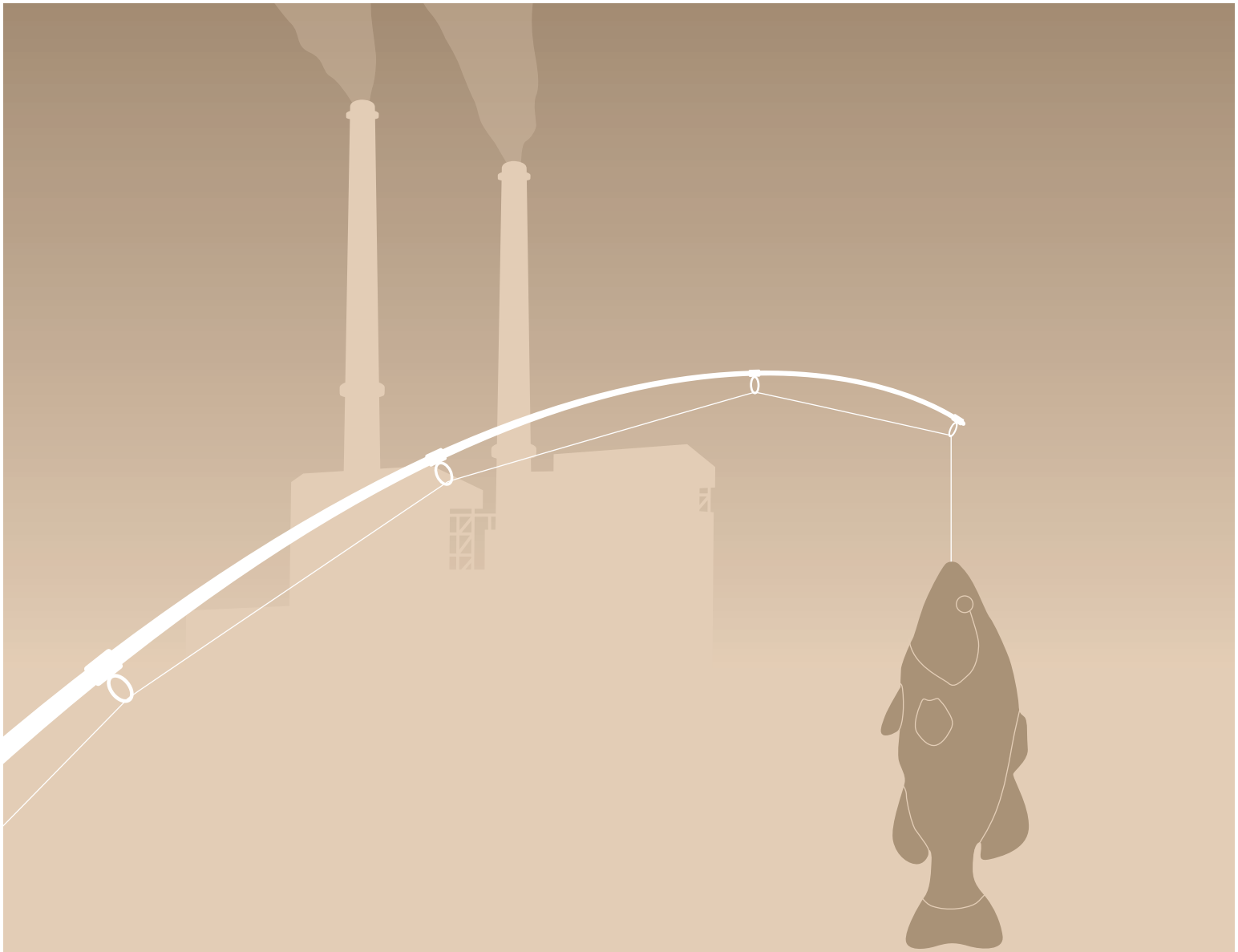


Risky Fishing

Power Plant Mercury Pollution and Illinois Sport Fish

Illinois PIRG Education Fund

April 2006

Risky Fishing: Power Plant Mercury Pollution and Illinois Sport Fish

Written by Max Muller
Environmental Advocate, Illinois PIRG Education Fund
April 2006

This report was inspired by and builds off of the work of Emily Figdor, author of the U.S. PIRG Education Fund report "Reel Danger: Power Plant Mercury Emissions and the Fish We Eat," which was released in August 2004.

Report cover and graphics courtesy of Dave Heinzel.

The author would like to thank Tom Hornshaw, Emily Langerak, and Rebecca Stanfield for their substantial assistance in reviewing this report and/or providing insight, information, or resources.

The author alone is responsible for any factual errors. The opinions expressed in the report are those of the Illinois PIRG Education Fund and do not necessarily express the views of our coalition partners and funders.

Illinois PIRG is a state-based, citizen-funded organization that advocates for the public interest. Illinois PIRG's mission is to deliver persistent, results-oriented activism that protects the environment, encourages a fair marketplace for consumers and fosters responsive, democratic government.

To receive a copy of this report, please visit our website or contact the author at:

407 S. Dearborn, Suite 701
Chicago, IL 60605
(312) 364-0096
max@illinoispirg.org
www.illinoispirg.org

Table of Contents

Executive Summary 3

Why is Mercury Dangerous? 6

Sources of Mercury: The Role of Coal-Fired Power Plants 6

Mercury Deposition 8

Mercury Levels in Fish 9

How Much Mercury is Safe? 10

The Illinois Fish Consumption Advisory for Methylmercury 11

Sources of Fish Mercury Concentration Data 12
- Illinois Fish Contaminant Monitoring Program, 1985-2004 12
- U.S. EPA National Lake Fish Tissue Study, 1999-2003 12

Findings: Mercury in Sport Fish from Illinois Lakes and Streams 13
- Fish Mercury Contamination in Illinois Counties 13
- Mercury Contamination in Illinois Fish Species 15
- Fish Mercury Contamination in Illinois Water Bodies 18
- Conclusion 18

Regulatory Background 25

An Illinois Solution: The State's Proposed Mercury Rule 26

The Costs and Benefits of Mercury Control Technologies 26

Widespread Support for Stringent Mercury Emissions Standards 28

Appendix A: The 2006 Illinois Special Fish Consumption Advisory for Methylmercury 30

Appendix B: Illinois EPA's Fish Consumption Advisory Criteria for Methylmercury . . 32

Appendix C: Data—Illinois Fish Contaminant Monitoring Program . . 33

Appendix D: Raw Data—U.S. EPA National Lake Fish Tissue Study . . 48

End Notes 50

Executive Summary

Mercury pollution from coal-fired power plants and other sources is making Illinois's and our nation's fish unsafe to eat. Coal-fired power plants are by far Illinois's largest remaining anthropogenic source of this pollution, emitting more mercury than all other industries combined. Mercury released during coal combustion is deposited from the atmosphere into our waters, where it is converted by bacteria into methylmercury, a potent toxin that accumulates in fish that eventually end up on our dinner tables. This report considers two studies of mercury concentrations in the tissues of popular sport fish and finds that potentially unsafe levels of mercury contaminate fish throughout Illinois.

Mercury is a potent neurotoxin that is particularly damaging to the developing brain. Even very low doses put developing fetuses and children at risk of developmental delays, decreased I.Q., and memory and attention difficulties. In April 2004, U.S. Environmental Protection Agency (EPA) scientists estimated that up to one in six women of childbearing age in the U.S. has sufficiently high mercury blood levels to put an unborn child at risk of neurological damage. Higher doses similarly impair adults and also increase the risk of heart attacks. The primary route of human exposure to mercury is eating contaminated fish.

Coal-fired power plants are by far the largest source of human-created mercury emissions. Illinois's 21 coal-fired power plants are the source of an estimated 71% of in-state mercury pollution. A third of this mercury is attributable to just a single company, Midwest Generation, a subsidiary of Edison International. Studies of mercury cycling in the environment tell us that much of this mercury will be deposited locally. When deposited in waterways, mercury is converted by bacteria into highly toxic methylmercury, which bioaccumulates up the aquatic food chain and into unsafe concentrations in popular sport fish. Even mercury that isn't deposited locally has local implications, as it contributes to global mercury deposition which contaminates commercial ocean fish, some of which eventually end up on Illinoisans dinner tables.

In Illinois, mercury contamination of fish is already so widespread that the Illinois Department of Public Health warns people to limit their consumption of Illinois predator species at the top of the food chain—species such as largemouth bass, flathead catfish, walleye and sauger. The mercury in these fish endangers everyone, but it does disproportionate harm to people in our communities for whom the state's waters are central to life: sport anglers, subsistence and commercial fishermen, charter boat operators and their clients, Illinoisans who buy local fish at the market, and all of their families.

In order to establish the severity and geographic distribution of the Illinois sport fish mercury contamination problem, this report considers the tissue mercury concentrations of 804 fish samples from the Illinois Fish Contaminant Monitoring Program (IFCMP) and 23 fish samples from U.S. EPA's National Lake Fish Tissue Study (NLFTS). The FCMP provides the dataset on which Illinois bases its fish consumption advisories, while the NLFTS is the first nation-wide random sample survey of fish contaminant concentrations.

Key findings of this report include:

- The mean mercury concentration in Illinois fish samples was about 0.16 parts per million (ppm), well above U.S. EPA's 0.13 ppm safe limit for women of average weight who eat fish twice per week.
- Thirty-nine (39) percent of the fish samples exceeded the 0.13 ppm safe mercury limit for women of average weight who eat fish twice per week.
- A largemouth bass caught in Sherman Park Lagoon in South Chicago had the highest mercury concentration of fish in either of the two studies at 1.40 ppm. For references, that is 0.40 ppm above the legal limit for fish sold in the United States. The second highest mercury concentration, at 1.07 ppm was found in a largemouth Bass in Kinkaid Lake, in Jackson County, and the third highest, at 0.94 ppm, was found in a largemouth bass in Cedar Lake, also in Jackson County.
- Fifty-nine (59) percent of the fish samples exceeded the safe mercury limit for children of average weight under age three who eat fish twice a week; 50 percent of fish samples exceeded the safe limit for children ages three to five years; and 34 percent of samples exceeded the safe limit for children ages six to eight years.
- In nearly half (36) of the 77 counties included in the studies, the average fish sample mercury concentration exceeded U.S. EPA's safe limit for women. These counties are geographically distributed throughout the state. In 8 counties (Boone, DeKalb, Edwards, Effingham, Kane, Pope, Pulaski, and Schuyler), 100% of fish samples were contaminated above the safe limit.
- In half (16) of 32 species included in the studies, the average fish sample mercury concentration exceeded U.S. EPA's safe limit for women. These species were, in descending order of average mercury concentration, bigmouth buffalo, freshwater drum, striped bass, lake trout, spotted bass, sauger, smallmouth buffalo, spotted sucker, flathead catfish, largemouth bass, brown trout, Chinook salmon, white bass, channel catfish, carp, and white sucker.
- In 66 of the 145 lakes and streams included in the studies, the average fish sample mercury concentrations exceeded U.S. EPA's safe limit for women. The ten lakes with highest average fish sample mercury concentrations were, in descending order: Lusk Creek in Pope County, Monee Reservoir in Will County, Devil's Kitchen Lake in Williamson County, an unnamed lake in Tazewell County, Piscasaw Creek in Boon County, McKinley Park Lagoon in Cook County, Steven A. Forbes Lake in Marion County, Big Muddy Creek in Clay County, Kinkaid Lake in Jackson County, and Cedar Lake in Jackson County.

These results show that potentially dangerous levels of mercury contamination are widespread in Illinois. Given recent research indicating that power plants contribute significantly to local mercury deposition and that decreasing rates of deposition are linked to reductions in fish tissue mercury levels, this report's findings underscore the need to reduce mercury emissions as much and quickly as possible.

Under the Bush Administration, the U.S EPA is currently implementing a severely flawed mercury reduction rule that will allow power companies to buy, trade, and bank emissions credits instead of reducing pollution. The rule will allow plants to avoid installing mercury

controls for a decade, may not achieve their meager reduction targets for another quarter century, and won't remedy local hot spots of mercury pollution.

In response to the insufficient federal rule, many states are pursuing more stringent mercury reductions of their own. Three states already have laws in effect that will reduce their mercury emissions by 90%, an achievable and affordable standard using modern emissions control technology. At the direction of Governor Rod Blagojevich, Illinois EPA on March 14th, 2006 finalized a proposed administrative rule to adopt a similar standard in Illinois. To protect public health by reducing mercury deposition that accumulates to toxic concentrations in fish, Illinois should adopt the proposed Illinois mercury rule.

Why is Mercury Dangerous?

Exposure to all forms of mercury is harmful to the health of humans and animals. Mercury is well known to be toxic to humans in incidents of acute high-dose exposure, but such events are rare in the United States. Rather it is the widespread, chronic, low-dose exposure to methylmercury, a highly toxic, organic form of mercury, that poses the greatest threat to public heath.[1] In Illinois, as in much of the rest of the world, the dominant route of human exposure to methylmercury is through eating contaminated fish.[2]

Developing fetuses and children are especially at risk from mercury contamination. When pregnant women eat contaminated fish, methylmercury easily crosses the placenta and blood-brain barrier[3] and can cause irreversible damage to the fetus's developing central nervous system. Even very low-dose *in utero* exposure can cause developmental delays, decreased IQ, and memory and attention problems.[4] Since the human brain continues to develop after birth, this heightened sensitivity lasts, to a lesser extent, through childhood.[5]

In April 2004, U.S. Environmental Protection Agency (EPA) scientists estimated that up to one in six women of childbearing age in the U.S. has a sufficiently high mercury blood level to put 630,000 of the four million American babies born each year at risk of neurological damage.[6] Researchers at the Center for Children's Health and the Environment at the Mt. Sinai School of Medicine recently estimated the dollar value of diminished productivity attributable to IQ loss from power plant mercury emissions at $1.3 billion dollars per year.[7] In another study still under peer review, those same researchers estimated that in 1566 American children each year, mercury caused large enough loss in IQ to result in mental retardation, with a monetary cost to our economy of approximately $2 billion per year.[8]

Although the developing brain is thought to be the most sensitive to methylmercury, mercury can also harm the human heart, nervous system, and immune system.[9] Adults exposed to methylmercury may experience neurocognitive deficits similar to those seen in prenatally exposed children as well as effects on blood pressure and fertility.[10] Studies also associate mercury exposure with an increased risk of heart attacks, leading researchers to conclude that the mercury in fish may offset the heart health benefits of regular fish consumption.[11]

Taken together, these findings indicate that consumption of mercury-contaminated fish can be harmful to men and women of all ages.

Sources of Mercury: The Role of Coal-Fired Power Plants

Mercury is a naturally occurring element present in the earth's rocks and soils, where it remains sequestered and generally biologically unavailable until disturbances cause it to be "emitted," or released to cycle in the environment. One study estimated that in 1990 about 30% of mercury emissions were caused by natural processes, such as the weathering of rock containing mercury, and 70% were cause by human activities, such as the burning of

mercury-containing coal.[12] Other studies have indicated that since the beginning of the industrial era, human activities have typically increased bioavailable mercury concentrations by a factor of three to ten.[13]

Power plants remain the largest source of manmade mercury emissions both in Illinois and in the nation as a whole. Although mercury emissions from power plants are not currently systematically monitored, emissions have been estimated using several different methodologies.

Based on information from U.S. EPA's 2002 National Emissions Inventory, which collects data from a variety of sources on emissions of nearly 200 different pollutants, Illinois Environmental Protection Agency (IEPA) has estimated that coal-fired power plants account for 71 percent of Illinois's manmade mercury emissions.

Based on U.S. EPA's 1999 Information Collection Request, another more rigorous survey that focused exclusively on power plant mercury emissions, IEPA estimates that in-state coal-fired power plants emitted 7022 pounds of mercury in 2002,[14] and the agency has broken that number down into mercury emissions estimates for each of Illinois's 21 coal-fired power plants (Table A).

Table A. Estimated Illinois Mercury Emissions by Power Plant in 2002[15]

Rank	Plant	Owner	County	2002 Mercury Emissions (Lbs)
1	Baldwin	Illinois Power Company (Dynegy)	Randolph	961
2	Joppa Steam	Electric Energy, Inc.	Massac	677
3	Newton	Central Illinois Public Service Company (Ameren)	Jasper	597
4	Powerton	Commonwealth Edison Company (Midwest Generation)	Tazewell	592
5	Joliet	Commonwealth Edison Company (Midwest Generation)	Will	560
6	Kincaid	Kincaid Generation (Dominion)	Christian	486
7	Will County	Commonwealth Edison Company (Midwest Generation)	Will	459
8	Coffeen	Central Illinois Public Service Company (Ameren)	Montgomery	423
9	Waukegan	Commonwealth Edison Company (Midwest Generation)	Lake	344
10	E D Edwards	Central Illinois Light Company (Ameren)	Peoria	299
11	Crawford	Commonwealth Edison Company (Midwest Generation)	Cook	219
12	Havana	Illinois Power Company (Dynegy)	Mason	215
13	Springfield	City Water Light and Power (City of Springfield, IL)	Sangamon	190
14	Wood River	Illinois Power Company (Dynegy)	Madison	175

Rank	Plant	Owner	County	2002 Mercury Emissions (Lbs)
15	Duck Creek	Central Illinois Light Company (Ameren)	Fulton	171
16	Hennepin	Illinois Power Company (Dynegy)	Putnam	168
17	Meredosia	Central Illinois Public Service Company (Ameren)	Morgan	119
18	Marion	Southern Illinois Power Cooperative	Williamson	118
19	Fisk	Commonwealth Edison Company (Midwest Generation)	Cook	110
20	Vermilion	Illinois Power Company (Dynegy)	Vermilion	91
21	Hutsonville	Central Illinois Public Service Company (Ameren)	Crawford	50

Of the eight electric utilities operating coal-fired power plants in Illinois, plants owned and operated by Midwest Generation (a subsidiary of Edison International) contributed most to Illinois's mercury pollution. Specifically, IEPA estimates Midwest Generation's plants emitted 2283 pounds of mercury in 2002, or 33% of the total estimated amount emitted by all Illinois coal-fired power plants.[16]

According to the nationwide 2003 Toxics Release Inventory database, which compiles self-reported emissions data from sources of pollutants, only five states had higher mercury emissions than Illinois.[17] Including Illinois, these top six states accounted for 40 percent of the mercury emitted nationwide.[18]

Mercury Deposition

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

In 2000, U.S EPA estimated that 60 percent of the mercury deposited in the United States comes from domestic man-made sources.[20] The agency's data show that about one-third of the mercury deposited nationally comes from U.S. power plants.[21]

When power plants burn coal, they release mercury from the coal into the air in three basic forms: elemental mercury, oxidized mercury, and particulate-bound mercury. Elemental mercury has an atmospheric lifetime of about six months, long enough to travel long distances on air masses and be distributed globally before being deposited.[22] Oxidized and particulate-bound mercury, on the other hand, have atmospheric lifetimes of just one to two weeks and are generally deposited onto land or water bodies within 50 to 500 miles of their source.[23] This local deposition of atmospheric mercury results in the build up of hot spots (regions where mercury deposition is particularly high) around mercury emissions sources. A 2003 analysis of U.S. EPA data by the group Environmental Defense found that in Illinois,

local emissions sources are responsible for over 60% of mercury deposition at in-state hot spots.[24]

It has been estimated that 80 percent of the mercury loading into Lake Michigan is the result of atmospheric deposition.[25] Recent data from the National Oceanic and Atmospheric Administration provides the best picture of the link between this deposition and local coal-fired power plant emissions. Researchers found that approximately 48 percent of the mercury deposited in Lake Michigan came from sources within 60 miles of the lake and that sixteen of the twenty-five top sources of mercury deposited into the lake were coal-fired power plants.[26]

Mercury Levels in Fish

After mercury is deposited onto soil and surface water, anaerobic bacteria convert it to methylmercury, a highly toxic and bioaccumulative species of mercury. Bioaccumulation occurs when an organism's rate of uptake exceeds its rate of elimination. Methylmercury has such a long tissue half-life (the time in which half the mercury in the tissue is eliminated) ranging from months to years, that it can accumulate in the tissue of aquatic biota even if ambient levels of mercury in the water are low.[27]

Virtually all ocean and freshwater fish are contaminated to some degree with mercury. As organisms at higher trophic levels (higher in the food chain) eat organisms at lower levels, the methylmercury concentration biomagnifies. In predator fish at the top of the food chain, the concentration of methylmercury can be one million to ten million times the concentration in the ambient water.[28] The fact that many such predator fish are popular, frequently-consumed sport and commercial fishing species is the reason why fish are the dominant route of mercury exposure in humans. The findings in this report show the mercury contamination levels of many fish of different species from Illinois waters.

Several studies have found a direct relationship between mercury deposition rates and mercury levels in fish. In a 2002 study, researchers correlated a decrease in atmospheric mercury loading into a Wisconsin lake with a 30% reduction in fish tissue mercury concentrations in just six years. These findings led the researchers to conclude "modest changes in . . . mercury deposition can scientifically affect mercury bioaccumulation over short-time scales."[29] In Southern Florida, emission rates have decreased 90% since peak levels in the early nineties due to federal and state limits on mercury emissions from waste incinerators. Over that same time period, mercury concentrations in Everglade largemouth bass have dropped by 80 percent.[30] Florida researchers modeled the relationship between mercury deposition and largemouth bass mercury concentrations in the Everglades and found that "for any reduction in mercury inputs there may be a near 1:1 reduction in fish mercury concentrations."[31]

How Much Mercury is Safe?

U.S. 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] The reference dose represents the amount of methylmercury which, when ingested daily over a lifetime, is anticipated to be without adverse health effects to people, including sensitive populations, based on current scientific knowledge. In 2000, the National Academy of Sciences affirmed that U.S. 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 B, for example, lists U.S. EPA's monthly noncommercial fish consumption advice for adults of average weight (154 pounds). U.S. EPA assumes the size of an average fish serving to be 8 ounces uncooked, corresponding with 6 ounces cooked.[35]

Table B. U.S. EPA's Monthly Fish Consumption Limits for Methylmercury[32]

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

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

Table C. 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

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

In its dietary guidelines, the American Heart Association (AHA) recommends that adults eat fish at least twice per week to avail themselves of the heart health benefits of the omega-3 fatty acids in fish.[36] Assuming a person intends to follow the AHA's advice, what is the maximum amount of mercury the fish can contain and still be eaten safely?

Young children and women of childbearing age and are considered most at risk from exposure to methylmercury. According to U.S. EPA, the average U.S. woman weighs 143 pounds.[37] Based on U.S. 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 parts per million (ppm).[a] A woman who is pregnant, plans to become pregnant, or is nursing and twice a week eats fish with methylmercury levels that exceed 0.13 ppm may expose her baby to unsafe levels of methylmercury.

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

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

Because of their small body size, children can safely eat less mercury-contaminated fish than adults. According to U.S. EPA, an average meal of fish for young children is two ounces (cooked).[39] Table D lists the safe limit of methylmercury in fish for young children of average weight who eat two average meals of fish per week.

Table D. Safe Limit of Mercury in Fish for Children of Various Ages[i]

Age of Child	Average Body Weight (pounds)[38]	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] These benchmarks are calculated using U.S. EPA's reference dose and assuming that children of average weight eat two two ounce meals of fish per week.

The Illinois Fish Consumption Advisory for Methylmercury

To protect the health of sport anglers, families that buy fish from local markets, and anyone else who might eat locally caught fish, Illinois is one of 45 states that issue fish consumption advisories due to methylmercury contamination.[40] The advisories provide guidance on how much Illinois-caught fish people can eat without exceeding the U.S. EPA reference dose for mercury. These advisories (as well as the findings of this report) are based on mercury contamination data from the Illinois Fish Contaminant Monitoring Program, an ongoing study that is described in the next section.

The Illinois 2006 Fish Consumption Advisory for Methylmercury has two parts, the general advisory, and the special advisory. The general advisory is based on IEPA's finding that mercury contamination in excess of U.S. EPA safe limits for sensitive populations are widespread in Illinois. The advisory applies to all waters in the state and warns "pregnant or nursing women, women of childbearing age, and children less than 15 years of age are advised to eat no more than one meal per week of predator fish."[41] Predator fish is defined to include all inland species of predator fish found in Illinois: all species of black bass (largemouth, smallmouth, and spotted), striped bass, white bass, hybrid striped bass, walleye, sauger, saugeye, flathead catfish, muskellunge, and northern pike.

The special advisory applies to 15 lakes and rivers in which fish have been found to have particularly high mercury concentrations (greater than 0.23 ppm) and in many cases is limited to fish of certain species or sizes. See Appendix A for the complete text of the special advisory.

Sources of Fish Mercury Concentration Data

This report analyzes fish tissue mercury concentration data from the following two studies of fish contaminant levels.

Illinois Fish Contaminant Monitoring Program, 1985–2004 (IFCMP)

This ongoing Illinois state program screens fish samples from approximately 40 bodies of water per year for contamination from a dozen pesticides and industrial pollutants, including mercury. The fish are collected by the Illinois Department of Natural Resources (IDNR) and tested by IEPA. Since one of the primary purposes of the program is to provide the data used by the Illinois Department of Public Health to generate fish consumption advisories, the program focuses primarily on lakes and streams that are the most publicly accessible and popular for fishing. Generally, the IFCMP provides only fish consumption advisories and does not make publicly available its raw contaminant concentration data. For this report, Illinois PIRG filed a Freedom of Information Act request to obtain the IFCMP's raw data.[42] This report considers IFCMP data for 804 fillet fish samples collected between 1985 and 2004. Appendix C contains the IFCMP data considered in this report.

U.S. EPA National Lake Fish Tissue Study 1999–2003 (NLFTS)

The NLFTS was a four year study of 268 chemicals in fish sampled from 500 lakes in the continental United States. It is the first national fish contamination survey that is based on a random sample design, and as such allows U.S. EPA to develop national estimates of mean levels of chemicals in freshwater fish and establish a baseline to track progress in reducing contaminant levels. U.S. EPA initiated the study in 1998, collected data between 2000 and 2003, and plans to report its findings in 2006. Researchers analyzed fillets from predator fish and whole bodies of bottom-dwellers. Raw, quality-assured contaminant concentration data from the study is publicly available on request from U.S. EPA.[43] This report considers NLFTS data from the 23 Illinois fish samples collected over the course of the four-year data collection period. See Appendix D for the NLFTS data considered in this report.

Some common features of the two studies:

- At each lake, researchers collected composite samples of the species being tested. Each composite sample consisted of approximately five adult fish of the same species and similar size.
- Each study generated numerical values in parts per million for the concentration of mercury present in fish tissues.
- Both tests detect total mercury rather than methylmercury specifically, but research has shown that nearly 100% of mercury that bioaccumulates in fish is methylated.[44]
- The mercury concentration data provided by the studies are the averages for each composite sample rather than the concentration in each individual fish. While this approach provides a good indication of the average mercury concentrations of different fish species, it levels out peak concentrations in individual fish. These peaks can be 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.[45]

- Most of the fish composites were collected during the summer and fall of the sampling year.
- Within each study, researchers use consistent methods to collect and analyze samples.

Findings: Mercury in Sport Fish from Illinois Lakes and Streams

An analysis of the 827 Illinois fish samples from the IFCMP and NLFTS finds:[a]

- The mean mercury concentration in Illinois fish samples was 0.16 parts per million (ppm), well above U.S. EPA's 0.13 ppm safe limit for women of average weight who eat fish twice per week.
- Thirty-nine (39) percent of the fish samples exceeded the 0.13 ppm safe mercury limit for women of childbearing age and average weight who eat fish twice per week.
- Fifty-nine (59) percent of the fish samples exceeded the safe mercury limit for children of average weight under age three who eat fish twice a week; 50 percent of fish samples exceeded the limit for children ages three to five years; and 34 percent of samples exceeded the safe limit for children ages six to eight years.
- A largemouth bass caught in Sherman Park Lagoon in South Chicago had the highest mercury concentration of fish in either of the two studies at 1.40 ppm. For references, that is .40 ppm above the 1.0 ppm United States Food and Drug Administration's mercury action level, which is the legal limit for fish sold in the United States; when fish exceed the action level, FDA removes them from store shelves.[46] The second highest mercury concentration, at 1.07 ppm was found in a largemouth Bass in Kinkaid Lake, in Jackson County, and the third highest, at 0.94 ppm, was found in a largemouth bass in Cedar Lake, also in Jackson County.

Fish Mercury Contamination in Illinois Counties

- In nearly half (36) of the 77 counties included in the studies, the average fish tissue mercury concentration exceeded U.S. EPA's safe limit for women (Table E). These counties are geographically distributed throughout the state.
- The counties with the top twenty highest average fish sample mercury concentrations were, in descending order: Pope, Boone, Kane, Jackson, Edwards, Jasper, Clay, Pulaski, Effingham, Bond, DeKalb, Wayne, Schuyler, Henry, Wabash, Richland, Clark, White, McHenry, and Grundy. The average fish sample mercury

[a] Note: The data tables in this section list the number of fish samples and individuals tested from each county, species, and water body in the two studies. The number of samples per county, species, and water body varies widely, from 1 to 1840. As in any analysis, the greater the number of samples, the greater the certainty of the averages, and averages are less certain when based on fewer samples. Each fish sample is composed of approximately five individual fish.

concentrations in these counties ranged from 0.20 ppm in Will County to 0.50 ppm in Pope County.

- In 8 of the 75 counties (Boone, DeKalb, Edwards, Effingham Kane, Pope, Pulaski, and Schuyler), 100 percent of fish samples contained mercury concentrations that exceeded the safe limit for women.

Table E. Percent of Fish Samples that Exceed the Safe Limit for Women by County

County	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Mercury Concentration Among Composite Samples (ppm)	Percent of Composite Samples Exceeding Safe Limit for Women (>0.13 ppm)
Adams	1	5	0.08	0.08	0%
Alexander	2	10	0.19	0.31	50%
Bond	3	15	0.25	0.44	67%
Boone	1	3	0.46	0.46	100%
Brown	3	14	0.04	0.05	0%
Calhoun	3	13	0.08	0.13	0%
Christian	7	32	0.11	0.26	14%
Clark	6	17	0.22	0.34	83%
Clay	9	26	0.28	0.81	67%
Clinton	16	69	0.08	0.21	13%
Coles	3	13	0.11	0.17	33%
Cook	147	632	0.10	1.40	21%
Cook/Lake[a]	17	66	0.13	0.27	35%
Cumberland	3	13	0.10	0.21	33%
DeKalb	2	10	0.25	0.37	100%
Dewitt	5	23	0.07	0.13	0%
Douglas	1	5	0.10	0.10	0%
DuPage	10	43	0.11	0.20	40%
Edgar	2	9	0.08	0.09	0%
Edwards	1	4	0.31	0.31	100%
Effingham	10	35	0.26	0.40	100%
Fayette	5	22	0.11	0.18	40%
Franklin	7	34	0.15	0.29	57%
Fulton	2	8	0.05	0.05	0%
Gallatin	4	13	0.14	0.34	25%
Grundy	6	29	0.20	0.42	67%
Henry	2	7	0.24	0.37	50%
Iroquois	1	3	0.05	0.05	0%
Jackson	53	251	0.34	1.07	83%
Jasper	5	25	0.28	0.43	80%
Jefferson	8	38	0.11	0.24	25%
Jersey	10	49	0.14	0.33	40%
Jo Daviess	1	4	0.05	0.05	0%
Kane	1	5	0.44	0.44	100%
Kankakee	6	23	0.14	0.28	67%
Kendall	3	15	0.14	0.20	33%

[a] For 17 fish samples from Lake Michigan, the IFCMP database did not distinguish between fish caught in Cook and Lake Counties. In this analysis, these samples were averaged separately from the samples indicated to be from either Cook or Lake County.

County	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Mercury Concentration Among Composite Samples (ppm)	Percent of Composite Samples Exceeding Safe Limit for Women (>0.13 ppm)
Knox	13	58	0.19	0.49	46%
Lake	46	177	0.14	0.54	41%
LaSalle	19	77	0.11	0.17	21%
Lee	14	47	0.12	0.63	14%
Livingston	1	2	0.05	0.05	0%
Macon	11	53	0.09	0.19	18%
Macoupin	13	65	0.17	0.51	54%
Madison	11	45	0.08	0.24	18%
Marion	14	63	0.17	0.46	50%
Marshall	2	10	0.10	0.13	0%
McHenry	8	33	0.20	0.72	63%
Mclean	2	10	0.11	0.16	50%
Mercer	2	6	0.08	0.10	0%
Montgomery	12	54	0.12	0.22	33%
Morgan	4	20	0.09	0.12	0%
Ogle	13	46	0.13	0.49	31%
Peoria	11	47	0.08	0.24	9%
Perry	1	5	0.13	0.13	0%
Piatt	1	3	0.05	0.05	0%
Pike	5	21	0.09	0.21	20%
Pope	4	18	0.50	0.88	100%
Pulaski	1	3	0.27	0.27	100%
Randolph	9	37	0.11	0.38	33%
Richland	14	54	0.24	0.57	79%
Rock Island	7	27	0.13	0.21	43%
Saline	3	12	0.16	0.30	33%
Sangamon	5	25	0.06	0.10	0%
Schuyler	2	9	0.25	0.30	100%
Shelby	12	51	0.13	0.50	25%
St. Clair	5	20	0.06	0.11	0%
Tazewell	19	92	0.09	0.48	16%
Vermilion	19	91	0.10	0.28	26%
Wabash	8	36	0.24	0.55	88%
Warren	1	3	0.13	0.13	0%
Washington	2	9	0.13	0.20	50%
Wayne	14	54	0.25	0.62	64%
White	22	92	0.21	0.45	82%
Whiteside	7	26	0.10	0.16	29%
Will	21	93	0.19	0.80	48%
Williamson	72	359	0.18	0.94	38%
Winnebago	6	15	0.14	0.35	33%
Woodford	5	23	0.14	0.29	40%
State-wide	**827**	**3574**	**0.16**	**1.40**	**39%**

Mercury Contamination in Illinois Fish Species

- In half (16) of the 32 species included in the studies, the average fish sample mercury concentration exceeded U.S. EPA's safe limit for women (Table F). These species

were, in descending order of average mercury concentration, bigmouth buffalo, freshwater drum, striped bass, lake trout, spotted bass, sauger, smallmouth buffalo, spotted sucker, flathead catfish, largemouth bass, brown trout, Chinook salmon, white bass, channel catfish, carp, and white sucker.

- As expected, predator fish at the top of the aquatic food chain tended to have particularly high average levels of mercury when compared to other fish species. Predator fish in Illinois include all species of black bass (largemouth, smallmouth, and spotted) striped bass, white bass, walleye, sauger, and flathead catfish,[47] and all of these species ranked in the top 20 of the 34 species in mercury contamination level.

Table F. Percent of Fish Samples that Exceed the Safe Limit for Women by Species

Type of Fish	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Mercury Concentration Among Composite Samples (ppm)	Percent of Composite Samples Exceeding Safe Limit for Women (>0.13 ppm)
Bighead carp	2	6	0.05	0.05	0%
Bigmouth buffalo	1	4	0.57	0.57	100%
Black crappie	20	91	0.10	0.42	25%
Bluegill	23	116	0.05	0.14	4%
Brown bullhead	1	5	0.02	0.02	0%
Brown trout	3	15	0.16	0.27	33%
Carp	72	334	0.14	0.62	39%
Channel catfish	19	81	0.14	0.68	26%
Chinook salmon	4	20	0.16	0.25	50%
Coho salmon	4	12	0.11	0.16	25%
Crappie (unspecified)	6	30	0.07	0.13	0%
Flathead catfish	15	45	0.19	0.63	47%
Freshwater drum	1	5	0.44	0.44	100%
Green sunfish	2	12	0.05	0.05	0%
Lake trout	1	5	0.24	0.24	100%
Largemouth bass	417	1840	0.18	1.40	44%
Rainbow trout	2	10	0.10	0.15	50%
Rock bass	5	18	0.07	0.15	20%
Sauger	6	21	0.23	0.55	67%
Silver Carp	1	4	0.02	0.02	0%
Smallmouth bass	59	226	0.12	0.46	32%
Smallmouth buffalo	10	44	0.20	0.48	60%
Spotted bass	16	59	0.24	0.54	75%
Spotted sucker	2	8	0.20	0.27	50%
Striped Bass	1	3	0.25	0.25	100%
Sunfish (green)	3	15	0.05	0.05	0%
Sunfish (pumpkinseed)	3	16	0.05	0.05	0%
Walleye	39	145	0.13	0.54	33%
White bass	38	160	0.14	0.52	45%
White crappie	44	191	0.10	0.43	27%
White sucker	1	5	0.14	0.14	100%
Yellow bass	5	23	0.05	0.05	0%
Yellow bullhead	1	5	0.05	0.05	0%
All Species	**827**	**3574**	**0.16**	**1.40**	**39%**

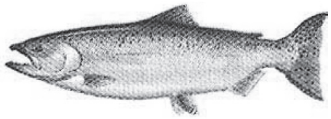
FISH HAVING MERCURY CONCENTRATIONS ABOVE U.S. EPA SAFE LIMIT FOR WOMEN

Bigmouth Buffalo

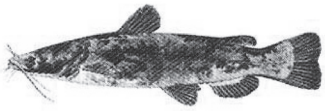
Brown Trout

Carp

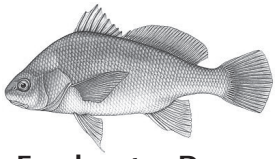
Channel Catfish



Chinook Salmon



Flathead Catfish



Freshwater Drum

Lake Trout

Largemouth Bass

Sauger

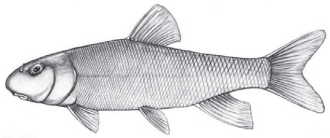
Smallmouth Buffalo

Spotted Bass

Spotted Sucker

Striped Bass

White Bass



White Sucker

Averages are of composite samples, usually of five individual fish. The U.S. EPA safe limit for women is 0.13 ppm and is calculated based U.S. EPA's reference dose assuming women of average weight (143 pounds) who eat two average meals (6 oz. cooked) of fish per week.

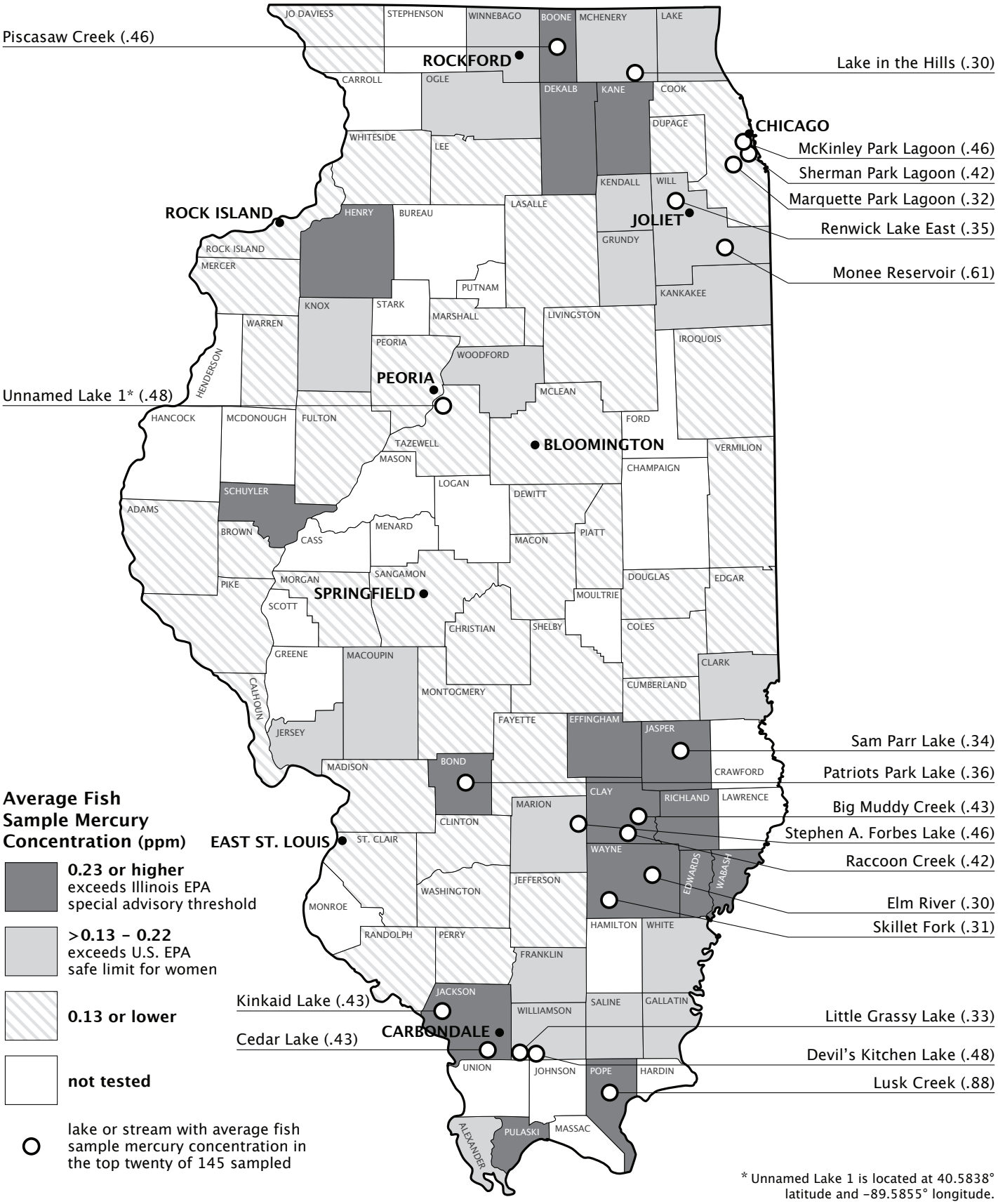
Fish Mercury Contamination in Illinois Water Bodies

- In 66 of the 145 lakes and streams included in the studies, the average fish sample mercury concentrations exceeded U.S. EPA's safe limit for women (Table G).
- The ten with highest average fish sample mercury concentrations were, in descending order: Lusk Creek in Pope County, Monee Reservoir in Will County, Devil's Kitchen Lake in Williamson County, an unnamed lake in Tazewell County, Piscasaw Creek in Boon County, McKinley Park Lagoon in Cook County, Steven A. Forbes Lake in Marion County, Big Muddy Creek in Clay County, Kinkaid Lake in Jackson County, and Cedar Lake in Jackson County.
- As can be seen in Table G, not all of the lakes with the potentially unsafe average mercury concentrations are on IEPA's special mercury advisory list. IEPA generally requires at least two recent fish samples of the same species, similar length and weight, and preferably from consecutive years before it will issue, change, or rescind a fish advisory. There are some lakes in Table G that have been flagged by IEPA for further testing, but due to a backlog of samples awaiting analysis, confirming data are not yet available to support the issuing of a consumption advisory. IEPA also does not issue fish consumption advisories for lakes where there are other reasons anglers should limit or avoid consumption of the lake's fish. These reasons include the existence of a more restrictive consumption advisory for another contaminant (such as PCBs) or lakes where fishing is prohibited or only catch and release fishing is permitted.

Conclusion

These results show that potentially dangerous levels of mercury contamination are widespread in Illinois. Given research indicating that power plants contribute significantly to local mercury deposition and that decreasing rates of mercury deposition are closely linked to significant reductions in fish tissue mercury levels, this report's findings underscore the need to reduce mercury emissions as much and quickly as possible.

FISH MERCURY CONTAMINATION BY COUNTY



* Unnamed Lake 1 is located at 40.5838° latitude and -89.5855° longitude.

Averages are of composite samples, usually of five individual fish. The U.S. EPA safe limit for women is 0.13 ppm and is calculated based U.S. EPA's reference dose assuming women of average weight (143 pounds) who eat two average meals (6 oz. cooked) of fish per week.

Table G. The sixty-six water bodies in Illinois with fish mercury concentrations above the U.S. EPA safe limit for women who eat fish twice per week

Rank	Water Body	County	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Mercury Concentration Among Composite Samples	Percent of Composite Samples Exceeding Safe Limit for Women (>0.13 ppm)	Percent of Composite Samples Exceeding IEPA Special Advisory Threshold (≥0.23 ppm)	IEPA Special Advisory Issued?[a]
1	Lusk Creek	Pope	1	3	0.88	0.88	100%	100%	
2	Monee Reservoir	Will	2	10	0.61	0.80	100%	100%	Yes
3	Devil's Kitchen Lake	Williamson	12	56	0.48	0.94	92%	83%	Yes
4	Unnamed lake 1[b]	Tazewell	1	4	0.48	0.48	100%	100%	
5	Piscasaw Creek	Boon	1	3	0.46	0.46	100%	100%	
6	McKinley Park Lagoon	Cook	1	1	0.46	0.46	100%	100%	
7	Stephen A. Forbes Lake	Marion	1	5	0.46	0.46	100%	100%	
8	Big Muddy Creek	Clay	2	3	0.43	0.81	50%	50%	Yes[c]
9	Kinkaid Lake	Jackson	17	79	0.43	1.07	94%	76%	Yes
10	Cedar Lake	Jackson	18	88	0.43	0.95	94%	67%	Yes
11	Raccoon Creek	Clay	1	2	0.42	0.42	100%	100%	
12	Sherman Park Lagoon	Cook	4	15	0.42	1.40	25%	25%	

[a] In some cases, the IEPA special advisory for a particular body of water is limited to a certain segment of a river or fish of a certain species or size. See the special advisory list in appendix A.

[b] Unnamed lake 1 is located at 40.5838° latitude and -89.5855° longitude.

[c] Big Muddy Creek is part of the Little Wabash River system and included under its special advisory. It has not been issued its own special advisory.

Rank	Water Body	County	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Mercury Concentration Among Composite Samples	Percent of Composite Samples Exceeding Safe Limit for Women (>0.13 ppm)	Percent of Composite Samples Exceeding IEPA Special Advisory Threshold (≥0.23 ppm)	IEPA Special Advisory Issued?[a]
13	Patriot's Park Lake	Bond	2	10	0.36	0.44	100%	100%	
14	Renwick Lake East	Will	2	5	0.35	0.35	100%	100%	
15	Sam Parr Lake	Jasper	3	15	0.34	0.43	100%	67%	
16	Little Grassy Lake	Williamson	9	45	0.33	0.60	100%	56%	Yes
17	Marquette Park Lagoon	Cook	6	24	0.32	0.61	83%	83%	Yes
18	Skillet Fork	Marion, Wayne, White	16	62	0.31	0.54	88%	63%	Yes[a]
19	Lake in the Hills	McHenry	4	19	0.30	0.72	75%	25%	Yes
20	Elm river	Wayne	4	19	0.30	0.62	75%	50%	Yes[1]
21	Little Muddy Creek	Clay	1	3	0.28	0.28	100%	100%	
22	Ohio River	Gallatin, Pope, Pulaski	7	28	0.27	0.46	71%	71%	Yes
23	Little Muddy River	Clay, Jackson	2	7	0.27	0.35	100%	50%	
24	Mt. Olive Old Lake	Macoupin	1	5	0.26	0.26	100%	100%	
25	Mississippi River–South	Alexander, Randolph	3	13	0.25	0.38	67%	67%	

[a] Skillet Fork and Little Muddy Creek are part of the Little Wabash River system and included under its special advisory. They have not been issued their own special advisories.

Rank	Water Body	County	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Mercury Concentration Among Composite Samples	Percent of Composite Samples Exceeding Safe Limit for Women (>0.13 ppm)	Percent of Composite Samples Exceeding IEPA Special Advisory Threshold (≥0.23 ppm)	IEPA Special Advisory Issued?[a]
26	Buck Lake	DeKalb	2	10	0.25	0.37	100%	50%	
27	Fox River	Kane, Kendall, LaSalle, Richland	12	45	0.25	0.57	58%	42%	
28	Schuyler-Rushville Lake	Schuyler	2	9	0.25	0.30	100%	50%	
29	Johnson Sauk Trail Lake	Henry	2	7	0.24	0.37	50%	50%	
30	Highland-Silver Lake	Madison	1	5	0.24	0.24	100%	100%	
31	Arrowhead Lake	Cook	4	16	0.22	0.28	75%	75%	Yes
32	Mt. Olive New Lake	Macoupin	2	10	0.22	0.26	100%	50%	
33	Heidecke Lake	Grundy	3	14	0.21	0.26	100%	33%	
34	Wabash River	Clark, Wabash, White	22	89	0.21	0.55	82%	32%	Yes
35	Little Wabash River	Clay, Edwards, Effingham, Richland, Shelby, Wayne, White	31	111	0.21	0.50	71%	39%	Yes
36	Unnamed lake 2[a]	Saline	2	7	0.20	0.30	50%	50%	
37	Vernor Lake	Richland	2	7	0.20	0.30	50%	50%	
38	Newton Lake	Jasper	2	10	0.20	0.27	50%	50%	

[a] Unnamed lake 2 is located at 37.737° latitude and -88.5078° longitude.

Rank	Water Body	County	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Mercury Concentration Among Composite Samples	Percent of Composite Samples Exceeding Safe Limit for Women (>0.13 ppm)	Percent of Composite Samples Exceeding IEPA Special Advisory Threshold (≥0.23 ppm)	IEPA Special Advisory Issued?[a]
39	Dresden Power Plant Lake[a]	Grundy	3	15	0.19	0.42	33%	33%	
40	Campus Lake	Jackson	4	20	0.19	0.30	75%	25%	Yes
41	Bracken Lake	Knox	13	58	0.19	0.49	46%	23%	Yes
42	Channel Lake	Lake	11	48	0.19	0.34	82%	36%	
43	South Spring Lake	Tazewell	3	15	0.19	0.41	33%	33%	
44	Otter Creek	Jersey	1	4	0.18	0.18	100%	0%	
45	Carbondale Lake	Jackson	3	13	0.18	0.29	67%	33%	
46	Staunton City Lake	Macoupin	2	10	0.18	0.23	50%	50%	
47	East Fork Lake	Richland	3	14	0.17	0.28	67%	33%	
48	Skokie Lagoons	Cook	3	10	0.17	0.18	100%	0%	
49	Borah Lake	Richland	2	10	0.17	0.19	100%	0%	
50	Big Muddy River	Franklin, Jackson, Jefferson	17	81	0.16	0.43	53%	24%	
51	Lake Michigan	Cook, Lake	25	91	0.16	0.40	48%	32%	
52	Humbolt Park Lagoon	Cook	1	3	0.16	0.16	100%	0%	

[a] Fishing is prohibited at Dresden Power Plant Lake.

Rank	Water Body	County	Number of Composite Samples	Total Number of Fish Tested	Average Mercury Concentration of Composite Samples (ppm)	Maximum Mercury Concentration Among Composite Samples	Percent of Composite Samples Exceeding Safe Limit for Women (>0.13 ppm)	Percent of Composite Samples Exceeding IEPA Special Advisory Threshold (≥0.23 ppm)	IEPA Special Advisory Issued?[a]
53	Otter Lake	Macoupin	5	25	0.16	0.51	20%	20%	
54	Centralia Lake	Marion	2	7	0.16	0.17	100%	0%	
55	Unnamed lake 3[a]	Williamson	2	10	0.15	0.25	50%	50%	
56	Sara Lake	Effingham	1	5	0.15	0.15	100%	0%	
57	Midlothian Reservoir	Cook	6	25	0.15	0.24	50%	33%	Yes
58	DuPage River	DuPage, Will	6	28	0.15	0.23	67%	17%	
59	Evergreen Lake	Woodford	5	23	0.14	0.29	40%	20%	
60	Sedgwick Lake	Cook	1	4	0.14	0.14	100%	0%	
61	Beaver Dam Lake	Macoupin	1	5	0.14	0.14	100%	0%	
62	Glen Shoals Lake	Montgomery	2	10	0.14	0.15	50%	0%	
63	Salt Creek	Cook, DuPage	9	40	0.14	0.25	56%	11%	
64	Kankakee River	Kankakee, Will	9	34	0.14	0.28	56%	22%	
65	Old Herrin Lake	Williamson	2	10	0.135	0.19	50%	0%	
66	Rock River	Lee, Ogle, Rock Island, Whiteside, Winnebago	36	116	0.133	0.63	31%	14%	Yes

[a] Unnamed lake 3 is located at 37.7733° latitude and -88.7835° longitude.

Regulatory Background

The Clean Air Act of 1970 requires U.S. EPA to develop and enforce regulations to protect the public from hazardous air pollutants. Section 112 of the Clean Air Act requires sources of hazardous air pollutants, a category which includes mercury, to reduce these toxic emissions by installing maximum achievable control technologies (MACT).[48] Under Section 112, a technology isn't considered "achievable" unless it is determined to be both affordable and feasible.[49] U.S. EPA said in 2001 that power company compliance with the MACT standard would mean reducing power plant mercury emissions by about 90%.[50]

In March 2005, however, U.S. EPA changed course and finalized the utility-industry favored "delisting rule," which removed coal-fired power plants from the list of mercury sources required to control emissions under the MACT standard.[51] Two months later, U.S. EPA promulgated a new, much weaker framework for the regulation of coal-fired power plant mercury emissions, the euphemistically-named Clean Air Mercury Rule (CAMR)."[52] CAMR mandates a 21% reduction in mercury emissions by 2010, a reduction U.S. EPA acknowledges is no greater than what is to be expected as a co-benefit of installing mandated controls for other pollutants, and slightly less than a 70% reduction by 2018.[53]

In fact, the Congressional Research Service estimates that CAMR's emission credit banking provisions, which allow utilities to save unused emission credits and use them to offset later pollution, may prevent the 70% reduction target from being met until 2030.[54] Further, CAMR's emissions trading provisions, which permit power plants to buy mercury emission credits instead of reducing emissions, are likely to exacerbate local hot spots of mercury pollution.[55]

In February 2005, U.S. EPA's own Inspector General issued a report highly critical of U.S. EPA's decision-making process leading to the delisting rule and CAMR. The report charged that U.S. EPA senior management instructed staff to arrive at predetermined, industry-favored outcomes, that CAMR does not address the problem of hot spots, and that U.S. EPA's rule development process did not comply with the requirements that it fully analyze the costs and benefits of regulatory options and impacts on children's health.[56]

At least sixteen states, including Illinois, have taken legal action to challenge CAMR's insufficient mercury reduction program in court.[57] States have the right to enact mercury programs more stringent than CAMR,[58] and a growing number are doing so rather than wait for the federal rule to be litigated. Connecticut and New Jersey have already put their power plants on schedule to capture 90% of smokestack mercury by 2007 and 2008, respectively, and Massachusetts will require 95% capture rates in 2012.[59] Minnesota, New Hampshire, North Carolina, and Wisconsin have also adopted laws that far exceed the CAMR requirement.[60] Other states, including Georgia, Michigan, Montana, New York, Pennsylvania, and Virginia have pending mercury reduction proposals more stringent than CAMR.[61]

An Illinois Solution: The State's Proposed Mercury Rule

On January 5, 2006, Governor Rod R. Blagojevich instructed IEPA to draft an administrative rule to reduce mercury emissions by 90 percent in Illinois. The Illinois mercury rule would take Illinois in a direction very similar to that of U.S. EPA prior to the delisting rule, and would make Illinois the fourth state to commit to a 90% or greater reduction in mercury pollution.

The provisions of the rule include:

1) Illinois coal plants must reduce their mercury emissions by 90% or more by July 1, 2009. Companies with multiple coal plants can achieve a system-wide average of 90% or more by that date, subject to the condition that no plant may achieve less than a 75% reduction.
2) All plants must reduce emissions by 90% by January 1, 2013.

To become law, the Illinois mercury rule must make its way through the Illinois rulemaking process. IEPA finalized and submitted the rule for approval to the five-member Illinois Pollution Control Board (IPCB) on March 14, 2006.[62] The IPCB will hold public hearings and accept public comment prior to deciding whether or not to adopt the rule.[63] If and when the IPCB agrees on the rule, it will submit it to the Legislature's Joint Committee on Administrative Rules (JCAR). JCAR can prohibit the filing of the rule by vote of eight of its twelve members and can also seek to negotiate with IEPA for changes to it.[64] If JCAR does not prohibit its filing, IEPA will file the rule with the Illinois Secretary of State and it will become law. Under the provisions of CAMR, the rule must be finalized no later than November 17, 2006.[65]

The Costs and Benefits of Mercury Control Technologies

The estimated cost of installing mercury control technologies to achieve a 90 percent emissions reduction is a small fraction of the cost of building and operating power plants and is dwarfed by the public health and environmental costs to of mercury pollution.

In 1990, mercury emissions from medical and municipal waste incinerators accounted for 50 and 42 tons of mercury emissions per year, respectively, rivaling the 51 tons emitted by coal-fired power plants. By 1999, however, those two source categories were down to 3 and 5 tons per year because of a 1995 U.S. EPA rule requiring 90% cuts in their mercury emissions. No such regulation applied to the coal industry, and by 1999, its mercury emissions remained 48 tons.[66] The technology that brought down emissions at those incinerators is essentially identical to Activated Carbon Injection (ACI) systems that can be cheaply deployed with equally high capture rates in coal-fired plants.[67] The use of halogenated sorbents with ACI makes 90% mercury capture rates feasible with every type of

coal burned in Illinois. And ACI is just one of several promising mercury control technologies.[68]

As is the case in any industry, mercury control technology improves with time. Increasing demand for mercury controls through mandated emissions reductions will further increase the rate of technological innovation, which in turn will bring down prices and increase mercury capture rates. In 2000, the U.S. Environmental Protection Agency said, "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 can eliminate most of the mercury from utilities at a cost far lower than one percent of utility industry revenues."[69]

In October 2004, the National Wildlife Federation (NWF) conducted a study to estimate the cost of reducing mercury emissions by 90% in five coal-dependent states, including Illinois. The NWF collected U.S. EPA estimates of the cost of installing ACI mercury controls in plants taking into consideration factors such as boiler configurations, size, and coal types. It then applied those estimates to real-life Illinois power plant data. The study concluded that achieving a state-wide 90% mercury emissions reduction would cost $139 million annually, just 1.4% of annual utility company revenues.[70]

In support of its proposed mercury rule, IEPA performed two rigorous projections of the additional cost of the Illinois mercury rule over CAMR. In the first study, the agency surveyed in detail the existing configurations of Illinois's 21 coal-fired power plants and calculated the costs to upgrade each into compliance with both rules given the prices of currently available control technologies. IEPA estimated that the Illinois rule's cost to the power sector over CAMR will be $32 million annually from 2010 to 2018, after which the costs of the two rules will be virtually identical.[71] For the second study, the agency hired an economic modeling firm to evaluate the economic impact of the Illinois proposed rule versus CAMR using a sophisticated computer model of the American electric power sector. The model predicted the increase in the average residential ratepayer's electricity bill to be less than $1.50 per month[72]—about the price of a cup of coffee.

Of course, any analysis of the costs and benefits of reducing mercury pollution must consider the other side of the ledger: the enormous public health and environmental costs that mercury inflicts on our society. As mentioned above, the Mt. Sinai School of Medicine recently estimated the dollar value of mercury-induced cognitive impairments due to power plant emissions to be $1.3 billion per year.[73] That figure considers only mercury's neurological effects and omits its other impacts on human health and the environment. In another study, The Harvard Center for Risk Analysis looked at the benefits of meeting the national mercury reduction targets of the Bush Administration's "Clear Skies Initiative." The study estimated that the monetized benefits of IQ increases, avoided cardiovascular events, and premature mortality could range up to 3.5 billion annually with a 26-ton emission cap, and $5.2 billion annually with a 15-ton cap.[74]

Other economic benefits of reducing mercury pollution include the installation and control technology industry jobs that will result from power company investments in control equipment and the benefit to the fishing industry as mercury levels drop in our state's waters and our fish become safer to eat.

Widespread Support for Stringent Mercury Emissions Standards

The following is a list of Illinois officials, health, environmental, and public interest groups, businesses, and other organizations that have signed letters in support of the Illinois mercury rule or otherwise called for a 90% reduction in coal-fired power plant mercury emissions.[75]

Access Living
Action for Children
Advocate Health Care
African American Healthcare Council
Alexian Pediatric Center of Excellence
Alliance for the Great Lakes (formerly the Lake Michigan Federation)
American Academy of Pediatrics, Illinois Chapter
American Bottom Conservancy
American Friends Service Committee
American Lung Association of Metropolitan Chicago
Asian Health Coalition of Illinois
Asian Human Services
Autism International Association
Business and Professional People for the Public Interest
Center for African American Health
Center for Neighborhood Technology
Chicago Clean Power Coalition
Chicago Recycling Coalition
Citizens Against Ruining the Environment
Clean Air Task Force
Critical Action Illinois
Environmental Law and Policy Center
Gilead Outreach and Referral Center
Good Neighbor Committee of South Cook County
Health and Medicine Policy Research Group
Hospitals for a Healthy Environment
Human Action Committee Organization
Illinois Academy of Family Physicians
Illinois Council of Trout Unlimited
Illinois Environmental Council
Illinois Maternal and Child Health Coalition
Illinois Public Health Association
Illinois Public Interest Research Group
Education Fund Illinois Stewardship Alliance
Illinois Stewardship Alliance
Illinois Student Environmental Network
Jenson Environmental Management, Inc.
Kids Public Education and Policy Project
Lake County Conservation Alliance
La Rabida Children's Hospital
League of Women Voters
Learning Disability Association of Illinois
Little Village Environmental Justice Organization
Living Upstream
Lyons Incineration Network
March of Dimes Illinois Chapter
Mayor Richard M. Daley of Chicago
Mayor Michael D. Belsky of Highland Park
Mayor Richard H. Hyde of Waukegan
Metropolitan Chicago Healthcare Council
National Wildlife Federation Great Lakes Natural Resources Center
Ounce of Prevention Fund
People for Community Recovery
Physicians for Social Responsibility
Pilsen/Southwest Side local of the Green Party
Prairie Rivers Network
Prairie Sun Consultations
Regional Association of Concerned Environmentalists
Representative Barbara Flynn Currie, State House Majority Leader
Salmon Unlimited
Sierra Club
Sinai Children's Hospital
South Cook County Environmental Action
South Suburban Citizens Opposed to Polluting Our Environment
Southern Sustainability
Stand Up/Save Lives Campaign
Trout Unlimited—Illinois Council
Voices for Illinois Children
Women's Business Development Center
YMCA of Metropolitan Chicago

The following newspapers have editorialized in favor of the IEPA mercury rule:

Champaign News-Gazette, Jan. 10, 2006
Detroit Free Press, Jan. 9, 2006
Rockford Register Star, Feb. 22, 2006
St Louis Post Dispatch, Feb. 13 2006

Kankakee Daily Journal, Feb. 21, 2006 *The Telegraph* (River Bend, IL), Jan 12, 2006
Peoria Journal Star, Jan. 16, 2006

Many governments and organizations outside of Illinois are also advocating to curtail mercury emissions. Along with Illinois, fifteen states have challenged the delisting rule or CAMR in court or have petitioned U.S. EPA to reconsider the delisting rule. Numerous environmental and public-health advocates have also challenged the two rules as have four national public health groups, several Native American Tribes, and the city of Baltimore.[76] Seven states have already adopted mercury emissions regulations more stringent than the new federal standard.[77]

Appendix A: Text of The 2006 Illinois Fish Consumption Advisory for Methylmercury[78]

In order to protect the most sensitive populations, pregnant or nursing women, women of childbearing age, and children less than 15 yeas of age are advised to eat no more than one meal per week of predator fish. This advisory is based on recent studies of families in several countries that eat many meals of fish having various amounts of methylmercury, along with the most recent mercury data from predator fish at sample points throughout the state. Predator fish include all species of black bass (largemouth, smallmouth, and spotted), striped bass, white bass, hybrid striped bass, walleye, sauger, saugeye, flathead catfish, muskellunge, and northern pike. Since women beyond childbearing age and males over 15 years of age are at less risk for the effect of methylmercury, these groups may continue to enjoy as many meals of predator fish as they please, except as noted below.

A few bodies of water have been found to have fish with higher levels of methylmercury than in water from the rest of the state. These waters require more restrictive meal advice than the general advice given above. The special advice is listed in the following table.

Meal Advice for Eating Sport Fish from Illinois Waters

- Measure the fish from the tip of the nose to the tip of the tail.
- One meal a week (52 meals per year), one meal a month (12 meals per year) and one meal every two months (six meals per year) is advice for how long to wait before eating your next meal of sport fish.
- Do not eat means no one should eat those fish because of very high concentration. (Note that the amount of contamination in a fish listed in the “One meal a month” group is four times higher than the amount of contamination in a fish listed in the “One meal a week” group.)
- One “Meal” is assumed to be one-half pound of fish (weighed before cooking) for a 150-pound person. The meal advice is equally protective for larger people who eat larger meals and smaller people who eat smaller meals.
- Follow cooking and cleaning directions given above to prepare fish [see the *Illinois Fishing Information 2006* booklet available at http://dnr.state.il.us].

SPECIAL MERCURY ADVISORY

Due to levels of mercury greater than what has been found in most predator fish in Illinois, the following bodies of water require more restrictive consumption advice.

		Advice for	
Water	**Fish Species**	**women beyond childbearing age, males more than 15 years old**	**pregnant or nursing women, women of childbearing age, children less than 15 years old**
Ohio River	Largemouth Bass (all sizes)	1 meal/week	1 meal/month
Rock River (Rockford to Milan Steel Dam)	Flathead Cafish (larger than 29")	1 meal/week	1 meal/month
Arrowhead Lake (Cook County)	Largemouth Bass (all sizes)	1 meal/week	1 meal/month
Campus Lake (Southern Illinois University)	Largemouth Bass (all sizes)	1 meal/week	1 meal/month
Cedar Lake (Jackson County)	Largemouth Bass (larger than 12") White Crappie (all sizes)	1 meal/week unlimited	1 meal/month 1 meal/week

Water	Fish Species	Advice for women beyond childbearing age, males more than 15 years old	Advice for pregnant or nursing women, women of childbearing age, children less than 15 years old
Devil's Kitchen (Williamson County)	Largemouth Lake Bass (all sizes) Black Crappie (all sizes)	1 meal/week 1 meal/week	1 meal/month 1 meal/month
Kinkaid Lake (Jackson County)	Largemouth Bass (all sizes) Walleye (all sizes) White Crappie (all sizes)	1 meal/week 1 meal/week unlimited	1 meal/month 1 meal/month 1 meal/week
Lake Bracken (Knox County)	Largemouth Bass (larger than 17")	1 meal/week	1 meal/month
Lake in the Hills (McHenry County)	Largemouth Bass (larger than 15")	1 meal/week	1 meal/month
Little Grassy Lake (Williamson County)	Largemouth Bass (all sizes) White & Black Crappie (all sizes)	1 meal/week unlimited	1 meal/month 1 meal/week
Little Wabash River & Tributaries	Carp (all sizes) Largemouth Bass (all sizes) Spotted Bass (all sizes) White Crappie (all sizes)	1 meal/week 1 meal/week 1 meal/week unlimited	1 meal/month 1 meal/month 1 meal/month 1 meal/week
Marquette Park Lagoon (Cook County)	Largemouth Bass (all sizes)	1 meal/week	1 meal/month
Midlothian Reservoir (Cook County)	Largemouth Bass (larger than 14")	1 meal/week	1 meal/month
Monee Reservoir (Will County)	Largemouth Bass (all sizes)	1 meal/week	1 meal/month
Wabash River	Sauger (larger than 12")	1 meal/week	1 meal/month

Appendix B: Illinois EPA's Fish Consumption Advisory Criteria For Methylmercury

Table E. IEPA's Fish Consumption Advisory Criteria for Mercury[79]

Consumption Frequency	Mercury Concentration Range for Sensitive Populations (ppm)	Mercury Concentration Range for Everyone Else (ppm)
Unrestricted Consumption	0-0.05	0-0.15
One Meal a Week (52 meals/year)	0.06-0.22	0.16-0.65
One Meal a Month (12 meals/year)	0.23-0.95	>.66-2.8
One Meal every Two Months (6 meals/year)	.96-1.9	2.9-5.6
No Consumption (Do Not Eat)	>1.90	>5.6

Appendix C: Data—Illinois Fish Contaminant Monitoring Program composite samples (1985 to 2004)

Notes on the IFCMP database

- There are two species of crappie, white and black, in Illinois. Several crappie samples in the IFCMP database were not identified as being white or black. In this chart, they are labeled "Crappie (unspecified)." For this report's analysis of average mercury concentrations by species, these samples were averaged separately from the samples indicated to be either white or black crappie.
- For 17 fish samples from Lake Michigan, the IFCMP database did not distinguish between fish caught in Cook and Lake Counties. In this chart, the county field for these entries says "Cook/Lake". For this report's analysis of average mercury concentrations by county, these samples were averaged separately from the samples indicated to be from either Cook or Lake County.
- Six fish samples in IEPA's database had no number of individuals in sample recorded, and are identified in this chart with a "-" in that field. In this report, fish samples without a recorded number of individuals were included for the purpose of calculating average mercury concentrations, but were excluded from the count of total number of fish tested.
- An X in the "Mercury Detection Level" column indicates a mercury concentration beneath IEPA's detection level of 0.10 ppm. IEPA's relatively high mercury detection level presents the problem that there are some concentrations of mercury above safe limits which are still too low for IEPA to measure accurately. For fish samples with mercury concentrations below its detection level, the agency assumes a concentration of 0.05 ppm for the purposes of averaging, and the same assumption was made in this report.

  IEPA says the assumption of 0.05 ppm is grounded in analyses of past fish tissue samples with mercury concentration less than 0.10 ppm. When analyzed with more sensitive equipment, these samples contained an average concentration of about 0.05 ppm. The U.S. EPA Lake Fish Tissue Study data included in this report also suggest IEPA's assumption is reasonable. Averaging the mercury concentrations less than 0.10 ppm from the U.S. EPA study, which has a much more sensitive test, yields an average concentration of 0.0456 ppm (~0.50 ppm).

  IEPA's mercury testing equipment was recently upgraded and recertified, and its new mercury detection level is much lower, between 0.01-0.03 ppm. However, the agency currently has a backlog of fish samples awaiting analysis using the recertified equipment and no samples tested with it are included in this report.

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Adams	Mississippi River–Central	Largemouth bass	09/04/91	5	0.08	
Alexander	Mississippi River–South	White bass	08/08/89	5	0.07	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Alexander	Mississippi River–South	White bass	08/24/90	5	0.31	
Bond	Greenville New Lake	Largemouth bass	09/20/99	5	0.10	X
Bond	Patriot's Park Lake (Greenville Old)	Largemouth bass	10/03/01	5	0.44	
Bond	Patriot's Park Lake (Greenville Old)	Largemouth bass	10/03/01	5	0.27	
Boone	Piscasaw Creek	Smallmouth bass	07/24/03	3	0.46	
Brown	Illinois River	Largemouth bass	07/26/89	5	0.03	
Brown	Illinois River	Largemouth bass	08/06/99	5	0.10	X
Brown	Illinois River	White bass	08/06/99	4	0.10	X
Calhoun	Mississippi River–Central	Largemouth bass	08/18/88	4	0.13	
Calhoun	Mississippi River–Central	Largemouth bass	09/10/90	5	0.08	
Calhoun	Mississippi River–South Central	Silver Carp	10/29/04	4	0.02	
Christian	Sangchris Lake	Largemouth bass	10/14/87	4	0.08	
Christian	Sangchris Lake	Largemouth bass	10/12/88	5	0.03	
Christian	Sangchris Lake	Largemouth bass	10/11/90	5	0.10	
Christian	Sangchris Lake	Largemouth bass	10/25/91	4	0.26	
Christian	Taylorville Lake	Largemouth bass	09/05/91	4	0.11	
Christian	Taylorville Lake	Largemouth bass	10/31/03	5	0.10	
Christian	Taylorville Lake	Largemouth bass	11/04/04	5	0.06	
Clark	Wabash River	Sauger	06/07/02	2	0.11	
Clark	Wabash River	Sauger	05/18/04	3	0.17	
Clark	Wabash River	Spotted bass	06/09/04	3	0.23	
Clark	Wabash River	White bass	06/07/02	3	0.26	
Clark	Wabash River	White bass	05/18/04	3	0.34	
Clark	Wabash River	White bass	05/18/04	3	0.19	
Clay	Big Muddy Creek	Carp	07/26/89	2	0.05	
Clay	Big Muddy Creek	Largemouth bass	07/26/89	1	0.81	
Clay	Little Muddy Creek	Spotted bass	07/27/89	3	0.28	
Clay	Little Muddy River	Carp	08/05/02	4	0.18	
Clay	Little Wabash River	Carp	07/26/89	4	0.01	X
Clay	Little Wabash River	Carp	07/31/02	4	0.44	
Clay	Little Wabash River	White crappie	07/26/89	3	0.18	
Clay	Little Wabash River	White crappie	07/26/89	3	0.10	
Clay	Raccoon Creek	Largemouth bass	08/02/89	2	0.42	
Clinton	Carlyle Lake	Flathead catfish	09/22/04	2	0.10	
Clinton	Carlyle Lake	Flathead catfish	09/22/04	3	0.09	
Clinton	Carlyle Lake	Flathead catfish	09/22/04	3	0.08	
Clinton	Carlyle Lake	Flathead catfish	09/22/04	1	0.07	
Clinton	Carlyle Lake	Largemouth bass	09/25/85	5	0.21	
Clinton	Carlyle Lake	Largemouth bass	09/25/86	5	0.04	
Clinton	Carlyle Lake	Largemouth bass	09/25/87	5	0.11	
Clinton	Carlyle Lake	Largemouth bass	09/28/88	5	0.08	
Clinton	Carlyle Lake	Largemouth bass	09/27/89	5	0.01	X
Clinton	Carlyle Lake	Largemouth bass	09/26/90	5	0.01	
Clinton	Carlyle Lake	Largemouth bass	09/26/01	5	0.10	X
Clinton	Carlyle Lake	Largemouth bass	10/17/01	5	0.16	
Clinton	Carlyle Lake	Largemouth bass	09/22/04	5	0.08	
Clinton	Carlyle Lake	Largemouth bass	09/22/04	5	0.06	
Clinton	Carlyle Lake	White crappie	10/17/01	5	0.10	X
Clinton	Carlyle Lake	White crappie	09/22/04	5	0.03	
Coles	Paradise Lake	Largemouth bass	07/23/91	5	0.10	
Coles	Paradise Lake	Largemouth bass	09/27/00	4	0.17	
Coles	Paradise Lake	Largemouth bass	09/27/00	4	0.10	X
Cook	Arrowhead Lake	Largemouth bass	09/10/98	5	0.10	X
Cook	Arrowhead Lake	Largemouth bass	07/27/99	3	0.27	
Cook	Arrowhead Lake	Largemouth bass	07/27/99	3	0.27	
Cook	Arrowhead Lake	Largemouth bass	08/08/02	5	0.28	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Cook	Busse Reservoir	Largemouth bass	08/24/99	4	0.13	
Cook	Busse Reservoir	Largemouth bass	08/24/99	3	0.10	X
Cook	Busse Reservoir	Largemouth bass	06/23/00	3	0.10	X
Cook	Busse Reservoir	Largemouth bass	06/23/00	3	0.10	X
Cook	Calumet Lake	Largemouth bass	07/18/90	5	0.04	
Cook	Calumet Lake	Largemouth bass	07/18/90	5	0.04	
Cook	Calumet Lake	Largemouth bass	10/11/99	6	0.13	
Cook	Calumet Lake	Largemouth bass	10/11/99	-	0.13	
Cook	Calumet Lake	Largemouth bass	08/25/00	5	0.10	X
Cook	Calumet Lake	Largemouth bass	08/25/00	6	0.10	X
Cook	Calumet Lake	Largemouth bass	09/06/02	3	0.10	X
Cook	Calumet Lake	Largemouth bass	09/06/02	3	0.10	X
Cook	Calumet River	Bluegill	06/15/99	5	0.10	X
Cook	Calumet River	Bluegill	06/07/00	5	0.10	X
Cook	Calumet River	Carp	05/03/99	5	0.16	
Cook	Calumet River	Carp	05/03/99	3	0.10	X
Cook	Calumet River	Largemouth bass	07/10/91	5	0.06	
Cook	Calumet River	Largemouth bass	07/09/99	5	0.10	X
Cook	Calumet River	Largemouth bass	06/07/00	5	0.10	X
Cook	Calumet River	Largemouth bass	06/07/00	5	0.10	X
Cook	Calumet River	Rock bass	06/15/99	3	0.10	X
Cook	Calumet River	Rock bass	06/07/00	4	0.10	X
Cook	Calumet River	Smallmouth bass	06/08/00	5	0.10	X
Cook	Calumet River	Sunfish (green)	06/07/00	5	0.10	X
Cook	Calumet River	Sunfish (pumpkinseed)	06/15/99	5	0.10	X
Cook	Calumet Sag Channel	Carp	05/26/99	4	0.10	X
Cook	Calumet Sag Channel	Carp	05/26/99	5	0.10	X
Cook	Calumet Sag Channel	Carp	06/16/00	5	0.10	X
Cook	Calumet Sag Channel	Carp	06/16/00	5	0.10	X
Cook	Calumet Sag Channel	Channel catfish	05/26/99	3	0.10	X
Cook	Calumet Sag Channel	Channel catfish	07/14/99	3	0.10	X
Cook	Calumet Sag Channel	Channel catfish	08/03/00	5	0.10	X
Cook	Calumet Sag Channel	Largemouth bass	05/26/99	3	0.10	
Cook	Calumet Sag Channel	Largemouth bass	06/16/00	5	0.10	X
Cook	Calumet Sag Channel	Yellow bass	07/12/99	5	0.10	X
Cook	Calumet Sag Channel	Yellow bass	07/14/99	3	0.10	X
Cook	Calumet Sag Channel	Yellow bass	06/16/00	4	0.10	X
Cook	Calumet Sag Channel	Yellow bass	06/16/00	6	0.10	X
Cook	Chicago River	Bluegill	08/09/99	5	0.01	X
Cook	Chicago River	Carp	07/22/99	5	0.11	X
Cook	Chicago River	Carp	07/22/99	5	0.10	X
Cook	Chicago River	Carp	08/10/00	5	0.10	X
Cook	Chicago River	Carp	08/29/00	5	0.10	X
Cook	Chicago River	Largemouth bass	07/22/99	4	0.20	X
Cook	Chicago River	Largemouth bass	07/22/99	4	0.15	X
Cook	Chicago River	Largemouth bass	08/10/00	4	0.17	
Cook	Chicago River	Largemouth bass	08/11/00	5	0.10	X
Cook	Chicago River	Rock Bass	07/22/99	4	0.10	X
Cook	Chicago River	Rock bass	07/22/99	4	0.10	X
Cook	Chicago River–North Branch	Bluegill	08/13/99	6	0.10	X
Cook	Chicago River–North Branch	Bluegill	08/13/99	6	0.10	X
Cook	Chicago River–North Branch	Bluegill	09/01/00	5	0.10	X
Cook	Chicago River–North Branch	Bluegill	09/01/00	5	0.10	X
Cook	Chicago River–North Branch	Carp	08/06/99	3	0.10	X
Cook	Chicago River–North Branch	Carp	08/06/99	5	0.10	X
Cook	Chicago River–North Branch	Carp	08/29/00	4	0.10	X

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Cook	Chicago River–North Branch	Carp	08/29/00	4	0.10	X
Cook	Chicago River–North Branch	Green sunfish	08/13/99	6	0.10	X
Cook	Chicago River–North Branch	Green sunfish	08/13/99	6	0.10	X
Cook	Chicago River–North Branch	Largemouth bass	08/13/99	6	0.14	
Cook	Chicago River–North Branch	Largemouth bass	08/13/99	6	0.10	X
Cook	Chicago River–North Branch	Largemouth bass	09/01/00	5	0.10	X
Cook	Chicago River–North Branch	Largemouth bass	07/31/01	6	0.10	X
Cook	Chicago River–North Branch	Sunfish (green)	09/01/00	5	0.10	X
Cook	Chicago River–North Branch	Sunfish (green)	09/01/00	5	0.10	X
Cook	Chicago Sanitary & Ship Canal	Carp	05/14/99	5	0.10	X
Cook	Chicago Sanitary & Ship Canal	Carp	05/14/99	5	0.10	X
Cook	Chicago Sanitary & Ship Canal	Carp	08/01/00	5	0.10	X
Cook	Chicago Sanitary & Ship Canal	Carp	08/04/00	5	0.10	X
Cook	Chicago Sanitary & Ship Canal	Carp	08/28/00	5	0.10	X
Cook	Chicago Sanitary & Ship Canal	Carp	08/28/00	5	0.10	X
Cook	Chicago Sanitary & Ship Canal	Largemouth bass	05/14/99	5	0.10	X
Cook	Chicago Sanitary & Ship Canal	Largemouth bass	05/21/99	4	0.10	X
Cook	Chicago Sanitary & Ship Canal	Largemouth bass	05/21/99	4	0.10	X
Cook	Chicago Sanitary & Ship Canal	Largemouth bass	08/28/00	4	0.12	
Cook	Des Plaines River	Largemouth bass	08/20/03	3	0.11	
Cook	Des Plaines River	Sauger	08/20/03	5	0.20	
Cook	Flatfoot Lake	Largemouth bass	07/30/99	3	0.10	X
Cook	Flatfoot Lake	Largemouth bass	07/06/00	2	0.10	X
Cook	Flatfoot Lake	Largemouth bass	05/21/02	5	0.10	X
Cook	Humbolt Park Lagoon	Largemouth bass	10/13/88	3	0.16	
Cook	Lake Michigan	Smallmouth bass	05/21/98	5	0.25	
Cook	Lake Michigan	Smallmouth bass	08/18/99	3	0.14	
Cook	Little Calumet River North	Bluegill	06/13/00	6	0.10	X
Cook	Little Calumet River North	Bluegill	06/15/00	6	0.10	X
Cook	Little Calumet River North	Carp	04/21/99	5	0.10	X
Cook	Little Calumet River North	Carp	04/21/99	5	0.10	X
Cook	Little Calumet River North	Carp	06/13/00	5	0.10	X
Cook	Little Calumet River North	Largemouth bass	04/21/99	4	0.10	X
Cook	Little Calumet River North	Largemouth bass	04/21/99	4	0.10	X
Cook	Little Calumet River North	Largemouth bass	06/05/00	5	0.13	
Cook	Little Calumet River North	Largemouth bass	08/27/01	3	0.17	
Cook	Little Calumet River North	Smallmouth bass	06/11/99	3	0.10	X
Cook	Little Calumet River North	Sunfish (pumpkinseed)	06/15/00	6	0.10	X
Cook	Little Calumet River North	Yellow bass	06/11/99	5	0.10	X
Cook	Marquette Park Lagoon	Largemouth bass	10/11/88	5	0.61	
Cook	Marquette Park Lagoon	Largemouth bass	05/04/90	4	0.47	
Cook	Marquette Park Lagoon[a]	Largemouth bass	04/30/91	1	0.31	
Cook	Marquette Park Lagoon[a]	Largemouth bass	04/30/91	1	0.26	
Cook	Marquette Park Lagoon[a]	Largemouth bass	04/30/91	1	0.26	
Cook	Marquette Park Lagoon[a]	Largemouth bass	04/30/91	1	0.25	
Cook	Marquette Park Lagoon[a]	Largemouth bass	04/30/91	1	0.25	
Cook	Marquette Park Lagoon	Largemouth bass	05/08/92	5	0.27	
Cook	Marquette Park Lagoon	Largemouth bass	10/01/02	2	0.26	
Cook	Marquette Park Lagoon	Largemouth bass	10/01/02	3	0.10	X
Cook	McKinley Park Lagoon	Largemouth bass	04/25/91	1	0.46	
Cook	Midlothian Reservoir	Largemouth bass	11/02/98	5	0.23	
Cook	Midlothian Reservoir	Largemouth bass	08/02/99	3	0.24	

[a] The five largemouth bass samples collected at Marquette Park Lagoon on April 30, 1991 contained only one individual fish each, a deviation from normal IFCMP data collection protocol. To avoid giving undo weight to Marquette Park in this report's analysis, these five samples were treated as a single sample of five individuals.

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Cook	Midlothian Reservoir	Largemouth bass	08/02/99	3	0.10	X
Cook	Midlothian Reservoir	Largemouth bass	06/06/01	5	0.20	
Cook	Midlothian Reservoir	Largemouth bass	10/22/02	4	0.11	
Cook	Midlothian Reservoir	Largemouth bass	10/22/02	5	0.10	X
Cook	North Shore Channel	Black crappie	09/01/99	6	0.10	X
Cook	North Shore Channel	Bluegill	09/07/00	4	0.10	X
Cook	North Shore Channel	Bluegill	09/28/00	5	0.10	X
Cook	North Shore Channel	Largemouth bass	08/23/99	-	0.19	
Cook	North Shore Channel	Largemouth bass	09/07/00	5	0.10	X
Cook	North Shore Channel	Largemouth bass	09/07/00	5	0.10	X
Cook	North Shore Channel	Smallmouth bass	08/23/99	-	0.10	X
Cook	North Shore Channel	Sunfish (pumpkinseed)	09/08/00	5	0.10	X
Cook	Saganashkee Slough	Largemouth bass	08/09/99	3	0.10	X
Cook	Saganashkee Slough	Largemouth bass	05/23/00	3	0.10	X
Cook	Saganashkee Slough	Largemouth bass	05/23/00	3	0.10	X
Cook	Salt Creek	Smallmouth bass	06/18/02	5	0.25	
Cook	Schiller Pond	Largemouth bass	11/05/98	4	0.11	
Cook	Schiller Pond	Largemouth bass	08/11/99	3	0.15	
Cook	Schiller Pond	Largemouth bass	07/05/00	3	0.11	
Cook	Sedgwick Lake	Largemouth bass	08/08/00	4	0.14	
Cook	Sherman Park Lagoon	Largemouth bass	10/07/88	5	1.40	
Cook	Sherman Park Lagoon	Largemouth bass	04/25/90	-	0.10	
Cook	Sherman Park Lagoon	Largemouth bass	10/01/02	5	0.13	
Cook	Sherman Park Lagoon	Largemouth bass	10/01/02	5	0.10	X
Cook	Skokie Lagoons	Largemouth bass	10/04/00	2	0.16	
Cook	Skokie Lagoons	Largemouth bass	10/04/00	3	0.16	
Cook	Skokie Lagoons	Largemouth bass	05/30/02	5	0.18	
Cook	Tampier Lake	Largemouth bass	06/08/00	3	0.10	X
Cook	Tampier Lake	Largemouth bass	06/08/00	4	0.10	X
Cook	Wolf Lake	Largemouth bass	08/11/00	5	0.10	X
Cook	Wolf Lake	Largemouth bass	08/11/00	5	0.10	X
Cook	Wolf Lake	Largemouth bass	06/12/02	4	0.14	
Cook	Wolf Lake	Largemouth bass	10/09/02	4	0.10	X
Cook/Lake	Lake Michigan	Brown trout	09/29/98	5	0.11	
Cook/Lake	Lake Michigan	Brown trout	10/20/98	5	0.11	
Cook/Lake	Lake Michigan	Brown trout	10/29/98	5	0.27	
Cook/Lake	Lake Michigan	Chinook salmon	09/24/98	5	0.10	
Cook/Lake	Lake Michigan	Chinook salmon	09/29/98	5	0.25	
Cook/Lake	Lake Michigan	Chinook salmon	09/29/98	5	0.13	
Cook/Lake	Lake Michigan	Chinook salmon	10/08/98	5	0.14	
Cook/Lake	Lake Michigan	Coho salmon	09/15/98	5	0.10	X
Cook/Lake	Lake Michigan	Coho salmon	09/29/98	5	0.11	
Cook/Lake	Lake Michigan	Coho salmon	10/20/98	1	0.16	
Cook/Lake	Lake Michigan	Coho salmon	11/13/98	1	0.12	
Cook/Lake	Lake Michigan	Rainbow trout	09/24/98	5	0.15	
Cook/Lake	Lake Michigan	Rainbow trout	10/27/98	5	0.10	X
Cook/Lake	Lake Michigan	Smallmouth bass	07/16/98	2	0.26	
Cook/Lake	Lake Michigan	Smallmouth bass	05/15/00	3	0.11	
Cook/Lake	Lake Michigan	Smallmouth bass	05/15/00	2	0.10	X
Cook/Lake	Lake Michigan	Smallmouth bass	06/20/00	2	0.10	X
Cumberland	Mattoon Lake	Largemouth bass	07/23/91	5	0.21	
Cumberland	Mattoon Lake	Largemouth bass	09/27/00	4	0.10	X
Cumberland	Mattoon Lake	Largemouth bass	09/27/00	4	0.10	X
DeWitt	Clinton Lake	Largemouth bass	09/26/88	5	0.13	
DeWitt	Clinton Lake	Largemouth bass	09/26/90	5	0.05	
DeWitt	Clinton Lake	Largemouth bass	09/28/93	5	0.10	X

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
DeWitt	Clinton Lake	Walleye	09/28/93	3	0.10	X
DeWitt	Clinton Lake	White crappie	09/28/93	5	0.10	X
Douglas	Lake Fork Creek	Carp	07/08/02	5	0.10	
DuPage	Churchill Lagoon	Largemouth bass	10/16/02	5	0.10	X
DuPage	DuPage River	Carp	07/24/02	3	0.10	X
DuPage	Salt Creek	Black crappie	10/11/00	5	0.10	X
DuPage	Salt Creek	Black crappie	09/25/02	5	0.14	
DuPage	Salt Creek	Black crappie	10/01/03	5	0.11	
DuPage	Salt Creek	Largemouth bass	10/11/00	4	0.11	
DuPage	Salt Creek	Largemouth bass	09/25/02	3	0.16	
DuPage	Salt Creek	Largemouth bass	09/25/02	3	0.10	X
DuPage	Salt Creek	Largemouth bass	10/01/03	5	0.17	
DuPage	Salt Creek	Walleye	10/01/03	5	0.20	
Edgar	Paris Twin Lake East	Largemouth bass	08/09/90	4	0.06	
Edgar	Paris Twin Lake West	Largemouth bass	08/09/90	5	0.09	
Edwards	Little Wabash River	Smallmouth buffalo	08/12/02	4	0.31	
Effingham	Little Wabash River	Carp	07/30/02	4	0.24	
Effingham	Little Wabash River	Carp	07/30/02	5	0.15	
Effingham	Little Wabash River	Largemouth bass	07/24/89	2	0.23	
Effingham	Little Wabash River	Smallmouth buffalo	07/30/02	3	0.29	
Effingham	Little Wabash River	Spotted bass	07/24/89	1	0.33	
Effingham	Little Wabash River	Spotted bass	07/24/89	4	0.29	
Effingham	Little Wabash River	Spotted bass	07/25/89	2	0.40	
Effingham	Little Wabash River	Spotted bass	07/26/89	6	0.33	
Effingham	Little Wabash River	White crappie	07/30/02	3	0.21	
Effingham	Sara Lake	Largemouth bass	05/03/04	5	0.15	
Fayette	Kaskaskia River	Carp	07/20/89	5	0.18	
Fayette	Kaskaskia River	Channel catfish	07/20/89	5	0.05	
Fayette	Kaskaskia River	Smallmouth buffalo	08/04/89	5	0.14	
Fayette	Kaskaskia River	Walleye	07/22/86	2	0.13	
Fayette	Vandalia Lake	Largemouth bass	05/05/04	5	0.07	
Franklin	Big Muddy River	Carp	08/17/88	5	0.21	
Franklin	Big Muddy River	Carp	08/17/88	5	0.19	
Franklin	Big Muddy River	Carp	08/21/02	5	0.29	
Franklin	Big Muddy River	Channel catfish	08/17/88	4	0.10	
Franklin	Rend Lake	Largemouth bass	10/03/01	5	0.10	X
Fulton	Anderson Lake	Crappie (unspecified)	05/29/03	5	0.10	X
Fulton	Anderson Lake	Largemouth bass	05/29/03	3	0.10	X
Gallatin	Ohio River	Largemouth bass	07/29/93	2	0.13	
Gallatin	Ohio River	Largemouth bass	07/21/97	4	0.34	
Gallatin	Ohio River	White crappie	05/23/00	4	0.10	X
Gallatin	Saline River-North Fork	Largemouth bass	08/14/00	3	0.10	X
Grundy	Dresden Power Plant Lake	Smallmouth bass	10/12/89	5	0.11	
Grundy	Dresden Power Plant Lake	Smallmouth bass	08/14/97	5	0.42	
Grundy	Dresden Power Plant Lake	Smallmouth bass	08/14/97	5	0.10	X
Grundy	Heidecke Lake	Largemouth bass	08/14/03	5	0.18	
Grundy	Heidecke Lake	Smallmouth bass	09/26/03	5	0.26	
Grundy	Heidecke Lake	Walleye	09/13/91	4	0.19	
Henry	Johnson Sauk Trail Lake	Largemouth bass	09/29/03	4	0.37	
Henry	Johnson Sauk Trail Lake	Largemouth bass	09/29/03	3	0.11	
Iroquois	Iroquois River	Smallmouth bass	08/16/00	3	0.10	X
Jackson	Big Muddy River	Carp	08/16/88	5	0.18	
Jackson	Big Muddy River	Carp	08/18/88	5	0.19	
Jackson	Big Muddy River	Carp	09/26/90	5	0.02	
Jackson	Big Muddy River	Carp	08/22/02	5	0.43	
Jackson	Big Muddy River	Carp	08/22/02	5	0.23	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Jackson	Big Muddy River	Channel catfish	08/16/88	5	0.09	
Jackson	Big Muddy River	Channel catfish	08/18/88	5	0.10	
Jackson	Big Muddy River	Channel catfish	09/26/90	5	0.01	X
Jackson	Big Muddy River	Channel catfish	08/22/02	3	0.12	
Jackson	Big Muddy River	White crappie	09/26/90	5	0.15	
Jackson	Campus Lake	Largemouth bass	07/09/97	5	0.08	
Jackson	Campus Lake	Largemouth bass	07/15/99	5	0.18	
Jackson	Campus Lake	Largemouth bass	06/20/00	5	0.30	
Jackson	Campus Lake	Largemouth bass	05/21/01	5	0.21	
Jackson	Carbondale Lake	Largemouth bass	06/02/04	4	0.29	
Jackson	Carbondale Lake	Largemouth bass	06/02/04	4	0.15	
Jackson	Carbondale Lake	White crappie	06/02/04	5	0.09	
Jackson	Cedar Lake	Largemouth bass	05/17/85	5	0.52	
Jackson	Cedar Lake	Largemouth bass	05/23/86	5	0.95	
Jackson	Cedar Lake	Largemouth bass	05/20/87	5	0.62	
Jackson	Cedar Lake	Largemouth bass	05/24/88	5	0.17	
Jackson	Cedar Lake	Largemouth bass	05/10/89	5	0.61	
Jackson	Cedar Lake	Largemouth bass	05/22/90	5	0.47	
Jackson	Cedar Lake	Largemouth bass	05/14/91	5	0.73	
Jackson	Cedar Lake	Largemouth bass	06/01/92	5	0.50	
Jackson	Cedar Lake	Largemouth bass	07/01/97	5	0.33	
Jackson	Cedar Lake	Largemouth bass	07/01/97	5	0.20	
Jackson	Cedar Lake	Largemouth bass	07/31/98	5	0.75	
Jackson	Cedar Lake	Largemouth bass	07/31/98	5	0.34	
Jackson	Cedar Lake	Largemouth bass	05/12/99	5	0.38	
Jackson	Cedar Lake	Largemouth bass	05/14/04	3	0.45	
Jackson	Cedar Lake	Largemouth bass	05/14/04	5	0.21	
Jackson	Cedar Lake	Largemouth bass	05/14/04	5	0.14	
Jackson	Cedar Lake	White crappie	05/12/99	5	0.13	
Jackson	Cedar Lake	White crappie	05/14/04	5	0.16	
Jackson	Kinkaid Lake	Largemouth bass	05/11/88	5	0.14	
Jackson	Kinkaid Lake	Largemouth bass	05/10/89	5	1.07	
Jackson	Kinkaid Lake	Largemouth bass	05/18/90	5	0.25	
Jackson	Kinkaid Lake	Largemouth bass	05/21/91	5	0.53	
Jackson	Kinkaid Lake	Largemouth bass	05/20/92	5	0.39	
Jackson	Kinkaid Lake	Largemouth bass	07/01/97	5	0.32	
Jackson	Kinkaid Lake	Largemouth bass	07/28/98	5	0.85	
Jackson	Kinkaid Lake	Largemouth bass	05/11/99	5	0.71	
Jackson	Kinkaid Lake	Largemouth bass	05/15/03	3	0.63	
Jackson	Kinkaid Lake	Walleye	05/11/99	5	0.46	
Jackson	Kinkaid Lake	Walleye	04/04/02	5	0.26	
Jackson	Kinkaid Lake	Walleye	03/21/03	3	0.26	
Jackson	Kinkaid Lake	White bass	03/21/03	3	0.52	
Jackson	Kinkaid Lake	White crappie	05/11/99	5	0.15	
Jackson	Kinkaid Lake	White crappie	03/18/03	5	0.11	
Jackson	Little Muddy River	White crappie	07/17/03	3	0.35	
Jasper	Newton Lake	Largemouth bass	05/05/03	5	0.27	
Jasper	Newton Lake	Largemouth bass	05/05/03	5	0.12	
Jasper	Sam Parr Lake	Largemouth bass	07/12/04	5	0.43	
Jasper	Sam Parr Lake	Largemouth bass	07/12/04	5	0.42	
Jasper	Sam Parr Lake	White crappie	07/12/04	5	0.16	
Jefferson	Big Muddy River	Carp	08/15/88	5	0.09	
Jefferson	Big Muddy River	Carp	08/21/02	5	0.24	
Jefferson	Big Muddy River	Spotted bass	09/22/00	4	0.10	X
Jefferson	Casey Fork	White crappie	07/24/90	4	0.05	
Jefferson	Rend Lake	Largemouth bass	10/29/85	5	0.17	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Jefferson	Rend Lake	Largemouth bass	10/01/86	5	0.13	
Jefferson	Rend Lake	Largemouth bass	09/30/87	5	0.07	
Jefferson	Rend Lake	Largemouth bass	10/04/88	5	0.01	X
Jersey	Illinois River	Largemouth bass	08/29/85	5	0.13	
Jersey	Illinois River	Largemouth bass	07/28/87	5	0.09	
Jersey	Illinois River	Largemouth bass	07/11/89	5	0.19	
Jersey	Illinois River	Largemouth bass	08/19/91	5	0.33	
Jersey	Illinois River	Largemouth bass	07/29/99	5	0.23	
Jersey	Illinois River	Largemouth bass	07/29/99	5	0.10	X
Jersey	Illinois River	Largemouth bass	07/27/00	5	0.10	X
Jersey	Illinois River	Largemouth bass	07/27/00	5	0.10	X
Jersey	Illinois River	White bass	07/27/00	5	0.13	
Jersey	Otter Creek	Largemouth bass	07/19/01	4	0.18	
Jo Daviess	Apple River	Smallmouth bass	07/20/00	4	0.10	X
Kane	Fox River	Freshwater drum	07/15/02	5	0.44	
Kankakee	Kankakee River	Largemouth bass	07/09/90	2	0.15	
Kankakee	Kankakee River	Smallmouth bass	06/28/88	4	0.17	
Kankakee	Kankakee River	Smallmouth bass	07/11/88	3	0.14	
Kankakee	Kankakee River	Smallmouth bass	07/10/90	5	0.04	
Kankakee	Kankakee River	Smallmouth bass	07/10/90	5	0.03	
Kankakee	Kankakee River	Smallmouth bass	07/26/00	4	0.28	
Kendall	Fox River	Smallmouth bass	07/07/88	5	0.11	
Kendall	Fox River	Smallmouth bass	07/02/90	5	0.20	
Kendall	Fox River	Smallmouth bass	08/16/91	5	0.12	
Knox	Bracken Lake	Bluegill	08/14/97	5	0.12	
Knox	Bracken Lake	Channel catfish	08/14/97	5	0.21	
Knox	Bracken Lake	Crappie (unspecified)	08/14/97	5	0.13	
Knox	Bracken Lake	Largemouth bass	08/14/97	5	0.25	
Knox	Bracken Lake	Largemouth bass	08/14/97	5	0.13	
Knox	Bracken Lake	Largemouth bass	07/01/99	2	0.39	
Knox	Bracken Lake	Largemouth bass	07/01/99	5	0.11	
Knox	Bracken Lake	Largemouth bass	08/24/00	5	0.10	X
Knox	Bracken Lake	Largemouth bass	06/28/01	3	0.20	
Knox	Bracken Lake	Largemouth bass	06/28/01	5	0.13	
Knox	Bracken Lake	Largemouth bass	06/26/03	3	0.49	
Knox	Bracken Lake	Largemouth bass	06/26/03	5	0.20	
Knox	Bracken Lake	White crappie	08/24/00	5	0.10	X
Lake	Catherine Lake	Walleye	04/02/90	5	0.02	
Lake	Catherine Lake	Walleye	03/30/91	5	0.14	
Lake	Catherine Lake	Walleye	04/06/91	5	0.10	
Lake	Catherine Lake	Walleye	04/26/93	5	0.10	X
Lake	Channel Lake	Black crappie	09/23/99	4	0.10	X
Lake	Channel Lake	Black crappie	07/07/00	4	0.10	X
Lake	Channel Lake	Largemouth bass	08/16/91	5	0.23	
Lake	Channel Lake	Largemouth bass	09/23/99	4	0.34	
Lake	Channel Lake	Largemouth bass	09/23/99	5	0.21	
Lake	Channel Lake	Largemouth bass	07/07/00	4	0.16	
Lake	Channel Lake	Largemouth bass	09/26/00	4	0.24	
Lake	Channel Lake	Largemouth bass	09/10/01	5	0.17	
Lake	Channel Lake	Walleye	09/17/99	3	0.24	
Lake	Channel Lake	Walleye	09/23/99	5	0.18	
Lake	Channel Lake	Walleye	07/07/00	5	0.20	
Lake	Des Plaines River	Largemouth bass	07/07/99	3	0.12	
Lake	Des Plaines River	Largemouth bass	08/10/00	3	0.15	
Lake	Fox Lake	Black crappie	08/11/00	3	0.10	X
Lake	Fox Lake	Crappie (unspecified)	04/15/99	5	0.10	X

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Lake	Fox Lake	Largemouth bass	08/21/90	5	0.15	
Lake	Fox Lake	Largemouth bass	09/14/99	3	0.10	X
Lake	Fox Lake	Largemouth bass	09/14/99	4	0.10	X
Lake	Fox Lake	Largemouth bass	09/12/01	3	0.10	X
Lake	Fox Lake	Walleye	04/12/99	3	0.54	
Lake	Fox Lake	Walleye	04/12/99	5	0.10	X
Lake	Fox Lake	Walleye	08/11/00	4	0.10	X
Lake	Fox Lake	Walleye	09/12/01	3	0.10	X
Lake	Grass Lake	Black crappie	09/11/01	3	0.10	X
Lake	Grass Lake	Largemouth bass	05/02/00	3	0.10	X
Lake	Grass Lake	Largemouth bass	05/15/00	3	0.10	X
Lake	Grass Lake	Walleye	09/15/00	3	0.10	X
Lake	Grass Lake	Walleye	10/30/01	3	0.10	X
Lake	Lake Michigan	Lake trout	08/07/91	5	0.24	
Lake	Lake Michigan	Largemouth bass	07/16/96	3	0.10	X
Lake	Lake Michigan	Largemouth bass	07/08/98	5	0.30	
Lake	Lake Michigan	Largemouth bass	08/06/99	1	0.40	
Lake	Lake Michigan	Largemouth bass	08/06/99	1	0.36	
Lake	Lake Michigan	Largemouth bass	08/06/99	2	0.10	X
Lake	Marie Lake	Black crappie	10/19/00	4	0.12	
Lake	Marie Lake	Largemouth bass	05/31/00	3	0.11	
Lake	Marie Lake	Largemouth bass	09/27/00	5	0.10	X
Lake	Marie Lake	Largemouth bass	10/29/01	3	0.22	
Lake	Marie Lake	Largemouth bass	10/29/01	4	0.10	X
Lake	Marie Lake	Walleye	04/01/98	5	0.10	X
Lake	Marie Lake	Walleye	09/27/00	5	0.10	X
Lake	Marie Lake	Walleye	09/11/01	4	0.17	
LaSalle	Fox River	Smallmouth bass	07/03/90	3	0.07	
LaSalle	Fox River	Walleye	07/03/90	3	0.12	
LaSalle	Fox River	White bass	07/05/88	2	0.13	
LaSalle	Illinois River	Largemouth bass	07/09/91	5	0.14	
LaSalle	Illinois River	Largemouth bass	10/12/99	5	0.10	X
LaSalle	Illinois River	Largemouth bass	08/11/00	3	0.10	X
LaSalle	Illinois River	Smallmouth bass	07/11/89	5	0.17	
LaSalle	Illinois River	Smallmouth bass	08/18/98	4	0.12	
LaSalle	Illinois River	Smallmouth bass	07/08/99	5	0.14	
LaSalle	Illinois River	Smallmouth bass	10/09/01	4	0.10	
LaSalle	Illinois River	Walleye	10/11/00	3	0.12	
LaSalle	Illinois River	Walleye	10/09/01	5	0.12	
LaSalle	Illinois River	White bass	07/11/89	5	0.11	
LaSalle	Illinois River	White bass	07/09/97	3	0.17	
LaSalle	Illinois River	White bass	07/11/97	5	0.10	X
LaSalle	Illinois River	White bass	08/18/98	4	0.10	
LaSalle	Illinois River	White bass	08/20/98	5	0.11	
LaSalle	Illinois River	White bass	08/11/00	4	0.10	X
LaSalle	Vermilion River	White bass	09/19/90	4	0.08	
Lee	Mississippi River–Central	Largemouth bass	09/20/90	5	0.01	
Lee	Mississippi River–Central	White bass	09/20/90	5	0.09	
Lee	Rock River	Flathead catfish	01/03/01	3	0.63	
Lee	Rock River	Flathead catfish	06/19/01	3	0.10	X
Lee	Rock River	Flathead catfish	10/03/01	3	0.27	
Lee	Rock River	Largemouth bass	09/07/00	3	0.12	
Lee	Rock River	Smallmouth bass	06/19/01	3	0.10	
Lee	Rock River	Smallmouth bass	06/19/01	3	0.10	X
Lee	Rock River	Smallmouth bass	06/19/01	3	0.10	X
Lee	Rock River	Smallmouth bass	06/19/01	3	0.10	X

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Lee	Rock River	Walleye	10/17/00	3	0.10	X
Lee	Rock River	Walleye	06/19/01	3	0.11	X
Lee	Rock River	Walleye	06/19/01	3	0.10	X
Lee	Rock River	White bass	06/19/01	4	0.10	X
Livingston	Wolf Creek	Largemouth bass	08/01/90	2	0.05	
Macon	Decatur Lake	Largemouth bass	07/13/88	5	0.09	
Macon	Decatur Lake	Largemouth bass	07/14/89	5	0.08	
Macon	Decatur Lake	Largemouth bass	07/19/90	5	0.12	
Macon	Decatur Lake	Largemouth bass	07/29/91	5	0.08	
Macon	Decatur Lake	Largemouth bass	10/20/97	5	0.10	X
Macon	Decatur Lake	White crappie	09/29/97	5	0.10	X
Macon	Sangamon River	Carp	09/26/00	5	0.11	
Macon	Sangamon River	Largemouth bass	06/24/88	5	0.10	X
Macon	Sangamon River	Largemouth bass	08/06/90	5	0.19	
Macon	Sangamon River	Largemouth bass	08/27/03	3	0.15	
Macon	Sangamon River	White crappie	08/27/03	5	0.10	X
Macoupin	Beaver Dam Lake	Largemouth bass	05/10/04	5	0.14	
Macoupin	Bunn Lake	Bluegill	05/20/93	5	0.10	X
Macoupin	Bunn Lake	Largemouth bass	05/20/93	5	0.18	
Macoupin	Mt. Olive New Lake	Largemouth bass	09/10/90	5	0.26	
Macoupin	Mt. Olive New Lake	Largemouth bass	05/15/03	5	0.17	
Macoupin	Mt. Olive Old Lake	Largemouth bass	05/15/03	5	0.26	
Macoupin	Otter Lake	Largemouth bass	09/13/00	5	0.10	X
Macoupin	Staunton City Lake	Largemouth bass	10/12/01	5	0.23	
Macoupin	Staunton City Lake	Largemouth bass	10/12/01	5	0.12	
Madison	Highland-Silver Lake	Largemouth bass	10/08/91	5	0.24	
Madison	Horseshoe Lake	Bluegill	06/03/99	5	0.10	X
Madison	Horseshoe Lake	Largemouth bass	06/03/99	5	0.10	X
Madison	Horseshoe Lake	Largemouth bass	06/03/99	5	0.10	X
Madison	Mississippi River–South Central	Largemouth bass	07/15/97	5	0.08	
Madison	Mississippi River–South Central	White bass	07/21/88	5	0.09	
Madison	Mississippi River–South Central	White bass	09/12/90	2	0.16	
Madison	Pine Lake	Black crappie	04/22/02	3	0.10	X
Madison	Pine Lake	Bluegill	04/22/02	3	0.10	X
Madison	Pine Lake	Largemouth bass	04/22/02	3	0.10	X
Madison	Pine Lake	Largemouth bass	04/22/02	4	0.10	X
Marion	Centralia Lake	Largemouth bass	05/10/04	4	0.17	
Marion	Centralia Lake	Largemouth bass	05/10/04	3	0.14	
Marion	Old Kinmundy Lake	Largemouth bass	05/01/03	5	0.10	X
Marion	Raccoon Lake	Brown bullhead	05/11/04	5	0.02	
Marion	Raccoon Lake	Largemouth bass	04/26/01	5	0.13	
Marion	Raccoon Lake	Largemouth bass	04/26/01	5	0.10	X
Marion	Raccoon Lake	Largemouth bass	05/11/04	3	0.14	
Marion	Raccoon Lake	Largemouth bass	05/11/04	5	0.04	
Marion	Salem Reservoir	Largemouth bass	04/28/04	5	0.09	
Marion	Skillet Fork	Carp	07/16/02	5	0.12	
Marion	Skillet Fork	Largemouth bass	08/19/98	5	0.42	
Marion	Skillet Fork	Smallmouth buffalo	07/16/02	5	0.35	
Marion	Skillet Fork	White crappie	08/09/89	3	0.17	
Marion	Steven A. Forbes Lake	Largemouth bass	09/30/91	5	0.46	
Marshall	Illinois River	Largemouth bass	07/19/89	5	0.06	
Marshall	Illinois River	Largemouth bass	07/08/91	5	0.13	
McHenry	Lake in the Hills	Largemouth bass	07/08/99	5	0.17	
McHenry	Lake in the Hills	Largemouth bass	07/08/99	5	0.13	
McHenry	Lake in the Hills	Largemouth bass	07/17/01	4	0.72	
McHenry	Lake in the Hills	Largemouth bass	07/17/01	5	0.19	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
McHenry	Pistakee Lake	Largemouth bass	10/03/00	3	0.14	
McHenry	Pistakee Lake	Largemouth bass	10/22/01	4	0.17	
McHenry	Pistakee Lake	Walleye	10/03/00	3	0.10	X
McHenry	Pistakee Lake	Walleye	10/22/01	4	0.10	X
Mclean	Bloomington Lake	Largemouth bass	05/26/98	5	0.16	
Mclean	Bloomington Lake	Largemouth bass	05/26/00	5	0.06	
Mercer	Mississippi River–North	Largemouth bass	07/10/97	3	0.10	
Mercer	Mississippi River–North	White crappie	07/10/97	3	0.10	X
Montgomery	Coffeen Lake	Largemouth bass	10/22/90	5	0.08	
Montgomery	Coffeen Lake	Largemouth bass	10/21/91	5	0.09	
Montgomery	Glen Shoals Lake	Largemouth bass	09/12/01	5	0.15	
Montgomery	Glen Shoals Lake	Largemouth bass	09/12/01	5	0.13	
Montgomery	Lou Yaeger Lake	Bluegill	06/15/89	5	0.09	
Montgomery	Lou Yaeger Lake	Largemouth bass	06/15/89	5	0.09	
Montgomery	Lou Yaeger Lake	Largemouth bass	09/23/91	1	0.22	
Montgomery	Lou Yaeger Lake	Largemouth bass	09/16/97	4	0.10	X
Montgomery	Lou Yaeger Lake	Largemouth bass	09/14/98	5	0.22	
Montgomery	Lou Yaeger Lake	Largemouth bass	09/13/99	5	0.18	
Montgomery	Lou Yaeger Lake	Largemouth bass	09/13/99	4	0.10	X
Montgomery	Lou Yaeger Lake	White crappie	09/14/98	5	0.10	
Morgan	Mauvaise Terre Lake	Largemouth bass	09/09/91	5	0.12	
Morgan	Mauvaise Terre Lake	Largemouth bass	05/21/03	5	0.12	
Morgan	Mauvaise Terre Lake	Largemouth bass	05/21/03	5	0.10	X
Morgan	Mauvaise Terre Lake	White crappie	05/21/03	5	0.10	X
Ogle	Rock River	Flathead catfish	06/18/01	3	0.49	
Ogle	Rock River	Flathead catfish	06/18/01	3	0.13	
Ogle	Rock River	Flathead catfish	06/18/01	3	0.10	X
Ogle	Rock River	Flathead catfish	06/18/01	3	0.10	X
Ogle	Rock River	Smallmouth bass	06/07/99	4	0.17	
Ogle	Rock River	Smallmouth bass	06/07/99	5	0.10	X
Ogle	Rock River	Smallmouth bass	10/19/00	3	0.10	X
Ogle	Rock River	Smallmouth bass	06/18/01	3	0.10	X
Ogle	Rock River	Smallmouth bass	06/18/01	5	0.10	X
Ogle	Rock River	Smallmouth bass	06/18/01	5	0.10	X
Ogle	Rock River	Walleye	10/19/00	3	0.12	
Ogle	Rock River	Walleye	06/18/01	3	0.28	
Ogle	Rock River	Walleye	06/18/01	3	0.19	
Peoria	Illinois River	Bighead carp	08/30/04	3	0.02	X
Peoria	Illinois River	Bighead carp	08/30/04	3	0.02	X
Peoria	Illinois River	Crappie (unspecified)	07/14/97	5	0.10	X
Peoria	Illinois River	Largemouth bass	07/14/97	5	0.10	X
Peoria	Illinois River	Largemouth bass	07/13/98	4	0.24	
Peoria	Illinois River	Largemouth bass	07/13/98	4	0.10	
Peoria	Illinois River	Largemouth bass	05/25/00	5	0.10	X
Peoria	Illinois River	Largemouth bass	05/25/00	5	0.10	X
Peoria	Illinois River	White crappie	07/13/98	5	0.10	
Peoria	Illinois River	White crappie	05/25/00	5	0.10	X
Peoria	Kickapoo Creek	Smallmouth bass	06/03/03	3	0.10	
Perry	Pinckneyville Reservoir	Largemouth bass	09/27/90	5	0.13	
Piatt	Sangamon River	White crappie	08/26/03	3	0.10	X
Pike	Illinois River	Largemouth bass	08/05/91	3	0.21	
Pike	Illinois River	Largemouth bass	07/26/00	4	0.10	X
Pike	Illinois River	White bass	07/26/00	4	0.10	X
Pike	Mississippi River–Central	Largemouth bass	08/14/90	5	0.06	
Pike	Pittsfield City Lake	Largemouth bass	10/02/90	5	0.08	
Pope	Lusk Creek	Largemouth bass	08/02/91	3	0.88	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Pope	Ohio River	Largemouth bass	07/11/91	5	0.28	
Pope	Ohio River	Largemouth bass	07/31/97	5	0.46	
Pope	Ohio River	Largemouth bass	07/31/97	5	0.39	
Pulaski	Ohio River	Largemouth bass	07/25/97	3	0.27	
Randolph	Baldwin Lake	Largemouth bass	10/27/03	5	0.10	X
Randolph	Baldwin Lake	Largemouth bass	10/28/03	4	0.10	X
Randolph	Kaskaskia River	Carp	07/18/89	4	0.09	
Randolph	Kaskaskia River	Channel catfish	07/18/89	5	0.04	
Randolph	Kaskaskia River	Largemouth bass	07/18/89	5	0.02	
Randolph	Kaskaskia River	Largemouth bass	08/21/91	5	0.17	
Randolph	Kaskaskia River	Smallmouth buffalo	07/18/89	2	0.03	
Randolph	Mississippi River–South	Largemouth bass	08/09/89	3	0.38	
Randolph	Mississippi River–South Central	White bass	07/12/88	4	0.16	
Richland	Borah Lake	Largemouth bass	07/13/04	5	0.19	
Richland	Borah Lake	Largemouth bass	07/13/04	5	0.14	
Richland	East Fork Lake	Largemouth bass	07/13/04	5	0.28	
Richland	East Fork Lake	Largemouth bass	07/13/04	4	0.21	
Richland	East Fork Lake	White crappie	07/13/04	5	0.03	
Richland	Fox River	Bigmouth buffalo	08/01/02	4	0.57	
Richland	Fox River	Carp	08/06/02	5	0.34	
Richland	Fox River	Channel catfish	07/28/89	1	0.25	
Richland	Fox River	Largemouth bass	07/28/89	4	0.47	
Richland	Fox River	Largemouth bass	09/07/93	3	0.21	
Richland	Little Wabash River	Carp	08/06/02	5	0.21	
Richland	Little Wabash River	Walleye	07/27/89	1	0.06	
Richland	Vernor Lake	Largemouth bass	07/12/04	3	0.30	
Richland	Vernor Lake	Largemouth bass	07/12/04	4	0.10	
Rock Island	Mississippi River–North Central	Largemouth bass	08/08/88	5	0.10	
Rock Island	Mississippi River–North Central	Largemouth bass	08/03/90	4	0.01	
Rock Island	Mississippi River–North	Largemouth bass	07/09/97	3	0.13	
Rock Island	Rock River	White bass	09/03/93	2	0.20	
Rock Island	Rock River	White bass	06/20/01	4	0.21	
Saline	Saline River-North Fork	White crappie	07/17/91	5	0.07	
Sangamon	Springfield Lake	Largemouth bass	09/22/88	5	0.06	
Sangamon	Springfield Lake	Largemouth bass	09/20/89	5	0.02	
Sangamon	Springfield Lake	Largemouth bass	09/19/90	5	0.08	
Sangamon	Springfield Lake	Largemouth bass	11/13/91	5	0.10	X
Sangamon	Springfield Lake	Largemouth bass	11/06/98	5	0.10	
Schuyler	Schuyler-Rushville Lake	Largemouth bass	10/04/90	4	0.19	
Schuyler	Schuyler-Rushville Lake	Largemouth bass	10/23/91	5	0.30	
Shelby	Kaskaskia River	Largemouth bass	07/12/89	4	0.17	
Shelby	Kaskaskia River	Walleye	07/12/89	2	0.03	
Shelby	Little Wabash River	Carp	07/24/89	3	0.05	
Shelby	Little Wabash River	Carp	07/24/89	5	0.01	
Shelby	Little Wabash River	Largemouth bass	07/24/89	3	0.50	
Shelby	Little Wabash River	Spotted bass	07/25/89	4	0.39	
Shelby	Shelbyville Lake	Largemouth bass	09/19/88	5	0.10	
Shelby	Shelbyville Lake	Largemouth bass	09/19/89	5	0.06	
Shelby	Shelbyville Lake	Largemouth bass	09/19/90	5	0.05	
Shelby	Shelbyville Lake	Largemouth bass	09/19/01	5	0.10	X
Shelby	Shelbyville Lake	Walleye	09/19/01	5	0.10	X
Shelby	Shelbyville Lake	White crappie	09/19/01	5	0.10	X
St. Clair	Frank Holten Lake	Largemouth bass	10/12/99	3	0.10	X
St. Clair	Frank Holten Lake	Largemouth bass	10/12/99	4	0.10	X
St. Clair	Kaskaskia River	Channel catfish	08/31/04	4	0.11	
St. Clair	Kaskaskia River	Largemouth bass	07/17/89	5	0.03	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
St. Clair	Kaskaskia River	White bass	08/31/04	4	0.05	
Tazewell	Mackinaw River	White bass	08/25/00	5	0.10	X
Tazewell	Mackinaw River	White bass	08/07/01	5	0.10	X
Tazewell	North Spring Lake	Black crappie	03/18/03	5	0.10	X
Tazewell	North Spring Lake	Largemouth bass	03/18/03	5	0.14	
Tazewell	North Spring Lake	Largemouth bass	03/18/03	5	0.13	
Tazewell	Powerton Lake	Smallmouth bass	05/17/99	5	0.10	X
Tazewell	Powerton Lake	Smallmouth bass	05/17/99	5	0.10	X
Tazewell	Powerton Lake	Smallmouth bass	04/14/00	3	0.10	X
Tazewell	Powerton Lake	Smallmouth bass	04/14/00	5	0.10	X
Tazewell	Powerton Lake	Smallmouth buffalo	05/19/98	5	0.01	
Tazewell	Powerton Lake	Smallmouth buffalo	05/19/98	5	0.01	
Tazewell	Powerton Lake	Smallmouth buffalo	05/19/98	5	0.01	
Tazewell	Powerton Lake	White bass	05/19/98	5	0.01	
Tazewell	Powerton Lake	White bass	04/14/00	5	0.10	X
Tazewell	Powerton Lake	White bass	04/14/00	5	0.10	X
Tazewell	South Spring Lake	Black crappie	03/10/03	5	0.10	X
Tazewell	South Spring Lake	Largemouth bass	03/10/03	5	0.41	
Tazewell	South Spring Lake	Largemouth bass	03/10/03	5	0.10	
Vermilion	Vermilion Lake	Crappie (unspecified)	07/08/98	5	0.10	X
Vermilion	Vermilion Lake	Largemouth bass	05/26/88	5	0.17	
Vermilion	Vermilion Lake	Largemouth bass	05/25/89	5	0.07	
Vermilion	Vermilion Lake	Largemouth bass	06/18/90	5	0.12	
Vermilion	Vermilion Lake	Largemouth bass	05/09/91	5	0.19	
Vermilion	Vermilion Lake	Largemouth bass	07/17/97	5	0.28	
Vermilion	Vermilion Lake	Largemouth bass	07/17/97	5	0.10	X
Vermilion	Vermilion Lake	Largemouth bass	07/08/98	5	0.10	X
Vermilion	Vermilion Lake	Largemouth bass	08/21/00	4	0.19	
Vermilion	Vermilion Lake	Largemouth bass	08/21/00	5	0.10	X
Vermilion	Vermilion Lake	Largemouth bass	10/03/01	3	0.18	
Vermilion	Vermilion Lake	Largemouth bass	10/03/01	5	0.10	X
Vermilion	Vermilion Lake	White crappie	05/25/89	5	0.02	
Vermilion	Vermilion Lake	White crappie	06/18/90	5	0.04	
Vermilion	Vermilion Lake	White crappie	05/09/91	5	0.06	
Vermilion	Vermilion Lake	White crappie	09/29/97	5	0.10	X
Vermilion	Vermilion Lake	White crappie	10/03/01	5	0.10	X
Vermilion	Vermilion River	Smallmouth bass	11/02/01	5	0.10	X
Vermilion	Vermilion River	Spotted bass	09/28/00	4	0.13	
Wabash	Wabash River	Sauger	06/13/02	3	0.55	
Wabash	Wabash River	Sauger	05/26/04	4	0.23	
Wabash	Wabash River	Spotted bass	06/13/02	5	0.17	
Wabash	Wabash River	Spotted bass	05/20/04	5	0.12	
Wabash	Wabash River	White bass	07/01/99	4	0.21	
Wabash	Wabash River	White bass	05/16/00	5	0.27	
Wabash	Wabash River	White bass	05/20/04	5	0.21	
Wabash	Wabash River	White bass	05/20/04	5	0.16	
Warren	Cedar Creek	Carp	08/25/04	3	0.13	
Washington	Nashville Reservoir	Largemouth bass	06/16/99	4	0.21	X
Washington	Nashville Reservoir	Largemouth bass	06/16/99	5	0.20	
Wayne	Elm river	Carp	07/31/89	4	0.17	
Wayne	Elm river	Carp	08/07/89	5	0.07	
Wayne	Elm river	Carp	08/08/02	5	0.62	
Wayne	Elm river	Carp	08/08/02	5	0.35	
Wayne	Little Wabash River	Carp	08/20/86	5	0.18	
Wayne	Little Wabash River	Carp	07/31/89	5	0.02	
Wayne	Little Wabash River	White crappie	08/01/89	1	0.03	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Wayne	Sam Dale Lake	Largemouth bass	04/15/04	5	0.08	
Wayne	Skillet Fork	Carp	07/16/02	5	0.17	
Wayne	Skillet Fork	Largemouth bass	08/08/89	2	0.24	
Wayne	Skillet Fork	Smallmouth buffalo	07/16/02	5	0.48	
Wayne	Skillet Fork	Spotted bass	07/16/02	3	0.54	
Wayne	Skillet Fork	White crappie	08/07/89	1	0.09	
Wayne	Skillet Fork	White crappie	07/16/02	3	0.43	
White	Little Wabash river	Carp	08/18/86	5	0.17	
White	Little Wabash river	Carp	10/26/88	5	0.15	
White	Little Wabash river	Carp	08/13/02	5	0.45	
White	Little Wabash River	Carp	08/13/02	5	0.16	
White	Little Wabash River	Spotted bass	08/03/89	2	0.17	
White	Little Wabash River	Spotted bass	08/03/89	3	0.08	
White	Little Wabash River	White bass	08/03/89	4	0.10	
White	Little Wabash River	White crappie	08/04/89	2	0.14	
White	Skillet Fork	Bluegill	07/15/02	5	0.14	
White	Skillet Fork	Carp	07/15/02	5	0.44	
White	Skillet Fork	Carp	07/15/02	3	0.35	
White	Skillet Fork	Flathead catfish	07/15/02	3	0.36	
White	Skillet Fork	Flathead catfish	07/15/02	4	0.20	
White	Skillet Fork	Smallmouth buffalo	07/15/02	5	0.40	
White	Wabash River	Largemouth bass	05/13/04	4	0.13	
White	Wabash River	Sauger	05/13/04	4	0.11	
White	Wabash River	Spotted bass	05/13/04	5	0.16	
White	Wabash River	Spotted bass	05/13/04	5	0.15	
White	Wabash River	Striped Bass	06/20/02	3	0.25	
White	Wabash River	White bass	06/20/02	5	0.22	
White	Wabash River	White bass	05/12/04	5	0.19	
White	Wabash River	White bass	05/13/04	5	0.18	
Whiteside	Mississippi River–North	Largemouth bass	07/26/90	5	0.10	
Whiteside	Rock River	Flathead catfish	06/20/01	5	0.16	
Whiteside	Rock River	Flathead catfish	10/03/01	3	0.15	
Whiteside	Rock River	Smallmouth bass	09/07/00	4	0.12	
Whiteside	Rock River	Smallmouth bass	06/20/01	3	0.10	X
Whiteside	Rock River	Walleye	10/18/00	3	0.10	X
Whiteside	Rock River	Walleye	06/20/01	3	0.10	X
Will	Braidwood Lake	Largemouth bass	07/29/88	5	0.30	
Will	Braidwood Lake	Largemouth bass	10/06/99	5	0.10	X
Will	Braidwood Lake	Largemouth bass	05/23/02	5	0.10	X
Will	Braidwood Lake	Largemouth bass	05/23/02	5	0.10	X
Will	Chicago Sanitary & Ship Canal	Carp	09/11/02	5	0.10	X
Will	Chicago Sanitary & Ship Canal	Carp	09/11/02	5	0.10	X
Will	Chicago Sanitary & Ship Canal	Channel catfish	09/11/02	2	0.10	X
Will	Des Plaines River	Largemouth bass	07/10/89	5	0.10	
Will	Des Plaines River	Largemouth bass	09/02/03	5	0.10	
Will	DuPage River	Largemouth bass	08/21/03	5	0.21	
Will	DuPage River	Smallmouth bass	05/27/99	5	0.23	
Will	DuPage River	Smallmouth bass	05/27/99	5	0.18	
Will	DuPage River	Smallmouth bass	06/12/02	5	0.10	X
Will	DuPage River	Smallmouth bass	08/21/03	5	0.16	
Will	Kankakee River	Largemouth bass	06/12/02	4	0.10	X
Will	Kankakee River	Smallmouth bass	07/25/00	3	0.25	
Will	Kankakee River	Smallmouth bass	06/12/02	4	0.12	
Will	Monee Reservoir	Largemouth bass	10/14/99	5	0.80	
Will	Monee Reservoir	Largemouth bass	10/04/01	5	0.42	
Will	Renwick Lake East	Largemouth bass	06/29/99	5	0.35	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Will	Renwick Lake East	Largemouth bass	06/29/99	-	0.35	
Williamson	Crab Orchard Lake	Black crappie	08/31/99	5	0.10	X
Williamson	Crab Orchard Lake	Black crappie	05/10/01	5	0.10	X
Williamson	Crab Orchard Lake	Bluegill	05/21/90	5	0.02	
Williamson	Crab Orchard Lake	Bluegill	05/21/90	5	0.02	
Williamson	Crab Orchard Lake	Bluegill	05/21/90	5	0.01	
Williamson	Crab Orchard Lake	Bluegill	05/17/91	5	0.10	X
Williamson	Crab Orchard Lake	Bluegill	05/17/91	5	0.10	X
Williamson	Crab Orchard Lake	Bluegill	05/17/91	5	0.10	X
Williamson	Crab Orchard Lake	Channel catfish	08/17/98	5	0.68	
Williamson	Crab Orchard Lake	Largemouth bass	08/01/88	5	0.12	
Williamson	Crab Orchard Lake	Largemouth bass	08/02/88	5	0.05	
Williamson	Crab Orchard Lake	Largemouth bass	08/03/88	5	0.01	
Williamson	Crab Orchard Lake	Largemouth bass	05/21/90	5	0.06	
Williamson	Crab Orchard Lake	Largemouth bass	05/21/90	5	0.05	
Williamson	Crab Orchard Lake	Largemouth bass	05/21/90	5	0.03	
Williamson	Crab Orchard Lake	Largemouth bass	05/17/91	5	0.14	
Williamson	Crab Orchard Lake	Largemouth bass	05/17/91	5	0.10	X
Williamson	Crab Orchard Lake	Largemouth bass	05/17/91	5	0.08	
Williamson	Crab Orchard Lake	Largemouth bass	08/17/98	5	0.13	
Williamson	Crab Orchard Lake	Largemouth bass	08/18/98	5	0.10	
Williamson	Crab Orchard Lake	Largemouth bass	08/19/98	5	0.10	
Williamson	Crab Orchard Lake	Largemouth bass	08/18/99	5	0.12	
Williamson	Crab Orchard Lake	Largemouth bass	08/19/99	8	0.10	X
Williamson	Crab Orchard Lake	Largemouth bass	08/31/99	5	0.10	X
Williamson	Crab Orchard Lake	Largemouth bass	05/09/01	5	0.15	
Williamson	Crab Orchard Lake	Largemouth bass	05/09/01	5	0.13	
Williamson	Crab Orchard Lake	Largemouth bass	05/09/01	5	0.11	
Williamson	Crab Orchard Lake	Largemouth bass	05/09/01	5	0.10	X
Williamson	Crab Orchard Lake	Largemouth bass	05/10/01	5	0.12	
Williamson	Crab Orchard Lake	Largemouth bass	05/10/01	5	0.10	X
Williamson	Crab Orchard Lake	Largemouth bass	06/07/04	5	0.11	
Williamson	Crab Orchard Lake	Largemouth bass	06/07/04	5	0.07	
Williamson	Crab Orchard Lake	Largemouth bass	06/07/04	5	0.07	
Williamson	Crab Orchard Lake	Largemouth bass	06/07/04	5	0.05	
Williamson	Crab Orchard Lake	Largemouth bass	06/07/04	5	0.04	
Williamson	Crab Orchard Lake	Largemouth bass	06/07/04	5	0.03	
Williamson	Crab Orchard Lake	White crappie	08/18/99	5	0.10	X
Williamson	Crab Orchard Lake	White crappie	08/19/99	5	0.10	X
Williamson	Crab Orchard Lake	White crappie	05/09/01	5	0.10	X
Williamson	Crab Orchard Lake	White crappie	05/09/01	5	0.10	X
Williamson	Devil's Kitchen Lake	Black crappie	04/17/01	4	0.31	
Williamson	Devil's Kitchen Lake	Black crappie	04/17/01	5	0.18	
Williamson	Devil's Kitchen Lake	Black crappie	04/15/03	5	0.42	
Williamson	Devil's Kitchen Lake	Largemouth bass	04/17/01	5	0.94	
Williamson	Devil's Kitchen Lake	Largemouth bass	04/17/01	5	0.67	
Williamson	Devil's Kitchen Lake	Largemouth bass	09/05/02	5	0.50	
Williamson	Devil's Kitchen Lake	Largemouth bass	09/05/02	5	0.48	
Williamson	Devil's Kitchen Lake	Largemouth bass	04/15/03	5	0.75	
Williamson	Devil's Kitchen Lake	Largemouth bass	04/15/03	5	0.71	
Williamson	Devil's Kitchen Lake	Largemouth bass	04/14/04	4	0.42	
Williamson	Devil's Kitchen Lake	Spotted sucker	05/11/01	4	0.27	
Williamson	Devil's Kitchen Lake	Spotted sucker	05/11/01	4	0.12	
Williamson	Lake of Egypt	Black crappie	07/21/00	5	0.10	X
Williamson	Lake of Egypt	Largemouth bass	07/21/00	5	0.10	X
Williamson	Lake Of Egypt	Largemouth bass	06/03/03	5	0.18	

County	Stream or lake name	Species	Sampling Date	Number of Individuals	Fillet Mercury Concentration (ppm)	Mercury Detect. Level
Williamson	Lake Of Egypt	Largemouth bass	06/03/03	5	0.15	
Williamson	Little Grassy Lake	Black crappie	04/16/03	5	0.16	
Williamson	Little Grassy Lake	Carp	04/18/01	4	0.22	
Williamson	Little Grassy Lake	Channel catfish	04/18/01	6	0.37	
Williamson	Little Grassy Lake	Largemouth bass	04/18/01	5	0.60	
Williamson	Little Grassy Lake	Largemouth bass	04/18/01	5	0.45	
Williamson	Little Grassy Lake	Largemouth bass	04/16/03	5	0.48	
Williamson	Little Grassy Lake	Largemouth bass	04/16/03	5	0.35	
Williamson	Little Grassy Lake	White crappie	04/18/01	5	0.16	
Williamson	Little Grassy Lake	White crappie	04/18/01	5	0.14	
Williamson	Marion Reservoir	Black crappie	05/17/04	5	0.03	
Williamson	Marion Reservoir	Largemouth bass	05/17/04	5	0.11	
Williamson	Marion Reservoir	Largemouth bass	05/17/04	5	0.10	
Williamson	Old Herrin Lake	Largemouth bass	04/19/04	5	0.19	
Williamson	Old Herrin Lake	Largemouth bass	04/19/04	5	0.08	
Winnebago	Kishwaukee River	Rock bass	08/15/01	3	0.15	
Winnebago	Kishwaukee River	Smallmouth bass	08/21/00	3	0.10	X
Winnebago	Kishwaukee River	Smallmouth bass	08/15/01	3	0.13	
Winnebago	Rock River	Smallmouth bass	08/08/00	2	0.10	X
Winnebago	Rock River	Smallmouth bass	10/26/00	1	0.13	
Winnebago	Rock River	Smallmouth bass	06/18/01	3	0.35	
Woodford	Evergreen Lake	Crappie (unspecified)	03/25/03	5	0.10	
Woodford	Evergreen Lake	Largemouth bass	06/08/98	5	0.13	
Woodford	Evergreen Lake	Largemouth bass	10/15/98	5	0.10	X
Woodford	Evergreen Lake	Largemouth bass	07/10/03	5	0.29	
Woodford	Evergreen Lake	Largemouth bass	09/09/03	3	0.15	

Appendix D: Raw Data—U.S. EPA Lake Fish Tissue Study composite samples (1999–2003)

County	Stream or Lake Name	Species	Preditor vs. Bottom-Dweller[a]	Sampling Year	Number of Individuals	Mercury Concentration (ppm)
Cook	Inverness Lake	Channel catfish	Bottom-dweller	2003	5	0.04
Cook	Inverness Lake	Channel catfish	Bottom-dweller	2003	5	0.02
Cook	Inverness Lake	Largemouth bass	Predator	2003	5	0.26
Cook	Inverness Lake	Largemouth bass	Predator	2003	5	0.18
Cook	Wolf Lake	Carp	Bottom-dweller	2001	5	0.02
Cook	Wolf Lake	Largemouth bass	Predator	2001	5	0.12
DeKalb	Buck Lake	Largemouth bass	Predator	2000	5	0.37
DeKalb	Buck Lake	White sucker	Bottom-dweller	2000	5	0.14
Franklin	Rend Lake	Carp	Bottom-dweller	2001	5	0.08
Franklin	Rend Lake	Largemouth bass	Predator	2001	5	0.13
Jackson	Kinkaid Lake	Channel catfish	Bottom-dweller	2002	5	0.18
Jackson	Kinkaid Lake	Largemouth bass	Predator	2002	5	0.42
Macoupin	Otter Lake	Carp	Bottom-dweller	2000	5	0.06
Macoupin	Otter Lake	Carp	Bottom-dweller	2000	5	0.05
Macoupin	Otter Lake	Largemouth bass	Predator	2001	5	0.51
Macoupin	Otter Lake	Largemouth bass	Predator	2001	5	0.11
Rock Island	Shook's Pond	Carp	Bottom-dweller	2000	5	0.04
Rock Island	Shook's Pond	Largemouth bass	Predator	2000	4	0.21
Saline	Unnamed lake 2[b]	Carp	Bottom-dweller	2002	4	0.10
Saline	Unnamed lake 2[b]	Largemouth bass	Predator	2002	3	0.30
Tazewell	Unnamed lake 1[c]	Largemouth bass	Predator	2000	4	0.48
Williamson	Unnamed lake 3[d]	Largemouth bass	Predator	2000	5	0.25
Williamson	Unnamed lake 3[d]	Yellow bullhead	Bottom-dweller	2000	5	0.05

[a] National Lake Fish Tissue Study researchers analyzed fillets of predator fish and whole bodies of bottom-dwellers.

[b] Unnamed lake 2 is located at 37.737° latitude and -88.5078° longitude.

[c] Unnamed lake 1 is located at 40.5838° latitude and -89.5855° longitude.

[d] Unnamed lake 3 is located at 37.7733° latitude and -88.7835° longitude.

End Notes

[1] National Academy of Science, National Research Council, *Toxicological Effects of Methylmercury* (Washington, DC: National Academy Press, 2000) (hereinafter *Toxicological Effects of Methylmercury*); U.S Environmental Protection Agency (EPA), *Mercury Study Report to Congress*, vol. 1 (December 1997) 0-2, available at http://www.epa.gov/mercury/report.htm (hereinafter *Mercury Study Report to Congress*).
[2] *Mercury Study Report to Congress*, vol. 1: 2-5 & 3-22.
[3] *Mercury Study Report to Congress*, vol. 1: 3-23.
[4] *Toxicological Effects of Methylmercury*; *Mercury Study Report to Congress*.
[5] *Mercury Study Report to Congress*, vol. 1: 3-22.
[6] Kathryn R. Mahaffey, Robert P. Clickner, and Catherine C. Bodurow, "Blood Organic Mercury and Dietary Mercury Intake: National Health and Nutrition Examination Survey, 1999 and 2000," *Environmental Health Perspectives*, 112.5 (April 2004) 569, available at http://ehp.niehs.nih.gov/members/2003/6587/6587.pdf.
[7] Leonardo Trasande, Philip J. Landrigan, and Clyde Schechter, "Public Health and Economic Consequences of Methyl Mercury Toxicity to the Developing Brain," *Environmental Health Perspectives* 113.5 (March 2005) 590, (hereinafter "Public Health and Economic Consequences of Methyl Mercury").
[8] From the abstract of Leonardo Trasande et al, "Mental Retardation and Prenatal Methylmercury Toxicity," *American Journal of Industrial Medicine*. This paper is still under peer review.
[9] *Toxicological Effects of Methylmercury*, *Mercury Study Report to Congress*.
[10] Ellen K. Silbergeld, Department of Environmental Health Sciences and Epidemiology, Bloomberg School of Public Health, Johns Hopkins University, testimony presented at EPA hearing on the regulation of utility mercury emissions, Philadelphia, 25 February 2004; Edna M. Yokoo et al, "Low Level Methylmercury Exposure Affects Neuropsychological Function in Adults," *Environmental Health*, 2.8 (June 2003); *Toxicological Effects of Methylmercury*.
[11] Eliseo Guallar et al, "Mercury, Fish Oils, and the Risk of Myocardial Infarction," *New England Journal of Medicine*, 347.22 (28 November 2002) 1747-1754.
[12] Lamborg, C.H., Fitzgerald, W.F., O'Donnell, L., Torgersen, T. "A non-steady-state compartmental model of global-scale mercury biogeochemistry with interhemispheric atmospheric gradients." *Geochimica et Cosmochimica Acta,* 66.7 (2002) 1105-1118.
[13] Paul F. Schuster et al, "Atmospheric Mercury Deposition during the Last 270 Years: A Glacial Ice Core Record of Natural and Anthropogenic Sources," *Environmental Science and Technology*, 36.11 (2002) 2303-2310.
[14] Illinois EPA (IEPA) estimates calculated based on U.S. EPA's 1999 Information Collection Request database and scaled upward with 2002 coal use data from the Energy Information Administration of the United States Department of Energy (hereinafter "IEPA ICR-based estimates").
[15] IEPA ICR-based estimates.
[16] IEPA ICR-based estimates.
[17] U.S. EPA, *Toxics Release Inventory* (2003) , available at http://www.epa.gov/triexplorer (hereinafter "*Toxics Release Inventory*").
[18] *Toxics Release Inventory*.
[19] Federal Register, vol. 65 (20 December 2000) 79827.
[20] Federal Register, vol. 65 (20 December 2000) 79827.
[21] See U.S. EPA, "Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units—Final Report to Congress," vol. 1 (February 1998) 7-28; and *Mercury Study Report to Congress*, vol. 3, 5-1 & 5-2.
[22] Northeast States for Coordinated Air Use Management (NESCAUM), *Mercury Emissions from Coal-Fired Power Plants: The Case for Regulatory Action* (October 2003) 2-4 (hereinafter *The Case for Regulatory Action*); Mark Cohen, National Atmospheric and Oceanic Administration (NOAA) Air Resources Laboratory, "Atmospheric Mercury and the Great Lakes: Briefing Materials for Rep. Mark Kirk" (29 June 2005) 27 (hereinafter "Briefing Materials for Rep. Mark Kirk").
[23] *The Case for Regulatory Action*, 2-4; "Briefing Materials for Rep. Mark Kirk," 27.
[24] Environmental Defense, "Out of Control and Close to Home: Mercury Pollution from Power Plants" (2003) 11-12 (hereinafter "Out of Control and Close to Home").
[25] Mason, R., Sullivan, K, "Mercury in Lake Michigan," *Environmental Science and Technology,* 31.3, (1997) 942–947.
[26] Mark Cohen, NOAA Air Resources Laboratory, "The Atmospheric Transport and Deposition of Mercury into the Great Lakes: Collection of Graphics for IJC Air Quality Advisory Board" (16 April 2004) 19 & 23,

available at http://www.arl.noaa.gov/data/web/reports/cohen/18_Great_Lakes_1999_updates_abbrev.pdf (herein after "Graphics for IJC Air Quality Advisory Board").
[27] *Mercury Study Report to Congress*, p. 2-5.
[28] U.S. EPA, Office of Water, Fact Sheet: "Mercury Update: Impact on Fish Advisories" (June 2001) 2.
[29] Hrabik, T.R., Watras, C.J. "Recent Declines in Mercury Concentration in a Freshwater Fishery: Isolating the Effects of De-acidification and Decreased Atmospheric Mercury Deposition in Little Rock Lake." *The Science of the Total Environment,* 297.1-3 (7 October 2002) 229-37.
[30] Florida Department of Environmental Protection, *Integrating Atmospheric Mercury Deposition with Aquatic Cycling in South Florida: An Approach for Conducting a Total Maximum Daily Load Analysis for an Atmospherically Derived Pollutant*, (October, 2002, Revised November 2003) 88-99, (hereinafter *Integrating Atmospheric Mercury Deposition with Aquatic Cycling*).
[31] *Integrating Atmospheric Mercury Deposition with Aquatic Cycling, 67-68.*
[32] U.S. EPA, Technical Memorandum: "Origin of a 1 Meal/Week Noncommercial Fish Consumption Rate in National Advisory for Mercury" (11 March 2004).
[33] *Mercury Study Report to Congress*, vol. 1 p. O-2.
[34] *Toxicological Effects of Methylmercury*, 11.
[35] U.S. EPA, Fact Sheet: "Mercury, Human Health" (3 July 2004), available at http://www.epa.gov/mercury/health.html.
[36] American Heart Association, "Fish and Omega-3 Fatty Acids" (26 February 2006), available at http://www.americanheart.org/presenter.jhtml?identifier=4632.
[37] U.S. EPA, *Guidelines for Assessing Chemical Contaminant Data for Use in Fish Advisories*, vol. 1, section 5 (November 2000) 5-5 (hereinafter *Guidelines for Fish Advisories*).
[38] *Guidelines for Fish Advisories.*
[39] U.S. EPA, Fact Sheet: "Mercury, Human Health" (3 July 2004), available at http://www.epa.gov/mercury/health.html.
[40] U.S. EPA, Fact Sheet: "National Listing of Fish Advisories" (August 2004), available at http://www.epa.gov/waterscience/fish/advisories/factsheet.pdf.
[41] Illinois Department of Natural Resources, *Illinois Fishing Information 2006*, available http://dnr.state.il.us.
[42] Illinois PIRG initially obtained the IFCMP database in Fall of 2004 by filing a Freedom of Information Act (FOIA) request with IEPA. Subsequently, IEPA has provided Illinois PIRG with updates to the database without requiring a FOIA request.
[43] National Lake Fish Tissue Study data is available at http://www.epa.gov/waterscience/fishstudy/.
[44] *Mercury Study Report to Congress*, vol. 1, 2-5.
[45] Gary L. Ginsberg and Brian F. Toal, "Development of a Single-Meal Fish Consumption Advisory for Methyl Mercury," *Risk Analysis*, 20.1 (2000) 41-47.
[46] U.S. Food and Drug Administrations, *Action Levels for Poisonous or Deleterious Substances in Human Food and Animal Feed* (August 2000), available at http://www.cfsan.fda.gov/~lrd/fdaact.html.
[47] *Illinois Fishing Information.*
[48] Mercury is listed as a hazardous air pollutant under the Clean Air Act section 112(b)(1).
[49] Clean Air Act, section 112(d)(2).
[50] U.S. EPA, presentation to the Edison Electric Institute (18 September 2001) available at http://cta.policy.net/epamercury.pdf.
[51] U.S. EPA, *Revision of December 2000 Regulatory Finding on the Emissions of Hazardous Air Pollutants from Electric Utility Steam Generating Units and the Removal of Coal- and Oil-Fired Electric Utility Steam Generating Units from the Section 112(c) List*, Federal Register, vol. 70 (29 March 2005) 15993 (hereinafter "Delisting Rule").
[52] Federal Register, vol. 70 (18 May 2005) 28605, (hereinafter "CAMR"). Also called "The Cap-and-Trade Rule," available at
http://www.epa.gov/air/mercuryrule/pdfs/camr_final_preamble.pdf (preamble) and
http://www.epa.gov/air/mercuryrule/pdfs/camr_final_regtext.pdf (regulatory text).
[53] CAMR, 28618.
[54] State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials (STAPPA & ALAPCO), "Regulating Mercury from Power Plants: A Model Rule for States and Localities" (November 2005) 6 (hereinafter "A Model Rule for States and Localities"); James E. McCarthy, Congressional Research Service (CRS) Report for Congress: "Mercury Emissions from Electric Power Plants:

An Analysis of EPA's Cap-and-Trade Regulations" (15 April 2005) CRS-6, available at http://www.4cleanair.org/FinalMercuryModelRule-111405.pdf (hereinafter "An Analysis of EPA's Cap-and-Trade Regulations").

[55] "An Analysis of EP's Cap-and-Trade Regulations," CRS-6.

[56] EPA, Office of Inspector General, *Evaluation Report: Additional Analyses of Mercury Emissions Needed Before EPA Finalizes Rules for Coal-Fired Electric Utilities*, Report No. 2005-P-00003, (3 February 2005).

[57] U.S. PIRG Education Fund, "Made in the USA: Power Plant and Mercury Pollution Across the Country" (September 2005) 9, available at http://illinoispirg.org/reports/madeintheusa.pdf (hereinafter "Made in the USA").

[58] Federal Register, vol. 70 (18 May 2005) 28632.

[59] STAPPA & ALAPCO, "State Programs to Control Mercury Emissions from Utilities," (November 28, 2005), available at http://www.4cleanair.org/StatePrograms.pdf (Hereinafter "State Programs to Control Mercury Emissions").

[60] "State Programs to Control Mercury Emissions.

[61] National Caucus of Environmental Legislators, "2006 Legislation to Reduce Mercury from Coal-Fired Power Plants" (31 January 2006), available at http://www.ncel.net/news_uploads/135/Mercury%20Legislation%20and%20Laws.1-31-06.doc.

[62] Information on the IPCB rulemaking process is available at www.ipcb.state.il.us/AboutTheBoard/CitizensGuidetotheBoard.asp?Section=Rulemakings. The complete text IEPA's March 14, 2006 filing with the IPCB is available at http://www.epa.state.il.us/air/cair/documents/031406/final-rule-225.pdf.

[63] Detailed information on the IPCB's mercury rulemaking is available http://www.ipcb.state.il.us/cool/external/CaseView2.asp?referer=coolsearch&case=R2006-025.

[64] Information on the Illinois Rulemaking Process is available at http://www.ilga.gov/commission/jcar/ILRulemakingProcess.pdf.

[65] Federal Register, vol. 70 (18 May 2005) 28647.

[66] Joint comments of 36 environmental scientists in a letter coordinated by the Hubbard Brook Research Foundation to EPA Administrator Mike Leavitt, on EPA's proposal mercury rule (28 April 2004).

[67] "A Model Rule for States and Localities," 25-29.

[68] The Sierra Club, North Star Chapter of Minnesota, has assembled a list of mercury control technology vendors. The list is available at http://www.northstar.sierraclub.org/campaigns/air/mercury/technologiesVendors.html. Also see IEPA, *Technical Support Document For Reducing Mercury Emissions From Coal-Fired Electric Generating Units* (14 March 2005) 113-152 (hereinafter *Technical Support Document*).

[69] EPA, Fact Sheet: "EPA to Regulate Mercury and Other Air Toxics Emissions from Coal- and Oil-Fired Power Plants" (14 December 2000) 4, available at http://www.epa.gov/ttn/oarpg/t3/fact_sheets/fs_util.pdf.

[70] National Wildlife Foundation, "Getting the Job Done: Affordable Mercury Control at Coal-Burning Power Plants," (October 2004) 28, available at http://www.nwf.org/nwfwebadmin/binaryVault/GJD%20Affordable%20Mercury%20Control%20at%20Power%20Plants%20NWF%2010-20044.pdf.

[71] *Technical Support Document,* 159.

[72] ICF Consulting, *Analysis of the Proposed Illinois Mercury Rule* (10 March 2006) 11, available at http://www.epa.state.il.us/air/cair/documents/031406/final-ipm-hg-rule-analysis.pdf.

[73] "Public Health and Economic Consequences of Methyl Mercury".

[74] Glenn Rice and James K. Hammitt, Harvard Center for Risk Analysis, "Economic Valuation of Human Health Benefits of Controlling Mercury Emission from U.S. Coal-Fired Power Plants", February 2005, available at: http://cleanairnow.org/cleanairnow.asp?id2=18509.

[75] This list is current as of March 8, 2006 and includes members of the Stop Mercury Pollution Now Coalition (website: http://www.stopmercurypollution.org) and individuals and organizations that have released expressions of support of their own or signed onto letters of support organized by Illinois PIRG.

[76] "Made in the USA," 9.

[77] "State Programs to Control Mercury Emissions from Utilities."

[78] *Illinois Fishing Information.*

[79] *Technical Support Document*, 58.