

US EPA ARCHIVE DOCUMENT

Since 1993, the U.S. Environmental Protection Agency (EPA) has made available to the public an annual compendium of information on locally issued fish advisories and safe eating guidelines. This information is provided to the EPA by the states, U.S. territories, Native American tribes, and local governments that issue fish consumption advisories and safe eating guidelines to inform people about the recommended level of consumption for fish caught in local waters. Fish consumption advisories provide advice to limit or avoid eating certain fish due to contamination with chemical pollutants. Safe eating guidelines are designations of monitored waters where there is no restriction on eating specific types of fish. The **2010 National Listing of Fish Advisories (NLFA)**¹ database shows that the number of fish advisories issued continues to rise as additional waters are sampled.

The 2010 NLFA is available online at

<http://water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories>

Background

All 50 states, the District of Columbia, the U.S. territories of American Samoa and Guam, and five Native American tribes (for simplicity, referred to here as “states”) have fish consumption advisories in place to protect their residents from the potential health risks of eating contaminated fish caught in local waters. The states have developed their own fish advisory programs over the years, and there is variability among states in the scope and extent of monitoring and in the specific advice that is provided when contaminated fish are found. Because of this variability, it is difficult to draw national conclusions or to establish national trends in fish advisories.

A fish consumption advisory is not a regulation, but rather a recommendation issued to help protect public health. These advisories may include recommendations to limit or avoid eating certain fish and wildlife species caught from specific water bodies or from water-body types (e.g., all lakes) due to chemical contamination. An advisory may be issued for the general public, including recreational and subsistence fishers, or it may be issued specifically for sensitive populations, such as pregnant women, nursing mothers, and children.

An advisory for a specific water body or water-body type may cover more than one affected fish species or chemical contaminant. Because of the wide range in the

¹ The NLFA fact sheet was produced annually through the EPA 2004 National Listing of Fish Advisories report. In 2005, EPA decided to release subsequent fact sheets on a biennial basis because of nominal changes in data from year to year. This fact sheet summarizes data submitted by the states and discusses changes in data for the 2010 data reporting cycle. Advisory data for the 2009 reporting cycle and previous years can be found on the EPA website at water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories.



number of lake acres and river miles affected by one advisory, the number of advisories does not tell the full story of the geographic extent of waters subject to state advice. Therefore, the EPA also provides the total lake acres and total river miles for which advisories are currently in effect (Figure 1).

States are increasingly issuing statewide advisories to warn the public of the potential human health risks from chemical contamination of certain species of fish from all water bodies within the state. States are also continuing to issue safe eating guidelines to inform the public that fish from specific water bodies have been tested for chemical contaminants and that, based on those results, certain species of fish from those water bodies are safe to eat without consumption restrictions. As states increase their monitoring activities, the quantity of available information about fish contamination also increases, resulting in better public health protection.

National Listing of Fish Advisories Website

The NLFA website (<http://water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories>) provides information about fish advisories, fish consumption advice, the risks and benefits of fish consumption, and mercury in fish. The website also provides a monthly fish advisory newsletter and the NLFA database. In addition, the NLFA website includes data on the concentrations of contaminants in fish tissue for 49 states, territories, and tribes. Through this website, users can generate national, regional, and state maps that summarize advisory information.

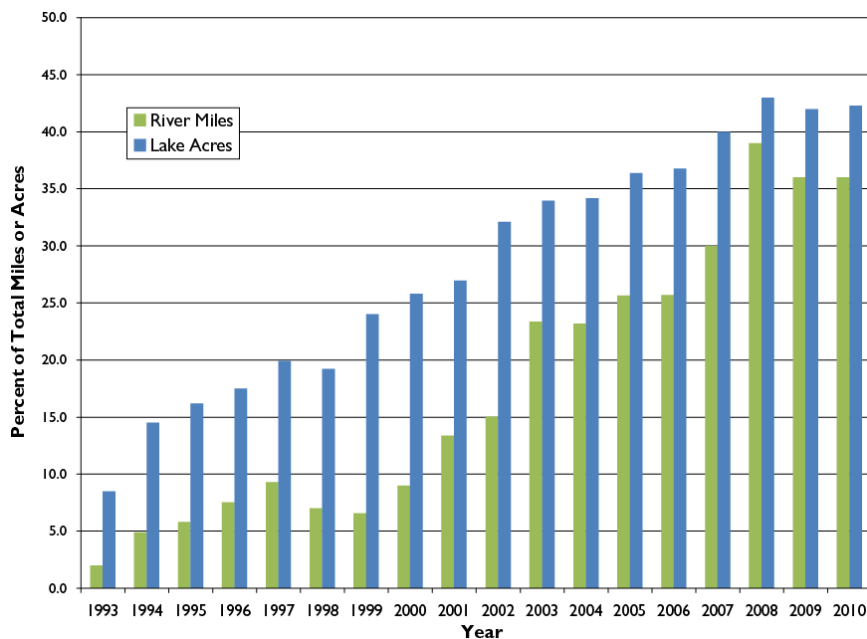


Figure 1 shows the percentage of total lake acres and river miles under advisory from 1993 to 2010.

Synopsis of the 2010 National Listing of Fish Advisories

The EPA's *2010 National Listing of Fish Advisories* indicates that the number of advisories increased by 349 since 2008, bringing the total number of advisories in effect from 4,249 in 2008 to 4,598 in 2010. Approximately 17.7 million lake acres and 1.3 million river miles were under advisory in 2010, representing 42 percent of the nation's total lake acreage and 36 percent of the nation's total river miles. From 2008 to 2010, the number of lake acres under advisory decreased by 2 percent and the number of river miles decreased by almost 8 percent.

The decreases in river miles and lake acres occurred primarily because Oregon rescinded a statewide advisory in 2009. As shown in Figure 2, 37 states had statewide advisories in effect in 2010.

Safe Eating Guidelines

The EPA encourages states to issue safe eating guidelines when providing advisory information to inform the public that certain species of fish from specific water bodies have been tested and have been shown to contain very low levels of contaminants.



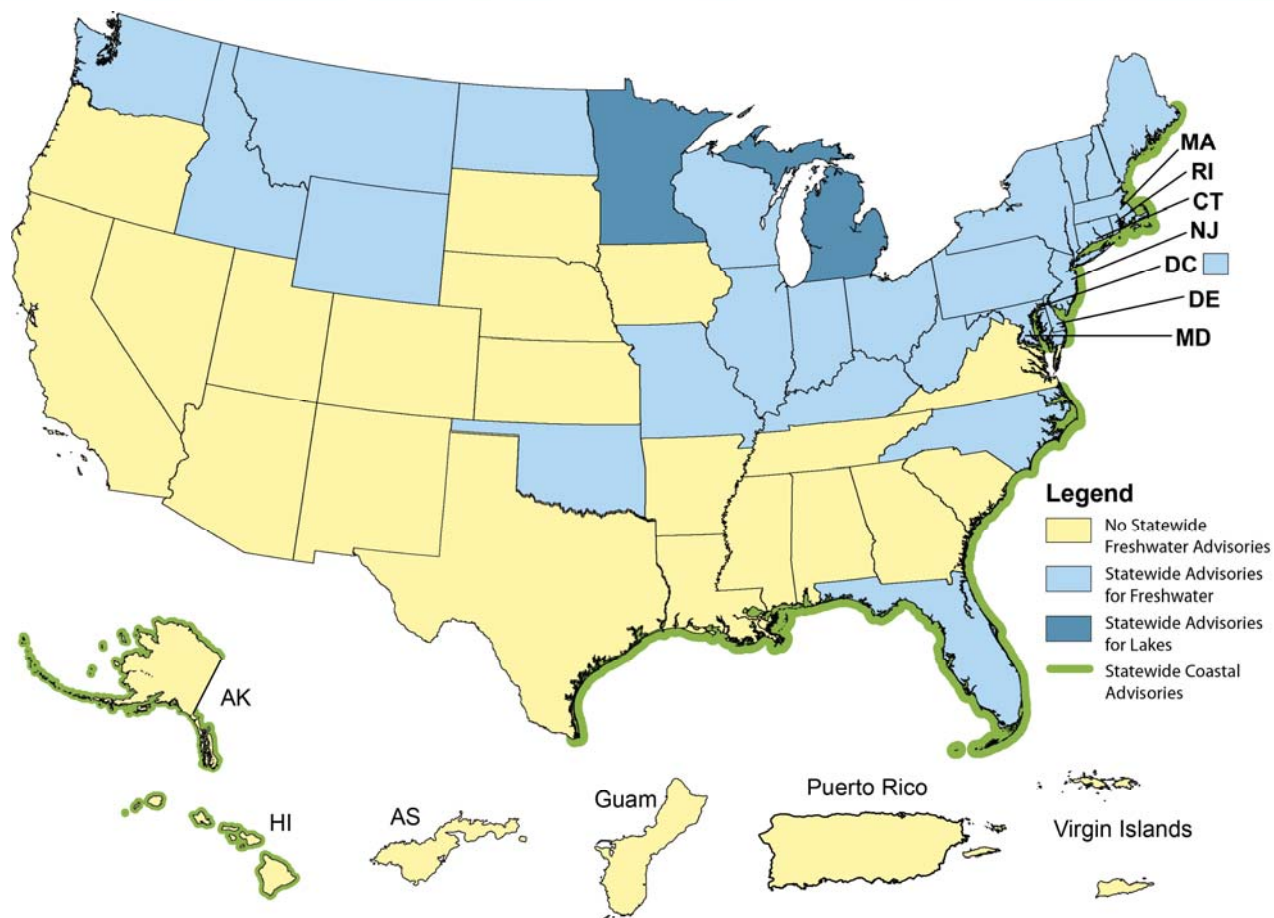


Figure 2 shows the states with statewide advisories in effect in 2010.

The states help promote recreational fishing by identifying monitored waters where designated fish are safe to eat without consumption restrictions.

The total number of safe eating guidelines increased from 874 in 2008 to 908 in 2010. In 2010, safe eating guidelines were in effect in 21 states, covering approximately 53,230 river miles (2 percent of the national total) and 2.5 million lake acres (9 percent of the national total). These river-mile and lake-acre figures represent decreases of 497 river miles and about 200,000 lake acres since 2008. Although several states issued a total of 83 new guidelines between 2008 and 2010, the overall geographic area covered by guidelines decreased because Arkansas and Missouri replaced their safe eating guidelines with advisories limiting consumption.

Bioaccumulative Contaminants

Although there are advisories in the United States for 33 different chemical contaminants, 98 percent of all advisories in effect in 2010 involved the following five bioaccumulative chemical contaminants: mercury, polychlorinated

biphenyls (PCBs), chlordane, dioxins, and dichlorodiphenyltrichloroethane (DDT) (Figures 3 and 4, Table 1). These chemical contaminants accumulate in the tissues of aquatic organisms at concentrations many times higher than concentrations in the water and can persist for many years in sediments, where they are accumulated by bottom-dwelling organisms that are lower on the food chain, and then passed to fish that are higher on the food chain. As a result, top predators in a food chain (e.g., largemouth bass, walleye) may have concentrations of bioaccumulative contaminants in their tissues that are often orders of magnitude higher than the concentrations found in the water.

Mercury: As of 2010, 50 states, 1 U.S. territory, and 3 tribes have mercury advisories in effect. Eighty-one percent of all advisories in effect in 2010 were issued, at least in part, because of mercury. In 2010, there were 16.4 million lake acres and 1.1 million river miles under advisory for mercury. This represents a decrease from 2008 of 2.4 percent for lake acres and almost 9 percent for river miles. Although many states added mercury advisories for individual water bodies between 2008 and 2010, the state of Oregon rescinded a statewide mercury advisory in 2009, resulting in the large decrease in river miles and lake acres under advisory.

PCBs: Between 2008 and 2010, lake acres under advisory for PCBs increased by less than 1 percent and river miles under advisory increased by about 1 percent.

Chlordane: All registered uses of the pesticide chlordane were banned in the United States in 1988. Between 2008 and 2010, lake acres under advisory for chlordane decreased by 2 percent and river miles under advisory decreased by 0.3 percent. Tennessee and Nebraska issued new advisories for chlordane in 2010, while California, Michigan, New York, Pennsylvania, and Texas each rescinded consumption advice for chlordane between 2008 and 2010.

Dioxins: Between 2008 and 2010, lake acres under advisory for dioxin did not change, remaining at less than 0.1% of the nation's total lake acres. River miles under advisory for

dioxin increased by 13%, but still represent less than 0.1% of the nation's total river miles. The increase was due to new river advisories in New York, Texas, and Virginia.

DDT: The use of DDT, a highly persistent organochlorine pesticide, has been banned in the United States since 1975. Lake acres and river miles under advisory for DDT both decreased by less than 1 percent from 2008 to 2010.

Other Contaminants: Seven percent of the advisories active in 2010 involved other contaminants, including organo-chlorine pesticides, heavy metals, and contaminants of emerging concern such as perfluorooctane sulfonate (PFOS). In 2010, approximately 2.5 million lake acres and 243,282 river miles were under advisory for other contaminants, representing decreases 1.5% and 0.1%, respectively, since 2008.

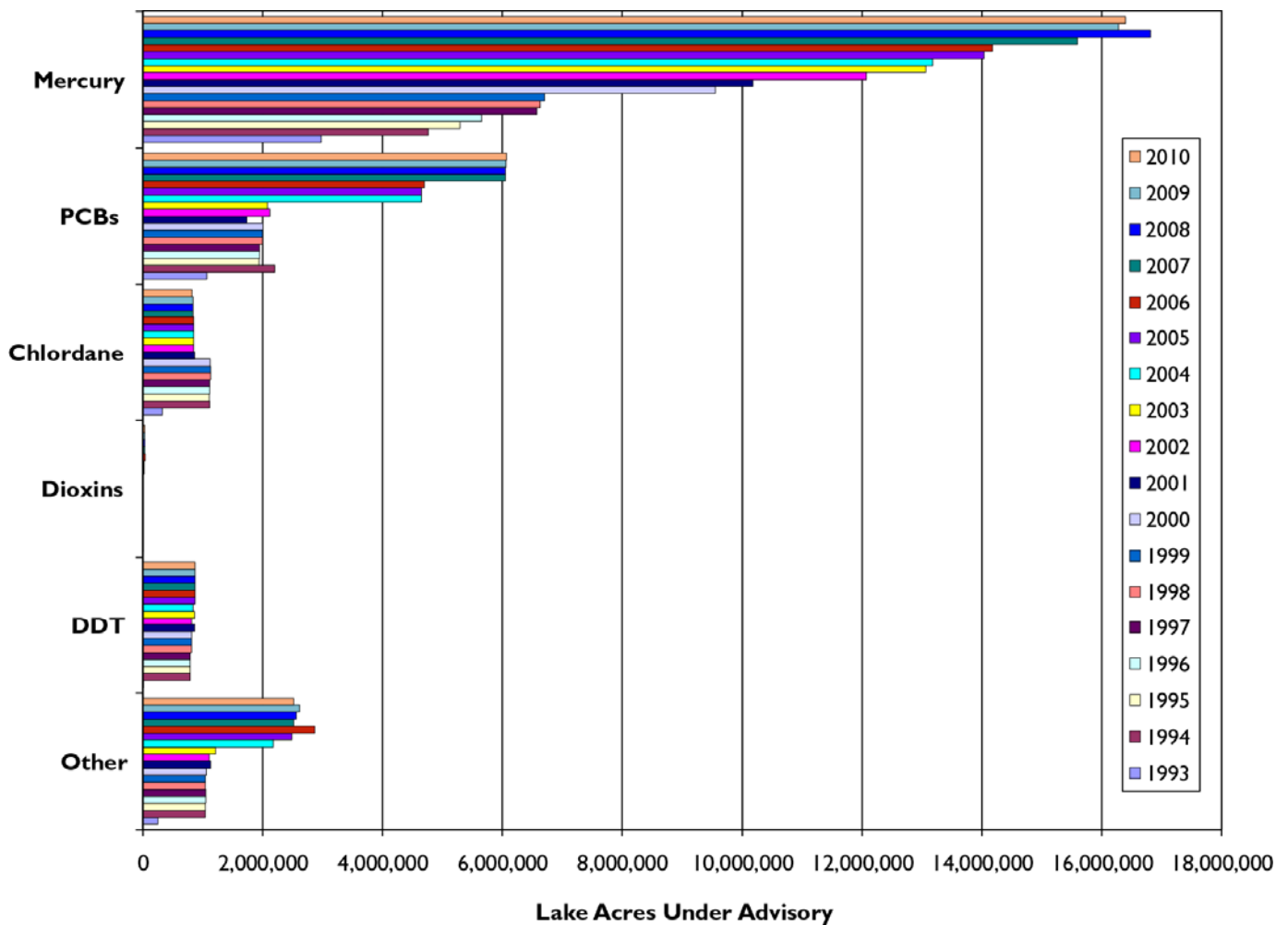


Figure 3 shows the total lake acres under advisory for mercury, PCBs, chlordane, dioxins, DDT, and other contaminants from 1993 to 2010.

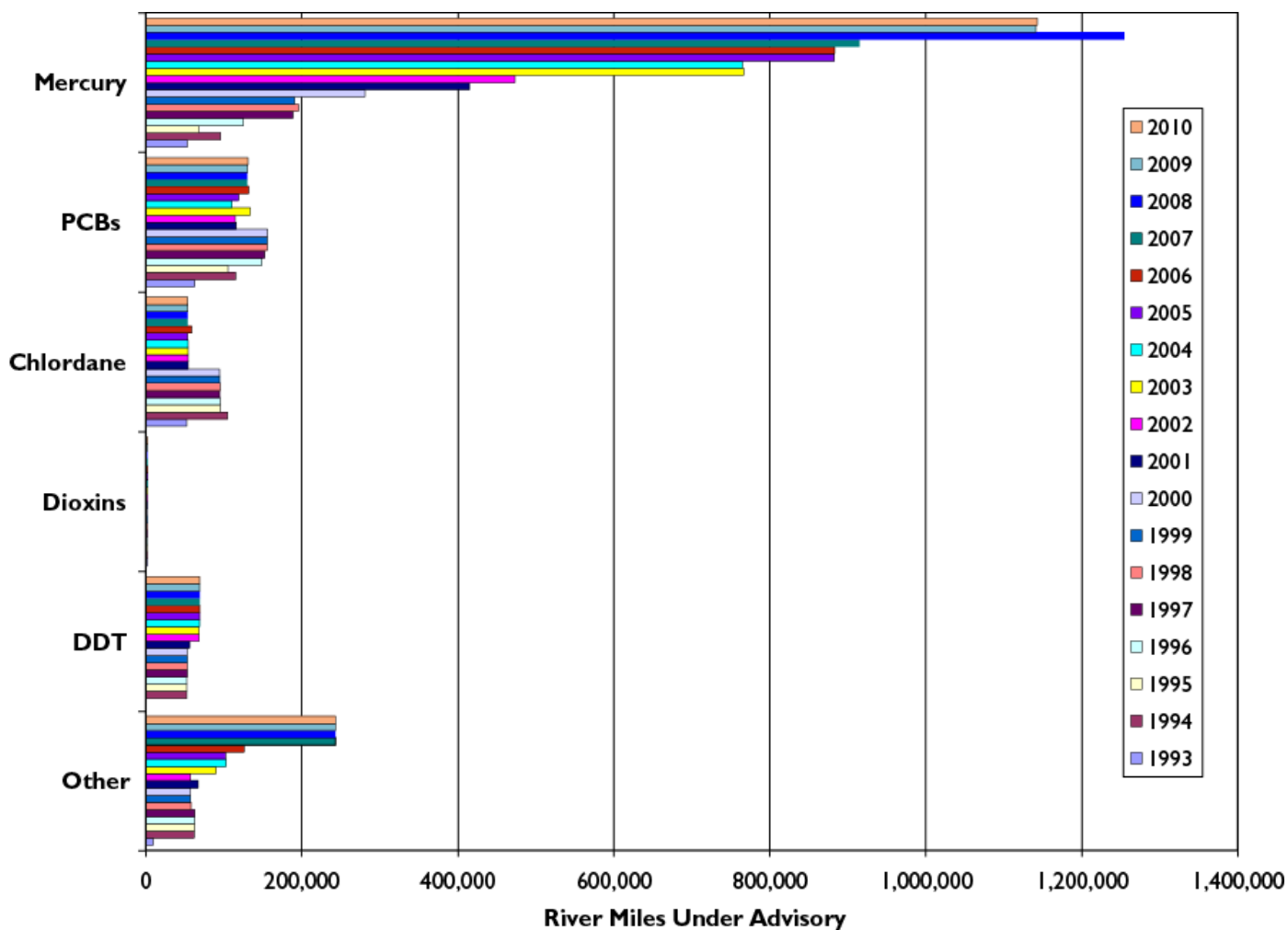


Figure 4 shows the total river miles under advisory for mercury, PCBs, chlordane, dioxins, DDT, and other contaminants from 1993 to 2010.

Table I shows the number of advisories and size of waters under advisory, by contaminant.

Contaminant	Number of Advisories		Lake Acres		River Miles	
	2008	2010	2008	2010	2008	2010
Mercury	3,361	3,710	16,808,032	16,396,422	1,255,016	1,143,327
PCBs	1,025	1,084	6,049,506	6,071,877	130,372	131,224
Chlordane	67	60	842,913	824,290	54,029	53,893
Dioxins	123	128	35,400	35,400	2,055	2,333
DDT	76	58	876,520	876,520	69,198	68,884

National Advice Concerning Mercury in Fish

In 2004, the EPA and the U.S. Food and Drug Administration (FDA) issued advice for women who might become pregnant; pregnant women; nursing mothers; and children. (The national advice is not included in the statistics presented in this fact sheet.) The following advice from the EPA and FDA is still in effect:

“By adhering to the following three recommendations for selecting and eating fish or shellfish, women and young children will receive the health benefits of eating fish and shellfish and be confident that they have reduced their exposure to the harmful effects of mercury:

- Do not eat shark, swordfish, king mackerel, or tile fish because they contain high levels of mercury.
- Eat up to 12 ounces (two average meals) each week of a variety of fish and shellfish that are lower in mercury.
 - Five of the most commonly consumed fish that are low in mercury are shrimp; canned, light tuna; salmon; pollock; and catfish.
 - Albacore (“white”) tuna is another commonly consumed fish that has more mercury than canned, light tuna. Eat up to 6 ounces (one average meal) of albacore tuna per week.
- Check local advisories about the safety of fish caught by family and friends in local lakes, rivers, and coastal areas. If no advice is available, eat up to 6 ounces (one average meal) per week of fish caught from local waters, but do not consume any other fish during that week.

Follow these same recommendations when including fish and shellfish in a young child’s diet, but serve smaller portions.”



For more information about the ways to reduce mercury exposure, consult the EPA’s brochure, *What You Need to Know About Mercury in Fish and Shellfish*, which is available in several languages on the EPA’s NLFA website at http://water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories/advisories_index.cfm.

EPA Fish Advisory Program Activities NLFA Web Application Redesign

In Fall 2011, the EPA will roll out a newly redesigned NLFA search and mapping Web application and website. The previous NLFA Web application was designed in 2001, and since that time, there have been tremendous improvements in website mapping technology. The new NLFA application features fast and easy mapping and drill-down querying of the most common search variables, including water-body names and the contaminants and fish species for which advisories are issued.

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Actos de la EPA y la FDA de 2004 para:
Las mujeres en edad fértil,
las mujeres embarazadas,
los madres lactantes y
los niños pequeños.

To make the application more user friendly and the data more accessible, the NLFA Web application has been divided into two areas: one focusing on the general public user, and one focusing on more advanced technical users. On the general public application “Advisories Where You Live” site, the user is able to find information about advisories in their area by entering a state and water-body name. The user can see whether there is advisory information in the NLFA database for that water body, and then is provided a link to the state or tribal agency that issued the advisory in order to see if the state has issued a more recent advisory and meal advice information.

The technical application site includes some features specifically designed for the needs of state and tribal Fish Advisory Program Managers and other more technical users. This area of the website is publicly accessible, but it is recommended for more advanced users. An easy-to-use drop-down search form with type-ahead functionality allows the user to search the technical advisory information and fish tissue contaminant data attributes. Users can then choose to display the results in map format, table format, or as a downloadable spreadsheet or PDF report.

EPA Fish Contamination Research Fish Tissue Contaminant Studies

As part of the Agency’s ongoing contaminant assessment activities, the EPA has expanded the evaluation of contaminants in fish tissue to include contaminants of emerging concern (CECs). Moving beyond the legacy of persistent organic contaminants and toxic metals that form the basis for most of the advisories described in this report, the EPA’s sampling and analysis activities include the collection and analysis of fish tissue samples to determine the occurrence of



pharmaceuticals and personal care products (PPCPs) as part of a nationally representative study of fish from urban rivers. The fish tissue samples collected from urban river segments as a part of the National Rivers and Streams Assessment will be analyzed for the presence of PPCP compounds and perfluorinated compounds (PFCs, e.g., PFOS, perfluorooctanoic acid). In addition, a suite of persistent organic compounds will be analyzed and mercury levels determined in all the river samples (urban and non-urban) in this national study. In 2010, the EPA also collected fish tissue samples at 150 statistically representative nearshore locations in the five Great Lakes (30 sites/lake) as part of the National Coastal Condition Assessment. Samples from the Great Lakes will be analyzed for mercury, PFCs, pharmaceutical compounds, polybrominated diphenyl ethers, and fatty acids. For more information about these studies, contact Leanne Stahl (stahl.leanne@epa.gov).

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Additional Information

For more information about specific advisories within a state, contact the appropriate state agency listed on EPA’s NLFA website at water.epa.gov/scitech/swguidance/fishshellfish/fishadvisories.

For more information about the NLFA or EPA’s Fish Advisory Program, contact:

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