

# 2008 Biennial National Listing of Fish Advisories

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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 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 2008 National Listing of Fish Advisories (NLFA)**<sup>1</sup> database shows that the number of fish advisories issued continues to rise.



The 2008 NLFA is available online at  
[www.epa.gov/fishadvisories](http://www.epa.gov/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



<sup>1</sup> 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 2008 data reporting cycle. Advisory data for the 2007 reporting cycle and previous years can be found on the EPA Web site at [www.epa.gov/fishadvisories](http://www.epa.gov/fishadvisories).

contaminant. Because of the wide range in the 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, EPA also provides information about 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 Web Site

The NLFA Web site ([www.epa.gov/fishadvisories](http://www.epa.gov/fishadvisories)) includes information about the species and size of fish under advisory, the chemical contaminants identified in the advisory, the location of the water body, and the population for whom the advisory was issued. The NLFA Web site also includes data on the concentrations of contaminants in fish tissue for 49 states/territories/tribes. Through this Web site, users can generate national, regional, and state maps that summarize advisory information.

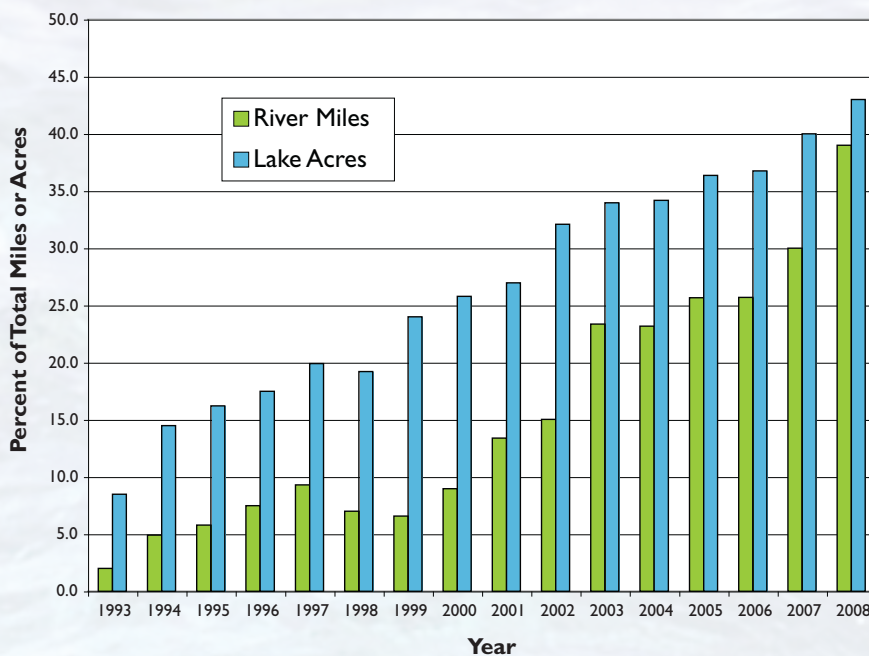


Figure 1 shows the percentage of total lake acres and river miles under advisory from 1993 to 2008.

### Synopsis of the 2008 National Listing of Fish Advisories

EPA's 2008 National Listing of Fish Advisories indicates that the number of advisories increased by 397 since 2006, bringing the total number of advisories in effect from 3,852 in 2006 to 4,249 in 2008. Approximately 18 million lake acres and 1.4 million river miles were under advisory in 2008, representing 43 percent of the nation's total lake acreage and 39 percent of the nation's total river miles. From 2006 to 2008, the number of lake acres under advisory increased by 18 percent, and the number of river miles increased by 52 percent.

The increase in lake acres and river miles under advisory from 2006 to 2008 can be attributed primarily to the issuance of several new statewide advisories. A statewide advisory is issued to warn the public of potential contamination of certain types of fish in specific types of water bodies across the state, resulting in the designation of all river miles and/or lake acres in the state as under advisory. Four states (Delaware, Idaho, Oregon, and Wyoming) issued new statewide advisories for all freshwaters in 2007 and 2008. As shown in Figure 2, 38 states had statewide advisories in effect in 2008.



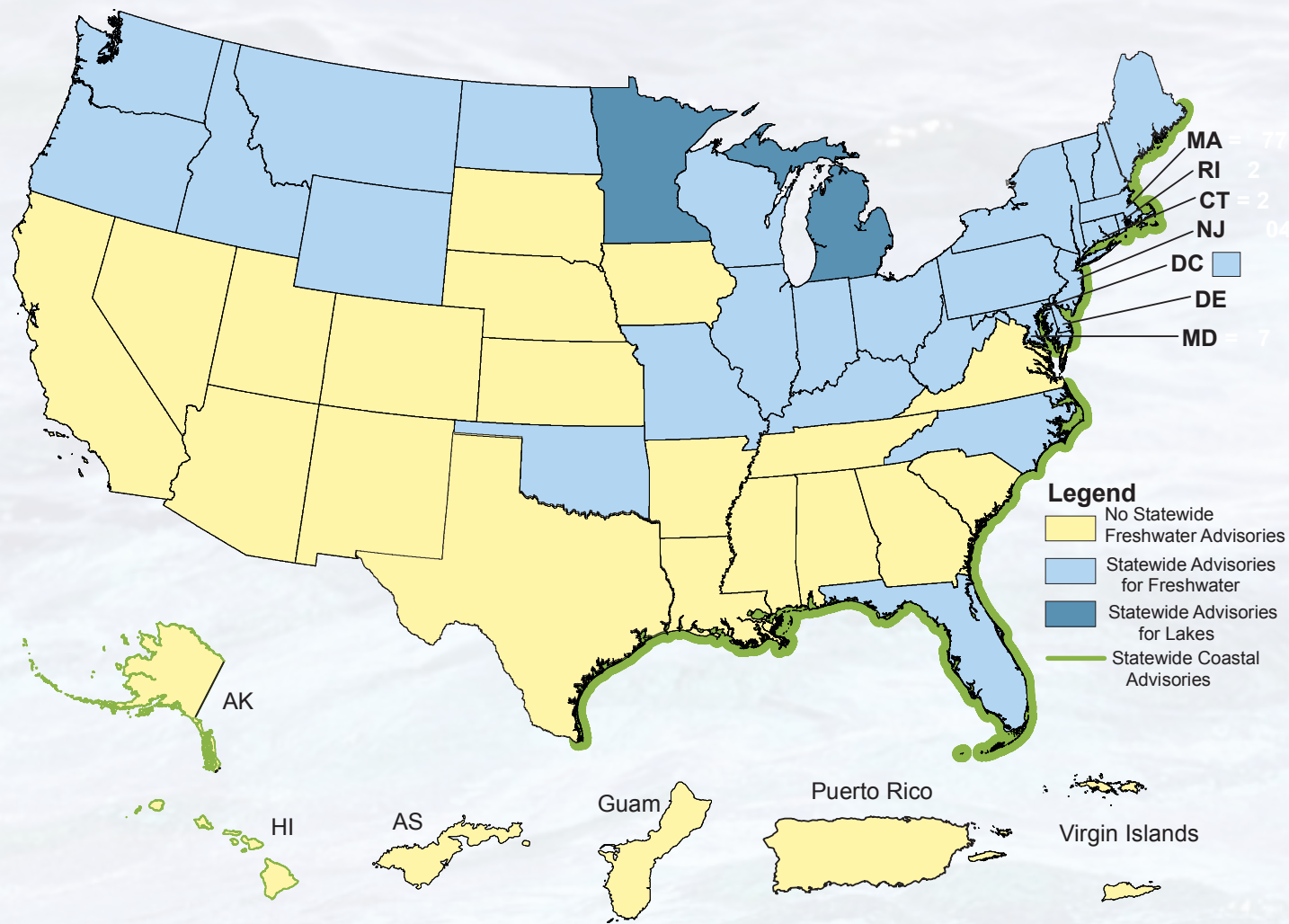


Figure 2 shows the states with statewide advisories in effect in 2008.

### Safe Eating Guidelines

EPA encourages states to issue safe eating guidelines when providing advisory information to inform the public that certain species of fish from specific bodies of water have been tested and have been shown to contain very low levels of contaminants. 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 20 in 1993 to 1,247 in 2006, but dropped to 874 in 2008. In 2008, safe eating guidelines were in effect in 22 states, covering approximately 53,728 river miles (2 percent of the national total) and 2.3 million lake acres (8 percent of the national total). These river-mile and lake-acre figures represent decreases of 42,897 river miles and nearly 3 million lake acres since 2006. Although several states issued a total of 120 new guidelines between 2006 and 2008, the overall geographic area covered by these guidelines decreased because one state rescinded almost 500 guidelines in the past 2 years.

### Bioaccumulative Contaminants

Although there are advisories in the United States for 34 different chemical contaminants, 97 percent of all advisories in effect in 2008 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 bottom-dwelling organisms that are lower on the food chain can accumulate them and pass them 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 significantly higher than the concentrations found in the water.

As of 2008, 50 states, one U.S. territory, and three tribes have issued mercury advisories. Eighty percent of all advisories in effect in 2008 were issued, at least in part, because of mercury. In 2008,

there were 16.8 million lake acres and 1.3 million river miles under advisory for mercury. This represents an increase from 2006 of 19 percent for lake acres and 42 percent for river miles. The increase in the area under advisory was largely driven by the new statewide mercury advisories in Idaho, Oregon, and Wyoming.

### Other Bioaccumulative Contaminants

**PCBs:** Between 2006 and 2008, lake acres under advisory for PCBs increased by 29 percent, and river miles under advisory decreased by 1.5 percent.

**Chlordane:** All registered uses of the pesticide chlordane were banned in the United States in 1988, and the compound continues to degrade in the environment. Between 2006 and 2008, lake acres under advisory for chlordane decreased by 1 percent, and river miles under advisory decreased by 8 percent.

**Dioxins:** Between 2006 and 2008, lake acres under advisory for dioxin decreased by 7 percent, and river miles under advisory decreased by 11 percent.

**DDT:** The use of DDT, an organochlorine pesticide, has been banned in the United States since 1975. Lake acres and river miles under advisory for DDT both increased less than 1 percent from 2006 to 2008.

**Other Contaminants:** Three percent of all fish advisories are caused solely by other contaminants, including organochlorine pesticides, heavy metals, and contaminants of emerging concern such as perfluorooctane sulfonate (PFOS). In 2008, approximately 2.6 million lake acres and 243,534 river miles were under advisory for other contaminants.

### Wildlife Advisories

In 2008, five states had a total of 6 wildlife advisories in effect, down from 12 advisories in 2006. New York had a statewide advisory for waterfowl, and Maine had a statewide advisory for moose liver and kidney. Massachusetts and Rhode Island had specific water body advisories for frogs and turtles, while Utah had two advisories for ducks.

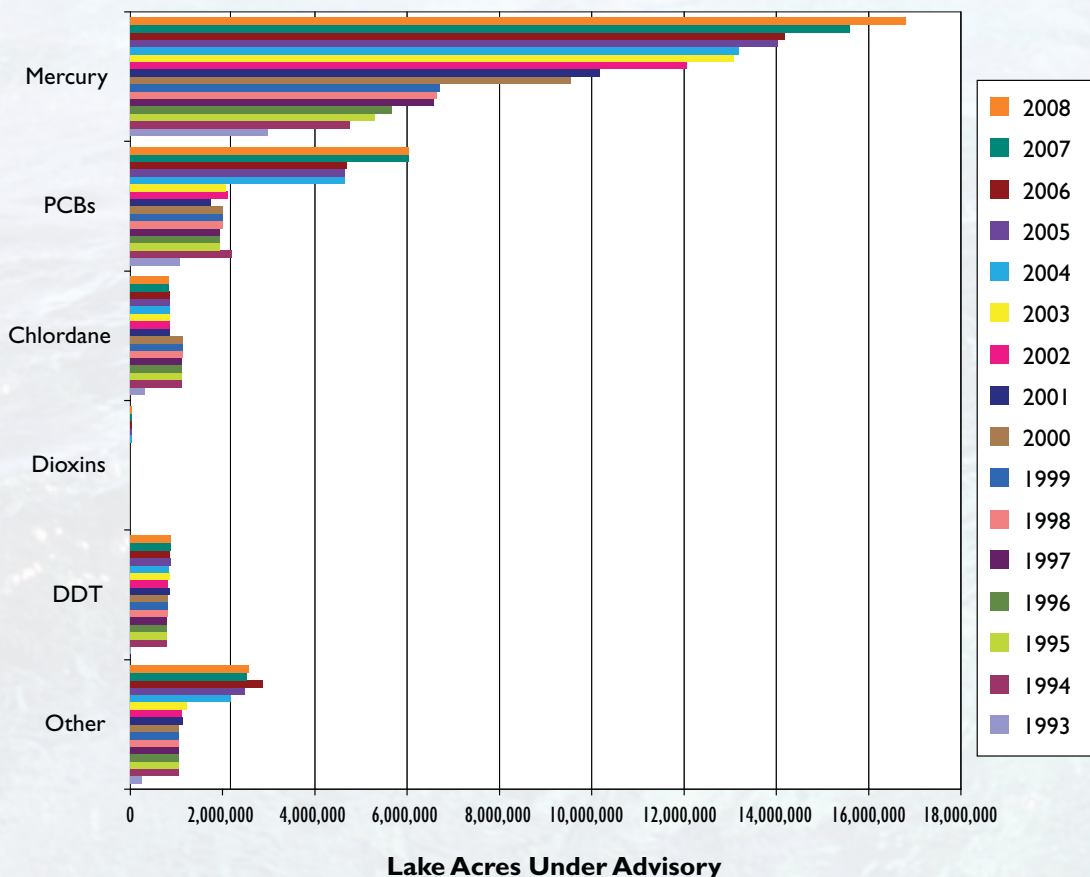


Figure 3 shows the total lake acres under advisory for mercury, PCBs, chlordane, dioxins, DDT and other contaminants from 1993 to 2008.

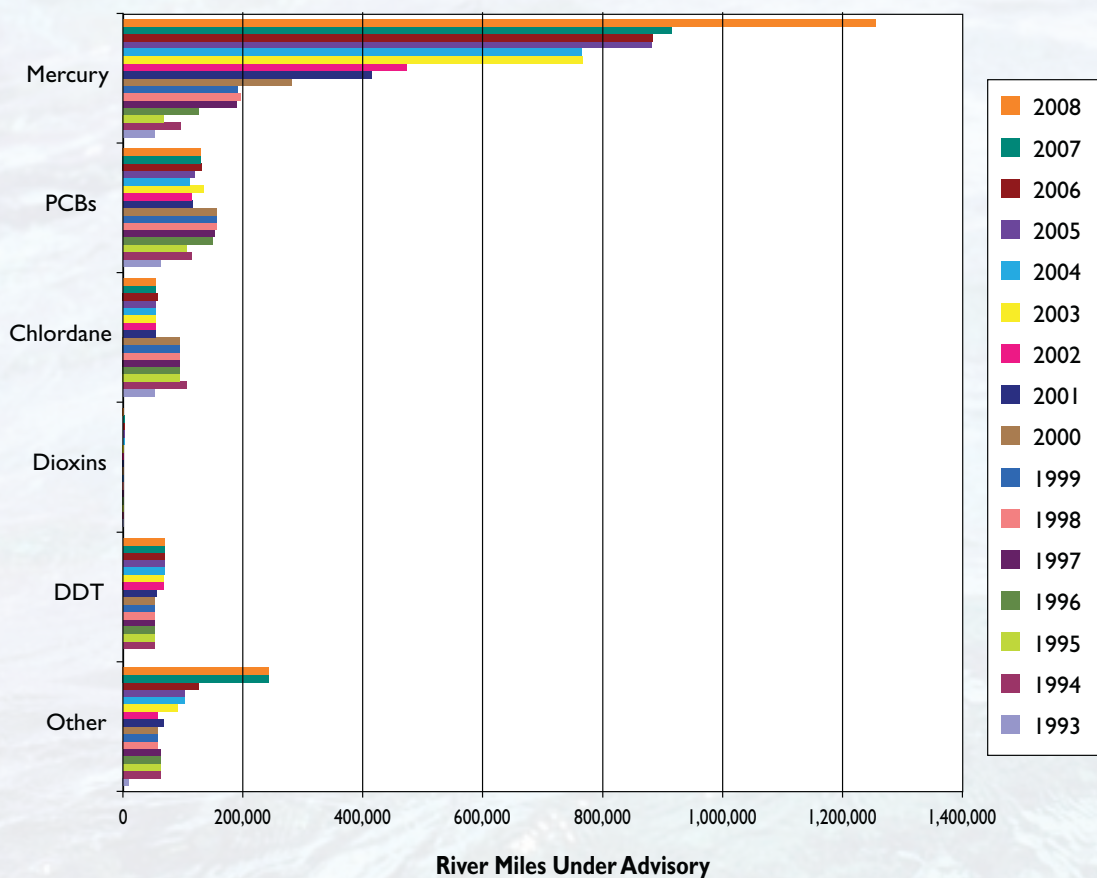


Figure 4 shows the total river miles under advisory for mercury, PCBs, chlordane, dioxins, DDT and other contaminants from 1993 to 2008.

**Table I. Number of advisories and lake acres and river miles under advisory in 2006 and 2008 for each contaminant.**

Contaminant	Number of Advisories		Lake Acres		River Miles	
	2006	2008	2006	2008	2006	2008
Mercury	3,080	3,361	14,177,175	16,808,032	882,963	1,254,893
PCBs	1,023	1,025	4,699,936	6,049,506	132,228	130,248
Chlordane	105	67	847,771	842,913	58,668	54,029
Dioxins	125	123	38,181	35,400	2,315	2,055
DDT	84	76	876,175	876,520	69,021	69,198

## National Advice Concerning Mercury in Fish

In 2004, 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 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 tilefish 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 EPA’s brochure, *What You Need to Know About Mercury in Fish and Shellfish*, which is available in several languages on EPA’s NLFA Web site at [www.epa.gov/fishadvisories](http://www.epa.gov/fishadvisories).

**HECHOS**

El pescado y el marisco son una parte importante de una dieta saludable. El pescado y el marisco contienen proteínas de alta calidad y otros nutrientes esenciales que son bajos en grasas saturadas y contienen ácidos grasos omega-3. Una dieta bien equilibrada que incluya pescados y mariscos variados puede contribuir a la salud cardíaca, y al crecimiento y desarrollo adecuado de los niños. Por tanto, las mujeres y los niños pequeños en particular deben incluir pescados o mariscos en sus dietas debido a sus muchos beneficios nutricionales.

Sin embargo, casi todos los pescados y mariscos contienen algunos rastros de mercurio. Para muchas personas, el riesgo

**Lo que Usted Necesita Saber Sobre el Mercurio en el Pescado y los Mariscos**

Para más información sobre los riesgos del mercurio en el pescado y los mariscos, llame a la línea de información gratuita de la Administración de Alimentos y Medicamentos de los EE.UU. en el 1-888-SAFEFOOD o visite el sitio Web de la FDA sobre la seguridad de los alimentos.

Para más información sobre la seguridad de los pescados y mariscos consumidos localmente visite el sitio Web de la FDA sobre la seguridad de los alimentos.

**鱼贝汞风险须知**

给以下人群的公告  
可能怀孕的女性  
孕妇  
哺乳期妇女  
儿童

由美国食品药品监督管理局和美国环境保护署提供

**Yam Koj Yuav Tsum Tau Paub Txog Ntawm Mercury hauv Nqaij Nses thiab Qwj Nses**

qhia rau s Yuav Xeeb Tub i Xeeb Tub Lawm Siam Mis sau Menyutam im Yaus

U.S. Food and Drug Administration | Protection Agency

**어패류에 함유된 수은에 관한 모든 정보**

신할 가능성이 있는 여성, 임신한 여성, 수유 중인 여성, 그리고 영유아를 위해 이 식품의약품과기 환경보호청이 드리는 조언

Khuyên dành cho phụ nữ có thể mang thai; phụ nữ đang mang thai; Bà mẹ cho con bú Trẻ nhỏ

áp: phươn và Dược; phươn Hoa Kỳ, và Bộ Môi trường Hoa Kỳ

**Những Thông tin Cần biết về Thủy ngân có trong Cá và Tôm, Cua, Sò, Hến**

Que Você Precisa Saber Sobre Mercúrio em Peixes e Frutos do Mar

ações para Podem Engravidar e Grávidas e Amamentando e Pequenas

U.S. Food and Drug Administration | Protection Agency

Advisory of the EPA and the FDA of 2004 for: Las mujeres en edad fértil, las mujeres embarazadas, las madres lactantes y los niños pequeños

## EPA Fish Advisory Program Activities

### The National Forum on Contaminants in Fish

This forum is a biennial event sponsored by EPA to bring together public health and environmental professionals from states, tribes, and other interested groups to discuss the many issues related to assessing risks and benefits of fish consumption. The next forum is scheduled for November 2–5, 2009, in Portland, Oregon. More information on the forum is available online at [www.epa.gov/waterscience/fish/forum](http://www.epa.gov/waterscience/fish/forum).

### Mississippi Delta Fish Consumption Survey

EPA's Fish Advisory Program is partnering with FDA and the Mississippi State Department of Environmental Quality to assess the awareness and effectiveness of existing fish consumption advisories in the Mississippi Delta. Objectives of the study are to:

- Determine the extent to which Delta sport and subsistence fishers and their families are aware of the advisory and its recommendations;
- Determine the extent to which Delta sport and subsistence fishermen and their families have changed their fish consumption behaviors as a result of the Delta advisory; and
- Document specific behavior changes, such as changes in the amount of fish consumed, method of fish preparation used, and species of fish consumed and avoided.

The survey is scheduled to be completed in early 2010, at which time results will be published.

### Fish Tissue Contaminant Studies

As part of our ongoing contaminant assessment activities, EPA has expanded the evaluation of contaminants in fish tissue to include Contaminants of Emerging Concern. Moving beyond the legacy of persistent organic contaminants and toxic metals, EPA's sampling and analysis activities include a pilot study of the occurrence of pharmaceuticals and personal care products (PPCPs) in five effluent-dominated streams, completed in 2008, and ongoing sampling of fish as part of a nationally representative study of fish caught in urban rivers. 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 organic compounds (e.g., PFOS, perfluorooctanoic acid). In addition, a full 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. For further information about these studies, contact Leanne Stahl ([stahl.leanne@epa.gov](mailto:stahl.leanne@epa.gov)).

## Additional Information

For more information about specific advisories within a state, contact the appropriate state agency listed on EPA's NLFA Web site at [www.epa.gov/fishadvisories](http://www.epa.gov/fishadvisories).

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

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