

US EPA ARCHIVE DOCUMENT

National Listing of Fish Advisories Questions and Answers

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What is a fish consumption advisory?

A fish consumption advisory is not a regulation, but rather a voluntary recommendation issued to help protect public health. Consumption advisories may include recommendations to limit or avoid eating certain fish and water-dependent wildlife species caught from specific water bodies or, in some cases, from specific water-body types (e.g., all lakes) due to contamination by one or more chemical contaminants.

An advisory may be issued for the general population (i.e., general public), including recreational and subsistence fishers, or it may be issued specifically for sensitive populations, such as pregnant women, nursing mothers, and children.

What are the different types of fish advisories?

States typically issue four types of advisories and a commercial fishing ban to protect both the general population and specific sensitive populations.

- **No-consumption advisory for the general population** – Issued when levels of chemical contamination in fish or wildlife pose a health risk to the general public. The general population is advised to avoid eating certain types of locally caught fish or wildlife.
- **No-consumption advisory for sensitive populations** – Issued when contaminant levels in fish or wildlife pose a health risk to sensitive populations (such as children and pregnant women). Sensitive populations are advised to avoid eating certain types of locally caught fish or wildlife.
- **Restricted-consumption advisory for the general population** – Issued when contaminant levels in fish or wildlife may pose a health risk if too much fish or wildlife is consumed. The general population is advised to limit eating certain types of locally caught fish or wildlife.
- **Restricted-consumption advisory for sensitive populations** – Issued when contaminant levels in fish or wildlife may pose a health risk if too much fish or wildlife is consumed. Sensitive populations are advised to limit eating certain types of locally caught fish or wildlife.
- **Commercial fishing ban** – Issued when high levels of contamination are found in fish caught for commercial purposes. These bans prohibit the commercial harvest and sale of fish and shellfish from a designated water body.

In 2011, all 50 states, the District of Columbia, the US Territories of American Samoa and Guam, and five Native American Tribes had fish advisories in place. Advisories were issued for the general population at 4,821 waterbodies.

Forty seven states issued advisories for sensitive subpopulations at 3,840 waterbodies. Many waterbodies have separate detailed recommendations for both population types, as well as multiple contaminant and species combinations, which brings the total number of active advisories in 2011 to 5,627.

What is the National Listing of Fish Advisories (NLFA)?

The [NLFA](#) is a database that contains information about the species and size of fish under advisory, the chemical contaminants causing the advisory, the location of the water body, and the population for whom the advisory was issued. The NLFA also includes data on the concentrations of contaminants in fish tissue for 49 states/territories/tribes. Through this website, the user can generate national, regional, and state maps that summarize advisory information.

What kind of information is included in the National Listing of Fish Advisories?

The NLFA database includes information on the geographic location of advisories, chemical contaminants causing advisories, the species of fish/wildlife affected, the type of advisory (such as no consumption or limited consumption), the population affected (such as women of childbearing age, children, general population), and web links to state, territory, and tribe advisory program contacts and websites.

Does EPA analyze this data or does EPA require that the data be gathered in a specific way?

No. The EPA simply provides a central 'one-stop' repository as a service and convenience for the public. The EPA has issued guidance to assist states in developing methods of monitoring, gathering and assessing information about their fish populations. Since this information is only guidance, use by states is not mandatory. The states have primary responsibility for monitoring, assessing and making advisory decisions.

Thus the basis for each State fish advisory varies.

Can EPA draw conclusions or identify trends from this National Listing?

No. The EPA's role is to provide a central repository. Each State determines the scope and extent of monitoring, which waters should be placed under advisory, etc. Consequently, the information is highly variable and makes it difficult to draw conclusions or trends.

How many advisories were there in 2011?

The 2011, EPA's National Listing of Fish Advisories indicates that the number of waterbodies under advisory was 4,821. This is an increase of 223 since 2010. Approximately 17.7 million lake acres and 1.36 million river miles were under advisory in 2011, representing 42.3 percent of the nation's total lake acreage and 36 percent of the nation's total river miles.

What is a statewide advisory?

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 designation of all river miles and/or lake acres in the state as under advisory.

Which states have issued statewide advisories?

Please refer to Table 1.

Table 1. Summary of Statewide Advisories by Water Body Type and Year Issued

State	Lake (issued)	River (issued)	Coastal Waters (issued)
Alabama			Mercury (1996)
Alaska			Mercury (2007)

State	Lake (issued)	River (issued)	Coastal Waters (issued)
Connecticut	Mercury (1996)	Mercury (1996)	PCBs (1993)
Delaware	Multiple Pollutants (2007)	Multiple Pollutants (2007)	Mercury, PCBs (2006), Multiple Pollutants (2007)
District of Columbia	PCBs (1993)	PCBs (1993)	
Florida	Mercury (2002)	Mercury (2002)	Mercury (1993)
Georgia			Mercury (2000)
Hawaii			Mercury (2003)
Idaho	Mercury (2008)	Mercury (2008)	
Illinois	Mercury (2002)	Mercury (2002)	
Indiana	Mercury (2004)	PCBs (1996), Mercury (2004)	
Kentucky	Mercury (2000)	Mercury (2000)	
Louisiana			Mercury (1997)
Maine	Mercury (1994)	Mercury (1994)	Dioxins, Mercury, PCBs (1994)
Maryland	Mercury (2001), PCBs (2007)	Mercury (2004), PCBs (2007)	Mercury, PCBs (2009)
Massachusetts	Mercury (1996)	Mercury (1996)	PCBs, Mercury (1994)
Michigan	Mercury (1993)		
Minnesota	Mercury, PCBs (1999)		
Mississippi			Mercury (1998)
Missouri	Mercury (2001) Chlordane and PCBs RESCINDED (1995)	Mercury (2001) Chlordane and PCBs RESCINDED (1995)	
Montana	Mercury (2003)	Mercury (2003)	
New Hampshire	Mercury (1995)	Mercury (1995)	PCBs, Mercury, Dioxin (1994)
New Jersey	Mercury (1995)	Mercury (1995)	PCBs, Dioxins (1993)
New York	Multiple Pollutants (1994)	Multiple Pollutants (1994)	Cadmium, PCBs, Multiple pollutants (1995)
North Carolina	Mercury (2006)	Mercury (2006)	Mercury (2000)
North Dakota	Mercury (2001)	Mercury (2001)	
Ohio	Mercury (1997)	Mercury (1997)	
Oklahoma	Mercury (2005)	Mercury (2005)	
Oregon	Mercury (2008, RESCINDED in 2009)	Mercury (2008, RESCINDED in 2009)	
Pennsylvania	Not specific (2001)	Not specific (2001)	

State	Lake (issued)	River (issued)	Coastal Waters (issued)
Rhode Island	Mercury (2002)	Mercury (2002)	PCBs, Mercury (1993)
South Carolina			Mercury (2001)
Texas			Mercury (1997)
Vermont	Mercury (1995)	Mercury (1995)	
Washington	Mercury (2003)	Mercury (2003)	
West Virginia	Mercury (2005)	Mercury (2005)	
Wisconsin	Mercury (2000)	Mercury (2000)	
Wyoming	Mercury (2008)	Mercury (2008)	

Are there any fish advisories in the Great Lakes?

Yes. All (100 percent) of the Great Lakes and their connecting waters were under advisory for at least one contaminant in 2011 (Table 2). The Great Lakes and their connecting waters are considered separately from other waters and are not included in the calculations of total lake acres or river miles.

Table 2. Fish Advisories Issued for the Great Lakes

Great Lakes	PCBs	Dioxins	Mercury	Chlordane	Mirex	DDT
Lake Superior	●	●	●	●		
Lake Michigan	●	●	●	●		●
Lake Huron	●	●	●			
Lake Erie	●	●	●			
Lake Ontario	●	●			●	

Are there any fish advisories in the Chesapeake Bay?

Yes. The main stem of the Chesapeake Bay and its tributaries are under advisory. The Potomac, James, Back, Anacostia, Piankatank, and Patapsco rivers that connect to the Chesapeake Bay continue to be under advisory.

The lower western shore including Herring Bay is also under advisory (PCBs). Baltimore Harbor, which also connects to the Chesapeake Bay, is under advisory for chlorinated pesticides and PCB contamination in fish and blue crabs. Delaware Bay, portions of the upper bay of New York Harbor, Long Island Sound and Puget Sound are also all under advisory.

Are there any fish advisories at the beach?

Yes. Eighteen states have issued fish advisories for all of their coastal waters, and Hawaii has an advisory for mercury in several species of marine fish (Table 1). The Atlantic coast advisories

have been issued for a wide variety of chemical contaminants including mercury, PCBs, dioxins, and cadmium.

All of the Gulf coast advisories have been issued for mercury. Of the Pacific coast states, only Alaska has issued a statewide advisory for coastal waters for mercury, although several local areas along the conterminous Pacific coast including areas in California (DDT, Mercury, PCB), Guam (Dioxin, PCB), and the American Samoa (DDT, Mercury, PCB) are under advisory.

Do the states tell us where it is safe to eat fish without restrictions?

Yes. The 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 908 in 2010 to 1,040 in 2011 (Table 3). In 2011, safe eating guidelines were in effect in 21 states, covering approximately 53,252 river miles and 2.9 million lake acres. These river-mile and lake-acre figures represent an increase of 22 river miles and about 371,286 lake acres since 2010.

Although several states issued a total of 132 new guidelines between 2010 and 2011, no new states issued safe eating guidelines in 2011. The overall geographic area covered by guidelines increased slightly in 2011 because new safe eating guidelines were issued in three states; Maryland, Minnesota, and Montana.

Table 3. States with Safe Eating Guidelines in effect in 2011.*

*** Please note: States not listed in this table did not have Safe Eating Guidelines in effect in 2011.**

State Number of Safe Eating Guidelines in 2011

AK	2
AL	19
AZ	1
CT	1
GA	181
IL	14
KY	2
MA	1
MD	26
MI	73
MN	493
MS	1

State Number of Safe Eating Guidelines in 2011

MT	34
NJ	18
NM	12
NV	10
SC	79
TX	48
WA	19
WI	2
WV	4

Which contaminants cause most fish advisories?

Although there are advisories in the United States for 34 different chemical contaminants, 94 percent of all advisories in effect in 2011 involved the following five bioaccumulative chemical contaminants: mercury, polychlorinated biphenyls (PCBs), chlordane, dioxins and dichlorodiphenyltrichloroethane (DDT).

Why are some contaminants found at such high concentrations in some fish?

Bioaccumulative chemical contaminants accumulate in the tissues of aquatic organisms at concentrations many times higher than concentrations in the water. These contaminants can persist for relatively long periods in sediments, where bottom-dwelling organisms that are low in the food chain can accumulate them and pass them up the food chain to larger predatory fish.

Concentrations of bioaccumulative contaminants in the tissues of aquatic organisms may increase at each level of the food chain. As a result, top predators in a food chain (e.g., largemouth bass or walleye) may have concentrations of bioaccumulative contaminants in their tissues that are a significantly higher than the concentrations found in the water.

How many mercury advisories were there in 2010 and 2011?

The total number of advisories for mercury increased from 3,710 in 2010 to 3,921 in 2011. Eighty-one percent of all advisories have been issued, at least in part, because of mercury. In 2010, 16,396,422 million lake acres and 1,143,327 million river miles were under advisory for mercury. In 2011, these numbers increased slightly to 16,404,769 million lake acres and 1,144,045 million river miles.

Currently all 50 states, 1 U.S. territory, and 3 tribes have mercury advisories in effect. As of 2011, 25 states have statewide advisories for mercury in freshwater lakes and/or rivers. Sixteen states have statewide fish advisories for mercury in their coastal waters (see Table 1).

How does mercury, which is generally emitted in a gaseous elemental or ionic form, end up as methylmercury in the muscle tissue of fish?

The answer involves a number of complex physical and chemical processes that are not well understood. The cycling, fate, and chemical form of mercury in natural environments, its uptake by biota, its bioaccumulation in the food chain, and its occurrence in fish are all areas that require continued research.

What steps is EPA taking to reduce the mercury levels in fish, the leading cause of fish advisories?

The EPA issues regulations that require industry to reduce mercury releases to air and water and to properly dispose of mercury wastes. In June 2013, EPA proposed new effluent guidelines for steam electric power plants which will greatly reduce a major source of discharges from a sector that currently accounts for more than half of all toxic pollutants discharged into stream, rivers and lakes.

For more information about the new [steam electric effluent guidelines](#).

[EPA's Mercury and Air Toxics Standards](#) are protecting children and communities by limiting the emissions of mercury from new power plants.

The EPA works with industry to promote voluntary reductions in mercury use and release, and with partners in state, local and tribal governments to improve their mercury reduction programs. The EPA also works with international organizations to prevent the release of mercury in other countries. The public can also contribute to mercury reduction efforts by purchasing mercury-free products and correctly disposing of products that contain mercury.

How many PCBs advisories were there in 2011?

The number of advisories for PCBs increased from 1,084 in 2010 to 1,102 in 2011. In 2010, there were 6,071,877 million lake acres and 131,224 river miles under advisory for PCBs.

Those numbers increased slightly to 6,080,041 million lake acres and 131,657 river miles in 2011. As of 2011, six (DC, IN, MD, MN, NY) states have statewide freshwater (river and/or lake) advisories for PCBs, and nine states have PCB advisories for all of their coastal marine waters (see Table 1).

Table 4. Change in size of waters under PCB advisories, by state, 2010-2011

State	Change from 2010 to 2011 (river miles)	Change from 2010 to 2011 (lake acres)
AL	0	0
AR	0	0
CA	0	0
CT	0	0

State	Change from 2010 to 2011 (river miles)	Change from 2010 to 2011 (lake acres)
DC	0	0
DE	0	0
FL	0	0
GA	0	0
IA	0	50
IL	241	0
IN	0	0
KS	0	0
KY	0	0
LA	0	0
MA	2	100
MD	0	0
ME	0	0
MI	0	0
MN	0	0
MO	0	0
MS	0	0
MT	0	0
NC	0	0
NE	-30	0
NJ	0	0
NM	0	0
NY	0	0
OH	2,043	0
OR	0	0
PA	0	0
RI	0	0
SC	0	0
TN	0	0
TX**	0	5,982
UT	0	0
VA	0	0
VT	0	0
WA	17	0
WI	0	2,022
WV	0	0

* Please note: Because MD has a statewide advisory for PCBs, two new lake advisories equaling 1,268 acres are not reflected in the changes from 2010 to 2011, as all miles and all acres remained under advisory for PCBs in 2011.

** TX also reported Galveston Bay Estuary (402064) as 17,000 acres with a PCB advisory

Bolded states had changes between 2008-2010.

How many chlordane advisories were there in 2010 and 2011?

All uses of the pesticide chlordane were banned in the United States in 1988. In 2011, chlordane advisories were in effect at 60 waterbodies. No new advisories were issued for chlordane in 2011.

Table 5. Change in size of waters under chlordane advisories, by state, 2010-2011

State	Change from 2010 to 2011 (river miles)	Change from 2010 to 2011 (lake acres)
AZ	0	0
CA	0	0
CT	0	0
DE	0	0
IL	0	0
MA	0	0
MI	0	0
MO	0	0
NE	0	0
NY*	0	0
PA	0	0
SC	0	0
TN	0	0
TX	0	0

* Please note: Because NY has a statewide advisory for chlordane, the new lake advisory for 26.5 acres is not reflected in the changes from 2010 to 2011, as all miles and all acres remained under advisory for chlordane in 2011.

** **Bolded states had changes between 2008-2010.**

How many dioxin advisories were there in 2010 and 2011?

The number of dioxin advisories was 128 in 2010, and 129 in 2011. In 2010, there were 35,400 lake acres and 2,333 river miles under advisory for dioxins. In 2011, there was no change in lake acres and river miles since 2010.

The geographic extent of dioxin advisories is extremely limited compared to that for the other four major contaminants, due in part to the locations of facilities that release dioxin and the high costs of laboratory analysis for dioxin.

Table 6. Change in size of waters under dioxin advisories, by state, 2010-2011

State Change from 2010 to 2011 (river miles)		Change from 2010 to 2011 (lake acres)
DE	0	0
FL	0	0
LA	0	0
MA	0	0
ME	0	0
MI	0	0
NC	0	0
NH	0	0
NJ	0	0
NY	0	0
OR	0	0
RI	0	0
TX	0	0
VA	0	0
WI	0	0
WV	0	0

How many DDT advisories were there in 2010 and 2011?

The use of DDT, an organochlorine pesticide, has been banned in the United States since 1975. The total number of DDT advisories increased from 58 in 2010 to 67 in 2011. In 2010 there were 876,470 lake acres and 68,884 river miles under advisory for DDT. In 2011 there were 876,571 lake acres and 68,927 river miles under advisory for DDT.

Nine DDT advisories were issued in 2011 resulting in the slight increase in lake acres and river miles under advisory for DDT between 2010 to 2011 (0.02 percent and 0.07 percent increase, respectively).

Were advisories issued for any other contaminants?

Yes. Although the five bioaccumulative contaminant groups contribute to 94 percent of the total number of advisories, six percent of all fish advisories are listed for other contaminants (in some cases these waterbodies are also listed for one of the top five contaminant groups). Other contaminants include:

- Organochlorine pesticides (e.g., dieldrin, mirex, toxaphene)
- Heavy metals (e.g., arsenic, cadmium, lead, copper) and
- Other chemical compounds, like creosote, polycyclic aromatic hydrocarbons (PAHs), and hexachlorobenzene

In 2010 California, Nebraska, and Michigan issued advisories for selenium, while Minnesota and Wisconsin issued new advisories for perfluorooctane sulfonate (PFOS), a key ingredient in stain repellants that has been largely phased out of use in the United States in recent years. In 2011, the only new contaminant for which an advisory was issued is Aldrin.

Aldrin is an insecticide that can remain in the environment for many years despite being restricted for use by the EPA in 1974 and banned in 1987. It is known to pose a risk to human health and may cause cancer, birth defects and kidney damage.

Why is the sum of the advisories reported for the individual bioaccumulative contaminants larger than the total number of advisories in the U.S. for each given year?

An advisory for a specific water body may be issued for more than one pollutant (e.g., both mercury and PCBs). When calculating the total number of advisories in the United States, the EPA counts a waterbody as one advisory, regardless of the number of contaminants or fish species that are included in the advisory. If the advisory applies to a specific contaminant, then it is counted in the total number of advisories for that contaminant. Therefore, when a water body is under advisory for multiple contaminants, it will be counted multiple times. This is why the sum of the individual contaminant advisories will always exceed the total number of advisories in the United States for a given year.

What about recent advice from EPA and FDA on mercury in fish?

In 2017, the EPA and the Food and Drug Administration (FDA) issued updated advice concerning mercury in fish for women who might become pregnant, women who are pregnant, nursing mothers, and young children.

- [EPA-FDA Advice about Eating Fish](#)

Where can I get more information about fish advisories?

For more information about the National Listing of Fish Advisories and the advisories themselves, you can visit the EPA's [Fish Advisories website](#). To find out how to select and prepare fish, read the brochure "[Should I Eat the Fish I Catch?](#)" available in several languages.

For more information about reducing your health risks from eating fish you catch, contact your local or state health or environmental protection department. You can find the name and number of a state or local fish advisory contact on the EPA fish advisory website.

For a more detailed analysis of the 2011 National Listing of Fish Advisories, see our [Technical Fact Sheet](#).