

Fish Consumption Advisories - July 2011

SHOULD WE EAT THE FISH CAUGHT IN ARIZONA?

Yes. You don't have to quit eating fish from Arizona's waters. Just learn to eat them safely. Fish consumption advisories for mercury and pesticides are currently in effect on a number of water bodies in Arizona. These pollutants concentrate to high levels in fish by accumulating in fatty tissues or binding to muscle tissue, a process called bioaccumulation. This bioaccumulation may pose a threat to human health if these organisms are eaten on a regular basis in excess of fish consumption advisory guidelines. Fish are a good source of low fat protein and as long as fish are not consumed at rates greater than those advised the likelihood of health risk is minimal. Eating smaller, younger fish which contain less mercury or other types of fish such as trout or bluegill can lower the amount of mercury you consume and increase the healthful benefits of eating fish. Fish consumption advisories have been issued in Arizona to inform the public about possible adverse health effects and to provide recommendations for how many fish meals can be consumed safely. Advisories may be directed at a particular subset of the population because some people are at greater risk (e.g., subsistence fishers, pregnant women and young children). Information on these advisories are shown in the table on the second page.

NATIONAL MERCURY FISH CONSUMPTION ADVISORY

In January 2001, the U.S. Environmental Protection Agency (EPA) issued an advisory for the entire nation concerning risks associated with mercury in fresh-water fish for women who are pregnant or may become pregnant, nursing mothers, and young children. EPA is recommending that these most vulnerable groups limit fish consumption to one meal per week – six ounces of cooked fish (eight ounces of uncooked fish) for an adult, and two ounces of cooked fish (three ounces uncooked) for a young child. The U.S. Food and Drug Administration has a companion advisory concerning the hazard posed by some fish purchased commercially (www.cfsan.fda.gov).

These state fish consumption advisories are based on risks associated with consumption of fish from rivers, lakes and reservoirs throughout the state. The advisories and recommended consumption rates are based on the same risk analysis methods that EPA used for the national advisory. To further strengthen the program, Arizona recently adopted the national fish tissue standard of 0.3 mg/kg for methylmercury. This standard was used in developing the 2009 advisories.

IS IT SAFE TO SWIM OR WADE IN LAKES WITH MERCURY OR PESTICIDE ADVISORIES?

Yes. Once mercury or pesticides enter an aquatic ecosystem such as a lake or stream, they accumulate quickly in the muscle tissue of living organisms such as fish and aquatic insects. The mercury remains within the living organisms and moves from organism to organism as part of the food chain cycle. In aquatic ecosystems the vast majority of these pollutants are contained in the organisms inhabiting that system leaving very small amounts in the water.

IS IT SAFE TO FISH IN THESE LAKES?

Yes. Recreational fishing should not be affected by these advisories. It is safe for people of any age to handle fish in "catch and release" situations and, as stated previously, contact with the water should not pose a risk to humans or domestic animals.

WHAT IS ADEQ DOING ABOUT THE PROBLEMS?

Use of the pesticides responsible for the early advisories has been banned or cancelled in the United States. While the pesticides are still present today in harmful concentrations, there has been a reduction in levels in the environment since their use ended. ADEQ continues to monitor fish tissue in these areas. The consumption advisories will remain in effect until the pesticides are gone from the aquatic ecosystem, or are no longer present at unhealthy levels.

Currently, ADEQ is conducting data collection, analysis and research to determine mercury sources in Arizona and develop feasible mitigation and remediation measures. Long-term strategies at the state and federal levels include reducing mercury in consumer products, encouraging development of new technologies, and facilitating proper disposal of products containing mercury. Reduction of mercury contamination will require participation from other agencies, including Game & Fish, Health Services, Mines & Minerals, EPA, USGS, state and federal land managers, as well as other public and private partners.

ADDITIONAL PROGRAM INFORMATION

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Waterbody Name	Sources of Contamination	Advisory Issued	Advised Consumption Rates (based on uncooked portion)
Alamo Lake	Mercury contamination Sources being investigated include: atmospheric deposition, naturally mineralized soils and abandoned mines	February 2004	Children under age 16: No consumption of largemouth bass, channel catfish or black crappie Women of childbearing age: One 8 oz. fish meal per month of largemouth bass, channel catfish or black crappie All other adult women: Same consumption rate as for women of childbearing age unless a physician supports a higher rate Adult men (16 yrs. or older): Four 8 oz. fish meals per month of largemouth bass, or black crappie. Six 8 oz. fish meals per month of channel catfish
Arivaca Lake	Mercury contamination Sources may include atmospheric deposition and naturally mineralized soils	1996	Do not consume fish and other aquatic organisms
Coors Lake	Mercury contamination Sources being investigated include: atmospheric deposition, naturally mineralized soils and abandoned mines	February 2004	Children under the age of 16: No consumption of largemouth bass Women of childbearing age: One 8 oz. fish meal per month of largemouth bass All other adult women: Same consumption rate as for women of childbearing age unless a physician supports a higher rate Adult men (16 yrs. or older): Four 8 oz. fish meals per month of largemouth bass
Dysart Drain (a canal that drains to the Agua Fria River)	Historic use of pesticides	1995	Do not consume fish and other aquatic organisms
Lake Pleasant	Mercury contamination Sources being investigated	January 2009	Children under the age of six: No consumption of largemouth bass Women of childbearing age and children between the ages of 6 and 16: One 8 oz. fish meal per month of largemouth bass All other adult women: Same consumption rate as for women of childbearing age unless a physician supports a higher rate Adult men (16 years or older): Five 8 oz. fish meals per month of largemouth bass
Lyman Lake	Mercury contamination Sources being investigated include: aerial deposition and naturally mineralized soils	October 2002	Children under age of 6: No consumption of walleye, largemouth bass or channel catfish Children between the ages of 6 and 16: no consumption of walleye or largemouth bass; one 8 oz fish meal per month of channel catfish Women of childbearing age: One 8 oz. fish meal per month of walleye, largemouth bass or channel catfish All other adult women: Same consumption rate as for women of childbearing age unless a physician supports a higher rate Adult men (16 yrs. or older): Three 8 oz. fish meals per month of walleye and largemouth bass; five 8 oz. fish meals per month of channel catfish
Painted Rocks Reservoir Painted Rock Borrow Pit Lake, and portions of the Gila, Salt, and Hassayampa rivers	Historic use of pesticides	1991	Do not consume fish and other aquatic organisms
Parker Canyon Lake	Mercury contamination Sources being investigated	October 2002	Children under age of 6: No consumption of largemouth bass, bluegill or pike Children between the ages of 6 and 16: no consumption of largemouth bass; one 8 oz fish meal per month of bluegill or pike Women of childbearing age One 8 oz. fish meal per month of largemouth bass or bluegill; two 8 oz fish meals per month of pike All other adult women: Same consumption rate as for women of childbearing age unless a physician supports a higher rate Adult men (16 yrs. or older): Three 8 oz. fish meals per month of largemouth bass; five 8 oz fish meals per month of bluegill; six 8 oz fish meals per month of pike
Peña Blanca Lake	Mercury contamination caused by historic mining	1995	Do not consume fish and other aquatic organisms
Roosevelt Lake	Mercury contamination Sources being investigated	January 2009	Children under the age of six years: No consumption of largemouth bass or channel catfish Women of childbearing age and children between the ages of 6 and 16: One 8 oz. fish meal per month of largemouth bass or channel catfish Pregnant women: Consume only largemouth bass below 13 inches at the consumption rate advised for women of child bearing age All other adult women: Same consumption rate as for women of childbearing age unless a physician supports a higher rate Adult men (16 years or older): Five 8 oz. fish meals per month of largemouth bass or channel catfish
Tonto Creek	Mercury contamination Sources to be investigated	July 2011	Downstream of the northern boundary of Hellsgate Wilderness at Bear Flat Campground: Do not consume smallmouth bass, green sunfish and black bullhead catfish For common carp in this area: Children under the age of six years: No consumption Children between six and sixteen years of age: One 8 oz. (uncooked weight) fish meal/month All adults (16 years or older): Two 8 oz. (uncooked weight) fish meals per month
Soldier Lake Soldier Annex Lake Long Lake	Mercury contamination Sources to be investigated	July 2003	Do not consume any fish caught from these lakes
Upper and Lower Lake Mary	Mercury contamination Sources to be investigated	May 2002	Do not consume walleye fish and limit consumption of other fish species to one 8 oz. fillet per month