



## **FAQ's Associated with the Lake Worth Fish Consumption Advisory**

*Prepared by the Seafood and Aquatic Life Group  
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### **Q: What recommendation has the Texas Department of State Health Services (DSHS) made to protect human health?**

**A:** Specific consumption advice, Fish Consumption Advisory 45 (ADV-45), has been issued for Lake Worth recommending that persons should not consume blue catfish, channel catfish, and smallmouth buffalo from these waters.

### **Q: What species of fish were tested from Lake Worth?**

**A:** Blue catfish, channel catfish, common carp, freshwater drum, largemouth bass, smallmouth buffalo, and white crappie.

### **Q: What are the chemical contaminants of concern in Lake Worth?**

**A:** Polychlorinated Biphenyls (PCBs), aldrin, and dieldrin.

### **Q: What are polychlorinated biphenyls (PCBs)?**

**A:** PCBs are synthetic (man-made) mixtures of up to 209 individual chlorinated compounds (known as congeners). Many commercial PCB mixtures in the U.S. are known by the trade name Aroclor. PCBs are oily liquids or solids that are colorless to yellow. Some PCBs may also exist as a vapor in air. PCBs were once used commercially as coolants and lubricants in electrical transformers and capacitors, heavy-duty electrical equipment in power plants, industries, and large buildings across the country and other electrical equipment, carbonless copy papers, sealing and caulking compounds, paint additives, cutting oils, ballasts in fluorescent light fixtures, and hydraulic fluids. PCBs were valued for chemical stability and fire resistance.

### **Q: How do PCBs enter the environment?**

**A:** In 1979, The United States Environmental Protection Agency (USEPA) banned the manufacture of PCBs in the United States. However, the USEPA did not require removal of PCB-containing materials still in service at the time of the ban. Therefore, some materials remain in use today. The major source of environmental PCBs in the United States today is from ongoing use, storage, and disposal of products in landfills or improper disposal of products that contain PCBs. PCBs also may be released from sediments disturbed by flooding, dredging, and other activities.

**Q: What are aldrin and dieldrin?**

A: Aldrin and dieldrin are insecticides with similar chemical structures that are discussed together because aldrin quickly breaks down to dieldrin in the body and in the environment. Pure aldrin and dieldrin are white powders with a mild chemical odor. The less pure commercial powders have a tan color. Neither substance occurs naturally in the environment. Aldrin and dieldrin was widely used as a pesticide on corn, cotton, and citrus crops between 1950 and 1974. Aldrin and dieldrin were also used to control locusts, mosquitoes, and termites. In 1970, the United States Department of Agriculture canceled all agricultural uses of dieldrin in the United States. Aldrin and dieldrin were used to control termites until 1987, when all uses were banned in the United States by the EPA. Aldrin and dieldrin are no longer produced in the United States.

**Q: How do aldrin and dieldrin enter the environment?**

A: Aldrin and dieldrin enters the environment through past uses, illegal uses, and accidental spills or leaks from storage containers at disposal sites. Aldrin rapidly changes to dieldrin in the environment. Once dieldrin is in the environment, it attaches to soil and lake or river sediments and breaks down very slowly.

**Q: How do aldrin, dieldrin, and PCBs accumulate in fish?**

A: Dieldrin and PCBs have been found in soil, ground and surface water, air, sediment, plants, and animals in all regions of the world. These contaminants break down very slowly in the environment and accumulate in fatty tissue, skin, and internal organs of fish and other animals. Levels of these contaminants in fish may be hundreds to a million times higher than the concentrations found in water or sediments. The amount of aldrin, dieldrin, and PCBs found in fish varies with species, age, size, fat content, diet, and surface water and sediment concentrations. Generally, larger, older fish will contain higher levels of aldrin, dieldrin, and PCBs than smaller, younger fish; fatty fish such as catfish species and smallmouth buffalo may contain higher levels of aldrin, dieldrin, and PCBs than lean fish such as the black bass species and crappie.

**Q: How can aldrin, dieldrin, and PCBs affect my health?**

A: PCBs may affect the immune system, reproductive system, liver, impair physical and neurological development of fetuses and children, and may increase the risk of cancer. Aldrin and dieldrin may affect the nervous system, immune system, liver, and may increase the risk of cancer.

**Q: What is the source of aldrin, dieldrin, and PCBs in Lake Worth?**

A: DSHS does not attempt to determine contaminant sources. The Texas Commission on Environmental Quality (TCEQ) is the state agency responsible for identifying contaminant sources.

**Q: I have been eating these fish all my life. Will I have adverse health effects?**

**A:** The consumption limits recommended by the DSHS have allowed a margin of safety below those levels that could result in adverse health effects; however, eating more than the recommended amount of fish from Lake Worth does not necessarily mean that a person will have observable adverse health effects.

**Q: Should I stop eating fish?**

**A:** No. Fish are an important source of protein in the diet. The DSHS recommends that you follow general consumption guidelines and/or fish consumption advisories or bans issued for specific water bodies provided in the *DSHS Guide to Eating Texas Fish and Crabs* booklet (copies of this booklet may be obtained by calling the DSHS Seafood and Aquatic Life Group (512) 834-6757 or by accessing the DSHS Seafood and Aquatic Life Group Web site at <http://www.dshs.state.tx.us/seafood>). Fish consumption advisory information is also published in the *Texas Parks and Wildlife Outdoor Annual Hunting and Fishing Regulations* booklet. This booklet is provided to all licensed anglers in Texas.

**Q: Will cooking or cleaning fish a certain way reduce the aldrin, dieldrin, and PCBs level?**

**A:** Yes. These chemical contaminants readily accumulate in the fatty tissues of fish. To reduce exposure to these chemicals, the skin, dark (reddish-color) muscle tissue, and fatty portions (i.e. belly fat, side fat, and fat along the top of the back) of the fish should be removed before cooking. The DSHS recommends baking or broiling skinned, trimmed fish on a rack or grill to allow fat to drip away from the fillet. If fish are fried, the frying oil should not be reused. These cooking methods will reduce exposure to many of the most common organic chemical contaminants in fish.

**Q: Should I stop fishing?**

**A:** No. Recreational fishing does not need to stop. Consuming fish in amounts recommended by the DSHS poses no significant health risk and catch-and-release fishing eliminates potential health risks.

**Q: Should I be concerned about aldrin, dieldrin, and PCBs while participating in contact recreation activities like boating or swimming?**

**A:** There is not a concern for aldrin, dieldrin, and PCB exposure while swimming or participating in other contact recreation activities. Levels in the water are low. The concern is for consumption of fish that concentrate the aldrin, dieldrin, and PCBs in their tissue.

**Q: Will the Lake Worth fish consumption advisory be long term?**

**A:** PCBs and dieldrin are contaminants that persist in the environment for years. Due to the long-lived nature of these contaminants there is a strong likelihood that the Lake Worth fish consumption advisory could be long term.

**Q: Will the Texas Department of State Health Services (DSHS) conduct additional monitoring?**

**A:** The DSHS will continue to monitor fish from Lake Worth as funding becomes available.

**Sources of Information**

United States Environmental Protection Agency (EPA) Chemical Fact Sheets  
<http://www.epa.gov/waterscience/fish/technical/chemfacts.html>

Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs  
<http://www.atsdr.cdc.gov/toxfags/index.asp>

Agency for Toxic Substances and Disease Registry (ATSDR) Public Health Statements  
<http://www.atsdr.cdc.gov/PHS/Index.asp>