



FAQ's Associated with Houston Ship Channel and Upper Galveston Bay Fish and Blue Crab 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 has been recommended for two portions of the Houston Ship Channel and Upper Galveston Bay. DSHS recommends an adult consumption limit of no more than one meal, not to exceed eight-ounces each month of all fish species and blue crabs from the Houston Ship Channel upstream of the Lynchburg Ferry crossing including the San Jacinto River below the U.S. Highway 90 bridge and all contiguous waters. Women of childbearing age and children should not consume any fish or blue crabs from this area. DSHS also recommends an adult consumption limit of no more than one meal, not to exceed 8 ounces each month of all catfish species, blue crabs and spotted seatrout from the Houston Ship Channel and Upper Galveston Bay downstream of the Lynchburg Ferry crossing including Upper Galveston Bay north of a line drawn from Red Bluff Point to Five Mile Cut Marker to Houston Point. Women of childbearing age and children should not consume catfish, blue crabs, or spotted seatrout from this area.

Q: What are the chemical contaminants of concern in the Houston Ship Channel and Upper Galveston Bay?

A: Polychlorinated Biphenyls (PCBs), Dioxin, and organochlorine pesticides.

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. 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 of 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: How do PCBs accumulate in fish?

A: PCBs have been found in soil, ground and surface water, air, sediment, plants, and animals in all regions of the world. PCBs break down very slowly in the environment and accumulate in fatty tissue, skin, and internal organs of fish and other animals. Levels of PCBs in fish may be 2,000 to 1,000,000 times greater than levels in the surrounding water. The amount of PCBs found in fish varies with species, age, size, fat content, diet, and surface water concentrations. Larger, older fish will generally contain higher levels of PCBs than smaller, younger fish; fatty fish such as carp, buffalo, gar, and catfish may contain higher levels of PCBs than lean fish such as largemouth bass, walleye, and crappie.

Q: Why do spotted seatrout accumulate higher levels of PCBs than other estuary sport fish?

A: Generally, PCB level differences can occur between fish species because of higher lipid "fat" levels, dietary differences, and/or geographic distribution.

Q: How can PCBs affect my health?

A: Eating fish that contain PCBs may cause infants of women who have eaten many contaminated fish to have lower birth weights, delayed physical development, and learning difficulties. PCBs may affect the immune system, reproductive organs, skin, stomach, thyroid, kidney, and liver and may increase the risk of cancer.

Q: What is the source of PCBs in the Houston Ship Channel and Upper Galveston Bay?

A: The source is unknown at this time.

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

A: The consumption limits recommended by the Texas Department of State Health Services (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 or

blue crabs from the Houston Ship Channel and Upper Galveston Bay does not necessarily mean that a person will have adverse health effects.

Q: Should I stop eating fish?

A: No. Fish are an important source of protein in the diet. The Texas Department of State Health Services (DSHS) recommends that you follow general consumption guidelines and/or fish consumption advisories or bans issued for specific water bodies provided in the *DSHS Fish Consumption Advisories and Bans* booklet (copies of this booklet may be obtained by calling the DSHS Seafood and Aquatic Life Group (512)-834-6757 or via the internet <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 polychlorinated biphenyl (PCB), dioxin, and organochlorine pesticide 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 Texas Department of State Health Services (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. Catching and releasing fish or consuming fish in amounts below those recommended by the Texas Department of State Health Services (DSHS) poses no significant health risk.

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

A: Funding resources are being sought to conduct additional monitoring in other portions of Galveston Bay.