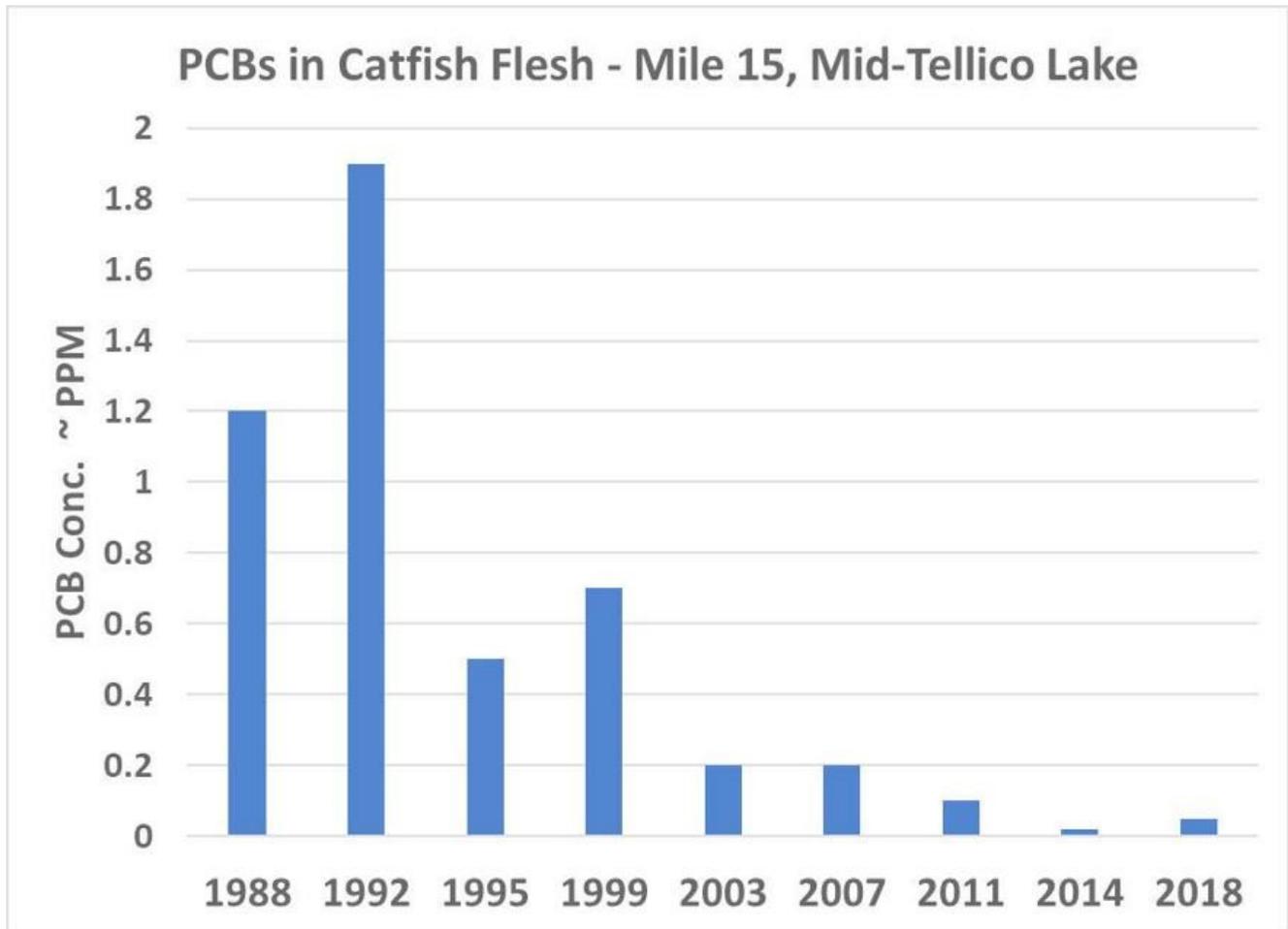


Are the fish safe to eat from the lake?

Marilyn Hawkeye – Published September 9, 2020 in the Connection and in the September 2020 Mountain Views



We are all concerned about fish consumption advisories for Tellico Lake.

There are legacy issues with the water quality of Tellico Lake that remain and are frequently misunderstood. Questions arise if swimming, eating fish and other recreational uses of the lake are safe.

Bill Waldrop, a founder of the Watershed Association of Tellico Reservoir, has had a dialogue with Tennessee Department of Environment and Conservation on this subject for decades.

“Tellico Lake, the last of the lakes built by (Tennessee Valley Authority), is considered one of the cleaner lakes in the TVA system.” Waldrop said. “Most of the water flowing into the lake originates upstream from national forests and the Smoky National Park. Essentially all industries in the drainage area are relatively new and comply with existing clean water standards.”

What are PCBs?

“Many published articles discussing Polychlorinated Biphenyl contamination of water bodies in this region mention the PCBs of Tellico Lake,” Waldrop said. “This was a legitimate concern 30 years ago, but not in recent years. The nonflammable, insulating properties of PCBs made them ideal for a wide range of industrial applications, including transformers and capacitors. However, in the 1970s, PCBs were found to have toxic properties and are likely a carcinogen and were banned by the Environmental Protection Agency. When disposing of transformers during that period, someone illegally dumped several into Chilhowee Lake — note the dam and lake were owned by Alcoa — upstream of what was soon to become Tellico Lake. These transformers rusted and leaked the oily PCBs into the water, and it flowed downstream.”

When TVA initiated water quality testing in the lake in the mid-1980s, it discovered elevated levels of PCBs in lab analyses of the flesh of bottom-feeding catfish, he said.

“This triggered TDEC to issue a Fish Consumption Advisory to discourage eating catfish from this lake,” Waldrop said. “After a diligent search, TVA located and removed the transformers from behind Chilhowee Dam, thus eliminating the source of the pollution.”

Although the source of the pollution had been identified and removed, the concern remained. The oily PCBs primarily adhered to sediment, which was deposited in the lower depths of the lake.

“The good news is that the natural downstream flow of the Little Tennessee River through the lake quickly flushed from the lake any PCB contaminated suspended material,” Waldrop said. “This natural flow rate also has steadily pushed the contaminated sediment on the bottom downstream along the lake bed to be accumulated in the deepest part of the lake near the Tellico Dam. Only surface waters flow through the canal into Fort Loudoun Lake. Fortunately, clean sediment is being deposited over this PCB contaminated sediment. This process isolates the PCBs from bottom-dwelling catfish and they are not contaminated by it.”

Waldrop also gave insight about how TVA samples.

“TVA periodically collects six channel catfish for PCB laboratory analysis from two sites in the lake — near the Tellico Dam and mid-lake near Rarity Bay,” he said. “The concentration of PCBs in the six catfish collected at mid-lake shows that the concentration peaked in 1992 and has steadily decreased since then and is currently approaching the limits for detection.

Concentrations from fish collected near the dam are also decreasing, but have always been greater than those at mid-lake. Fish collected near the dam still contain concentrations of concern, and based on results from these two sites, TDEC continues to apply the advisory to the entire lake.

“The advisory is based on a steady diet of fish for a lifetime,” he added. “U.S. Food and Drug Administration imposes a limit of 2.0 parts per million for fish consumption and this level has not been reached since 1992.”

Waldrop said mercury was also temporarily included in the fish consumption advisory for Tellico Lake beginning in 2008 when the EPA reduced the risk limit for mercury in fish from 0.7 ppm to 0.3 ppm.

“The source of the mercury in the lake is from decades of mercury deposited from airborne emissions from coal-fired power plants,” Waldrop said. “U.S. clean air standards have virtually eliminated the airborne mercury. The lab

analysis of mercury in the fish collected by TVA exceeded the limit only once in 16 years, which triggered the advisory. TDEC removed the mercury advisory in 2016 after eight years of compliance, demonstrating that it is far easier to have a water body listed as polluted than to de-list it when it meets a required limit.

“The fact is neither mercury nor PCBs are now a concern for any recreational use in Tellico Lake,” he added. “The only pathway of concern issued by any environmental agency is by eating catfish from the lake every day of every month for 70 years.”

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