

GE PCB fish graph a little fishy

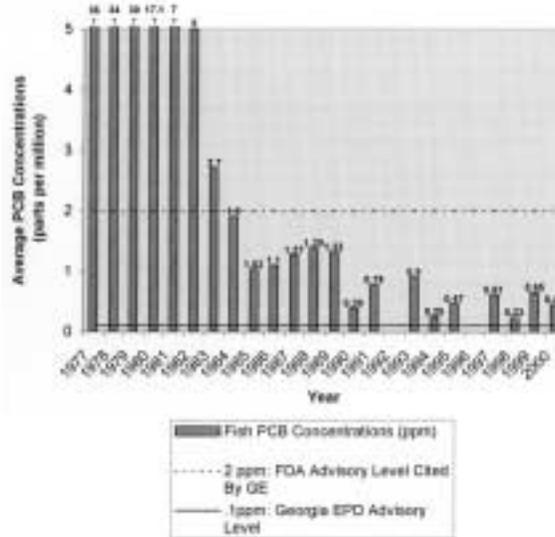
A graph depicting the dramatic decline of PCB contamination in fish from 1976 through 1999 and published in a recent GE newsletter could mislead citizens, according to U.S. Food and Drug Administration and Georgia environmental officials.

A graph published in GE's Spring 2001 GE Rome Report newsletter used the U.S. Food and Drug Administration's PCB advisory level of 2 parts per million (ppm) as an indicator of safe PCB levels, but such use is not consistent with the purposes of FDA's guidelines.

FDA's 2 ppm advisory is intended to protect consumers eating fish from numerous waterways in the interstate market and is not applicable to anglers consuming fish from the same contaminated waterways over a prolonged time, according to Barbara Wood, FDA's director of compliance for the Atlanta district.

While average PCB levels in Coosa River fish have dropped below the FDA's advisory level of 2 ppm, levels remain unsafe for prolonged consumption. Georgia bases its fish consumption guidelines on a safe level of .1 ppm, 20 times below the FDA advisory level cited in GE's literature.

Coosa River Fish PCB Concentrations 1977-2000.
Source: Georgia Environmental Protection Division



"FDA, in my view, never intended that 2ppm to be used by states for developing these local advisories," said Dr. Randall Manning who coordinates Georgia's fish consumption advisory program for the Environmental Protection Division. "That's why when we did our assessment we've come out with numbers that are much lower than FDA's. We're trying to be protective of people for whom that might be their only source of fish. If we're protective for them we are protective for everybody."

Ingestion of PCB-contaminated food, particularly wild fish and game, is currently the most serious means by which humans are exposed to the toxic substance, according to the U.S. Agency for Toxic Substances and Disease Registry. The threat is particularly serious for women and their infants.

The Agency reports that the consumption of PCB-contaminated fish by pregnant women and women of childbearing age has been associated with low birth weights and impacts to infants including abnormal motor skill responses and decreased short term memory as well as compromised immune systems.

Rome PCBs threaten local, global wildlife

For 10 years Dr. Philip Cook, a research chemist with the U.S. Environmental Protection Agency, has labored in a Duluth, Minnesota lab studying the impacts of PCBs and other dioxin-like chemicals on Great Lakes' lake trout.

His findings, to be published soon, are a damning indictment of these toxic chemicals and their part in the demise of the Great Lakes' sport fish during the past 60 years.

"These chemicals alone are responsible for the lack of any survival at early life stages and the disappearance of the species from 1940 through the 1980s," Dr. Cook said. The toxins still linger in the Great Lakes system and are responsible for the lake trout's continuing inability to maintain populations through natural reproduction, Cook said.

Populations on the Great Lakes are currently maintained through stocking programs.

Cook's study reinforces previous research on wildlife and illustrates the serious impacts of PCBs on wildlife. PCBs enter wildlife by

working their way through the food chain, starting with insects feeding on contaminated organic matter, moving on to smaller predators like fish and then to larger fish, birds and mammals.

The PCBs reach their highest, most toxic concentrations in the largest fish-eating predators like birds, minks, otters, seals, sea lions and bears. And, the more highly chlorinated PCBs like PCB 1260 used at GE's Rome facility tend to bioaccumulate most readily, according to the U.S. Agency for Toxic Substances and Disease Registry (ATSDR). The ability of both PCBs and animals to travel long distances means that PCB contamination in Rome holds continuing global wildlife health implications.

Studies cited in the ATSDR's Toxicological Profile for PCBs show serious impacts to reproductive, nervous and immune systems in wildlife:

A study conducted on wildlife in the Great Lakes region showed connections between PCBs and reduced egg hatchability in birds and fish and reduced numbers of live births in mammals. In seals and sea lions, accumulated PCBs have been shown to impair reproduction by preventing implantation of embryos.

Minks provided diets of PCB-contaminated carp showed signs of nervousness, anorexia, hind-limb paralysis and sporadic seizures prior to death. Likewise, birds exposed to PCBs showed a variety of abnormal behaviors including decreased nest building activity and increased migratory restlessness.

In sea lions, seals, dolphins and catfish, high PCB levels in tissue have been linked with suppressed immune response and a greater

susceptibility to disease.

Closer to home, PCBs may have played a part in the demise of the lake sturgeon, a popular sport fish lost in the Coosa River Basin during the 1950s, 60s and 70s. The Georgia Department of Natural Resources began reintroducing the fish last year and expects to stock 2,000 to 5,000 sturgeon in the Coosa system this year, followed by additional releases in the future.

Sturgeon populations in the Coosa began declining during the 1950s and 60s. The last known sighting was during the 1980s. Fisheries biologists blame the loss on overharvesting and the construction of dams, but their decline directly coincides with the release of PCBs into area streams and rivers from the GE facility.

"The sturgeon in the Coosa took a major hit from overharvesting. The question is why didn't they comeback?" said Dr. Doug Peterson, a fisheries professor at the University of Georgia assisting the DNR with the sturgeon program. "It could be that we took too many adults, but a contributing factor might have been the contaminants."

Though no studies were conducted on Coosa sturgeon, studies conducted by Russian scientists on Volga River sturgeon showed a link between PCBs and reduced reproduction rates.

