

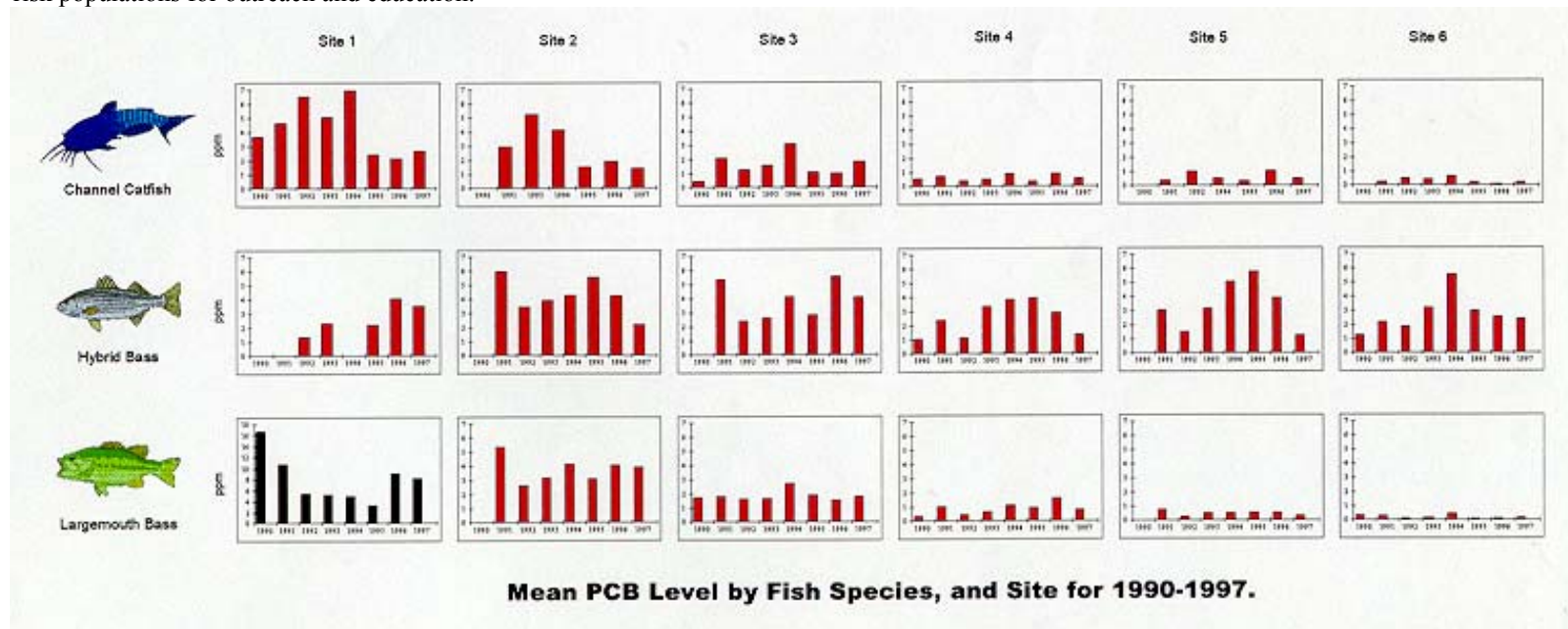
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GIS Site Evaluation of Polychlorinated Biphenyls (PCBs) Contamination of Fish in Lake Hartwell, South Carolina

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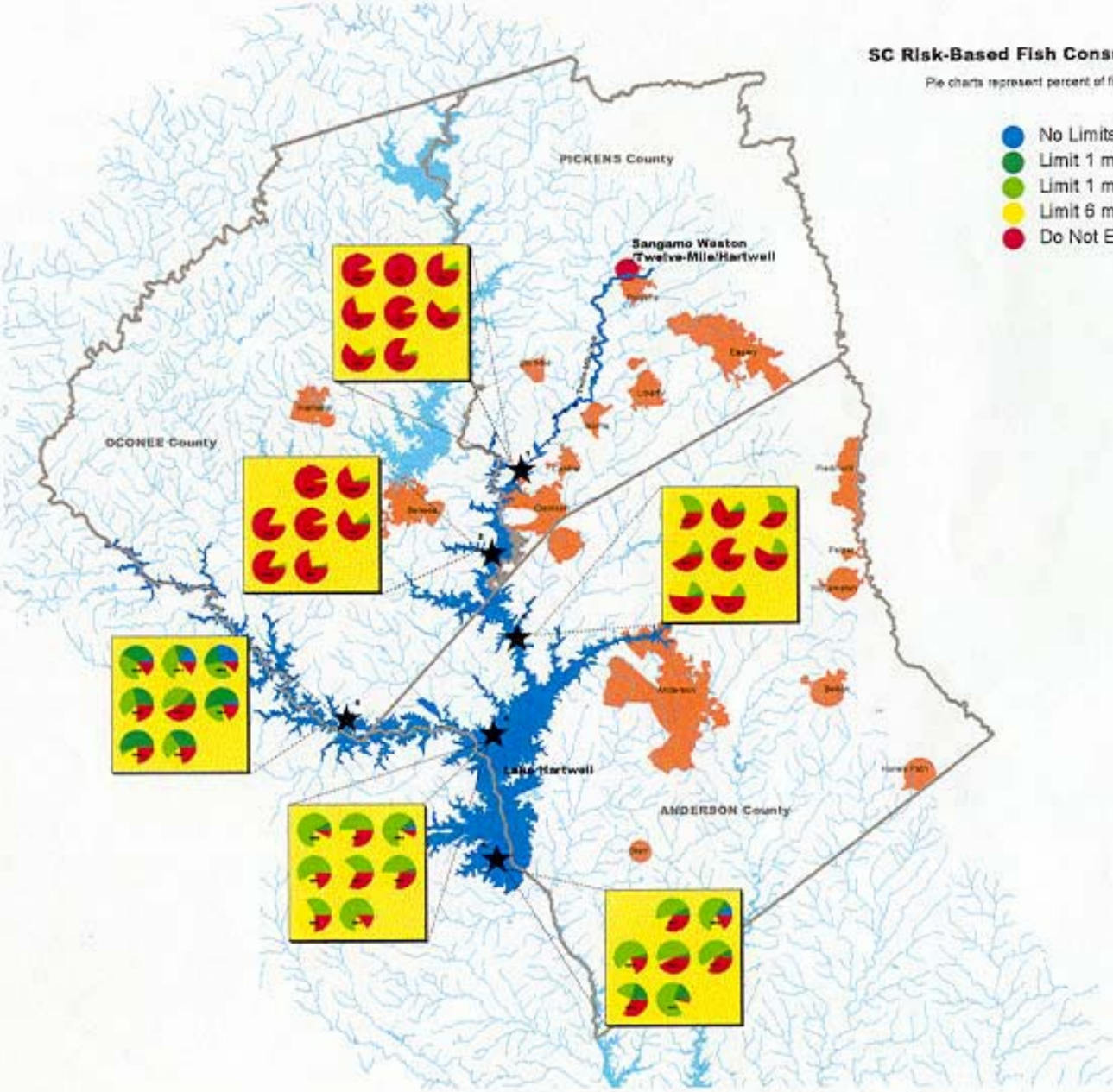
Lake Hartwell, located on the Georgia-South Carolina border, is a 56,000 acre lake with 1000 miles of shoreline. It is a popular recreational area with many marinas, state parks and campgrounds on its shore. In 1976 it was discovered that the sediment and fish in the lake were contaminated with polychlorinated biphenyls (PCBs). The fish contained levels higher than United States Food and Drug Administration (FDA) recommended as safe. The effluent from an electric company's wastewater treatment plant had discharged into Town Creek over thirty miles upstream from the dam and caused the contamination. Multiple federal and state agencies and institutions have been involved in data collection, monitoring and decision about remediation. Twenty-one years since discovery of the contamination, the fish still have PCB levels above the FDA recommended safe levels. Even though a fishing advisory has been in effect for many years, the extent to which it is followed is unknown. Possible long term health effects remain a public health concern. GIS was used to compile a comprehensive evaluation of the site overlaying census and population data, watershed information, and fish tissue data. Fish tissue data from 1990 through 1997 were analyzed temporally and spatially. New sediment data, cancer incidence data and data from a fish consumption survey will be added as they become available. This information will make it possible to target high risk populations for outreach and education.



SC Risk-Based Fish Consumption Advisory Categories

Pie charts represent percent of fish sampled that were in each category.

- No Limits
- Limit 1 meal a week - 52 meals a year
- Limit 1 meal a month - 12 meals a year
- Limit 6 meals a year
- Do Not Eat



- ▲ Dams
- ★ Sampling Sites
- CERCLA Sites
- ~ Twelve Mile Creek
- ~ Streams
- Lakes
- Lake Hartwell
- City Areas
- County Boundaries

