Little information is available on sportfish contamination in the Delta. In 1997 and 1998, studies of chemical contamination in largemouth bass and white catfish were conducted in the Delta, the Sacramento River, and the San Joaquin River to address the need for more information in these waterbodies. Mercury concentrations were frequently above the screening value. Nearly two thirds of the largemouth bass and white catfish samples analyzed in 1997 and 1998 exceeded the mercury screening value (17 of 26 largemouth bass and 11 of 18 white catfish). Consistent regional variation has been observed in both species, with the highest concentrations in the lower Sacramento River watershed, moderately high concentrations in the lower San Joaquin River watershed, and generally low concentrations in the central and southern Delta. Concentrations of PCBs were above the screening value in 29% of the samples (8 of 15 white catfish and 4 of 26 largemouth). Available data suggest that PCBs are elevated in localized hotspots rather than on a regional basis. Concentrations of DDT exceeded the screening value in 17% of the samples (6 of 15 white catfish and 1 of 26 largemouth bass). All of the samples above the DDT screening value were obtained from the south Delta or lower San Joaquin River watershed. Other chemicals which are possible concerns in the Delta include dieldrin, toxaphene, arsenic, PAHs, and dioxins. The following recommendations are based on these findings: (1) long-term monitoring should be conducted to track trends in contaminants of concern relative to screening values; (2) further fish sampling should be conducted in the San Joaquin River watershed to characterize human health concerns related to chemical contamination; and (3) a fish consumption study should be conducted in the Delta and Central Valley.