



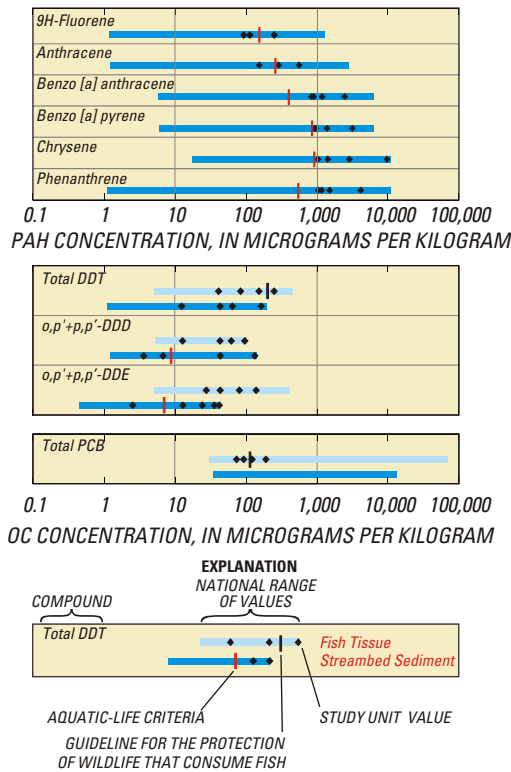
ORGANIC CONTAMINANTS IN A NATIONAL CONTEXT--CONCENTRATIONS WERE GREATEST IN URBAN STREAMS IN THE STUDY UNIT

Polycyclic aromatic hydrocarbon concentrations in streambed sediment in urban areas are among the greatest in the Nation.

Six polycyclic aromatic hydrocarbon compounds (PAHs) were detected at concentrations above U.S. Environmental Protection Agency (USEPA) aquatic-life criteria. Some are known carcinogens and are toxic to aquatic life. These compounds are generally by-products of combustion of fossil fuels or the burning of wood. Concentrations of PAHs at sites in other land uses were 10 to 100 times less than those in urban areas.

Organochlorine detections are prevalent in urban areas. Some sites had concentrations greater than recommended for the protection of aquatic life or wildlife.

Streambed sediment and fish tissue were analyzed for organochlorine compounds (OCs). Although uses of the insecticide DDT for mosquito control and polychlorinated biphenyls (PCBs) for industrial applications were discontinued in the 1970s, these compounds were still detected in urban streambed sediment in the Study Unit. Twelve of the 13 OCs (insecticides and PCBs) detected in streambed sediment in the Study Unit were found at urban sites. Three OCs including DDT, DDT metabolites (DDE and DDD), and total PCBs were detected in fish tissue at all urban sites in the Study Unit. Total DDT and metabolites in streambed sediment exceeded USEPA water-quality guidelines. PCB concentrations in fish exceeded USEPA standards for wildlife that consume fish.



This figure taken from: Stark, J.R., Hanson, P. E., Goldstein, R.M., Fallon, J.D., Fong, A.L., Lee, K.E., Kroening, S.E., and Andrews, W.J., 2001, Water quality in the Upper Mississippi River Basin, Minnesota and Wisconsin, South Dakota, Iowa, and North Dakota, 1995-98: U.S. Geological Survey Summary Circular 1211, 35 p.