

SLT Meeting 2 Questions and Answers: Water Quality Monitoring Programs.

1) What is a likely source of PCB and Mercury impairments?

Mercury and PCB were detected only in fish tissue samples related to KDHE and Kansas Department of Wildlife and Parks (KDWP) fish tissue contaminant monitoring. These contaminants are commonly found in tissue of bottom feeding fish, and are picked up through sediments.

Mercury is found in a number of commercially available products, many of which are still in use today. While some manufacturers have reduced or eliminated their use of mercury in consumer and commercial or industrial products, there are still many existing items in the marketplace that contain mercury. Some of the more common products containing mercury include batteries, mercury vapor florescent lights, thermostats, thermometers and dental amalgam. Mercury contamination has also been attributed to atmospheric deposition on a regional basis.

Prior to the 1979 ban, PCBs entered the environment during their manufacture and use in the United States. Today PCBs can still be released into the environment from poorly maintained hazardous waste sites that contain PCBs; illegal or improper dumping of PCB wastes; leaks or releases from electrical transformers containing PCBs; and disposal of PCB-containing consumer products into municipal or other landfills not designed to handle hazardous waste. PCBs may also be released into the environment by the burning of some wastes in municipal and industrial incinerators.

2) Are there differences in the parameters monitored by the KDHE and the City of Wichita?

The City of Wichita monitors surface water quality at 14 locations in the Wichita WRAPS area. Four of the locations are sampled during storm events and provide information relative to the quality of storm water run-off during the rainstorm. Ten locations are monitoring during periods of dry weather to provide comparison values representing the quality of surface water under dry conditions.

The parameters analyzed include; Oil and Grease, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Total Metals, Dissolved Metals, Hardness, Biological Oxygen Demand (BOD), Total Kjeldahl Nitrogen (TKN), Total Phosphorous, Nitrate (NO₃), Chloride (Cl), Cadmium (Cd), Copper (Cu) and Zinc (Zn). In some cases, subsets of the listed parameters are analyzed, depending on monitoring requirements.

The KDHE Stream Chemistry Monitoring program includes all of the above parameters except oil and grease. In addition, the KDHE monitoring program includes analysis of a wide range of organic, inorganic and radiological parameters. A full list of parameters is found in the Stream Chemistry Monitoring Program Quality Assurance Management Plan (QAMP).

KDHE QAMP can be reviewed at the following website if you would like to learn more about the programs.

http://www.kdheks.gov/environment/qmp_2000/qmp_2000.htm#BEFS

Go to Bureau of Environmental Field Services (BEFS) QMP Part III to review specific QAMP for KDHE monitoring programs.

3) Is sediment sampling a part of either monitoring program?

KDHE's surface water monitoring program has not included sediment sampling. Any published data would only relate to surface water and fish tissue contaminant monitoring. The City of Wichita monitoring does not include sediment sampling.

4) What are the contaminant concentrations associated with the impairments listed.

Impairment is listed when a contaminant average concentration exceeds established water quality standards. The water quality criteria for the Lower Arkansas Basin are found at: <http://www.kdheks.gov/tmdl/lowark.htm>

If you would like to learn more about how the water quality criteria are developed please refer to information provided at:

<http://www.kdheks.gov/tmdl/>