

Sheboygan River Area of Concern Beneficial Use Impairments

Restrictions on Fish & Wildlife Consumption:

Fish and waterfowl consumption advisories are in effect for the Sheboygan River AOC. Elevated PCB concentrations in river sediment are contributing to the problem. Anglers are advised not to eat any resident fish (e.g. smallmouth bass, walleye, carp or panfish) caught in the Sheboygan River, and to consult the fish advisory about consumption of trout and salmon. Based on the results of an experimental stocking study, trout and salmon stocking has been resumed on a limited basis in the Sheboygan River.

Degradation of Fish & Wildlife Populations:

The lower Sheboygan River currently supports a diverse fish population. Recent surveys show smallmouth bass are abundant in the Sheboygan River system. Populations of trout and salmon are dependent on stocking. However, bioaccumulating contaminants in the food chain and sedimentation are negatively affecting the fish populations and their forage base. Populations of mink are well below what normally would be expected for the habitat available. Small mammal trapping in 1993 resulted in no mink found in the AOC. Occasional mink are seen in this area, however they are suspected to be transient individuals which probably are not breeding there.

Fish Tumors or Other Deformities:

Fish health assessments were conducted by the Wisconsin Department of Natural Resources (WDNR) on white suckers in the AOC in 1994. The research concluded that white suckers residing in the lower Sheboygan River were exposed to and absorbed significant amounts of PCBs and PAH, and exhibited biochemical, histological and hematological alterations, suggesting impaired fish condition.

Bird or Animal Deformities or Reproductive Problems:

Reproductive problems are suspected with mink because of their low population levels in relationship to available high quality habitat. A study that examined four species of birds collected along the Sheboygan River concluded that reproductive impairments were suspected because of the PCB tissue concentrations found.

Degradation of Benthos:

Benthic surveys on the Sheboygan River identified the AOC as having degraded populations. The community shows low species diversity and is dominated by pollution tolerant species compared to reference conditions.

Restrictions on Dredging Activities:

Dredging in the lower Sheboygan River and Inner Harbor has not been conducted since 1969 because of contaminated sediment disposal concerns. The sediments are contaminated with high concentrations of PCBs, PAHs and heavy metals. Some deposits are considered heavy pollution according to U.S. EPA guidelines and WDNR draft sediment criteria.

Eutrophication or Undesirable Algae:

Nutrient concentrations in the lower Sheboygan River and Harbor routinely exceed water quality criteria. Blooms of nuisance algae are often seen in summer months. The major cause of eutrophication is nonpoint source pollution from developing urban areas and upstream agricultural areas.

Degradation of Phytoplankton & Zooplankton Populations:

The species found in the AOC are indicative of disturbed conditions. The periphyton community downstream of the Village of Kohler is highly productive. The community shifts toward greater tolerance of high nutrient conditions. Biomass and density in the AOC are the highest found in the

Sheboygan River. High concentrations of nutrients from point and nonpoint sources are considered responsible.

Loss of Fish & Wildlife Habitat:

Although historic loss of habitat has occurred through development, the quality of wildlife habitat along the river is good considering its proximity to urban areas. Ongoing loss of instream habitat for fish and wildlife is occurring through sedimentation from streambank, farmland and construction site erosion. Dams on the river also contribute to degraded habitat in several ways. They alter river flow, increase water temperature, cause the loss of important riffle areas, inhibit fish migration and cause sediment build up which buries much of the fish cover and invertebrate habitat.