

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Lake St. Louis

Waterbody Segment at a Glance:

County: St. Charles
Nearby Cities: Lake St. Louis, O'Fallon, Wentzville
Area of impairment: 525 acres
Pollutant: Chlordane
Source: Urban nonpoint sources



State map showing location of watershed

Note: Lake deleted from 2002 303(d) List

TMDL Priority Ranking: TMDL completed 2001

Description of the Problem

Beneficial uses of Lake St. Louis

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health associated with Fish Consumption
- Whole Body Contact Recreation (Swimming)

Use that is impaired

- Protection of Human Health associated with Fish Consumption

Standards that apply

- The action level for chlordane in fish tissue, established by the U.S. Food and Drug Administration, is 0.3 milligrams per kilogram (mg/kg). Note: 1 kilogram = 2.2 pounds.

Background Information and Water Quality Data

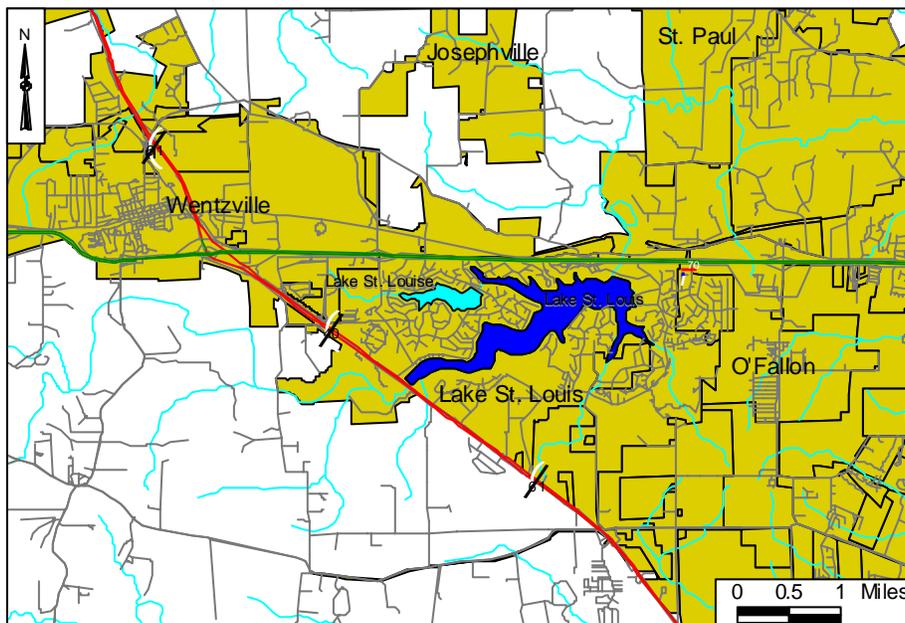
As part of a new development, Peruque Creek was dammed in 1973 to form Lake St. Louis. The land around it is almost entirely urban. The swimming use is not impaired by chlordane because chlordane is insoluble in water.

Chlordane is a pesticide that was commonly used in the past for termite control. It was also used at nurseries, on golf courses and in agriculture. Chlordane was banned for agricultural use in 1975 and all uses in 1988. It degrades very slowly in the environment and bio-accumulates in fish tissue, particularly in bottom dwelling/feeding fish. This is because chlordane is insoluble in water, but binds to the soil. The highest levels found in Lake St. Louis occur in channel catfish and carp. Human exposure to chlordane has been associated with liver cancer and nervous system disorders.

In the years since chlordane was banned, chlordane levels in tissue from fish in Lake St. Louis have declined. Since chlordane is banned and degrades slowly, there is little that can be done (besides dredging, which brings up disposal problems) to improve the situation other than let nature take its course.

A fish consumption advisory was issued in 1987 for bottom-feeding fish in Lake St. Louis. This was discontinued July 9, 2001 because chlordane levels in fish had fallen below the FDA action level of 0.3 mg/kg (see Table 1). The TMDL recommends continued monitoring of chlordane levels in fish in Lake St. Louis. The U.S. Environmental Protection Agency approved this TMDL November 19, 2001. See existing data and a map of the area below.

Lake St. Louis in St. Charles County, Missouri



Average Chlordane Concentration in Fish Tissues in Lake St. Louis (mg/kg)

Year	Bluegill	Carp	Channel Catfish	Largemouth Bass	Smallmouth Buffalo
1987	0.089	1.063	0.313	0.114	
1998		0.103		<.030	0.099
1999		0.061		<.030	
2000		0.030		<.030	
2001		.045			

Sources: U.S. EPA, Missouri Departments of Natural Resources and Conservation

For more information call or write:

Missouri Department of Natural Resources, Water Protection Program
P.O. Box 176, Jefferson City, MO 65102-0176
1-800-361-4827 or (573) 751-1300 office
(573) 522-9920 fax
Program Home Page: www.dnr.mo.gov/env/wpp/index.html