



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

NOV 19 2001

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Mr. Scott B. Totten, Interim Director  
Water Pollution Control Program  
Water Protection and Soil Conservation Division  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102-0176

Dear Mr. Totten:

RE: Approval of seven TMDLs for chlordane in Lake St. Louis, Creve Coeur Lake, Blue River, and Pleasant Hill Lake, pursuant to Section 303(d) of the Clean Water Act

Thank you for the seven final TMDLs for water bodies appearing on Missouri's approved 1998 Section 303(d) list with chlordane as the pollutant. The water bodies, Missouri's water body ID numbers (WBID), and the submittal dates are Lake St. Louis, WBID 7054 (one TMDL), September 11, 2001; Creve Coeur Lake, WBID 7255 (one TMDL), September 11, 2001; Blue River, WBIDs 417, 418, 419, and 421 (four TMDLs), September 11, 2001; and, Pleasant Hill Lake, WBID 7211 (one TMDL), September 20, 2001. We have completed our review of the seven TMDLs submitted by your office and in accordance with Section 303(d)(2) of the Clean Water Act. We approve all aspects of these TMDLs.

Enclosed are the Environmental Protection Agency (EPA) Region 7 Decision Documents, which summarize the rationale for EPA's approval of these TMDLs. EPA believes the separate elements of the TMDLs described in the enclosed documents adequately address the chlordane pollutant, taking into consideration seasonal variation and a margin of safety.

EPA is currently in consultation under Section 7 of the Endangered Species Act with the U.S. Fish and Wildlife Service regarding these TMDLs. While EPA is approving these TMDLs at the present time, EPA may decide that changes to the TMDLs are warranted based upon the results of the consultation when it is completed.

EPA appreciates the effort that Missouri has put forth in the development of these TMDLs. EPA will continue to cooperate with and assist, as appropriate, in future efforts by Missouri to develop the remaining TMDLs on the current Missouri Section 303(d) list of impaired water bodies.

Sincerely,

A handwritten signature in cursive script, appearing to read "John Houltha", is written over the typed name "U. Gale Hutton".

Director

Water, Wetlands, and Pesticide Division

Enclosures

cc: Sharon Clifford, MO Dept. of Natural Resources, Jefferson City, MO



soluble in water. Missouri uses the FDA fish tissue action level of 0.3 mg/kg chlordane in fish tissue as the criteria for determining fish consumption use impairment.

#### **Link Between Numeric Target(s) and Pollutant(s) of concern**

*An explanation and analytical basis for expressing the TMDL through surrogate measures (e.g., parameters such as percent fines and turbidity for sediment impairments, or chlorophyll-a and phosphorus loadings for excess algae) is provided, if applicable. For each identified pollutant, the submittal describes analytical basis for conclusions, allocations and margin of safety that do not exceed the load capacity.*

Lake St Louis was listed as impaired for chlordane due to the existence of a fish advisory on the water body. MO's protocol for removing or downgrading a fish advisory requires at least two years of fish tissue chlordane data below 0.3 mg/kg. The numeric target is the FDA action level, which is the criterion that Missouri uses to determine impairment.

#### **Source Analysis**

*Important assumptions made in developing the TMDL, such as assumed distribution of land use in the watershed, population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources, are described. Point, non point and background sources of pollutants of concern are described, including magnitude and location of the sources. Submittal demonstrates all significant sources have been considered.*

The TMDL provides a historic discussion of Lake St. Louis and the land uses, and describes the onset of the uses of chlordane, the concentration of the pesticide found in different species of fish, and the banning of the pesticide in 1988. Monitoring indicates that chlordane levels in fish tissue are decreasing over time. The fish advisory was lifted on July 9, 2001.

#### **Allocation**

*Submittal identifies appropriate wasteload allocations for point, and load allocations for nonpoint sources. If no point sources are present the wasteload allocation is zero. If no nonpoint sources are present, the load allocation is zero.*

The load and waste load allocations are both established as zero. The reasonable assurance that these loadings will not be exceeded is that chlordane was banned for use in 1988, and therefore no more chlordane will be applied in the environment.

#### **WLA Comment**

The WLA is zero.

#### **LA Comment**

The LA is zero.

#### **Margin of Safety**

*Submittal describes explicit and/or implicit margin of safety for each pollutant. If the MOS is implicit, the conservative assumptions in the analysis for the MOS are described. If the MOS is explicit, the loadings set aside for the MOS are identified and a rationale for selecting the value for the MOS is provided.*

The WLA and the LA are both zero, and it is not possible to reduce these numbers any further with a Margin of Safety. Missouri will continue to monitor chlordane levels in fish tissue and issue fish consumption advisories as needed, as a way to satisfy the intent of a Margin of Safety.

#### **Seasonal Variation and Critical Conditions**

*Submittal describes the method for accounting for seasonal variation and critical conditions in the TMDL(s).*

The seasonal variation of the levels of chlordane in the water body is not significant for this TMDL.

#### **Public Participation**

*Submittal describes public notice and public comment opportunity, and explains how the public comments were considered in the final TMDL(s).*

Six public meetings covering Missouri TMDLs were held between August 18 and September 22, 1998. The TMDL was public noticed prior to sending to EPA for final approval.

#### **Monitoring Plan for TMDL(s) Under Phased Approach**

*The TMDL identifies the monitoring plan that describes the additional data to be collected to determine if the load reductions required by the TMDL lead to attainment of WQS, and a schedule for considering revisions to the TMDL(s) (where phased approach is used).*

Missouri will routinely monitor fish tissue samples from the water body.

#### **Reasonable assurance**

*Reasonable assurance only applies when reductions in nonpoint source loading is required to meet the prescribed waste load allocations.*

The allocations are zero for the Load Allocation and the Wasteload Allocation.

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