

STATE OF MISSOURI Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES

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JUL 11 2006

Mr. John DeLashmit
U.S. Environmental Protection Agency
Region VII
901 North Fifth Street
Kansas City, KS 66101

Re: Total Maximum Daily Load for Little Sac River

Dear Mr. DeLashmit:

Enclosed please find a copy of the Total Maximum Daily Load (TMDL) study for Little Sac River in Greene and Polk Counties, Missouri. We have received and reviewed comments on the draft TMDL document and have edited it appropriately. The TMDL was public noticed from December 30, 2005 to March 30, 2006.

Among the comments submitted by the City of Springfield's Department of Public Works were a request to: 1) add "phased" to the TMDL title; 2) use the geometric mean to evaluate bacterial data; 3) add a section on uncertainties and potential sources of error for water quality data and the SWAT model; and 4) de-emphasize urban stormwater sources.

The Department of Natural Resources (the department) responded that the TMDL is not phased because an adaptive approach allows new information to change the direction of the implementation. The author of the bacteria study (Dr. Claire Baffaut) included geometric mean in the last draft and more emphasis on the city's efforts to control stormwater. A section on "Uncertainties and Potential Sources of Error" related to the water quality data was included.

The Watershed Committee of the Ozarks submitted a comment letter requesting we address nutrients and sediment pollution in this TMDL. The department recognizes other pollution threats to the river and encourages the committee to continue efforts to reduce those sources. The committee also requests more study on the recharge areas to springs since springs are identified as the greatest source of bacteria to the river. The TMDL agrees that more study is necessary to identify the recharge areas for springs, but is not essential for implementing the TMDL.

The Missouri Department of Conservation (MDC) and Mr. David Cavender, Scott Consulting Engineers, commented on the types of wild geese in the watershed. MDC commented on the interpretation of the data on the increase in geese bacteria loading during spring and summer and the decrease in the fall and winter. The author agreed to leave out any interpretation of why this occurred. MDC was also concerned that domestic geese feces could have been included in the fecal samples used to identify DNA in the river. The author explained that fecal samples were taken in the Springfield area only after observation of *wild* geese defecating.

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The Show-Me Missouri Back Country Horsemen questioned the tracing of bacteria in the river to horses and the overall legitimacy of DNA bacterial source tracking. Dr. Baffaut explained that only horse feces from the area were used in identifying DNA types and the study only used DNA patterns identified as 90% equine. Also, the rep-PCR method is shown to be accurate in a nationwide assessment of bacterial source tracking methods.

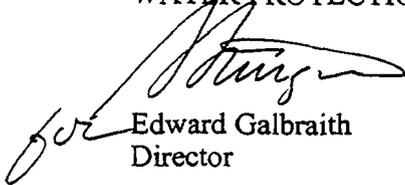
The responses are on file with the department. We now submit this document as a final TMDL for review and approval by EPA pursuant to Section 303(d)(2) of the Federal Clean Water Act.

The Little Sac River TMDL is based on a study completed by the Food and Agricultural Policy Research Institute (FAPRI) for the department's Water Protection Program, to address the sources of bacterial impairment of the Little Sac River, as identified on the 2002 303(d) list. The impairment arises mainly from non-point sources. The current actions by the City of Springfield and local groups such as the Watershed Committee of the Ozarks, the Upper White River Basin Foundation and the James River Basin Partnership, as well as the County Soil and Water Districts and MDC have already implemented practices to reduce bacterial pollution. In addition, the City of Springfield's Northwest Wastewater Treatment Plant is required to disinfect to meet bacteria limits in the state discharge permit.

We appreciate your office taking prompt action on this TMDL. If you have any questions, please contact Ms. Mary Clark of my staff at P.O. Box 176, Jefferson City, Missouri 65102 or (573) 751-6623.

Sincerely,

WATER PROTECTION PROGRAM



Edward Galbraith
Director

EG:mcl

Enclosure

c: Mr. William Bryan, Attorney General's Office
Mr. Daniel Schuette, Director, Division of Environmental Quality
Mr. Earl Pabst, Deputy Director, Division of Environmental Quality
Missouri Clean Water Commission