



Pollutant Reduction Plans for Hinkson, Jordan, Pearson and Wilson Creeks in Missouri

This fact sheet will assist you in understanding EPA Region 7 action to establish Total Maximum Daily Loads (TMDLs) or pollutant reduction plans for Pearson, Wilson and Jordan Creeks in Christian and Greene Counties and Hinkson Creek in Boone County. EPA will work with the Missouri Department of Natural Resources (MDNR) to ensure the impairments are addressed.

EPA Region 7 is establishing TMDLs under the CWA. A TMDL is a plan that can be used to expand a community's conversation about its strategy to improve streams' water quality. A TMDL provides water quality goals that are intended to restore a stream's health. The stormwater runoff goals are used to represent and ultimately reduce a toxic mix of pollutants and physical changes that negatively affect aquatic life. The increase in impervious surfaces, such as pavement and buildings in these urban areas results in increased stormwater runoff and reduces the amount of water that soaks into the ground and recharges the underlying groundwater. The increased stormwater runoff carries a toxic mix of pollutants into the stream and the decreased groundwater recharge brings about prolonged low flows after the storm events.

Why is EPA establishing the TMDLs now?

The TMDLs are being established to address requirements of the 2001 Consent Decree, American Canoe Association, et al. v. EPA, that TMDLs for these streams be established by December 31, 2010. The deadline was extended to January 31, 2011. These streams were listed by the state on its 1998 Impaired Waters, or 303(d), list. EPA has worked closely with MDNR using the best available data to analyze, develop and revise these TMDLs in response to the comments that we've received. The established TMDLs offer a solution based upon an analysis of all the currently available data. The overall goal of these TMDLs is to restore the state's designated beneficial uses for the streams. Data gathering continues; new information may bring about adjustments to the implementation of these TMDLs. Also, the MDNR may submit, and EPA may approve, a revised TMDL for these streams at any time.

What are some of the sources of impairments?

In general, the sources of the impairment are divided into point sources and nonpoint sources. In particular, the Hinkson Creek watershed contains more than 150 permitted point sources and several categories of nonpoint sources, including agricultural sources. Details on the pollutant sources can be found in Section 3 of TMDLs. While non-urban and agricultural sources are considered, the TMDLs' analyses show that urban areas are expected to be the major contributors to stormwater and pollutant loadings. Water quality problems associated with streams in urban areas stem from many factors, including a high percentage of impervious land cover and toxic conditions created by multiple pollutants carried into the streams by stormwater runoff. The anticipated effect of these TMDLs is healthy streams attaining all of their designated beneficial uses.



May new information about the streams be considered after the TMDLs are established by EPA?

EPA recognizes in the TMDLs that implementation will be phased and adaptive. In a phased TMDL, EPA uses the best information available to establish the TMDL at levels necessary to implement applicable water quality standards (WQS) and to make the allocations to the pollution sources. However, the phased TMDL approach recognizes that additional data and information may be necessary to further validate the assumptions of the TMDL and to provide greater certainty that the TMDL will achieve the WQS. There is one overarching requirement for all TMDLs; they must meet all applicable WQS.

Based on EPA regulations, the state will incorporate the TMDLs into its current water quality management plan for implementation. EPA recognizes that implementation of these TMDLs will be adaptive and iterative, using new data and information to adjust the implementation activities. EPA recommends initial actions to improve water quality be undertaken right away, including, but not limited to: 1) taking measures to eliminate harmful bottom deposits, 2) rigorous implementation of protective city and county ordinances and 3) improving the use of best management practices (BMPs) within the watersheds. EPA anticipates that more long-term actions will be implemented in the future including, but not limited to, consideration of incorporating green infrastructure in existing and future developments, continuation of on-going watershed restoration projects and water quality projects, continued efforts of existing watershed protection groups and the formation of additional watershed protection groups.

How will we know when or if the TMDLs' goals have been achieved?

Water quality monitoring has not revealed repeated exceedances of a specific numeric water quality criterion. However, all Missouri streams are protected by the general criteria contained in Missouri's WQS. These criteria are also called narrative criteria, since they do not contain specific numeric limits. For example, the general criteria that applies to the Hinkson Creek impairment state:

- Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
- Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
- Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
- Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.

It is important to note that these WQS are applicable regardless of the individual pollutant concentrations. Exceedances of these standards are typically determined by direct observation, sampling, and quantitative analysis to determine the health of the stream. All WQS, including these general criteria, must be met to demonstrate that a stream is attaining all its designated beneficial uses and is no longer impaired.

For more information:

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EPA's TMDL documents provide a more detailed description of EPA's review and the basis for this action. The TMDLs are available at <http://epa.gov/region7/water/apprtmdl.htm>