



Missouri  
Department of  
Natural Resources

SPRING CREEK TMDL  
EPA COMMENTS

TMDL submitted to EPA  
Aug. 31, 2010

**Spring Creek**  
**WBID # 1870**

Dent County, Mo.

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**Comments from EPA on submitted Spring Creek TMDL and Department responses  
10-11-10**

1. *Table 9 needs to be corrected (LA numbers for TP). The spreadsheet calculations are okay but when the values were reported on the table, WLA for TP was rounded down to two significant digits at 0.04 lbs/day (value is 0.045 lbs/d). This resulted in the allocation values not summing up to the LC in the Table.*

The WLA, LA and TMDL TP columns in Table 9 have been expanded to three decimal places.

2. *Please clarify these discrepancies from page ii: The Revised US EPA Consolidated 2002 Missouri 303(d) List identified Spring Creek (WBID 1870) as impaired. The stream is classified in Missouri's WQS 10 CSR 20-7.031 Table H as Spring Branch.*

The name of this stream was changed to Spring Creek in Missouri's most recent revision of the water quality standards, effective Oct. 30, 2009. This change is duly noted in Footnote #1. The Department recognizes EPA has not yet approved these revisions, and a note was added to Footnote #1 to clarify.

*Spring Branch (WBID 1870) was resegmented in the 2005 revisions to Missouri's WQS. This resulted in the original classified segment being divided into two segments, which are now identified as WBIDs 1870 and 3708. The impaired portion of Spring Branch is part of WBID 3708 rather than WBID 1870 (page 3, section 2.1). Please clarify the listing for Spring since page ii footnote indicates the 2008 303(d) listing is incorrect.*

Resegmentation of Spring Creek (Branch) was based on a Use Attainability Analysis (UAA) for whole body contact recreation. Subsequently, the UAA decision was reversed and the entire stream is now listed as WBID 1870.

*The Location of Impaired segment: Nothing in Table H matches (one segment is listed as 7.4 miles and matches Length of impairment w/in segment: S2, T34N, R6W to Hwy 32) (another segment goes from mouth to S2, T34N, R6W): please clarify if the S19, T34N, R5W is the description for Hwy 32 or some other option.*

S19, T34N, R5W is the legal description for Hwy 32 and has been added to the TMDL for completeness of the legal description.

*The Length of Impaired segment: 18 miles doesn't agree with any of the 303(d) lists or Table H. (one segment is 7.4, the other is 4.8) please clarify mileage.*

As listed in the 2009 revision to Missouri's WQS, 18 miles is the full length of Spring Creek with new measurement. The beginning and end points of the segment remain unchanged.

3. *Page 1 indicates the original listing was for BOD and VSS. Clarify to include non filterable residue (NFR).*

The original listing for Spring Creek has been corrected in the TMDL on pages 1-3.

4. *Page 6 last sentence: These data indicate that the problem exists upstream of the WWTF. This sentence appears to indicate the only impairment is to the upstream portion and seems misleading. Please clarify.*

Section 2.5 of the document has been revised to clarify that the low dissolved oxygen problem exists both upstream and downstream of the WWTF.

5. *References used throughout the document aren't cited in the reference section: Tetra Tech, 2008a; 2008b, EPA, 2001a; 2001b.*

The references noted in the comment above have been added to the reference section of the document.

6. *Add MOS for TN and TP to section 9, page 25.*

Additional language regarding the rationale for an implicit margin of safety for TN and TP has been included in Section 9 of the document. The margin of safety language is similar to that found in the approved Willow Branch TMDL.

7. *Add to appendix the info sheet on "Development of Nutrient Targets Using Ecoregion Nutrient Criteria with LDCs". Explanation in TMDL and reference on this development for nutrient targets needs to be clearer.*

The information contained in "Development of Nutrient Targets using EPA Recommended Ecoregion Nutrient Criteria with Load Duration Curves" has been added as Appendix G. The appendix has been updated to include data and information specific to the Spring Creek TMDL.

*There is no mention of what EDU or ecoregion that Spring Branch is located in.*

Information on the ecoregion and ecological drainage unit (EDU) in which Spring Creek is located has been added to the document (e.g., Section 5.22 and Appendix D & G).

8. *Add number of comments and how considered in section 14, page 30. Also need to include date of public notice and dates of any public meetings (ie, 2007).*

Section 14 (Public Participation) has been revised per the above comment.

9. *Table 9, please check values and ensure calculations are correct. Ex: Table 9 cfs(122.9)\* TN value (0.289)\*conversion(5.395)=191.62 (table says 217.53)*

According to the load duration curve methodology, the concentration used in calculating the LC (TMDL) is either the ecoregion target (0.289 for TN) or the adjusted regional stream data, whichever is greater. Referencing the spreadsheet used to calculate the LDCs, the nutrient target concentration rises as flow increases. For TN at a flow of 122.9 cfs, as per the above example, the TN concentration used is 0.328 mg/L. Therefore, the result is as shown in Table 9: 217.53 lbs/d. For a flow of 74.8 cfs, the TN concentration of 0.309 mg/L was used. All other flows in Table 9 used 0.289 mg/L TN as the TMDL target. An additional paragraph explaining the LDC methodology was added to Section 5.2.2. of the TMDL (page 22).

10. *MoRAP reference indicates Missouri Resource Assessment Program instead of Partnership, pg 31.*

The reference to MoRAP has been corrected as noted. Thank you for bringing this typo to our attention.

11. *EPA reference 2000 was not found as used in document.*

Reference to the EPA document noted in the comment above has been added to Section 9, Margin of Safety.

12. *EPA reference 2002 in document doesn't have a title in the reference section, pg 31. Appears as \_\_\_\_\_, 2002.*

When multiple references from the same author or organization are included in the "References" section of the document, a blank line is used to indicate "same author as above". USEPA has been added to the reference section to clarify.

13. *USDA, Soil Conservation Service and Forest.... 1971 reference was not found as used in document.*

Reference to the document noted in the comment above has been added to Section 2.3 of the document (page 3).