



## EPA Region 7 4B Rationale

**Water body ID(s):** MO\_1529 **State:** MO  
**Water body Names(s):** LITTLE BEAVER CREEK  
**Pollutant(s):** LOW DISSOLVED OXYGEN  
**HUC(s):** 10290203  
**Basin:** GASCONADE-LOWER GASCONADE RIVER BASIN  
**Tributary(ies):**  
**First Listing Cycle:** 1998  
**Submittal Date:** 7/6/2009 **Approved:** Yes

### Submittal Letter

*State submittal letter indicates final Maximum Daily Load(s) for specific pollutant(s)/water(s) were adopted by the state, and submitted to EPA for approval under section 303(d) of the Clean Water Act. Include date submitted letter was received by EPA and date of receipt of any revisions.*

The United States Environmental Protection Agency (EPA) received this submittal with fact sheet, final permit, water quality based calculation sheet and discharge monitoring data by email September 18, 2009 included as follow-up information to the 2008 Missouri 303(d) list submittal on July 6, 2009, from the Missouri Department of Natural Resources (MDNR).

### Concern

*A statement of the problem causing the impairment.*

The sole source of the impairment is the City of Rolla's Southwest wastewater treatment plant (WWTP)(permit number: MO0047023). Little Beaver Creek is a four mile segment, class C stream, located in Douglas County. The designated uses for Little Beaver Creek are Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), and Whole Body Contact Recreation (WBC)-Category B. Non-filterable residue (NFR) was identified as the impairing parameter in the 1998 303(d) list. Volatile Suspended Solids (VSS) was identified as the impairing parameter in the 2002 303(d) list. A permit in lieu of a Total Maximum Daily Load (TMDL) was concurred on August 9, 2006. Low dissolved oxygen (DO) was identified as the impairing parameter in the 2004/2006 303(d) list. An alternative to a TMDL, for the impairment VSS, was approved for Category 4b with the 2004/2006 303(d) list. Since the concurrence of the VSS 4b, the City of Rolla's Southwest WWTP has completed its schedule of compliance and is currently operating within the final limits of the permit.

### Implementation Strategy

*A description of the proposed implementation strategy and supporting pollution controls necessary to achieve WQS, including the identification of point and nonpoint source loadings that when implemented assure the attainment of all applicable WQS.*

A permit was issued on December 23, 2005 and revised on August 22, 2008.

The revised permit sets final weekly and monthly average limits for biological oxygen demand (BOD) of 15 milligrams per liter (mg/L) and 10 mg/L and total suspended solids (TSS) of 20 mg/L and 15 mg/L. The revised permit also includes limits for fecal coliform of 1000 colony forming units (cfu)/100 milliliters (ml) daily maximum and 400 cfu/ 100 ml monthly average, and ammonia daily maximums at 3.7 mg/L (May 1- October 31) and 7.5 mg/L (November 1 - April 30) and monthly averages at 1.5 mg/L (May 1- October 31) and 3.1 mg/L (November 1 - April 30). The permit requires a DO concentration of 6 mg/L for the facility effluent. These permitted limits will ensure the Missouri WQS for DO of 5 mg/L is achieved.

#### **Time**

*An estimate or projection of the time when WQS will be met.*

In-stream data from the facility's monthly sampling, downstream of the outfall, is currently meeting the DO WQS of 5 mg/L. WQS should be achieved in Little Beaver Creek three years from when the City of Rolla was issued the new limits by the revised permit (August 22, 2008).

#### **Schedule**

*A reasonable schedule for implementing the necessary pollution controls.*

A permit was issued on December 23, 2005 and revised on August 22, 2008. The final effluent limits were effective from the date of the revised permit issuance (August 22, 2008). The City of Rolla should have met WQS by the December 22, 2010 permit expiration date.

#### **Monitoring**

*A description of, and schedule for, monitoring milestones for tracking and reporting progress to EPA on the implementation of the pollution controls.*

MDNR will schedule biological and water quality monitoring after completion of all construction to determine if the impairment has been eliminated. The permit includes monthly instream monitoring one quarter mile downstream of the facility outfall, for ammonia as nitrogen, temperature, pH and dissolved oxygen to verify if permit limits are being achieved.

#### **Commitment to Revise**

*A commitment to revise, as necessary, the implementation strategy and pollution controls if progress towards meeting WQS is not being shown.*

A reopener clause has been included in the permit to allow for incorporation of stricter effluent limits if monitoring shows that WQS are not being achieved.

\*\*\*\*\* **Pollution control requirements in the submittal**\*\*\*\*\*

National Pollutant Discharge Elimination System (NPDES)