

Total Maximum Daily Load (TMDL) Synopsis

State: Kentucky

Major River Basin: Green River

HUC8: 05110006

County: Muhlenberg

Pollutant of Concern: low pH

Impaired Use(s): Primary and Secondary Contact Recreation and Warm Water Aquatic Life

Impaired Waterbodies for pH TMDLs (2004 303(d) List):

Waterbody Name	Segment Length (miles)	County	Suspected Source(s)
Pond Creek into Green River (from RM 9.4 to 13.6)	4.2	Muhlenberg	Resource Extraction (Surface Mining, Petroleum Activities, and Acid Mine Drainage)
Pond Creek into Green River (from RM 13.6 to 16.3)	2.7	Muhlenberg	Resource Extraction (Acid Mine Drainage)
Pond Creek into Green River (from RM 16.3 to 20.0)	3.7	Muhlenberg	Resource Extraction (Acid Mine Drainage)
Pond Creek into Green River (from RM 20.0 to 23.8)	3.8	Muhlenberg	Resource Extraction (Acid Mine Drainage)

TMDL Endpoint (i.e., Water Quality Standard): pH 6.0 to 9.0 standard units. The TMDL is expressed as hydrogen ion load.

TMDL Allocations:

Subbasin	Incremental contributing area (mi ²)	Incremental Critical Flow Rate (cfs)	Incremental TMDL for pH = 6.0 (lbs H ⁺ /day)	Wasteload Allocation ¹ (lbs H ⁺ /day)	Load Allocation (lbs H ⁺ /day)
0	40.42	25.10	0.14	0.0	0.14
1	29.94	18.60	0.10	0.0	0.10
2 ²	11.57	7.18	0.04	0.0	0.04
3	24.14	15.00	0.08	0.0	0.08
4	20.55	12.76	0.07	0.0	0.07

Load Reductions Required:

Subbasin	Allowable load for a pH of 6.0 (lbs H ⁺ /day)	Existing load (lbs H ⁺ /day)	Load reduction required (lbs H ⁺ /day)	Percent reduction required
0	0.14	0.00	0.00	0%
1	0.10	6.46	6.36	98%
2 ²	0.04	0.00	0.00	0%
3	0.08	0.00	0.00	0%
4	0.07	0.00	0.00	0%

¹pH limits for existing and new discharges must be between 6.35 and 9.0.

²The TMDL for the Beech Creek Watershed was approved by EPA in February of 2006. The limits contained in the Beech Creek TMDL should be used for that watershed.