

TMDL Synopsis

State: Kentucky

Major River Basin: Green River

HUC8: 05110001

Counties: Adair, Butler, Edmondson, Grayson, Green, Hardin, Hart, Taylor, and Warren

Pollutant of Concern: Pathogens

Impaired Use: Primary Contact Recreation

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

| Waterbody Name | Segment Length (miles) | County | Suspected Source |
|---|------------------------|-----------------------|----------------------|
| Big Creek of Russell Creek RM 3.0-8.2 | 5.2 | Adair | Unknown |
| Big Pitman Creek of Green River RM 0.0-13.6 | 13.6 | Green, Taylor | Unknown |
| Big Reedy Creek of Green River RM 7.5-13.6 | 6.1 | Butler, Edmondson | Agriculture, Unknown |
| Billy Creek of Valley Creek RM 0.0-5.9 | 5.9 | Hardin | Unknown |
| Butler Fork of Russell Creek RM 2.3-4.0 | 1.7 | Adair | Unknown |
| Casey Creek of Green River RM 3.7-4.7 | 1.0 | Adair | Unknown |
| Claylick Creek of Green River RM 2.0-3.1 | 1.1 | Warren | Unknown |
| Glens Fork of Russell Creek RM 0.0-8.0 | 8.0 | Adair | Agriculture, Unknown |
| Little Barren River of Green River RM 0.0-8.8 | 8.8 | Green, Hart | Unknown |
| Nolin River of Green River RM 44.0-93.2 | 49.2 | Hart, Hardin, Grayson | Agriculture |
| Pettys Fork of Russell Creek RM 0.0-6.0 | 6.0 | Adair | Agriculture, Unknown |
| Poplar Grove Branch of Big Brush Creek RM 0.0-3.0 | 3.0 | Green | Unknown |
| Russell Creek of Green River RM 40.0-41.5 | 1.5 | Adair | Unknown |
| Valley Creek of Nolin River RM 0.0-3.5 | 3.5 | Hardin | Unknown |
| Valley Creek of Nolin River RM 10.3-11.8 | 1.5 | Hardin | Unknown |

Note: Suspected sources as identified in the 2004 303(d) Report for Kentucky.

TMDL Endpoints (i.e., Water Quality Standard): 360 col/100ml (400 col/100ml minus a 10% Margin of Safety)

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Fecal Coliform Allocation:

| TMDL ⁽¹⁾ | MOS | WLA | | LA ⁽⁵⁾ | Percent Reduction ⁽⁶⁾ | | |
|--|--------------------|--|----------------------------------|--|----------------------------------|-----|-----|
| | | Wastewater ^(2,3) | MS4 ⁽⁵⁾ | | | | |
| Big Creek of Russell Creek RM 3.0-8.2 | | | | | | | |
| 96% | See ⁽⁴⁾ | Sparksville Grade School KY0026182 | 6.06×10 ⁷ col/day | 0.0 col/day | 96% | 96% | |
| Big Pitman Creek of Green River RM 0.0-13.6 | | | | | | | |
| 92% | See ⁽⁴⁾ | Campbellsville STP KY0054437 | 6.36×10 ¹⁰ col/day | City of Campbellsville KYG200015 | 92% | 92% | |
| | | Green Co Sanitation District #1 KY0096881 | 1.51×10 ¹⁰ col/day | | | | |
| | | Total | 6.87×10 ¹⁰ col/day | | | | |
| Big Reedy Creek of Green River RM 7.5-13.6 | | | | | | | |
| 82% | See ⁽⁴⁾ | 0.0 col/day | | 0.0 col/day | 82% | 82% | |
| Billy Creek of Valley Creek RM 0.0-5.9 | | | | | | | |
| 85% | See ⁽⁴⁾ | 0.0 col/day | | City of Elizabethtown KYG200035 | 85% | 85% | 85% |
| | | | | Hardin County Fiscal Court KYG200003 | 85% | | |
| Butler Fork of Russell Creek RM 2.3-4.0 | | | | | | | |
| 97% | See ⁽⁴⁾ | 0.0 col/day | | 0.0 col/day | 97% | 97% | |
| Casey Creek of Green River RM 3.7-4.7 | | | | | | | |
| 90% | See ⁽⁴⁾ | 0.0 col/day | | 0.0 col/day | 90% | 90% | |
| Claylick Creek of Green River RM 2.0-3.1 | | | | | | | |
| 97% | See ⁽⁴⁾ | 0.0 col/day | | 0.0 col/day | 97% | 97% | |
| Glens Fork of Russell Creek RM 0.0-8.0 | | | | | | | |
| 97% | See ⁽⁴⁾ | 0.0 col/day | | 0.0 col/day | 97% | 97% | |
| Little Barren River of Green River RM 0.0-8.8 | | | | | | | |
| 84% | See ⁽⁴⁾ | Edmonton STP KY0028100 | 7.72×10 ⁹ col/day | 0.0 col/day | 84% | 84% | |
| Pettys Fork of Russell Creek RM 0.0-6.0 | | | | | | | |
| 79% | See ⁽⁴⁾ | 0.0 col/day | | 0.0 col/day | 79% | 79% | |
| Poplar Grove Branch of Big Brush Creek RM 0.0-3.0 | | | | | | | |
| 37% | See ⁽⁴⁾ | 0.0 col/day | | 0.0 col/day | 37% | 37% | |

| TMDL ⁽¹⁾ | MOS | WLA | | | LA ⁽⁵⁾ | Percent Reduction ⁽⁶⁾ | |
|--|----------------------------------|---|----------------------------------|--|----------------------------------|----------------------------------|-----|
| | | Wastewater ^(2,3) | | MS4 ⁽⁵⁾ | | | |
| Russell Creek of Green River RM 40.0-41.5 | | | | | | | |
| 93% | See ⁽⁴⁾ | 0.0 col/day | | N/A | N/A | 93% | |
| Nolin River of Green River RM 44.0-93.2 | | | | | | | |
| 5.06×10 ¹² col/day | 5.06×10 ¹¹ col/day | Elizabethtown STP KY0022039 | 1.09×10 ¹¹ col/day | City of Elizabethtown KYG200035 | 1.35×10 ¹¹ col/day | 4.43×10 ¹² col/day | 79% |
| | | Hodgenville STP KY0026379 | 1.18×10 ¹⁰ col/day | | | | |
| | | Petro Stopping Center KY0103560 | 1.36×10 ⁹ col/day | | | | |
| | | Pilot Travel Center #48 KY0080764 | 1.30×10 ⁹ col/day | Hardin County Fiscal Court KYG200003 | 2.56×10 ¹¹ col/day | | |
| | | Glen Dale Childrens Home KY0073644 | 3.41×10 ⁸ col/day | | | | |
| | | Glendale Auto Truck Plaza KY0029700 | 2.27×10 ⁸ col/day | | | | |
| | | Total | 1.24×10 ¹¹ col/day | | | | |
| Valley Creek of Nolin River RM 0.0-3.5 | | | | | | | |
| 84% | See ⁽⁴⁾ | Elizabethtown STP KY0026182 | 1.09×10 ¹¹ col/day | City of Elizabethtown KYG200035 | 84% | 84% | 84% |
| | | | | Hardin County Fiscal Court KYG200003 | 84% | | |
| Valley Creek of Nolin River RM 10.3-11.8 | | | | | | | |
| 89% | See ⁽⁴⁾ | 0.0 col/day | | City of Elizabethtown KYG200035 | 89% | 89% | 89% |
| | | | | Hardin County Fiscal Court KYG200003 | 89% | | |

Notes:

- (1). TMDLs are expressed as daily loads of fecal colonies in Table 61 of Appendix 1.
- (2). Any future KPDES wastewater permitted sources must meet permit limits based on the Water Quality Standards in 401 KAR 5:031, and must not cause or contribute to an existing impairment.
- (3). WLA value is based on design flow and acute permit limits and represents the maximum one-day load that can be discharged to the stream segment.
- (4). MOS is both implicit and explicit.
- (5). MS4 WLA and LA are expressed as percent reductions
- (6). Overall reduction to achieve the target of 360 col/100ml.

TMDL Synopsis

KPDES Wastewater Discharges to surface waters addressed in TMDLs:

| Facility Name | KPDES No. | Design Flow (MGD) | Permit Limit (col/day) | | WLA |
|--|-----------|-------------------|------------------------|-----------------|-------------------------------|
| | | | Monthly Avg. | Max Weekly Avg. | |
| Big Creek of Russell Creek RM 3.0-8.2 | | | | | |
| Sparksville Grade School | KY0026182 | 0.004 | 200 | 400 | 6.06×10 ⁷ col/day |
| Big Pitman Creek of Green River RM 0.0-13.6 | | | | | |
| Campbellsville STP | KY0054437 | 4.2 | 200 | 400 | 6.36×10 ¹⁰ col/day |
| Green Co. Sanitation District #1 | KY0096881 | 0.1 | 200 | 400 | 1.51×10 ⁹ col/day |
| City of Campbellsville | KYG200015 | n/a | n/a | n/a | 92% |
| Little Barren River of Green River RM 0.0-8.8 | | | | | |
| Edmonton STP | KY0028100 | 0.51 | 200 | 400 | 7.72×10 ⁹ col/day |
| Nolin River of Green River RM 44.0-93.2 | | | | | |
| Elizabethtown STP | KY0022039 | 7.2 | 200 | 400 | 1.09×10 ¹¹ col/day |
| Hodgenville STP | KY0026379 | 0.78 | 200 | 400 | 1.18×10 ¹⁰ col/day |
| Petro Stopping Center | KY0103560 | 0.09 | 200 | 400 | 1.36×10 ⁹ col/day |
| Pilot Travel Center #48 | KY0080764 | 0.086 | 200 | 400 | 1.30×10 ⁹ col/day |
| Glen Dale Childrens Home | KY0073644 | 0.0225 | 200 | 400 | 3.41×10 ⁸ col/day |
| Glendale Auto Truck Plaza | KY0029700 | 0.015 | 200 | 400 | 2.27×10 ⁸ col/day |
| Hardin County Fiscal Court | KYG200003 | n/a | n/a | n/a | 1.35×10 ¹¹ col/day |
| City of Elizabethtown | KYG200035 | n/a | n/a | n/a | 2.56×10 ¹¹ col/day |
| Valley Creek of Nolin River RM 0.0-3.5 | | | | | |
| Elizabethtown STP | KY0022039 | 7.2 | 200 | 400 | 1.09×10 ¹¹ col/day |
| Hardin County Fiscal Court | KYG200003 | n/a | n/a | n/a | 84% |
| City of Elizabethtown | KYG200035 | n/a | n/a | n/a | 84% |
| Valley Creek of Nolin River RM 10.3-11.8 | | | | | |
| Hardin County Fiscal Court | KYG200003 | n/a | n/a | n/a | 89% |
| City of Elizabethtown | KYG200035 | n/a | n/a | n/a | 89% |

Note:

(1) MS4 WLA is expressed as a percent reduction necessary to meet TMDL not an actual load.