Integrated Report to Congress on the Condition of Water Resources in Kentucky, 2010

Volume I. 305(b) Assessment Results with Emphasis on the Big Sandy-Little Sandy-Tygarts Basin Management Unit and the Kentucky River Basin Management Unit

Kentucky Environmental and
Public Protection Cabinet
Division of Water
April 2010

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Kentucky Department for Environmental Protection
Kentucky Division of Water
Water Quality Branch
Frankfort, Kentucky

This report has been approved for release:

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Sandra Gruzesky, Director
Kentucky Division of Water

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Date

ACKNOWLEDGMENTS

Volume I of this report covers years five and one of the second and third cycle of the intensive interagency watershed monitoring effort including work from state, federal and local agencies. The Kentucky Department of Fish and Wildlife Resources and their district fisheries biologists have assisted with monitoring and reporting effort by providing data for this report. The U.S. Army Corps of Engineers, Louisville District, contributed to monitoring and data submittal on the reservoirs they manage in the Kentucky River Basin Management Unit. The Kentucky Division of Environmental Program Support provided analyses of all water quality samples submitted by Division of Water. Appreciation to Division of Water staffs in the regional offices. Particularly those in the basin management units of emphasizes: Hazard, London and Morehead for collecting many of the ambient surface water quality samples. U.S. EPA National Health and Environmental Effects Research Laboratory in Corvallis, Oregon provided the random monitoring design. Thank you to those who have promoted the watershed effort through Kentucky Division of Water. I would like to thank all the staffs in Water Quality and Watershed Management branches of Kentucky Division of Water for their dedication to the efforts of monitoring and assessing the waters of the commonwealth. I am grateful to colleagues who made valuable comments on this report.

Randall G. Payne
Kentucky 305(b) Coordinator
April 1, 2010

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Executive Summary

I. Section 305(b), Volume I

The 2010 Integrated Report (IR) on the condition of water resources in Kentucky is submitted to the U. S. Environmental Protection Agency (EPA) to fulfill requirements of sections 303(d), 305(b) and 314 of the Federal Water Pollution Control (or Clean Water) Act of 1972 (P.L. 92-500), as subsequently amended. Section 305(b) of the Act requires states to assess and report water quality conditions to EPA every two years. This is the third reporting cycle that the commonwealth has submitted the biennial report in the Integrated Report (IR) format. This reporting format provides categories to report assessment results per designated use of assessed water bodies, thus providing a convenient method to track water bodies and segments by designated use and assessment results. Below are the categories assessed water body designated uses are assigned (Table 1).

Table 1. Reporting categories assigned to surface waters during the assessment process.

Category	Definition
1	All designated uses for water body fully supporting.
2	Assessed designated use(s) is/are fully supporting, but not all designated uses assessed.
2B	Segment currently supporting use(s), but 303(d) listed & proposed to EPA for delisting.
3	Designated use(s) has/have not been assessed (insufficient or no data available).
4A	Segment with an EPA approved or established TMDL for all listed uses not attaining full support.
4B	Nonsupport segment with an approved alternative pollution control plan (e.g. BMP) stringent enough to meet full support level of all uses within a specified time.
4C	Segment is not meeting full support of assessed use(s), but this is not attributable to a pollutant or combination of pollutants.
5	TMDL is required.
5B	Segment does not support designated uses based on evaluated data, but based on Kentucky listing methodology insufficient data are available to make a listing determination. No TMDL needed.

While this reporting cycle is comprehensive in that it provides a statewide update on water quality conditions of water bodies in all river basins, or BMUs (basin management unit), the focus is on the Big Sandy-Little Sandy-Tygarts BMU and the Kentucky River BMU. There are five BMUs in the state: 1) Kentucky River; 2) Salt-Licking Rivers; 3) Upper Cumberland and 4-Rivers; 4) Green-Tradewater; and 5) Big Sandy-Little Sandy-Tygarts. Since 1998 the KDOW (Kentucky Division of Water) has executed a five-year rotating BMU monitoring strategy. This strategy has many advantages for the state to monitor and manage water resources, namely it focuses available resources to a particular BMU once every five years providing an in-depth assessment of water quality and issues specific to regional water resources.

The assessment results use three classifications to denote relative level of designated use support: fully supporting (good to excellent water quality); partially supporting (fair water quality, does not fully meet designated use); and nonsupporting (poor water quality).

The KDOW monitors wadeable and boatable waters and lakes or reservoirs. In the ambient water quality network all stations are monitored for a suite of conventional and toxic pollutants on a monthly or bimonthly frequency. Water quality stations in a given BMU are monitored monthly once every five years, and are otherwise monitored bimonthly four of five years. When the rotating BMU monitoring strategy was adopted the KDOW expanded the primary (permanent, regular monitored stations) water quality stations to 70 and added approximately 20 additional watershed water quality stations per BMU. This has provided greater coverage of water quality stations and the flexibility to add watershed stations for monitoring watersheds for particular reasons (e.g. landuse considerations, TMDL development, intra-basin issues) for each BMU. Many of the wadeable primary water quality stations are monitored for biological community health once every five years. The KDOW develops biological monitoring plans for wadeable streams including a reference network for development and refinement of biological metrics, and targeted monitoring to address needs and fill gaps in each BMU. Probability-based monitoring design of wadeable streams (stream order 1 – 5) is employed in each BMU to provide a nonbiased assessment of water quality, laying the foundation for trends across the state. This random approach provides water quality data that is nonbiased and can be applied to many issues and water quality needs for the KDOW. For example, nutrient gradients and other water quality variables, and given the nature of the data it is often a resource that can be drawn upon for new issues that may emerge. The TMDL section monitors water bodies and associated watersheds to scope the extent and verify sources of each pollutant affecting a 303(d) listed water body as part of TMDL development. Publicly owned lakes and reservoirs are monitored per BMU to determine current and trend water quality condition. A suite of physical and chemical variables are monitored three times during the growing season, spring, summer and fall. This interval provides data under the most environmentally stressful conditions when water quality may degrade due to pollutants and is most likely manifest.

Warmwater and Coldwater Aquatic Habitat Use Support – Streams

<u>Statewide</u>

Kentucky has almost 92,000 miles of streams, many of these miles are small, 1^{st} and 2^{nd} order intermittent or perennial streams to the great rivers, the Ohio and the Mississippi that account for about 850 miles. To date, there are 9,967 miles (about 11 percent) assessed for coldwater and warmwater aquatic habitat designated uses (collectively often referred to as aquatic life use) of the approximately 92,000 miles. Of assessed miles, 5,167 (nearly 52 percent) fully support this designated use. The number of assessed miles not supporting these designated uses (often referred to collectively as aquatic life use) is about 4,800 miles, or 48 percent (Figure 1). Since the 2008 IR the number of miles not supporting aquatic life use has increased about one percent statewide. The three leading causes (pollutants) of impaired water quality for this designated use are sedimentation/siltation, nutrient/eutrophication and total dissolved solids. The percentage of stream miles monitored and assessed for this use is presented by major river basin in Figure 2.

Figure 1. Support level for total stream miles monitored by all methods for aquatic life use per the 2010 Integrated Report.

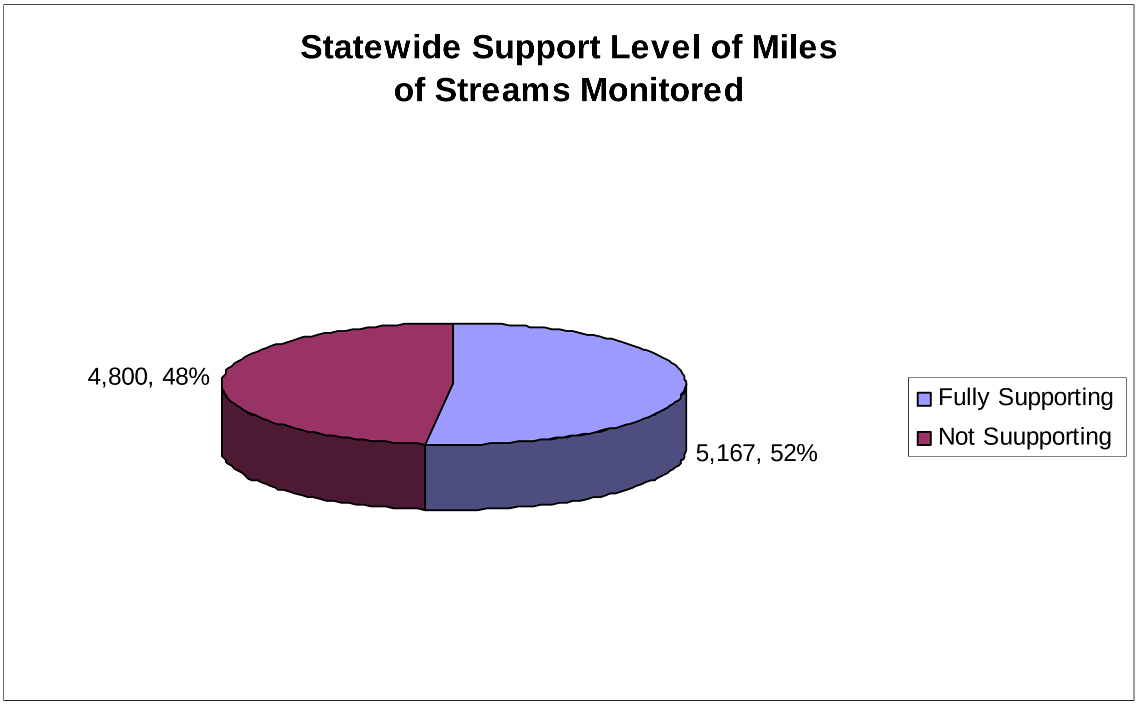
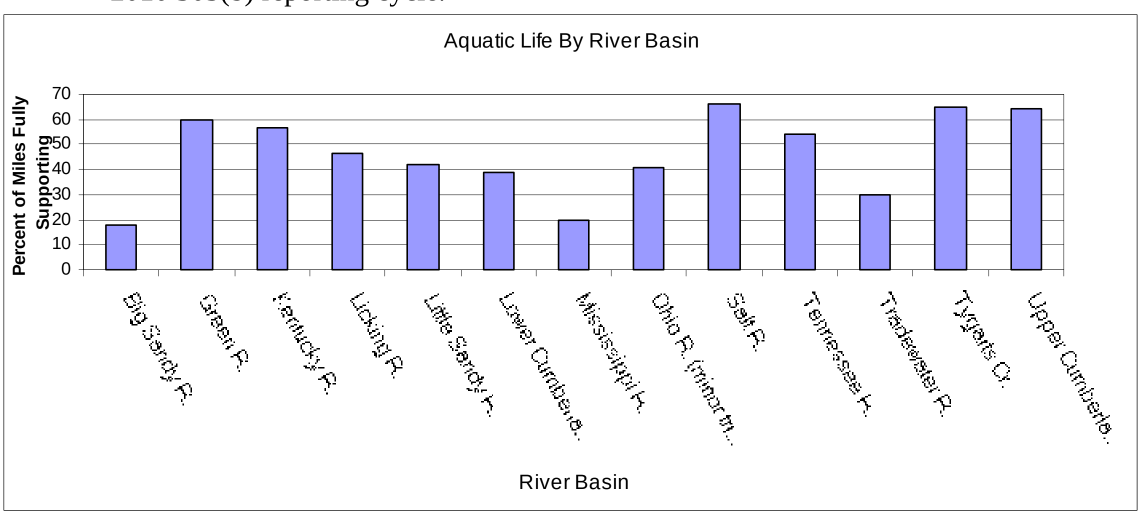


Figure 2. Percent of monitored fully supporting miles assessed for aquatic life use through the 2010 305(b) reporting cycle.



Big Sandy-Little Sandy-Tygarts BMU

Big Sandy River Basin

The Big Sandy River basin is the largest basin in this BMU, followed by the Little Sandy River and Tygarts Creek basins. There are 790 stream miles assessed in the Big Sandy River basin, with 141 miles (18 percent) fully supporting this use, 340 miles (43 percent) partially supporting and 308 miles (39 percent) nonsupporting. The top three pollutants affecting water quality for this use are sedimentation/siltation, specific conductance and total dissolved solids. In comparison, the 2004 305(b) report had 696 stream miles assessed for this use and 188 miles (27 percent) fully supported, 292 miles (42 percent) partially supported this use and 187 miles (27 percent) did not (Figure 3) . Twenty-nine stream miles (four percent) were assessed full support, but threatened. Thus, there has been an overall decline in the percentage of fully supporting assessed stream miles by 13 percent (includes the four percent full support, but threatened streams) since the 2004 305(b) report.

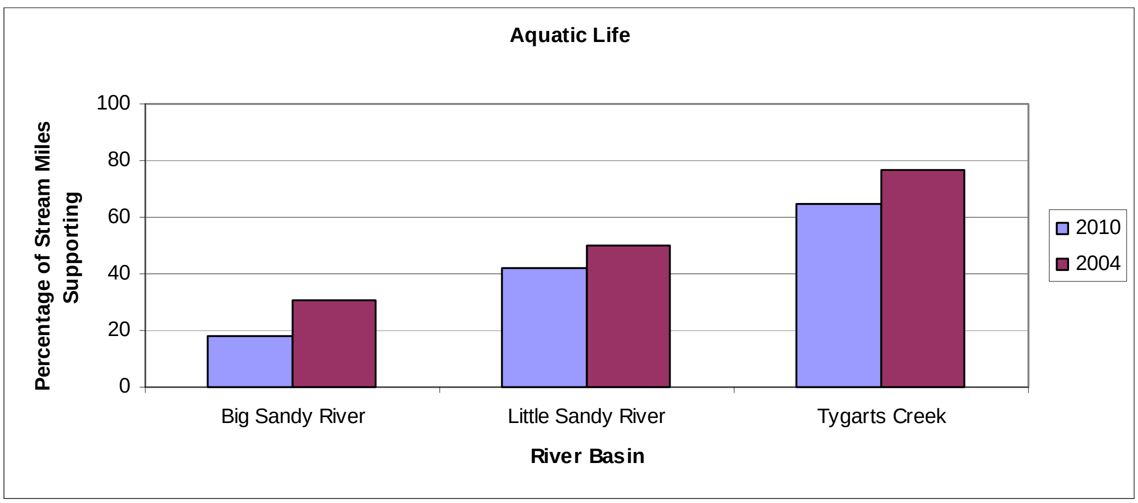
Little Sandy River Basin

There are 231 stream miles assessed for this use in the Little Sandy River basin. Ninety-six stream miles (42 percent) fully support the use, 105 stream miles (45 percent) partially support and 29 stream miles (13 percent) are nonsupporting. The top three pollutants affecting water quality for this use are sedimentation/siltation, total dissolved solids, and cause unknown. The 2004 305(b) report listed 181 miles assessed for aquatic life use with 90 miles (50 percent) fully supporting, partially supporting were 81 miles (45 percent) and not supporting were 10 miles (6 percent) (Figure 3). The overall support decreased by eight percent as a percentage of assessed miles from 2004 to 2010. However, the number of assessed stream miles increased by 50 miles.

Tygarts Creek Basin

Tygarts Creek is a direct tributary to the Ohio River and is the smallest basin in this BMU. There are 112 stream miles assessed for this use; 73 stream miles (65 percent) are fully supporting, 37 stream miles (33 percent) partially support and three stream miles (three percent) are nonsupporting. The top three causes (pollutants) affecting water quality for this use are sedimentation/siltation, total dissolved solids and nutrient/eutrophication. The assessment results per the 2004 305(b) report showed nearly 77 miles were assessed and 59 (77 percent) of those miles fully supported, partially supporting were 16 (21 percent) miles and one mile (one percent) was not supporting (Figure 3). There has been a decrease in overall full support for this basin since 2004 of 12 percent of stream miles assessed. Those assessed miles increased by 35 miles per the 2010 IR results.

Figure 3. Reporting year 2004 compared to reporting year 2010 on the percentage of fully supporting stream miles assessed in the Big Sandy-Little Sandy-Tygarts BMU.



Big Sandy-Little Sandy-Tygarts BMU - Combined

Combining the three basins of the BMU results in 1,133 stream miles assessed for this use with 310 miles (27 percent) fully supporting, 482 miles (43 percent) partially supporting and 340 miles (30 percent) do not support the use. The top three causes (pollutants) affecting water quality for aquatic life use are sedimentation/siltation, total dissolved solids and specific conductance.

In comparison of the BMU results reported in the 2004 305(b) report, there were 954 stream miles assessed and 337 miles (35 percent) fully supported aquatic life use, partially supporting were 389 miles (41 percent) and 198 miles (21 percent) did not support. About 29 miles (three percent) were reported to be fully supporting, but threatened.

Probabilistic Biosurvey, Big Sandy-Little Sandy-Tygarts BMU

This biological survey program differs from other monitoring programs (i.e. targeted) in the KDOW due to the random design. The random design is employed to determine the overall health, or aquatic life use support, of wadeable streams in the commonwealth. Given all streams in the defined survey population are selected by an unbiased, random method one can statistically extrapolate the results in the defined area to determine what is the condition of that stream population. This sampling method provides not only a statistically defensible summary of the condition of streams in the survey, but insight into the stressors affecting the quality of these streams.

Probabilistic biosurveys are part of the commonwealth's monitoring strategy and is conducted on the BMU level. The target population is all wadeable streams 1st through 5th Strahler stream order within the HUCs of each BMU. A frequency table is established for the population candidate streams (based on stream order) across the HUCs and based on those frequencies, a random, weighted survey design is utilized to determine those streams and locations of the sample point for the study. A sample size of 50 sites with approximately an equivalent number (based on frequency) in each of the five stream order categories: 1st, 2nd, 3rd, 4th and 5th. An oversample of 200% (100 sites) for a total of 150 sites including the base sites are derived per study. This oversample provides reserve samples for alternative sites when those initial sites do not conform to target population parameters (e.g. non-wadeable, miss-mapped features), are inaccessible due to safety concerns, or to which access is denied by landowners. Standard protocol dictates that surrogate stream sample sites be selected sequentially from the oversample population when replacement of an initial sample site is necessary. Since the random design is weighted, no regard to replacement of an initial sample site with one of equivalent Strahler order is required. Macroinvertebrates (aquatic invertebrates) have been the indicator community for these surveys; additionally, select water quality variables are sampled at time of collection.

The graph below (Figure 4) depicts the percentage of wadeable streams in this BMU with level of support based on biosurvey conducted in 2007. Fully supporting stream miles is 6 percent and those stream miles not fully supporting total 94 percent. This compares with the 2002 probabilistic biosurvey that indicated 12.5 percent of stream miles fully support aquatic life and 88.5 percent did not (Figure 5). There has been some decrease in level of fully supporting stream miles over the intervening five years.

Figure 4. Proportions of aquatic life use support level in the Big Sandy-Little Sandy Tygarts basin management unit based on probability biosurveys, 2007. Pie chart represents the defined stream population (Strahler stream order 1 – 5).

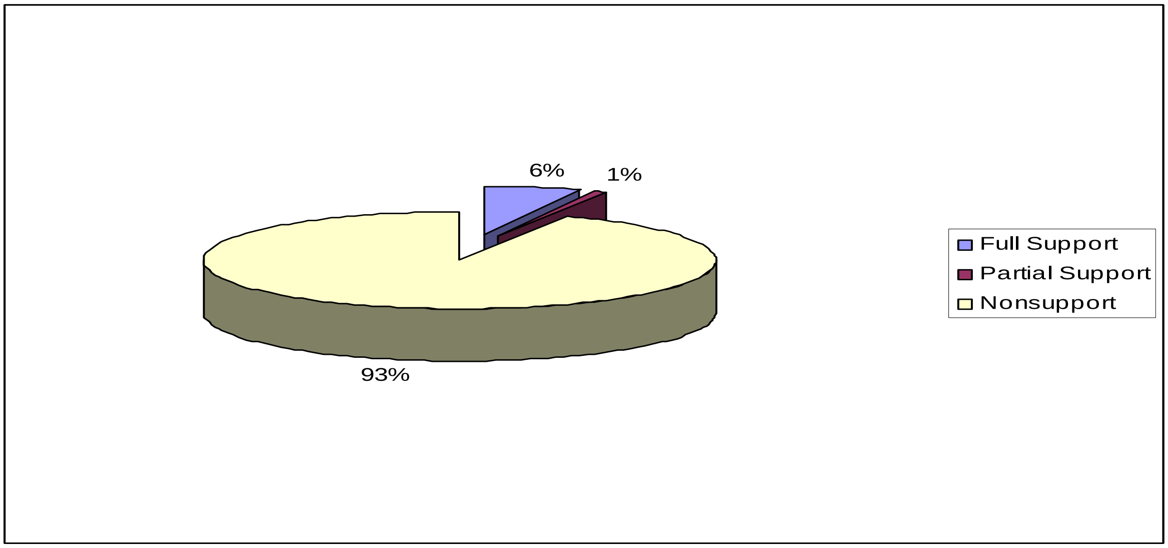
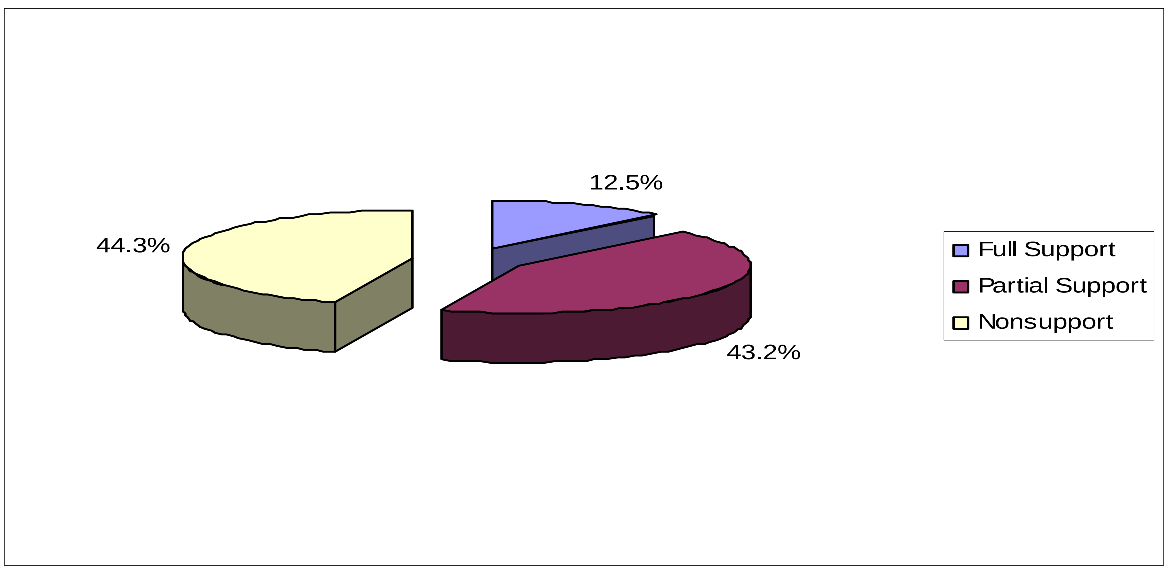


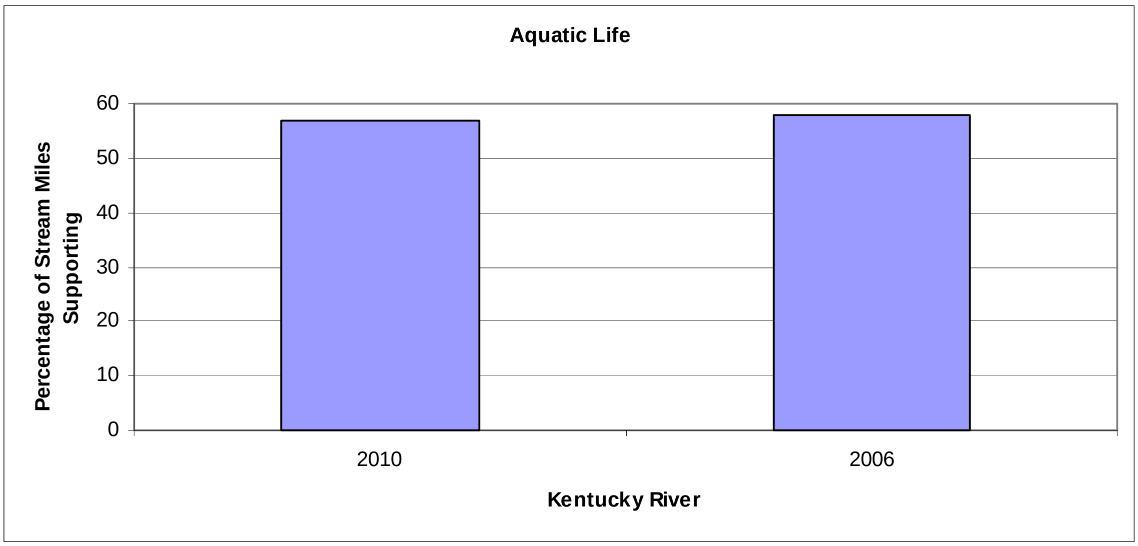
Figure 5. Proportions of aquatic life use support level in the Big Sandy-Little Sandy Tygarts basin management unit based on probability biosurveys, 2002. Pie chart represents the defined stream population (Strahler stream order 1 – 5).



Kentucky River BMU

There have been 1,945 stream miles assessed for warmwater and coldwater aquatic habitat designated uses. Of those stream miles, 1,101 miles (57 percent) are fully supporting, 578 miles (30 percent) are partially supporting and 266 miles (14 percent) are not supporting the designated uses. The top three pollutants of concern as it applies to this designated use are sedimentation/siltation, total dissolved solids and nutrient/eutrophication. According to the 2006 IR there were 1,844 stream miles assessed for aquatic life, of those 1076 miles (58 percent) were fully supporting, about 555 miles (30 percent) partially supported and 213 miles (12 percent) did not support the use. In comparing between the current reported information to the 2006 IR, the percent of fully supporting miles in this BMU have remained about the same (Figure 6).

Figure 6. Percentage of stream miles monitored that fully support aquatic life in the Kentucky River BMU, 305(b) reporting years 2006 and 2010.

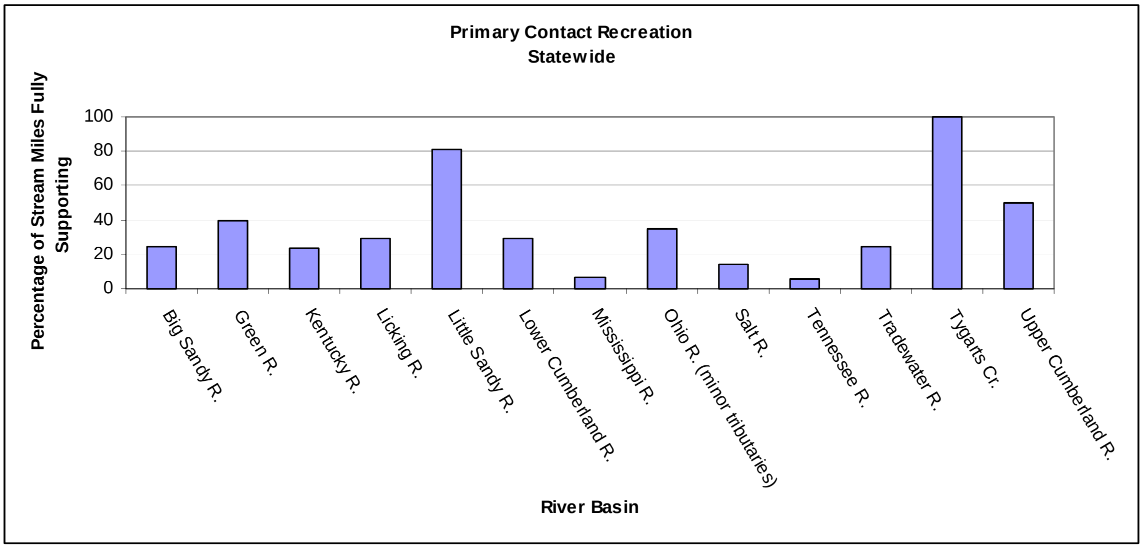


Contact Recreation Use Support – Streams

Statewide

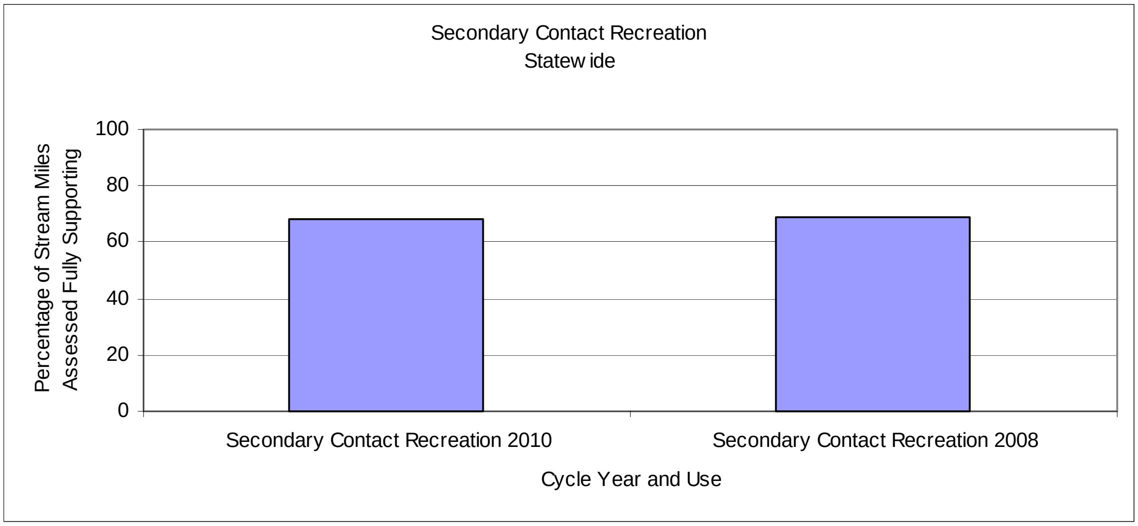
Primary Contact Recreation (PCR) criteria are in-place to protect people recreating in a way that likely will result in full body immersion, such as swimming. Both bacteria and pH criteria apply to this designated use. In this report 4,762 miles have been assessed statewide for this use. A total of 1,494 miles (31 percent) fully support and 3,268 miles (69 percent) do not support the use. In comparison with results in the 2008 IR 4,493 miles were assessed and 1,346 miles (30 percent) fully supported the use and 3,148 miles (70 percent) did not fully support. Current findings indicate little change in percentage of support level between the two report cycles while assessed miles have increased nearly 270 stream miles in the 2010 cycle. Figure 7 depicts the percentage of stream miles monitored and assessed for PCR in each major river basin.

Figure 7. Percentage of monitored stream miles fully supporting primary contact recreation use per the 2010 305(b) reporting cycle.



Secondary Contact Recreation (SCR) designated use criteria are in-place to protect those recreational activities that are likely to result in incidental contact with water, such as boating, fishing and wading. There have been 1,951 miles assessed for this use in the state and 1,330 miles (68 percent) fully support; a total of 621 miles (32 percent) do not fully support this use. Compared to the 2008 IR, 1,868 stream miles were assessed and 1,295 miles (69 percent) fully supported and 573 miles (31 percent) did not support the use (Figure 8). This is nearly equivalent results between the two reporting cycles.

Figure 8. Percentage of monitored stream miles fully supporting secondary contact recreation use per the 2008 and 2010 305(b) reporting cycles.



Big Sandy-Little Sandy-Tygarts BMU

Big Sandy River Basin

There are 451 miles assessed for PCR use in the Big Sandy River basin in the 2010 IR. Of those stream miles, about 109 miles (24 percent) are fully supporting this designated use, 36 miles (eight percent) partially supporting and 306 miles (68 percent) not fully supporting (Figure 9). In the 2004 305(b) report the PCR results for this BMU were 223 miles assessed; of those 42 miles (19 percent) were fully supporting. No stream miles were assessed as partially supporting, but 115 miles (52 percent) were not supporting and 66 stream miles (30 percent) were assessed full support, but threatened. In this basin stream miles fully supporting has increased by five percent as a percentage of assessed miles since the 2004 305(b) cycle; however, this includes all miles that were categorized as full support, but threatened being moved to the full support category (Figure 9). Overall stream miles assessed have increased by about 230 miles over this timeframe.

Nearly 52 miles have been assessed for SCR in the Big Sandy River basin and all miles are less than full support (6 percent partially supporting [three miles] and 94 percent [49 miles] not supporting). The second leading cause (pollutant) affecting this basin is pathogens (bacteria indicators) and this directly affects use support for contact recreation. No stream miles were assessed for SCR in this BMU in the 2004 305(b) for comparison.

Little Sandy River Basin

Approximately 62 stream miles are assessed in the Little Sandy River basin for PCR per the 2010 IR. Of those miles, 50 (81 percent) are fully supporting and 12 (19 percent) are not (Figure 9). Given the high rate of miles fully supporting this use no direct cause (pollutant) (pathogen indicator or pH) occurs in the top five causes affecting miles of streams in this basin. According to the 2004 305(b) report 45 miles were assessed for PCR. All but two miles (43 miles) fully supported the use (96 percent) (Figure 9). While the percentage of stream miles supporting PCR decreased per 2010 IR the miles assessed increased by 17 miles.

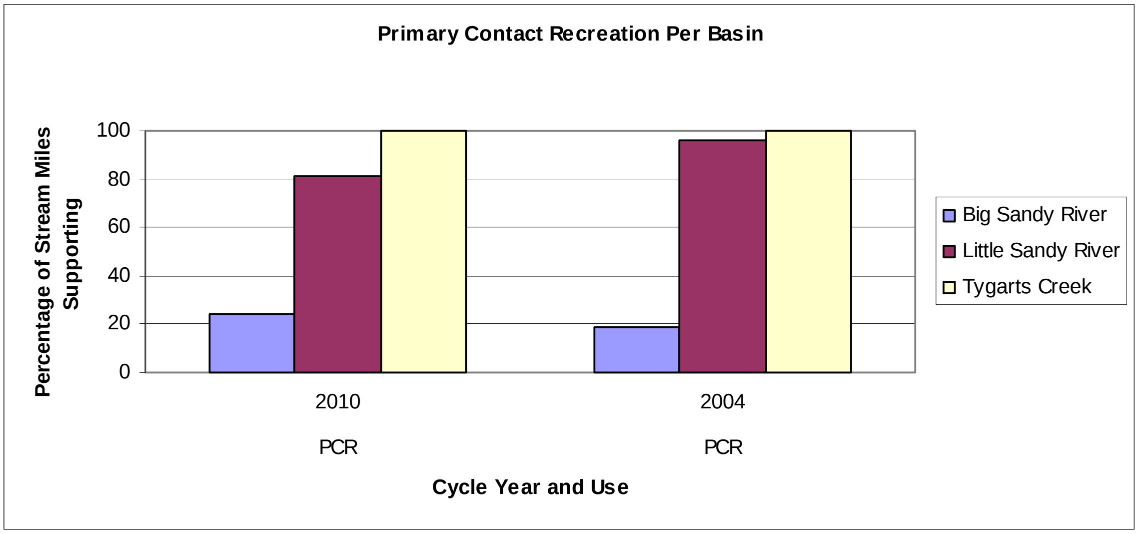
There have been no miles assessed for SCR in the Little Sandy River basin. This may be due to the fact that bacteria monitoring for PCR is now based primarily on the pathogen indicator *Escherichia coli* rather than fecal coliform, and no pH measurements exceed water quality standards for the use.

Tygarts Creek Basin

In the Tygarts Creek basin almost 56 miles are assessed for PCR. All stream miles (100 percent) fully support this use. This compares to 100 percent of 16.5 miles assessed fully supporting per the 2004 305(b) report (Figure 9).

Secondary Contact Recreation has not been assessed in this basin. As with the Little Sandy River basin a change in monitored bacteria indicators and no pH conditions exceeding water quality standards are reasons for this result.

Figure 9. Comparison of percentage of monitored stream miles fully supporting primary contact recreation use between the 2004 and 2010 305(b) reporting cycles for the Big Sandy-Little Sandy-Tygarts BMU.

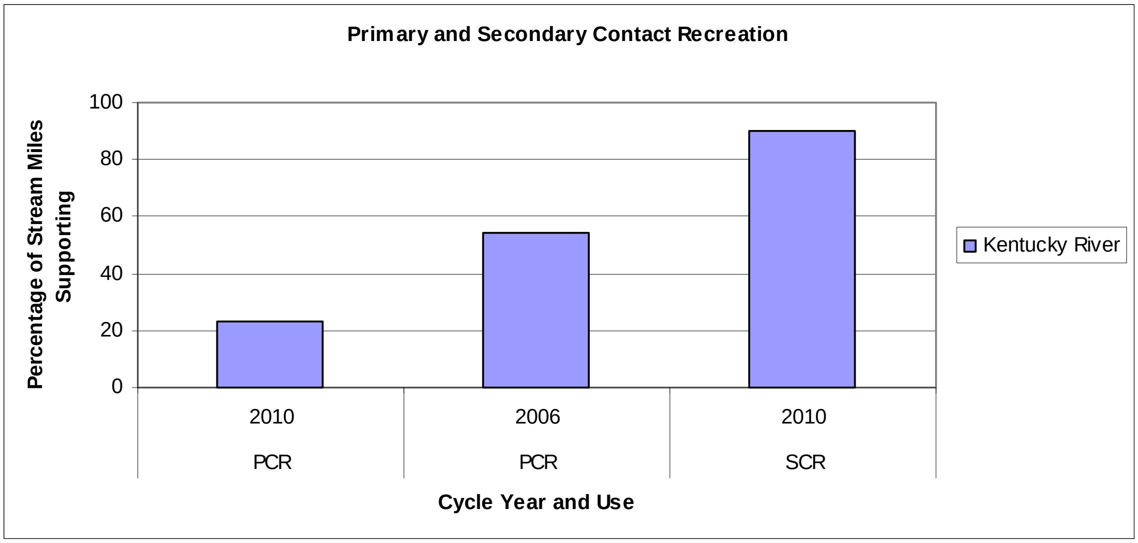


Kentucky River BMU

Approximately 939 stream miles are assessed for PCR in this BMU with about 219 miles (23 percent) fully supporting (Figure 10). This is in contrast to 179 miles (19 percent) partially supporting and nearly 542 miles (58 percent) not supporting this use per 2010 305(b) reporting cycle. Pathogens are the most frequent cause (pollutant) identified affecting the most miles in this basin. Compared to the 2006 IR there were 646 stream miles assessed for PCR, 349 miles (54 percent) fully supported (Figure 10), 146 miles (23 percent) partially supported and 152 miles (24 percent) did not support the use. As a percent of stream miles assessed the level of support has declined 31 percent; stream miles assessed increased from 2006 to 2010 IR cycle by about 300 miles.

Approximately 444 stream miles have been assessed in this BMU for SCR with nearly 399 miles (90 percent) fully supporting the use (Figure 10). Partially supporting the use are nine miles (two percent) and 37 miles (eight percent) not supporting SCR.

Figure 10. Comparison of percentage of monitored stream miles fully supporting primary contact recreation use between the 2006 and 2010 305(b) reporting cycles.



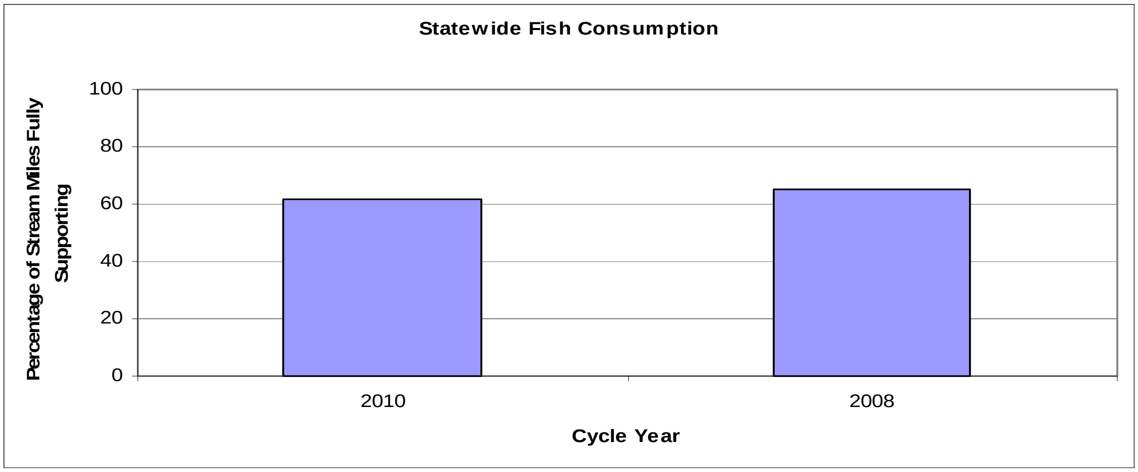
Fish Consumption

Statewide

Fish consumption is not a designated use in Kentucky water quality standards, but the use is implied in 401 KAR 10:031 Section 2 and through human health criteria in Section 6. Twelve hundred ten stream miles have been assessed for fish consumption and 754 miles (62 percent) fully support (Figure11). Not supporting are 456 miles (38 percent), primarily due to mercury in fish tissue. In the 2008 IR there were 1245 stream miles reported as assessed with 805 of those miles (65 percent) fully supporting (Figure 11). Not supporting fish consumption was 440 miles (35 percent). With nearly as many miles assessed between the two reports the data indicate approximately the same level of support.

There is a statewide fish consumption advisory that differs from fish consumption assessed to determine whether this implied use is supporting or not based on monitored data. The latter is based on water body specific monitoring and comparing the fish tissue body burden results for specific pollutants (e.g. mercury, PCB, chlordane) in our water quality standards that apply. The advisory is a precautionary alert for those sensitive populations (children six years and youger and women of childbearing age) to consider limiting their consumption of fish to no more than one meal (a meal is considered eight ounces) per week. This advisory was issued on April 11, 2000 because of low levels of mercury found in fish tissue statewide.

Figure 11. Comparison of stream miles monitored and that fully support fish consumption between the 2008 and 2010 305(b) reporting cycles.



Big Sandy River Basin

Seventy-seven stream miles are assessed for the Big Sandy River basin with 54 miles (70 percent) fully supporting (Figure 12). Partially supporting fish consumption are 15 miles (20 percent) and eight miles (10 percent) are not supporting. Mercury and PCB (polychlorinated biphenyls) in fish tissue are the primary pollutants of concern in this basin for fish consumption. When compared to the 2004 305(b) results 79 stream miles (83 percent) out of 95 miles fully supported PCR (Figure 12). Sixteen miles (17 percent) did not support this use. With nearly equal miles assessed between the two cycles the support level has changed, decreasing 13 percent.

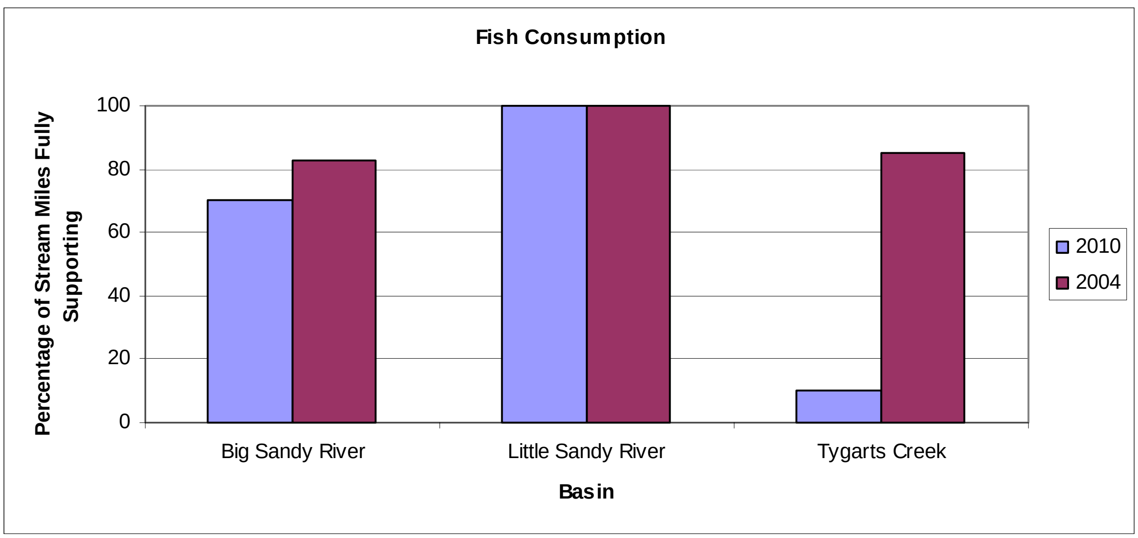
Little Sandy River Basin

Of the eight stream miles assessed for fish consumption in the Little Sandy River basin, all are fully supporting (Figure 12). These results have not changed since the last reporting cycle in 2004.

Tygarts Creek

The Tygarts Creek basin has 51 stream miles assessed for fish consumption. Of those miles, about five miles (10 percent) fully support (Figure 12). There are no partially supporting stream miles and 45 miles (88 percent) do not support fish consumption. The pollutants of concern in this basin are mercury and PCB. In the 2004 305(b) report 13 stream miles were assessed, 11 miles (85 percent) fully supported the use (Figure 12) and two miles (15 percent) did not support. While the stream miles assessed have increased (38 miles) the percentage of assessed miles fully supporting has decreased by 75 percent.

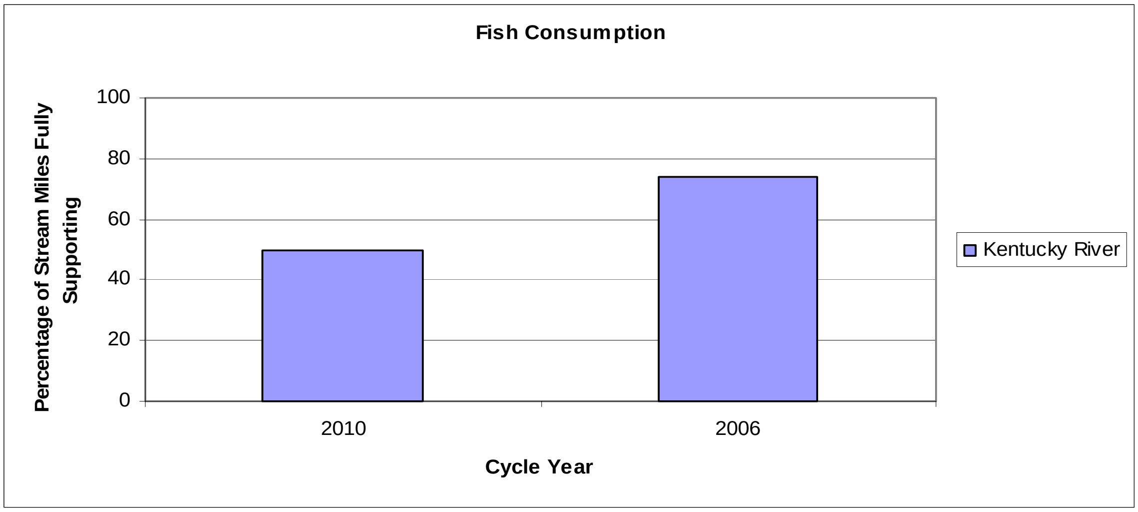
Figure 12. Monitored and assessed stream miles fully supporting fish consumption in the Big Sandy, Little Sandy and Tygarts basins; 2004 305(b) reporting cycle compared to the 2010 305(b) cycle.



Kentucky River BMU

Nearly 308 steam miles have been assessed for fish consumption in this BMU. Of those, 153 miles (50 percent) fully support (Figure 13), 143 miles (46 percent) partially support and 11 miles (4 percent) do not support fish consumption. Mercury in fish tissue is the pollutant of concern in this BMU. In the 2006 IR there were 326 miles assessed and 241 miles (74 percent) fully supported (Figure 13), 74 miles (23 percent) partially supported and 11 miles (three percent) were nonsupporting. The miles of assessed waters fully supporting have decreased by 24 percent per the 2010 IR.

Figure 13. Comparison between the 2006 and 2010 305(b) cycles of stream miles monitored and assessed that fully support fish consumption.

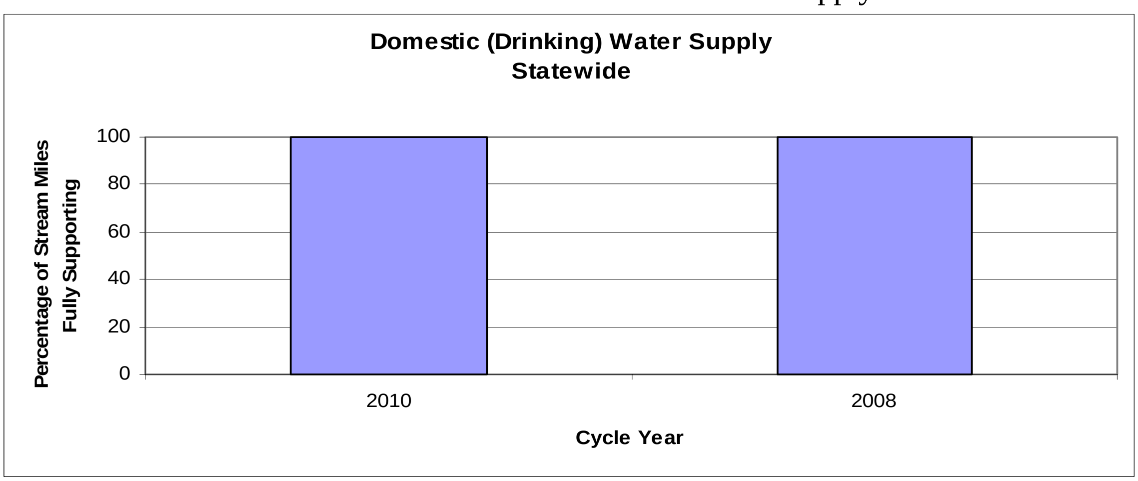


Domestic (Drinking) Water Supply

<u>Statewide</u>

All stream miles fully support domestic (drinking) water supply use (Figure 14). Where this designated use has been implemented (point of withdrawal) an associated 689.5 stream miles have been assessed. Given all stream miles in the commonwealth fully support this designated use no individual basin report occurs in the executive summary. All streams fully supported this use per the 2008 IR.

Figure 14. Comparison between the 2008 and 2010 305(b) reporting cycles of stream miles monitored and assessed for domestic water supply use.

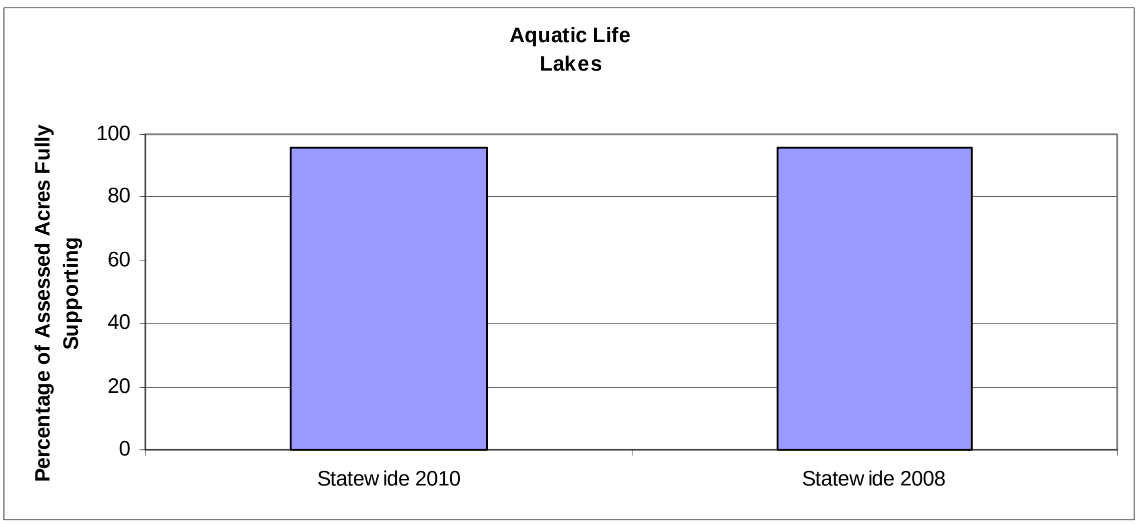


Warmwater and Coldwater Aquatic Habitat Use Support – Lakes

Statewide

About 98 percent (nearly 218,000 acres) of publicly owned reservoir, lake and pond (hereafter referred as lakes) acres have been assessed for at least one designated use, primarily aquatic life. Of the 220,005 acres of publicly owned lakes assessed for this use, 211,448 acres (96 percent) fully support aquatic life use (Figure 15). Nearly 8,560 acres (4 percent) are not supporting this use. The top three pollutants affecting lakes for this use are, nutrient/eutrophication, pH and dissolved oxygen. These results are comparable to the support level reported in the 2008 IR that also showed the same percentage (96 percent) of assessed lake acreage supporting this use (Figure 15). Since the 2008 IR cycle, the number of assessed acreage increased about 9,000 acres.

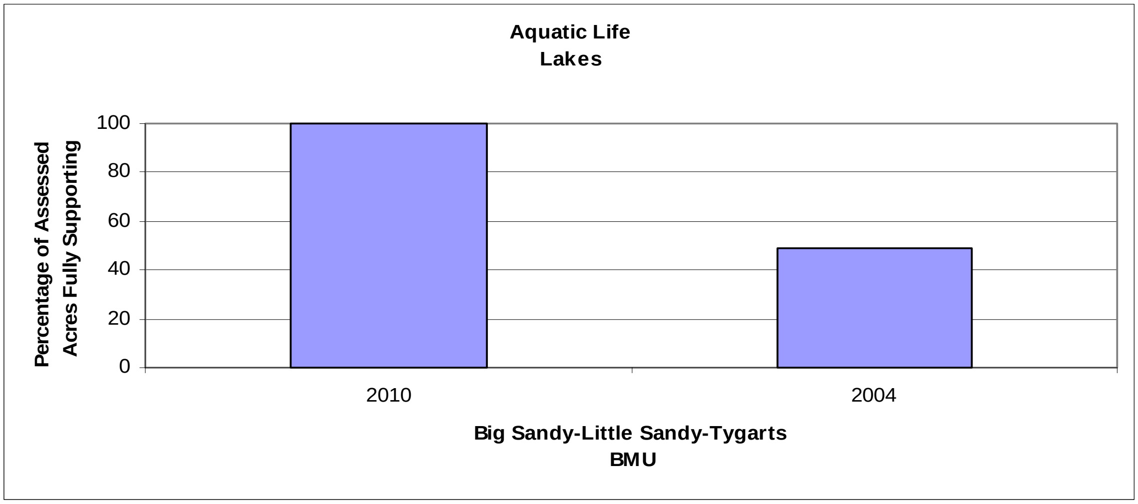
Figure 15. Statewide comparison between the 2008 and 2010 305(b) reporting cycles of monitored lake acres fully supporting aquatic life use.



Big Sandy-Little Sandy-Tygarts BMU

Of the 7,383 acres assessed for designated uses, 100 percent of those acres fully support aquatic life use (Figure 16). This compares to 3,625 lake-acres (49 percent) supporting this use in the 2004 305(b) report (Figure 16). This is an important increase in lake resources fully supporting.

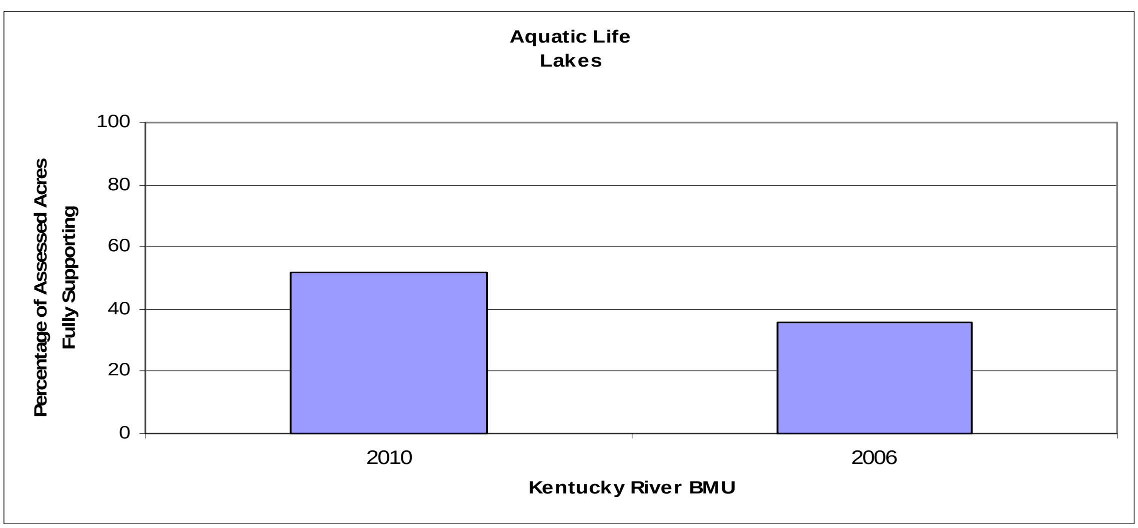
Figure 16. Comparison between the 2004 and 2010 305(b) reporting cycles of lake acres monitored and assessed that fully support aquatic life use in the Big Sandy-Little Sandy-Tygars BMU.



Kentucky River BMU

There are 5,965 lake-acres assessed in this BMU for this use, 3,113 acres (52 percent) are fully supporting (note this includes acreage proposed for delisting based on current data results). As a percentage of assessed acres, lake-acres fully supporting have increased by about 16 percent (from 36 percent) since the 2006 IR results for this BMU (Figure 17).

Figure 17. Comparison between the 2006 and 2010 305(b) reporting cycles of lake acres monitored and assessed that fully support aquatic life use in the Kentucky River BMU.



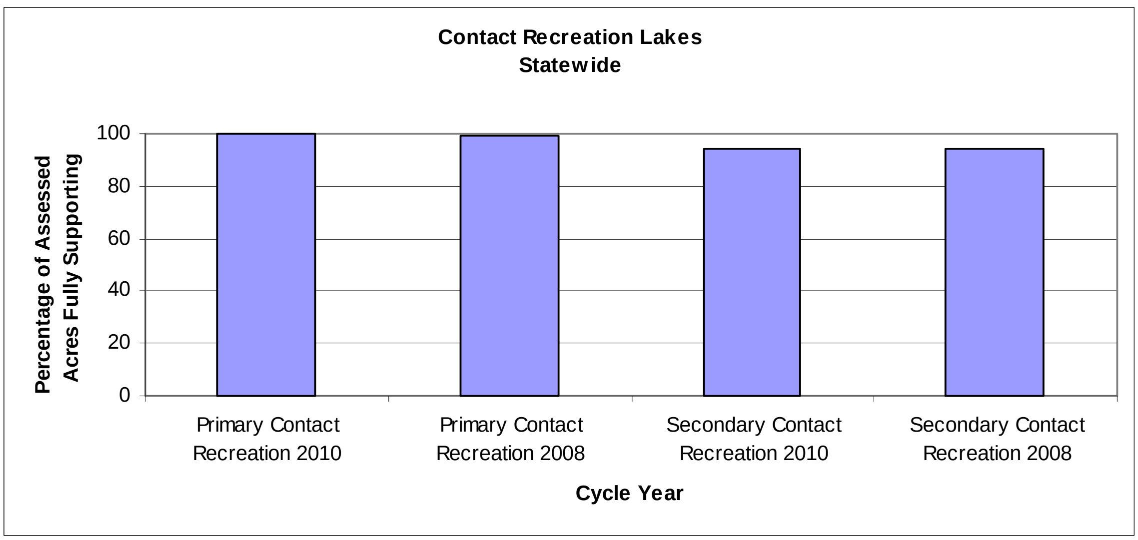
Contact Recreation Use Support

Statewide

Primary contact recreation acreage reported in 2010 is 62,149 acres and all those acres are fully supporting the use. This compares to 62,149 acres assessed per the 2008 IR with 61,930 acres (nearly 100 percent) supporting the use (Figure 18).

Approximately 217,337 acres are assessed for SCR and about 204,936 acres (94 percent) fully support this use. This compares to 213,497 acres assessed and 200,773 acres (94 percent) fully supporting per the 2008 IR (Figure 18).

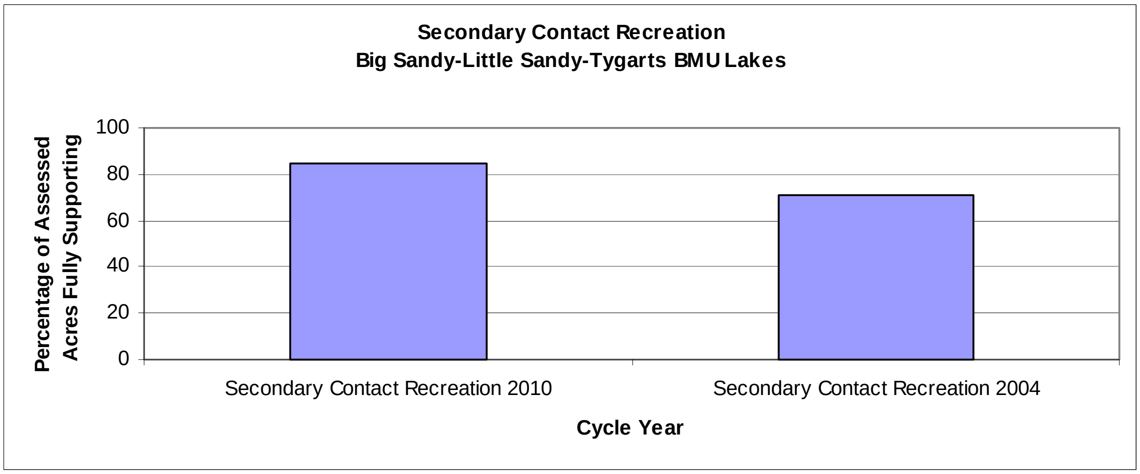
Figure 18. Statewide comparison between the 2008 and 2010 305(b) reporting cycles of lake acres monitored and assessed that fully support primary and secondary contact recreation.



Big Sandy-Little Sandy-Tygarts BMU

In this BMU 7,353 acres are assessed for SCR and 6,253 acres (85 percent) fully support (Figure 19). This compares to 3,755 acres assessed in the 2004 305(b) report with 2,655 acres (71 percent) fully supporting (Figure 19). This is considerable increase in both use support and acreage assessed in the 2010 IR cycle. As explained in the report PCR has not been monitored in lakes for this BMU.

Figure 19. Comparison between the 2004 and 2010 305(b) reporting cycles of lake acres monitored and assessed that fully support secondary contact recreation in the Big Sandy-Little Sandy-Tygarts BMU.

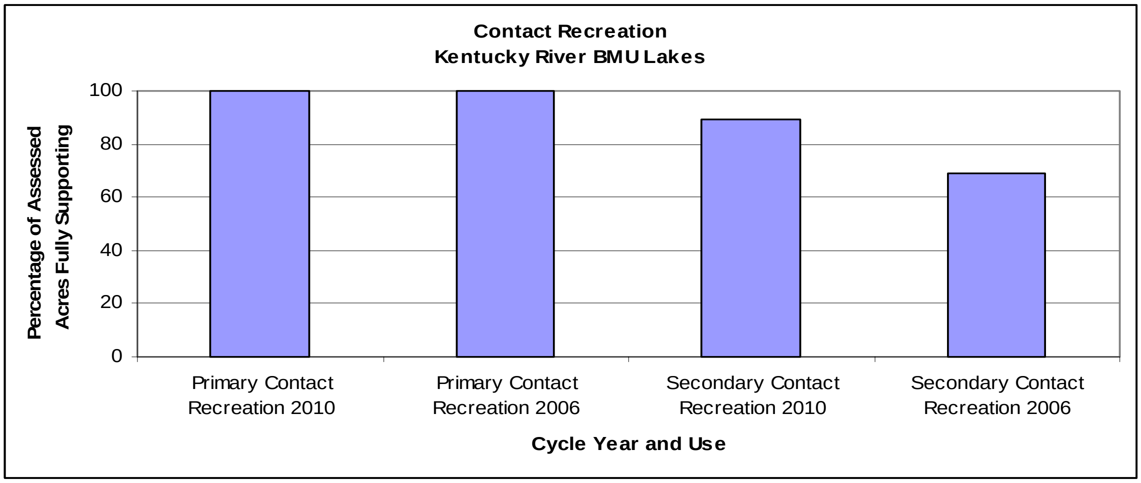


Kentucky River BMU

No new lake acres were assessed in 2010 for PCR in this BMU. Due to a special project on Herrington Lake, the 2006 305(b) report documented 2,940 acres assessed and fully supporting PCR (Figure 20).

Secondary contact recreation is typically assessed at all lakes where this use is allowed (this use is restricted at some domestic water supply lakes). The 2010 IR results show 5,948 acres (89 percent) out of 6,658 acres assessed for this use are fully supporting. According to information in the 2006 IR 6,885 acres were assessed for SCR and 4,776 (69 percent) acres fully support (Figure 20). The 2010 IR information show an increase in percentage of assessed acreage fully supporting this use of nearly 20 percent.

Figure 20. Comparison between the 2006 and 2010 305(b) reporting cycles of lake acres monitored and assessed that fully support primary and secondary contact recreation in the Kentucky River BMU.

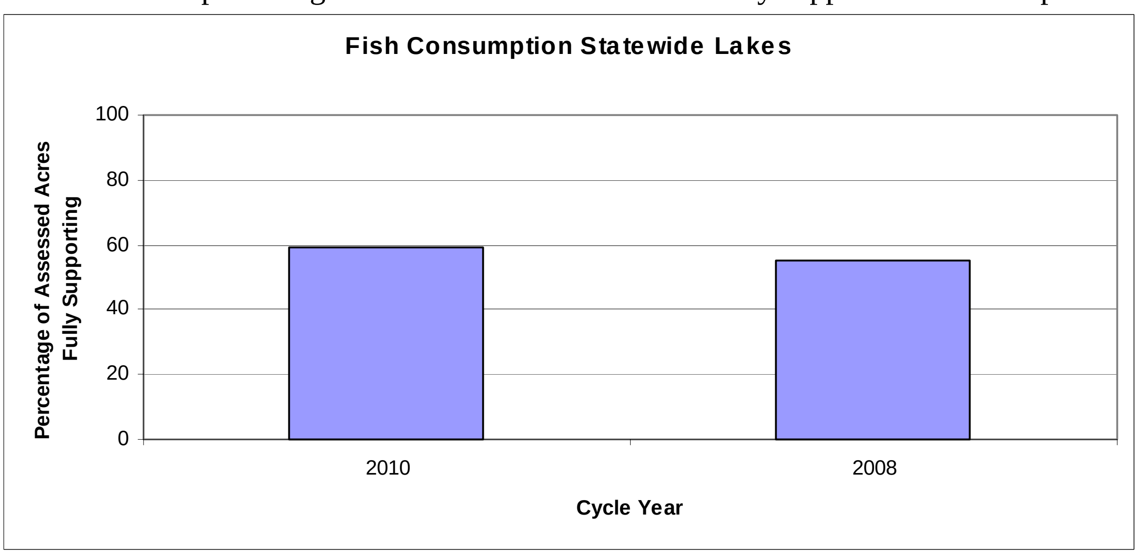


Fish Consumption

Statewide

Fish consumption acreage assessed is 205,635 with 122,247 acres (59 percent) fully supporting. In comparison to the 2008 IR, 204,732 acres were assessed and 112,212 acres (55 percent) fully supported (Figure 21). The 2010 IR data show an increase in supporting lake acreage of four percent.

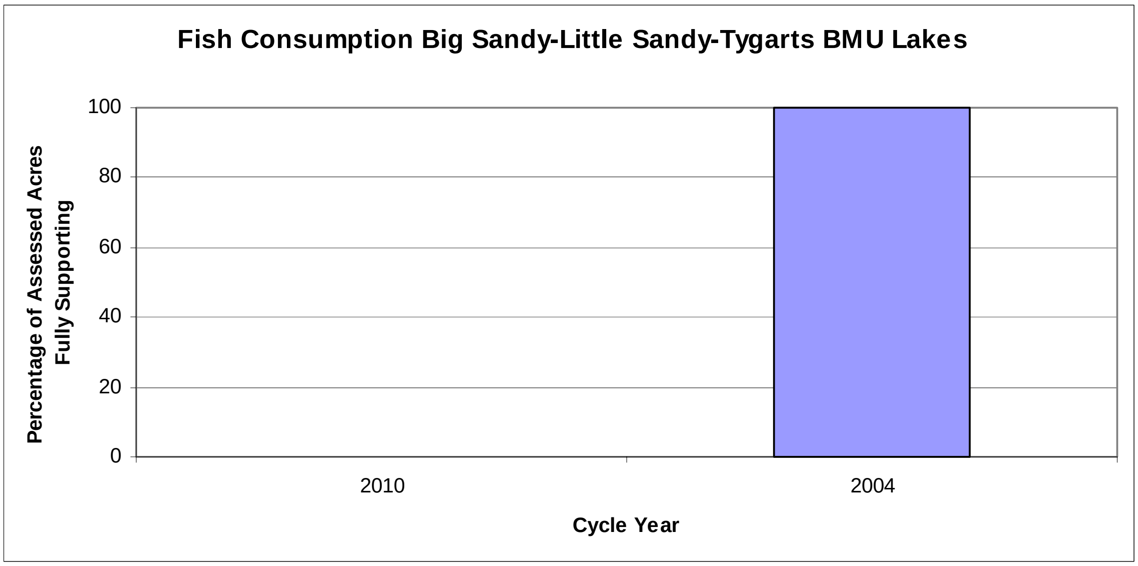
Figure 21. Statewide comparison between the 2008 and 2010 305(b) reporting cycle for the percentage of monitored lake acres that fully support fish consumption.



Big Sandy-Little Sandy-Tygarts BMU

Assessed acres for this BMU are 3,794 and all those acres are less than full support for fish consumption. This compares to the 2004 305(b) report of 1,089 acres assessed and 100 percent of those acres fully supported (Figure 22). The pollutants of primary concern for this use are mercury and PCB in fish tissue.

Figure 22. Comparison between the 2004 and 2010 monitored lake acres that fully support fish consumption in the Big Sandy-Little Sandy-Tygarts BMU.



Kentucky River BMU

Approximately 4,440 acres were assessed in the 2010 IR, of those acres all are less than full support. Compared to the 2006 IR, 3,724 acres were assessed and all those acres did not fully support fish consumption. The pollutant of concern in this BMU is mercury in fish tissue.

Statewide Water Quality Trends

Water quality trends analysis was performed on 37 of the KDOW's ambient stations with the longest record, 1979-2004. These stations were monitored on a monthly frequency until 1998 when the KDOW implemented a rotating basin management unit strategy. Once this plan was implemented the ambient stations were expanded to 70 statewide with sampling frequency bimonthly, except once every five years when those stations within the BMU undergoing intensive monitoring revert to monthly sampling for the water-year (April through March).

Trends for surface water-quality were analyzed for 15 water quality properties. Analyses were performed for physical properties (temperature, pH, dissolved oxygen, specific conductance, hardness and suspended solids), major ions (sulfate and chloride), selected metals (total iron and total manganese) and nutrients (total phosphorus, total nitrogen, nitrite-nitrate and total Kjeldahl nitrogen). Flow-adjustment procedures were employed at all stations to remove the effects of streamflow on water quality variability. A decreasing trend indicates a decrease in concentration of a particular water quality property, and an increasing trend indicates an increase in concentration of a particular water quality property.

Water quality trends varied statewide by station and physical or chemical constituent. Results for all stations had a significant trend if at least one water quality property had a statistically significant (p-value <0.05) increasing or decreasing trend during the period specified. Water temperature or dissolved oxygen had no significant decreasing trend at any station. Water temperature had one significant increasing trend at the South Fork Cumberland River near Blue Heron. Specific conductance and concentrations of hardness had one significant decreasing trend at South Fork Cumberland River near Blue Heron. pH had a significant decreasing trend at the Mud River near Gus. Concentrations of total suspended solids had one increasing trend at the Kentucky River at High Bridge and decreasing trends at five stations located in the Cumberland River basin.

Chloride concentrations at the 37 stations had increasing trends at 15 stations, decreasing trends at three stations and no significant trend in concentration at 19 stations. Most of the increasing trends were located at stations in the northern part of the state. Increasing trends of sulfate concentrations were detected at seven stations, all these stations were located in the Appalachian Region.

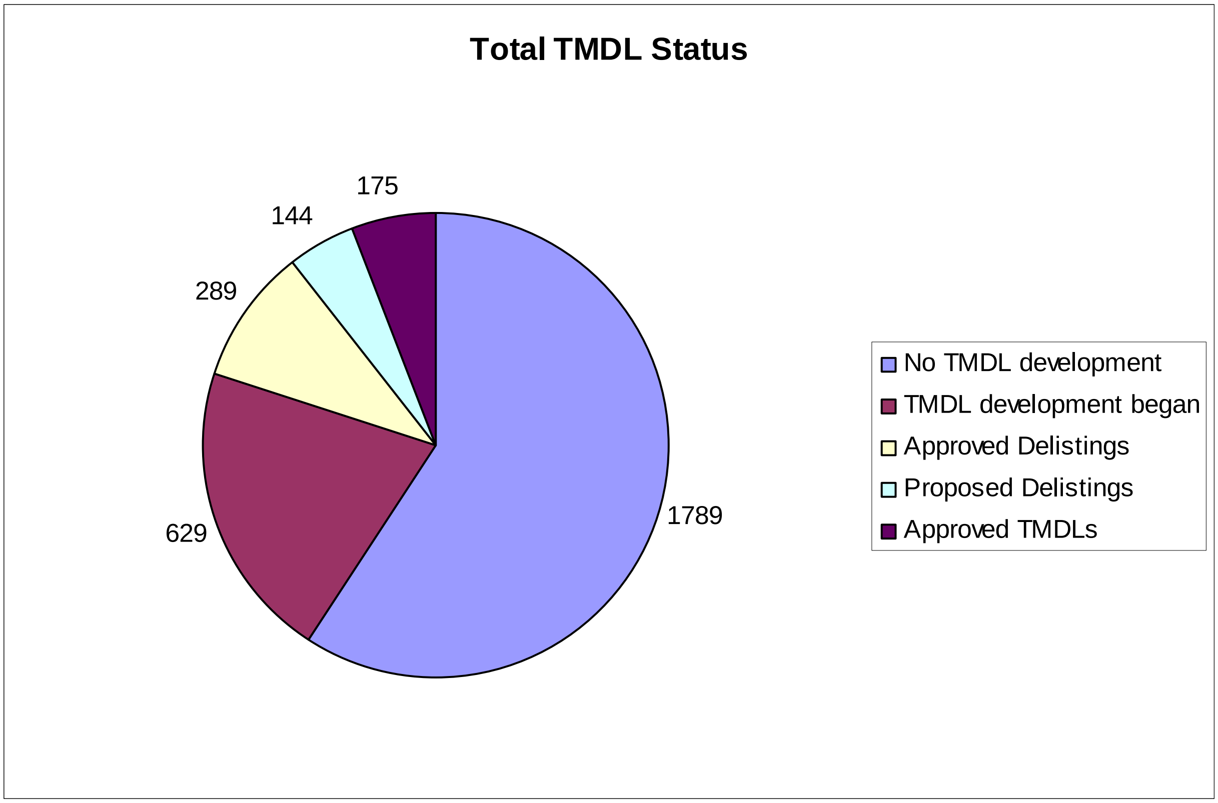
Total iron concentrations had significant increasing (one station) and decreasing (four stations) trends in various locations in east Kentucky. Tygarts Creek near Lynn had a significant increasing trend in total iron. Concentrations of total manganese had increasing trends at two stations, decreasing trends at 13 stations and no significant trend at 22 stations. All six ambient stations in the Cumberland River basin had decreasing concentrations of total manganese.

Trends analysis for all nitrogen constituents analyzed for had no trends at 25 stations. Concentrations for total nitrogen had two significant increasing trends at the Little Sandy River at Argillite and at the Little River near Cadiz. Concentration analysis for total phosphorus had 14 decreasing trends and four increasing trends. Three of the four stations with increasing trends were in the Kentucky River basin, while the other station was at the Green River near Woodbury in the Green River basin.

II. Section 303(d), Volume II

Volume II of the IR addresses the section of the Clean Water Act requiring states to submit a list of waters impaired for any designated use. Specifically, the 303(d) list is a subset of the 305(b) list of assessed waters; those requiring a TMDL (total maximum daily load) be developed for each pollutant that exceeds water quality criteria. The TMDL is a calculation of the total amount of a pollutant a water body can assimilate while meeting applicable designated uses (warmwater and coldwater aquatic habitat; primary and secondary contact recreation; domestic water supply; outstanding state resource water; and fish consumption [an implied use]). For the 2010 IR cycle there are 2,418 pollutant-water body combinations (PWC). Currently, 74 TMDLs are scheduled for completion during federal fiscal year (FFY) 2010 and 185 in FFY 2011. There are over 600 pollutant-water body combinations presently under development. As of time of this report, EPA has approved 289 PWC. Based on current monitored data the KDOW is requesting 144 PWC be delisted given current results. If EPA denies any of these requests the water bodies and associated pollutants will be maintained on the 303(d) list requiring development of a TMDL. Figure 23 indicates the various stages of the TMDL process (including requested delistings) statewide for Kentucky.

Figure 22. Status of the TMDL process in Kentucky through the 2010 Integrated Report cycle.



Chapter 1. Introduction

The 2010 Integrated Report (IR) was prepared by the Kentucky Division of Water (KDOW), Department for Environmental Protection (DEP), for submittal to the U.S. Environmental Protection Agency (EPA) to fulfill requirements of sections 303(d), 305(b) and 314 of the Federal Water Pollution Control (or Clean Water) Act of 1972 (P.L. 92-500), as subsequently amended. Section 305(b) of the Act requires states to assess and report current water quality conditions to EPA every two years.

In 2006 an IR was released for the first time by the commonwealth. It was produced in two volumes, and this procedure was followed for the 2010 IR. Volume 1 reports the 305(b) assessment methods, processes, overview of the commonwealth's water resources, monitoring programs, statistical findings, georeferencing of monitored waters and assessment results, including a comprehensive table listing all waters or segments assessed by designated use, the causes (pollutants or pollution) for impairment and probable sources. Volume 2 of the IR lists those waters and segments that were not fully supporting one or more designated uses (DU), based on monitored data, and require a TMDL (total maximum daily load) calculation for those pollutants causing the impairments. By integrating the two reports users of the information in the first IR (2006) found this comprehensive reporting medium of greater utility by having all relevant information together in two volumes. The use of assessment categories to file assessed stream segments and lakes or reservoirs provides an accurate and convenient method for the commonwealth to track the miles (or acres) of assessed and non-assessed uses, while also tracking those impaired waters from the time of 303(d) listing through the TMDL process and post-implementation.

KDOW utilized the assessment database (ADB) to store designated use assessments and aid in producing the various tables and compilation of statistics that were presented in this report. The current report was based on assessment data stored in ADB version 2.2; this database had been modified to function per the particular needs of KDOW. As with previous IRs (305[b] reports), ADB provides assessment information of water bodies and segments that include geographic information (latitude – longitude) used to georeference those assessments. This proved to be a reliable mechanism to produce the reach-indexed maps.

The KDOW operates its primary monitoring programs under a five-year rotating watershed management approach implemented in 1998. This IR represents monitoring efforts from the second and third cycle of the BMU (basin management unit) monitoring strategy; the Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs were of primary focus in this 2010 IR; these BMUs were monitored beginning in April 2007 – March 2008 and April 2008 – March 2009, respectively. This report also incorporated assessment data and results from monitoring that occurred during this reporting cycle outside of the BMUs of focus; thus providing a statewide update of monitoring results. Monitoring of the Ohio River mainstem is primarily accomplished by the Ohio River Valley Water Sanitation Commission (ORSANCO). Assessment of the river is reported in ORSANCO's 2010 305(b) Report; segments not supporting any assessed designated use is listed in Volume 2 of the Kentucky IR.

The 2010 303(d) list contains 6,274.53 miles and 2,419 pollutant-water body combinations. This monitoring cycle was years five and one of the second and third phases of the five-year BMU cycle, respectively. As such, much of the monitoring activities focused on TMDL- associated watersheds to identify the extent, concentrations and track sources of pollutants of concern necessary for TMDL calculation. To maintain overall awareness of aquatic life support conditions, and compare results over time, KDOW conducted a probabilistic designed biosurvey of the Big Sandy-Little Sandy-Tygarts BMU. This biosurvey provides information on aquatic life use support projected as a percent of total stream miles (wadeable streams defined as 1^{st} – 5^{th} Strahler order) in the BMU. A comparison of those results can then be made to the 2002 probabilistic biosurvey.

There are reasons that some impaired waters were not listed on the 303(d) report. For example, evaluated data from discharge monitoring reports (DMRs) from permitted facilities were not on the 303(d) list because permit compliance should result in protection of the designated uses; also, these DMR data were not monitored instream, but at the outfall.

Chapter 2. Background

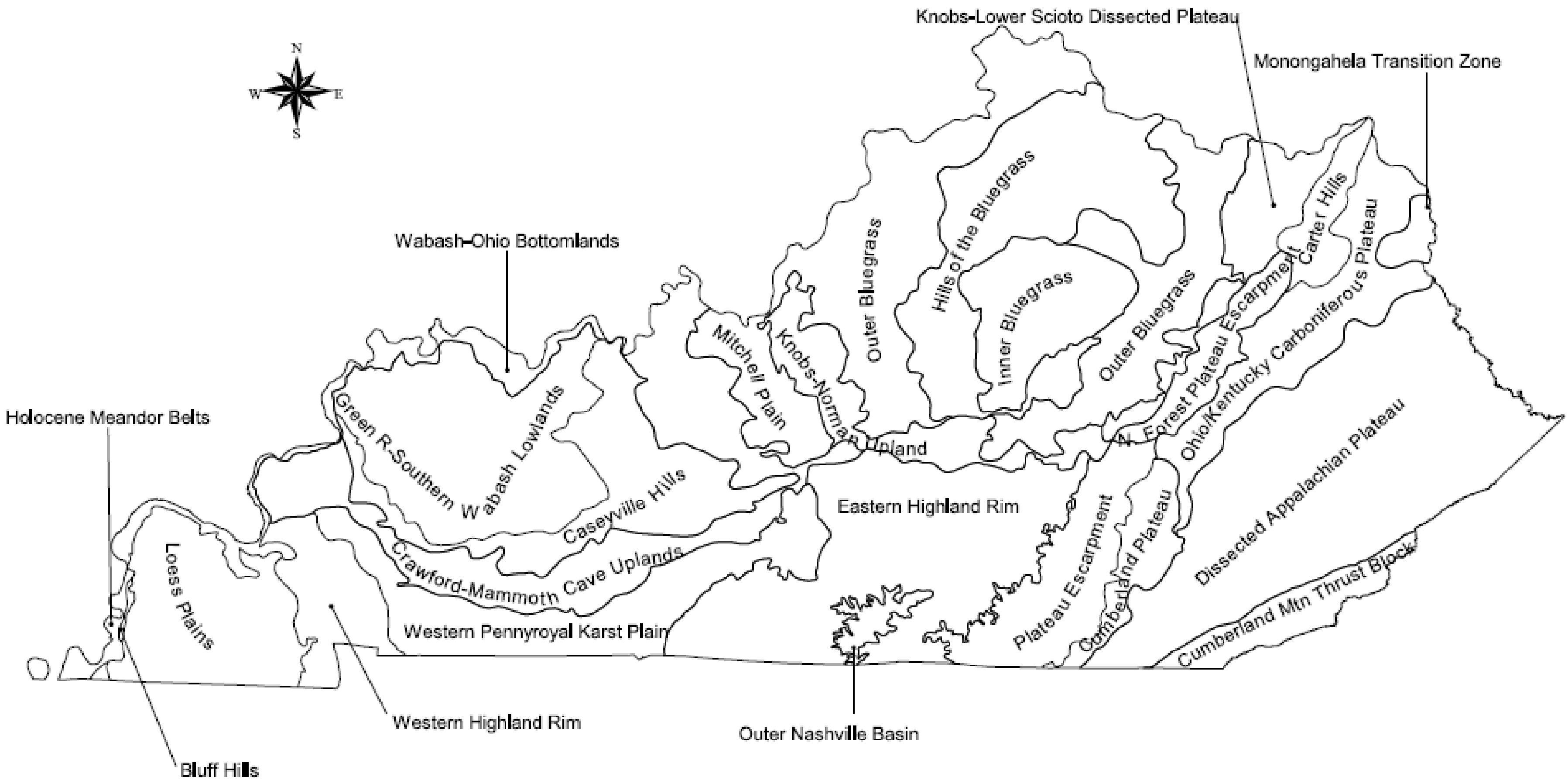
2.1 Atlas of Kentucky's Water Resources and Profile of Select Demographic and Physiographic Statistics Atlas of Kentucky

State population (2009 estimate)[1]	4,314,113
Surface area (square miles)	40,409
Number of counties	120
Number of major physiographic regions	5
Number of level III ecoregions	7
Number of level IV ecoregions	25
Number of major basins	12
Number of USGS 8-digit HUCs[2]	42
Number of stream miles (1:24,000 NHD[3])	90,961
Number of stream-formed border miles (primarily Ohio River)	861
Number of publicly owned lake and reservoir surface acres (estimated)	229,500
Three largest reservoirs by surface acres	
Kentucky Lake (Kentucky portion)	57,103
Cumberland Lake	47,623
Barkley Lake (Kentucky portion)	42,780
Wetland acres (approximation)[4]	324,000

[1]US Census Bureau
[2]Hydrolgic unit code
[3]National hydrography dataset
[4]*The state of Kentucky's environment: 1994 status report*. The Kentucky Environmental Commission, 1995.

The physiography of Kentucky provides a landscape of 25-Level IV Ecoregions (Figure 2.1-1) that are diverse geologically and physically and provide a variety of microclimates that are important in forming and supporting diverse plant and aquatic communities. This rich aquatic biodiversity is a result of an environment that provided long and stable conditions, a result of non-glaciation. While the state has many miles of streams and rivers, natural lakes are uncommon and are found along the Lower Ohio and Mississippi rivers in the Jackson Purchase (region west of Tennessee River [Reservoir]); most of these lakes were formed by oxbows or shallow depression basins. Many of the major rivers in the commonwealth have been dammed for flood control and secondarily

Figure 2.1-1. Level IV Ecoregions of Kentucky.



for generation of electricity. This change has altered the natural aquatic communities of these systems while providing drinking water supplies, tourism and recreational opportunities. While only a portion of wetlands exist from what was estimated to have occurred historically (1.5 million acres), loss of wetland acreage has slowed with federal and state regulations and disincentives in place for altering wetlands (The Kentucky Environmental Commission, 1995). By river basin, the Green River has the largest proportion of remaining wetland acres, approximately 88,000. As indicated by the number of caves in Kentucky, there are significant karst areas in the state, but the largest karst landscape exists in the Green River basin, which includes Mammoth Cave. These areas of karst present special concerns for water quality protection because groundwater flows may be unknown and difficult to monitor due to limited access.

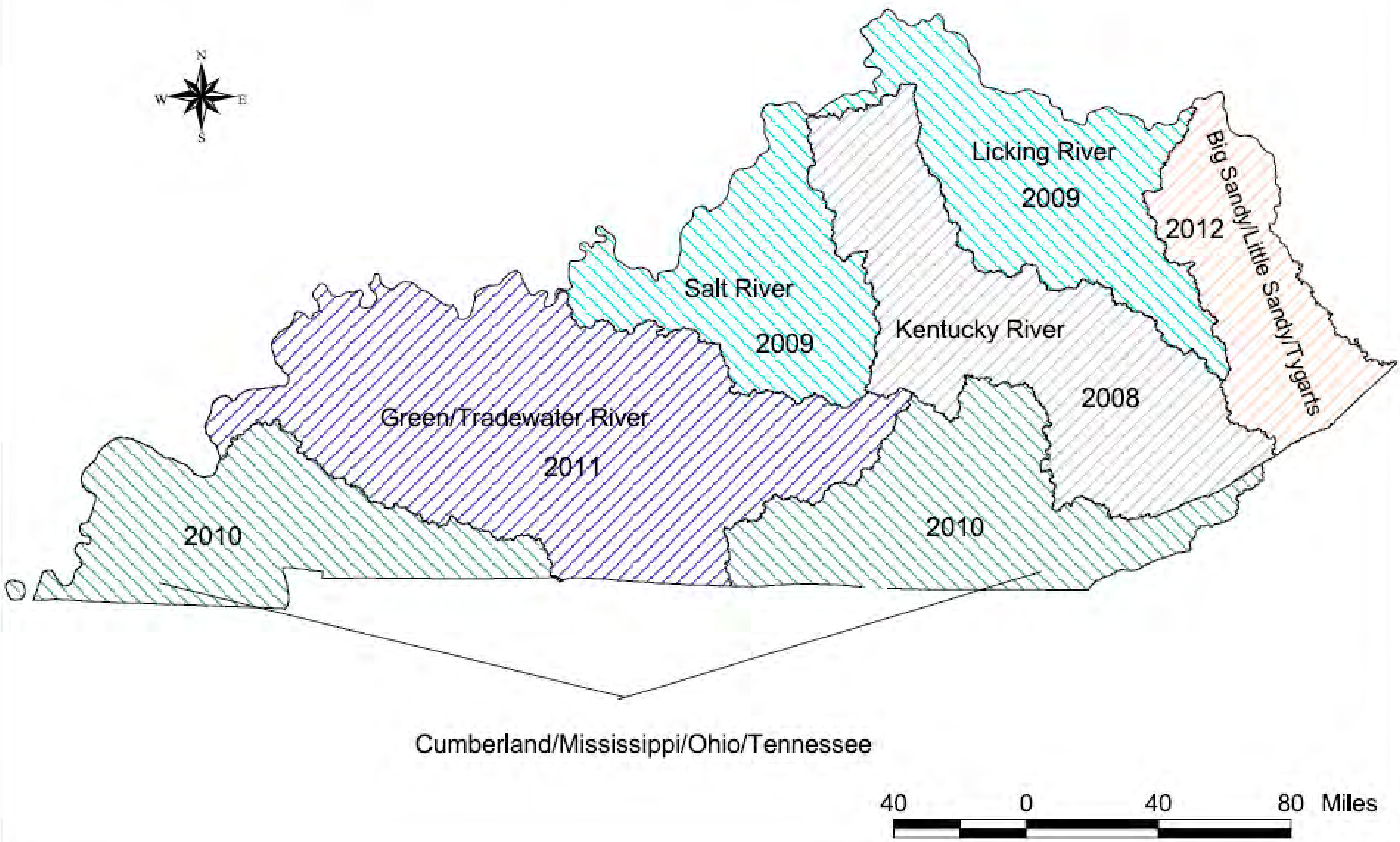
2.2 Programmatic

In order to better characterize the waters of the state and better coordinate resources toward addressing problems, Kentucky adopted a Watershed Management Framework in 1997. The purpose of this management framework is to use programs, people, information, and funds as efficiently as possible to protect, maintain, and restore water and land resources. This approach provides a framework within which participating individuals and institutions can link and support one another's efforts in watershed management.

Coordinated, multi-agency watershed monitoring was initiated in 1998 in the Kentucky River basin, and monitoring for the first five-year watershed cycle was completed in 2002. The first cycle of monitoring focused on obtaining, for the first time, a snapshot of conditions of Kentucky’s waters, especially wadeable streams. Most local, state, and federal agencies in Kentucky with monitoring responsibilities cooperated in the watershed monitoring effort. Some agencies simply provided their data and carried out monitoring as usual; others revised their sampling programs and sampling methods for better fit with the watershed monitoring plan. In early 2005, Kentucky Department for Environmental Protection and Tennessee Department of Environment and Conservation met to share information on interstate issues surrounding shared watersheds. In addition to discussion and determining probable shared sources of pollutants or pollution affecting stream health, enhanced protection of high quality waters was identified as an important outcome of this effort. A tangible result from this cooperative effort was realized in the triennial review of 2008. Kentucky designated its portion of Reelfoot Lake as an Outstanding National Resource Water; Tennessee had previously so designated its portion of water within the National Wildlife Refuge. From this effort information on the Clarks River regarding bacteria levels above standard for primary contact recreation (PCR) use helped prioritize the watershed for monitoring, identify sources and begin working on TMDL development. A TMDL for this watershed is in the final stages of development.

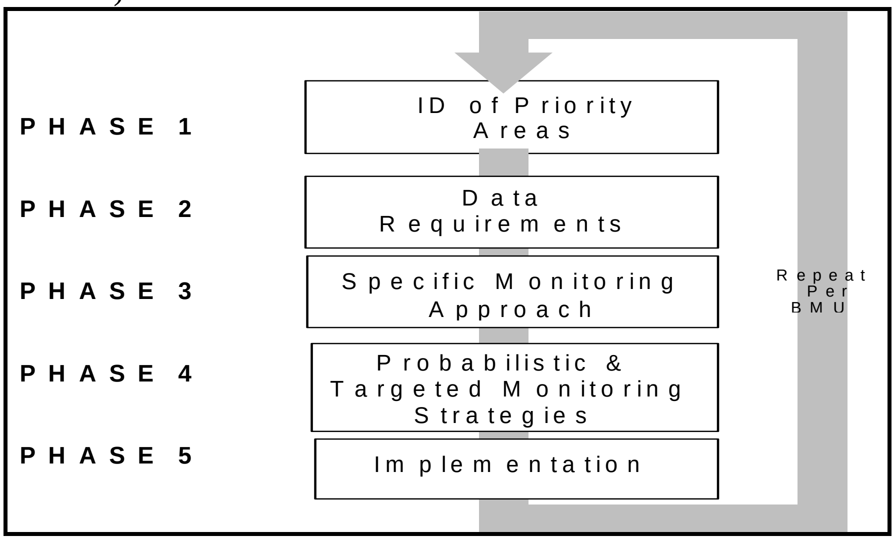
According to the adopted framework, the state is divided into five BMUs (Figure 2.2-1) for the purposes of focusing management activities spatially and temporally. Activities within each of the five units follow a five-year cycle so efforts can better be focused within a basin. Phases in the cycle include: 1) collecting information about water resources in the basin; 2) identifying priority watersheds; 3) listing the watersheds in the basin in order of priority and deciding which problems can be solved with existing funds; 4) determining how best to solve the problems in the watershed; 5) developing an action plan; and 6) carrying out the developed strategies (Figure 2.2-2). State and federal agencies are invited to participate in the process, providing a mechanism for interested parties to stay informed and have an active role in management of resources. Examples of how other agencies have gotten involved in the monitoring and assessment process include the Kentucky Department of Fish and Wildlife that stepped-up to monitor streams in a given BMU using the KDOW's fish biosurvey protocols. This has resulted in many stream assessments that would not have been possible without this additional resource. It has worked well for both agencies providing a better understanding of stream health and conditions to both agencies while increasing the number of stream miles the commonwealth has monitored and can report. The U.S. Forest Service has cooperated by starting a probabilistic biosurvey program on the Daniel Boone National Forest that follows the protocols of the KDOW. With budget and personnel reductions over the last several years the USACE (United States Army Corps of Engineers) and KDOW have shared resources (staff and laboratory capacity) to accomplish mutual need of continuing

Figure 2.2-1. Kentucky basin management units and monitoring years of the third five-year cycle.



reservoir monitoring. The KDOW has over 25 years of historic data on many publicly owned reservoirs.

Figure 2.2-2. Phases of the third cycle of the basin management unit approach (2008 – 2012).



Each BMU will follow the rotation of the third cycle of the watershed management framework according to the schedule below. The following is the cycle beginning with planning phase-year with the monitoring and assessment in years two and three, respectively. Monitoring activities begin in April and end in March the following year.

- April 2007 – March 2009 – Kentucky River basin
- April 2008 – March 2010 – Salt and Licking river basins
- April 2009 – March 2011 – upper Cumberland River and 4-Rivers (lower Cumberland, Ohio, Mississippi and Tennessee rivers) basins
- April 2010 – March 2012 – Green and Tradewater rivers basins
- April 2011 – March 2013 – Big Sandy River, Little Sandy River , and Tygarts Creek basins

Benefits of this approach include:

- Planning and determination of monitoring strategy developed on a watershed approach for TMDL-specific monitoring

- Increased coordination of resource management activities focused on identified priorities in each basin
- Greater ability to stretch limited dollars for implementation activities through partnering and coordination of efforts; spin-off benefit of the initial BMU cycle approach
- Collaboration of state and federal agencies effectively increasing manpower, expertise and environmental disciplines
- Additional data as monitoring efforts are coordinated – approximately a four-fold increase in assessment data has been realized since the inception of the watershed approach in 1998.
- Increase in quality assurance of data as agencies standardize methods and procedures.

The 2004 305(b) Report represented the completion of the first monitoring and assessment cycle of the five BMU management framework. Whereas the purpose of monitoring in the first watershed cycle was to obtain baseline data statewide, monitoring in the second cycle (begun in 2003) focused on impaired watersheds. The focus in the third cycle is on impaired watersheds, but special data needs will also drive this cycle. For example, special studies to derive data in the effort to develop numeric nutrient criteria for wadeable streams continue into the early stages of this third cycle. However, ongoing ambient monitoring will continue at long-term stream, lake and reservoir stations, probabilistic biosurveys, and on a subset of reference reach streams to monitor the physicochemical and biological status of those watersheds.

2.2.1 Overview of Programs Related to Monitoring and Assessment

The Division of Water has the primary responsibility of monitoring and assessing the commonwealth's water resources, and overseeing the permitting of facilities and industries that discharge point sources to waters through Kentucky Pollutant Discharge Elimination System (KPDES).

To monitor the designated uses of Kentucky's waters and monitor the effectiveness of various control programs, such as KPDES, KDOW has a number of monitoring programs that monitor biological and water quality indicators for 305(b) and 303(d) purposes. Table 2.2.1-1 highlights the monitoring programs and the indicators associated with each. A more comprehensive discussion of surface water quality monitoring programs follows in Chapter 3.

Table 2.2.1-1. Matrix of water resources and monitoring programs

	Long-term Surface Water[a]	Rotating Surface Water[a]	Targeted Biological Monitoring[b,c]	Reference Reach[b]	Probabilistic Biosurvey[d]	Lake Monitoring[e]	Ground-water & Springs Monitor-ing[a]
Streams (1st-5th order)		X	X	X	X		
Large Rivers	X	X	X				
Lakes/Reservoirs						X	
Groundwater							X
Swamps/Wetlands	--	--	--	--	--	--	--

[a]Indicators: physicochemical and pathogen indicator
[b]Indicators: macroinvertebrates, fish, algae, physicochemical, habitat
[c]Includes some 6th order streams where wadeable and associated with ambient water quality stations
[d]Indicators: macroinvertebrates, physicochemical, habitat
[e]Indicators: physicochemical, fish kills, macrophytes, algae

For those waters requiring a TMDL pollutant reduction, the division's TMDL program manages this process by coordinating the monitoring and development of those discharge or load reductions necessary to bring the impaired Designated Use (DU) into full support. The primary source of pollutants affecting the commonwealth's waters emanate from nonpoint sources (NPS). The fact that sedimentation became the leading pollutant in the 2004 305(b) cycle was a direct reflection on NPS pollution being the more significant source of degradation to the state's waters. This trend follows nationwide.

The primary objectives of the ambient monitoring program were to establish current conditions and long-term records and trends of water quality, biological, fish tissue, and sediment conditions in the state's major watersheds. Sub-objectives were identified as determining: 1) the quality of water in outstanding resource waters; 2) background or baseline water quality conditions in streams not impacted by discharges; 3) the extent to which point and nonpoint sources affect trophic status of lakes and reservoirs; and 4) the impact of acid precipitation on water quality of lakes and reservoirs. There are 70 primary water quality stations throughout the commonwealth that are monitored on a monthly or bimonthly frequency. Primary water quality stations are monitored monthly during a given BMU water-year, and those stations outside of the current water-year BMU are monitored bimonthly. These stations are located at mid- and lower watershed reaches of 8-digit HUC basins. Station location also occurs near the inflow and outflow of major reservoirs, for example Green River Reservoir in the Green River basin. Implemented with the rotating basin approach were the rotating watershed stations. These stations are monitored for the same suite of water quality parameters as the primary stations, but are established to provide monitored data in smaller watersheds for a variety of reasons. Those primary considerations for watershed monitoring are: 1) TMDL development; 2) characterize water quality in reference watersheds; 3) monitor waters that receive permitted discharge (for instance a municipal wastewater treatment plant) to characterize upstream and downstream water quality; and 4) characterize water quality conditions in certain landscapes, such as agricultural or mining areas.

KDOW's targeted biological monitoring program has a long history associated in determining the health and long-term water quality of stream and river resources. In addition to biological community survey, water quality variables are included in the monitoring program. Biological monitoring was implemented in the 1970s with significant refinement of the program as more research led to the development of biological multimetric indices (for more information go to Methods for Assessing Biological Integrity Of Surface Waters in Kentucky). A portion of KDOW's biological monitoring emphasis was shifted to development of those metrics and associated criteria through a reference reach approach. This was implemented in the 1990s based on an ecoregional approach to determine reference conditions in each basin. These waters do not represent pristine conditions rather they represent the best examples of high quality water and biological integrity in each of the four identified bioregions. Through this effort a network of streams, or stream reaches, have been identified throughout the commonwealth. These stream reaches are listed in water quality standards, 401 KAR

10:030 and can be accessed at: http://www.lrc.ky.gov/kar/401/010/030.htm. One to three biological communities (macroinvertebrates, fishes, or algae) were sampled per biosurvey. When one community only was used to make an aquatic life use support determination, either macroinvertebrates or fishes were monitored, typically the former.

A random biosurvey effort was initiated with the help of EPA's technical support group in Corvallis, Oregon. Kentucky's approach was to sample macroinvertebrates once at a minimum of 50 sites in each BMU. In 2004 nutrients and additional chemical water quality variables were added to the suite of indicators used by this program. These additional data were added to aid in the development of numeric nutrient criteria, gain a more comprehensive knowledge of what ambient water quality variable values were in each BMU, and increase the confidence of each aquatic life use assessment. This program allows KDOW to report on aquatic life use support in wadeable streams on a state-level over the five year watershed cycle. Section 305(b) use support determinations made through the probabilistic biosurvy program were determined only on segments directly monitored, whereas extrapolated use support over a given BMU was made for informational, resource conditions, and planning purposes only. This program was important both on the statewide level as well as national level, as indicated by EPA's nationwide probabilistic monitoring efforts in wadeable streams, lakes and reservoir, large rivers and a planned survey of wetlands.

The lake and reservoir monitoring program began in the early 1980s as part of the Clean Lakes monitoring initiative. Currently KDOW monitors all significant publicly-owned lakes and reservoirs in the state (approximately 105 water bodies). Many of the U.S. Army Corps of Engineers (USACE) reservoirs and Kentucky Lake, a Tennessee Valley Authority (TVA) project, were typically monitored by those respective agencies, and KDOW, meeting each agency's data requirements. The working relationship between KDOW and USACE, Louisville and Nashville districts has proved to be a good cooperative effort that is beneficial to all parties by increasing available resources (e.g. USACE may provide the field work and KDOW, in coordination with Division of Environmental Program Support [DEPS] provides chemical analyses).

Physicochemical water quality variables and chlorophyll *a* were analyzed to determine current Trophic State status of these water bodies. Monitoring occurs three times during the growing season (spring, summer and fall) to capture the seasonal variability and is reflected in an overall trophic state status of the resource. By monitoring these resources every five years trends in water quality can be measured. This monitoring program collects data sufficient to determine aquatic life, secondary contact recreation and drinking water supply DUs. The majority of these resources are posted by Kentucky Fish and Wildlife Department as "no swimming" water bodies, precluding applicability of PCR monitoring.

2.3 Costs Associated with Water Pollution

Putting a dollar figure on the costs associated with water pollution is difficult to determine. However, the costs associated with KPDES-permitted facilities, which are primarily comprised of industrial facilities, package wastewater treatment plants, and municipal wastewater treatment plants, are in the tens of millions of dollars considering construction, operating, maintenance, compliance, and administrative costs. Figures obtained from KDOW, Facilities Construction Branch, give some insight into the costs associated with treating household, business and industrial wastes (Table 2.3-1).

Table 2.3-1. Costs to taxpayers for municipal wastewater treatment facilities (planning, design and construction) for the control of pollution from houses, businesses and industries.

	Clean Water State Revolving Fund	EPA Special Appropriation Grants	American Recovery & Reinvestment Act
FFY 2009	10,377,720	3,347,000	49,878,100
FFY 2008	10,308,535	2,863,000	0
FFY 2007	16,237,311	0	0
Prior to FFY 2007	415,614,911 (first loan made in May 1988)	51,297,002 (first grant awarded in 1998)	0
Total	$452,538,477	$57,507,002	$49,878,100

However, these costs are only a portion of the total costs to society. The increased cost of technology needed to treat potable water in areas of heavy siltation/sedimentation alone may result in loss of source water supply because the cost of treatment is prohibitive, while areas of organic industrial contamination may require expensive continuous carbon-based treatment. Medical and loss of productivity costs associated with various diseases that may result from waterborne pollution are not accurately known. For example, consumption of fish flesh that has elevated levels of mercury carries increased reproductive health risks for women of childbearing age and developmental health concerns for children. Fish contaminated with elevated levels of PCBs carries increased cancer risks to the general population. Pollutants affect commercial fisheries where restricted consumption, or loss of resources, reduces the commercially available fish population; additionally, some members of society rely on subsistence fishing to supply a portion of their nutritional needs. Water pollution may also result in loss of revenue to governments and local businesses if recreation areas are unsafe for swimming or fishing. The shipping industry relies on barges to move many commodities around the nation, and the cost of maintaining shipping channels prone to fill due to excess sedimentation is an ongoing expense to both industries and governments.

2.4 Monitoring and Assessment Issues Facing the Commonwealth

Some of the larger monitoring and assessment issues are presented below. However, the overriding issue is personnel to conduct additional monitoring tasks and use these generated data in a meaningful way throughout the various water management programs. The challenges facing the commonwealth and nation during this time of economic downturn has resulted in little opportunity for expansion of ambient monitoring programs. Through these challenges, the KDOW has maintained its monitoring programs, and taken on special projects, especially related to development of draft numeric nutrient criteria.

KDOW submitted a nutrient criteria development plan in 2004 that was satisfactory to EPA. This plan was revised in late 2008 in recognition of additional data needed to fill gaps in certain ecoregions and adjust timetables of anticipated draft criteria development. The first waters scheduled for criteria development are wadeable streams and intrastate reservoirs. A particular need is for additional data from Ecoregion 71e and 71g in the Pennyroyal region. To obtain the necessary additional nutrient data KDOW secured EPA funds to involve Western Kentucky University to collect the water quality samples and KDOW biologists will collect macroinvertebrate community data during the spring and early summer 2010. The USGS was awarded grant money from EPA to collect water quality data in Ecoregion 71a (Crawford-Mammoth Cave Uplands) (Figure 2.1-1). A report on this project is forthcoming from USGS around mid-2010. The additional water quality data gathered under varying flows, and biological community data, will add discriminatory power for criteria development within this region. In the interim of nutrient criteria development, the KDOW has begun addressing organic enrichment issue through applying a 1 mg/L total phosphorus discharge limit to those waters impaired by nutrients, and increased nutrient sampling. Additional data were required from the mountainous region of the commonwealth for numeric nutrient criteria development. A 106 supplemental grant was awarded to Kentucky Geological Survey (KGS) to assist KDOW in physicochemical data collection in wadeable watersheds in this region that receive discharge from municipal, package and household wastewater treatment facilities or units. Part of the study design was to identify those receiving watersheds that have minimal other potential impacts, particularly from mining activities. Data gathering for this project was completed at the end of 2009. Biologic community (macroinvertebrates and algae) data were collected in select watersheds from this study during 2008; correlation of nutrient data to community structure was the objective. It should be noted that KDOW had considerable data collected throughout this region; however, either nutrient data were not collected with biological data or it was collected from naturally nutrient-poor reference watersheds. This region is made up of the following river basins: upper Cumberland; upper Kentucky; Big Sandy; Little Sandy; and upper Licking rivers.

Lake and reservoir data were relatively complete and span approximately 25 years. This program continued to characterize the trophic state of these waters during the growing season; samples were collected spring, summer, and fall. The majority of reservoirs had remained stable according to TSI (trophic state index), but there were trends of increased trophic level occurring in some waters.

Kentucky’s wetlands are primarily bottomland hardwood systems that flood seasonally. This corresponds to the winter and spring rainy season. Any excess nutrients will likely have a subtle impact on these environments since the supply of water comes from flooding rivers, and seasonal inundation. These bottomland hardwoods naturally do not hold standing surface water for a prolonged period of the year.

To date, there have been no recognizable geographic patterns in mercury levels in fish tissue in Kentucky. A potential strategy to aid in detecting a possible pattern may be moving toward a random monitoring scheme. In 2009 KDOW implemented a probabilistic monitoring effort for collection of fish tissue in publicly owned reservoirs and lakes of 40 surface acres and greater. States are now faced with the situation where they are asked to maintain a robust ambient monitoring program to characterize and track conditions of the state's waters (305[b] reporting) and at the same time collect data for TMDL development in hundreds of impaired water bodies and segments, eventually tracking the success of implementation. Faced with these tasks, a critical resource need is additional support for the TMDL program; some monitoring resources have been shifted from ambient programs into the TMDL monitoring-specific needs. Like most states, Kentucky's schedule requires hundreds (2419 as of the 2010 IR cycle) of TMDLs be developed. The 2002 303(d) list had 946 pollutant/water body combinations and those TMDLs are scheduled to be developed by 2015. Additional staff, lab resources, and especially contractual monies, must be obtained to accomplish this workload. KDOW must establish arrangements to fund TMDL planning, data collection, lab analysis, and development with internal, contractual, and interested third-party resources, including volunteer organizations.

Industrial and point source monitoring is important to the commonwealth's assessment of the effectiveness of permitted facilities adhering to their permit limits, and if the permitted limits are appropriate and protective for the receiving waters. The primary target of this monitoring program would be to gage the biological integrity in these waters. This monitoring need may only be fulfilled with significant monetary and personnel resources; however, neither of these resources will likely become sufficient anytime soon. Possibly contracting the work through a federal grant would be one way to address this need. This permit biomonitoring program would help fulfill sections 301, 302, 303, 305, 306, 307, 308, 314 and 402 of the CWA. Milestones would be incremental, with resources initially directed to pre-permit biomonitoring. As resources increase biomonitoring would be implemented prior to permit renewals. The earliest implementation would be 2014 and, given the resources needed to undertake this objective, it is currently not viewed as realistic in this timeframe.

Chapter 3. Surface Water Monitoring and Assessment

3.1 Monitoring Program - General

Kentucky Division of Water has used NHD 1:24,000 scale maps for monitoring, planning, and assessment since 2004. As noted in Chapter 2, there are over 90,000 miles of streams in the commonwealth at this resolution. Of particular interest in this 2010 IR are new 305(b) assessments of two BMUs, the Big Sandy-Little Sandy-Tygarts and the Kentucky River, which were the focus of monitoring in water-years 2007 and 2008, respectively. Table 3.1-1 provides population of stream miles for those two BMUs by river basin.

Table 3.1-1. Total stream miles (NHD 1:24,000 scale) of respective river basins in the Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs.

Big Sandy-Little Sandy-Tygarts BMU, including Ohio River minor tributaries	7607
Big Sandy River basin	4500
Little Sandy River basin	1888
Tygarts Creek basin	1219
Kentucky River BMU	16,071
North Fork Kentucky River sub-basin	2872
Middle Fork Kentucky River sub-basin	1213
South Fork Kentucky River sub-basin	1533
Upper Kentucky River sub-basin	2644
Lower Kentucky River sub-basin	7809

In this reporting cycle, primary monitoring occurred in 11 of the state's 42 eight-digit HUCs (hydrologic unit codes) established by the U.S. Geological Survey (USGS). Table 3.1-2 provides data on the number of assessed water bodies, segments and types of water bodies per the monitoring program for water-years 2005 – 2007. In the Big Sandy-Little Sandy-Tygarts BMU, those data are from HUCs 05070201, 05070202, 05070203, 05070204, 05090104 and 05090103. Many of these assessments stemmed from intensive watershed monitoring in 2007 and 2008, and data from 2003 – 2007 were considered for assessment at the primary long-term water quality stations. However, some data more than five years old were considered valid this reporting period, particularly biological data.

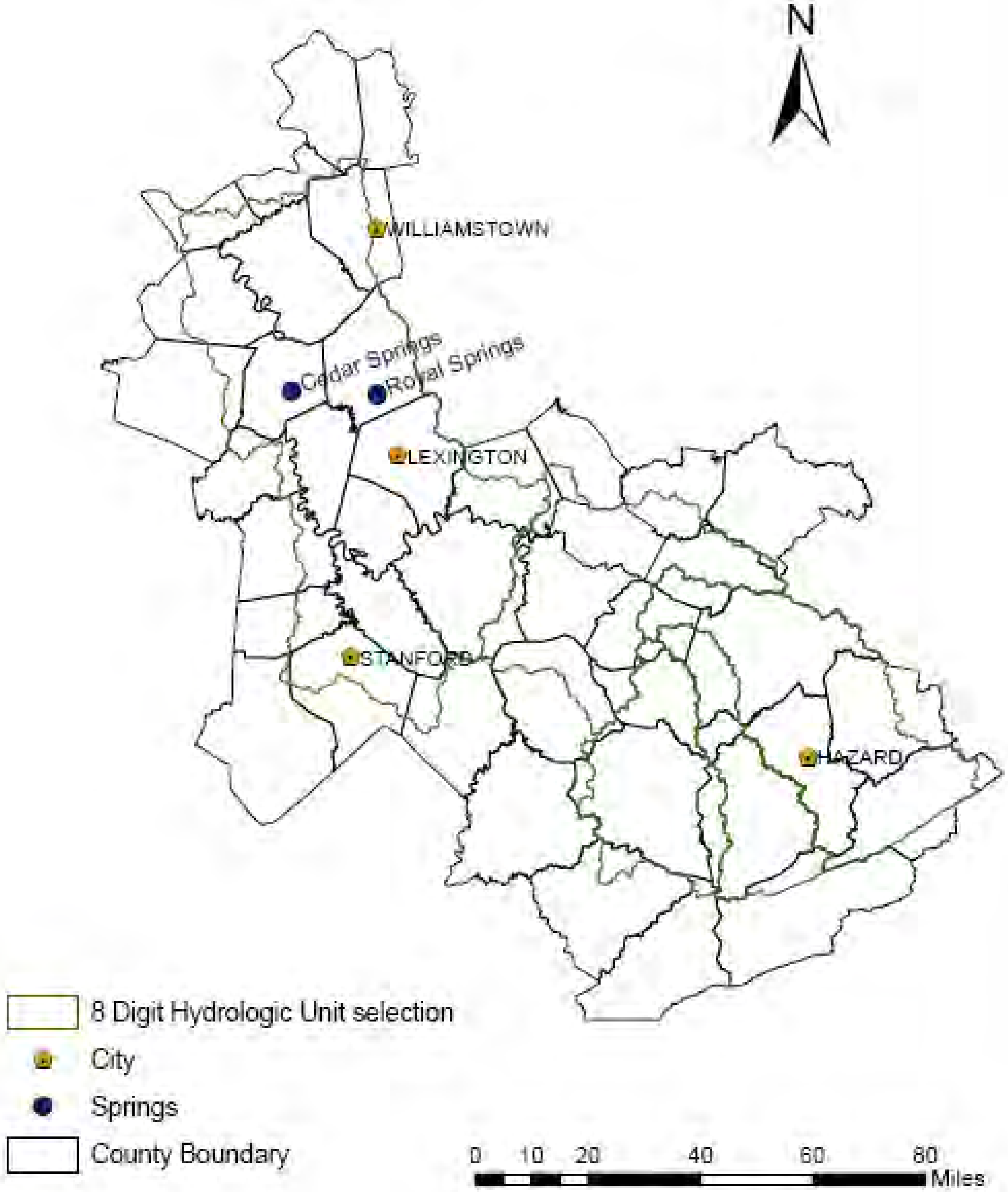
Table 3.1-2. Numbers of streams, stream segments, lakes and reservoirs assessed in the Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs of focus during the 2007 and 2008 water-years.

BMU	Number of Streams	Number of Stream Segments	Number of Lakes	Number of Reservoirs	Number of Springs
Big Sandy-Little Sandy-Tygarts	210	293	0	10	0
Kentucky River	353	474	0	27	2
Total	563	767	0	37	2

The Kentucky River BMU is comprised of HUCs 05100201, 05100202, 05100203, 05100204 and 05100205. Most monitoring of waters in this BMU occurred during the water-year 2008 – 2009; however, data from 2004 – 2008 were considered for assessment decisions made at the primary long-term water quality stations. Additionally, some data older than five years were considered valid for this reporting period, particularly biological data.

Springs were added to the KDOW's monitoring program during the 2008 305(b) cycle; additional springs were monitored in the Kentucky River BMU and reported herein. These are significant resources in karstic regions of the state. Karst can be found in every basin of the commonwealth, but is most common in south-central Kentucky in the Green River basin. Given the sensitivity of groundwater, subsurface (losing) streams and associated surface waters to land uses in regions of porous limestone, monitoring significant springs was made a priority by the KDOW. This effort was undertaken by KDOW's Groundwater Section following the Water Quality Branch's SOP used for surface water quality monitoring programs. The locations of those monitored springs are shown in Figure 3.1-1.

3.1-1. Monitored springs in the Kentucky River basin, 2008.



3.1.1 Ambient (Long-Term) Monitoring Network

Water Quality. Kentucky Division of Water's statewide ambient water quality monitoring network consists of 70 fixed stations (Table 3.1.1-1 and Figure 3.1.1-1). This network was expanded from 44 to 70 in 1998 following the watershed approach adopted by the commonwealth in 1997. Ambient stations were located in the downstream and mid-unit reaches of USGS 8-digit HUCs upstream of major reservoirs and in the downstream reaches of major tributaries. The Big Sandy-Little Sandy-Tygarts BMU had nine ambient stations and the Kentucky River BMU had 15 ambient water quality stations (Table 3.1.1-1). The ambient stations of a BMU were sampled monthly during the water-year the unit was in phase. During the other four water-years of the watershed cycle, sampling frequency was reduced to bimonthly to devote more monitoring and laboratory resources to the rotating watershed water quality network (discussed later). Field measurements were taken for pH, dissolved oxygen, specific conductance and temperature; samples were analyzed for nutrients and metals; pesticides and herbicides were included if the streams drained predominantly agricultural areas. During the recreation season of May through October water quality samples are collected to determine if levels of pathogen-indicating bacteria may be a concern for people who recreate in these waters. The purpose of the ambient water quality network was to assess long-term conditions and trends on rivers and the larger streams of the state.

Biology. Fish, macroinvertebrate and algae data from select ambient stations provide long-term and trend information on the mainstem of rivers and many major tributaries. Most of the ambient biological stations are located on streams that also have water quality monitoring (Figure 3.1.1-2). Due to other special monitoring commitments biological community data were not collected in the Kentucky BMU.

Fish Tissue. Fish tissue samples were obtained from 12 streams or segments and eight reservoirs for this reporting cycle. These water bodies represent either newly assessed data for fish consumption or follow-up monitored data for water bodies that had been assessed in past 305(b) cycles. Tissue was analyzed for mercury, selenium, PCBs, chlordane, DDT and toxaphene. Results were used to determine if there were potential problems with contaminants in fish tissue that required further sampling. These results also were used to make fish consumption use support determinations. The widespread pollutant of concern in Kentucky fishes is mercury. The following criteria were used to determine level of use support: 0.0 – 0.3 ppm was full use support, greater than 0.3 – 1.0 ppm was partial support and greater than 1.0 ppm was nonsupport. If results were not elevated, no further fish tissue sampling was conducted. This method of assessment closely follows EPA's recommended application of basing water quality evaluation for total mercury on fish tissue concentrations.

3.1.2 Rotating Watershed Network

An interagency monitoring team established several objectives for the one-year watershed water quality monitoring stations. The objectives were to: 1) obtain an overall representation of the quality of the basin's water resources; 2) determine water quality conditions associated with major land cover or land uses such as forest, urban, agriculture and mining; 3) characterize the basin's least impacted waters; and 4) collect data for establishing total maximum daily loads (TMDLs) as required by Section 303(d) of the Clean Water Act. Parameters analyzed were similar to those described earlier for the ambient network.

The DEPS, the laboratory of the Kentucky Energy and Environment Cabinet, analyzed water quality samples collected by KDOW. The rotating watershed water quality monitoring network consisted of 20 stations in the Big Sandy-Little Sandy-Tygarts BMU and 13 stations in the Kentucky River BMU (Tables 3.1.2-1 and 3.1.2-2) (Figures 3.1.2-1 and 3.1.2-2). Rotating stations were typically located at the downstream reaches of USGS 11-digit HUC watersheds; however, some streams with particular issue of concern were monitored in this network for that singular reason. Monthly sampling was conducted over the 12-month watershed monitoring period April 2007 – March 2008 in the Big Sandy-Little Sandy-Tygarts BMU and April 2008 – March 2009 in the Kentucky River BMU to characterize water quality of those watersheds. The KDOW follows water quality sample collection and preservation procedures found in its water quality monitoring SOP (2005).

Table 3.1.1-1. Statewide primary water quality stations with Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs highlighted in bold type.

River Basin & Stream	Station	HUC	Mile-point	Location	Latitude (dd)	Longitude (dd)	Drainage (mi^2)	Station Type
Big Sandy								
Tug Fork[a]	**PRI002**	**05070201**	**35.1**	**at Kermit, WV**	**37.8379**	**-82.40970**	**1277**	**hydrologic unit index site**
Tug Fork[a]	**PRI003**	**05070201**	**77.7**	**at Freeburn**	**37.56615**	**-82.14358**	**781**	**mid-hydrologic unit index site**
Levisa Fork[a]	**PRI006**	**05070202**	**115.0**	**nr Pikeville**	**37.46435**	**-82.52589**	**1229**	**hydrologic unit index site**
Levisa Fork[a]	**PRI064**	**05070203**	**29.6**	**nr Louisa**	**38.1160**	**-82.6002**	**2323**	**hydrologic unit index site**
Levisa Fork[a]	**PRI094**	**05070203**	**75.0**	**at Auxier**	**37.72905**	**-82.75436**	**1723**	**mid-hydrologic unit index site**
Beaver Creek[a]	**PRI095**	**05070203**	**95.0**	**at Allen**	**37.60280**	**-82.72754**	**239**	**major tributary**
Johns Creek[a]	**PRI096**	**05070203**	**26.6**	**at McCombs**	**37.6553**	**-82.5870**	**120**	**inflow to Dewey Res. major tributary**
Little Sandy								
Little Sandy River[a]	**PRI049**	**05090104**	**13.2**	**at Argillite**	**38.49053**	**-82.83404**	**539**	**hydrologic unit index site**
Tygarts Creek								
Tygarts Creek[a]	**PRI048**	**05090103**	**23.5**	**nr Lynn**	**38.5997**	**-82.9528**	**265**	**hydrologic unit index site**
Cumberland River								
Cumberland River	PRI086	05130101	661.0	at Calvin	36.72244	-83.62537	519	mid-hydrologic unit index site
Cumberland River	PRI009	05130101	563.0	at Cumberland Falls	36.83558	-84.34015	1963	hydrologic unit index site
Clear Fork	PRI087	05130101	0.9	nr Williamsburg	36.72617	-84.14224	370	major tributary
Rockcastle River[a]	PRI010	05130102	24.7	at Billows	37.17137	-84.29673	604	hydrologic unit index site
Horse Lick Creek[a]	PRI051	05130102	0.1	nr Lamero	37.32011	-84.13841	62	special interest watershed
Cumberland River	PRI007	05130103	423.0	nr Burkesville	36.68879	-85.56670	6244	hydrologic unit index site
Buck Creek	PRI088	05130103	12.3	nr Dykes	37.0601	-84.4264	253	major tributary
S. Fk. Cumberland R. [a]	PRI008	05130104	44.8	at Blue Heron	36.6703	-84.5492	964	hydrologic unit index site
Little River[a]	PRI043	05130205	24.4	nr Cadiz	36.84104	-87.77731	268	major tributary
Red River	PRI069	05130205	49	nr Keysburg	36.64063	-86.97961	519	hydrologic unit index site

Table 3.1.1-1 (cont.). Statewide primary water quality stations with Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs highlighted in bold type.

River Basin & Stream	Station	HUC	Mile-point	Location	Latitude (dd)	Longitude (dd)	Drainage (mi^2)	Station Type
Kentucky River								
Eagle Creek[a]	**PRI022**	**05100205**	**21.5**	**at Glenco**	**38.7061**	**-84.8254**	**437**	**hydrologic unit index site**
Kentucky River	**PRI114**	**05100205**	**56.2**	**below (Frankfort) Steeles Branch**	**38.29227**	**-84.87937**	**5412**	**hydrologic unit index site**
Kentucky River	**PRI066**	**05100205**	**30.5**	**nr Lockport**	**38.4450**	**-84.9569**	**6177**	**hydrologic unit index site**
Kentucky River	**PRI067**	**05100205**	**119.0**	**at High Bridge**	**37.8201**	**-84.7051**	**4587**	**hydrologic unit index site**
Elkhorn Creek[a]	**PRI098**	**05100205**	**10.3**	**nr Peaks Mill**	**38.2686**	**-84.81429**	**473**	**major tributary**
Dix River[a]	**PRI045**	**05100205**	**34.7**	**nr Danville**	**37.64176**	**-84.66113**	**318**	**hydrologic unit index site**
Silver Creek	**PRI099**	**05100205**	**5.9**	**nr Ruthton**	**37.73251**	**-84.43674**	**111**	**major tributary**
Kentucky River	**PRI058**	**05100204**	**171.5**	**nr Trapp**	**37.84675**	**-84.08182**	**3235**	**hydrologic unit index site**
Red River	**PRI046**	**05100204**	**21.6**	**Clay City**	**37.86468**	**-83.93316**	**362**	**hydrologic unit index site**
N. Fork Kentucky River	**PRI031**	**05100201**	**49.7**	**Jackson**	**37.55127**	**-83.38464**	**1101**	**hydrologic unit index site**
Troublesome Creek	**PRI090**	**05100201**	**7.2**	**nr Clayhole**	**37.46722**	**-83.27936**	**194**	**major tributary**
Middle Fk. Kentucky R. [a]	**PRI032**	**05100202**	**8.4**	**nr Tallega**	**37.55505**	**-83.59373**	**536**	**hydrologic unit index site**
South Fork Kentucky R. [a]	**PRI033**	**05100203**	**12.1**	**at Booneville**	**37.47513**	**-83.67082**	**692**	**hydrologic unit index site**
Red Bird River	**PRI091**	**05100203**	**5.5**	**nr Oneida**	**37.23690**	**-83.64500**	**192**	**major tributary**
Goose Creek	**PRI092**	**05100203**	**3.4**	**nr Oneida**	**37.23280**	**-83.69103**	**251**	**major tributary**
Licking River								
Licking River	PRI062	05100101	226	at West Liberty	37.91470	-83.26169	335	inflow to Cave Run Reservoir
Slate Creek[a]	PRI093	05100101	10.0	nr Owingsville	38.1415	-83.7285	185	major tributary
Licking River[a]	PRI061	05100101	78.2	at Claysville	38.52058	-84.18310	1996	mid-hydrologic unit index site
N. Fork Licking River[a]	PRI060	05100101	6.9	nr Milford	38.58123	-84.16566	287	major tributary
S. Fork Licking River[a]	PRI059	05100102	11.7	at Morgan	38.6033	-84.4008	838	hydrologic unit index site
Hinkston Creek[a]	PRI102	05100102	0.2	at Ruddles Mill	38.30471	-84.23778	259	major tributary
Stoner Creek[a]	PRI101	05100102	0.6	nr Ruddles Mill	38.3029	-84.2497	283	major tributary

Table 3.1.1-1 (cont.). Statewide primary water quality stations with Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs highlighted in bold type.

River Basin & Stream	Station	HUC	Mile-point	Location	Latitude (dd)	Longitude (dd)	Drainage (mi^2)	Station Type
Licking River (cont.)								
Licking River[b]	PRI111	05100101	35.5	at Butler	38.7898	-84.3674	3384	hydrologic unit index site
Licking River	PRI062	05100101	226	at West Liberty	37.91470	-83.26169	335	inflow to Cave Run Reservoir
Licking River	PRI062	05100101	226	at West Liberty	37.91470	-83.26169	335	inflow to Cave Run Reservoir
Ohio River Tributary								
Kinniconick Creek[a]	PRI063	05090201	10.4	nr Tannery	38.57458	-83.18811	229	major tributary
Salt River								
Salt River[a]	PRI029	05140102	22.9	at Shepherdsville	37.98524	-85.71720	1197	hydrologic unit index site
Salt River[a]	PRI052	05140102	82.5	at Glensboro	38.00231	-85.06028	173	major reservoir inflow
Brashears Creek	PRI105	05140102	1.2	at Taylorsville	38.03040	-85.35154	262	major tributary
Floyds Fork[a]	PRI100	05140102	7.4	nr Shepherdsville	38.03447	-85.65936	259	major tributary
Rolling Fork[a]	PRI057	05140103	12.3	nr Lebanon Jct.	37.82267	-85.74787	1374	hydrologic unit index site
Beech Fork[a]	PRI041	05140103	48.0	nr Maud	37.83266	-85.29610	436	major tributary
Green River								
Green River[a]	PRI018	05110001	226.0	at Munfordville	37.2687	-85.8853	1680	hydrologic unit index site
Green River	PRI076	05110001	334.0	at Neatsville	37.1919	-85.1303	339	major reservoir inflow
Nolin River[a]	PRI021	05110001	80.9	at White Mills	37.55536	-86.03182	351	major reservoir inflow-tributary
Russell Creek[a]	PRI077	05110001	10.0	nr Bramlett	37.16790	-85.47005	264	major tributary
Little Barren River	PRI078	05110001	6.3	nr Monroe	37.2264	-85.6776	250	major tributary
Bear Creek	PRI075	05110001	11.8	nr Huff	37.2488	-86.3612	137	major tributary
Barren River	PRI072	05110002	1.0	nr Woodbury	37.17069	-86.62052	2264	hydrologic unit index site
Drakes Creek	PRI074	05110002	8.0	nr Bowling Green	36.93492	-86.39227	5487	major tributary
Green River	PRI055	05110003	72.0	at Livermore	37.47832	-87.12694	6428	hydrologic unit index site
Mud River	PRI056	05110003	17.4	nr Gus	37.12324	-86.90042	268	major tributary
Green River	PRI103	05110003	150.0	nr Woodbury	37.18242	-86.61034	3136	hydrologic unit index site

Table 3.1.1-1 (cont.). Statewide primary water quality stations with Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs highlighted in bold type.

River Basin & Stream	Station	HUC	Mile-point	Location	Latitude (dd)	Longitude (dd)	Drainage (mi^2)	Station Type
Green River (cont.)								
Rough River	PRI014	05110004	62.5	nr Dundee	37.54720	-86.72139	757	mid-hydrologic unit index site
Rough River	PRI054	05110004	1.0	nr Livermore	37.49934	-87.06574	1068	hydrologic unit index site
Panther Creek[b]	PRI113	05110005	2.7	nr West Louisville	37.72497	-87.31513	371	major tributary
Pond River	PRI012	05110006	12.4	nr Sacramento	37.44179	-87.35285	578	hydrologic unit index site
Ohio River Tributary								
Highland Creek[b]	PRI110	05140102	14.0	nr Smith Mill	37.75699	-87.79514	145	major tributary
Tradewater River								
Tradewater River[a, b]	PRI112	05140205	25.0	nr Piney	37.39896	-87.90456	618	hydrologic unit index site
Tennessee River								
Clarks River	PRI106	06040006	17.6	nr Sharpe	36.96130	-88.49322	310	hydrologic unit index site
W. Fork Clarks River	PRI107	06040006	8.6	nr Symsonia	36.93245	-88.54396	186	major tributary
Mississippi River								
Bayou de Chien[a, b]	PRI109	08010201	13.6	nr Cayce	36.61543	-89.03025	103	major tributary
Mayfield Creek[a]	PRI042	08010201	13.7	nr Magee Springs	36.92989	-88.94297	274	major tributary

[a]Long-term ambient water quality stations that are also long-term ambient biological monitoring stations
[b]Stations created since 2004 (these were changes necessary for sampler safety issues)

Figure 3.1.1-1. Fixed (long-term) ambient surface water quality network.

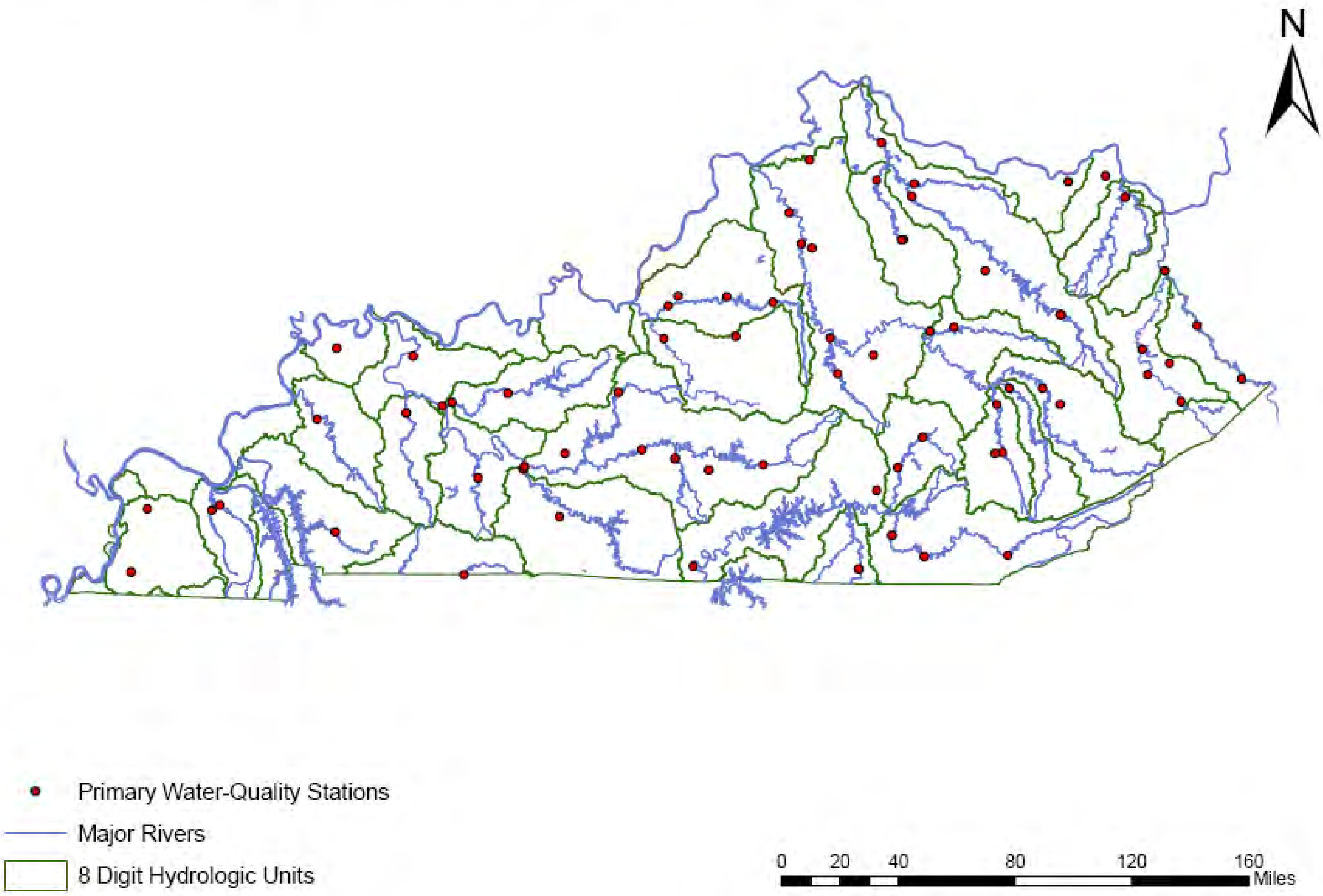


Figure 3.1.1-2. Targeted biological (including probabilistic sites) and ambient water quality monitoring stations in the Big Sandy-Little Sandy-Tygarts BMU.

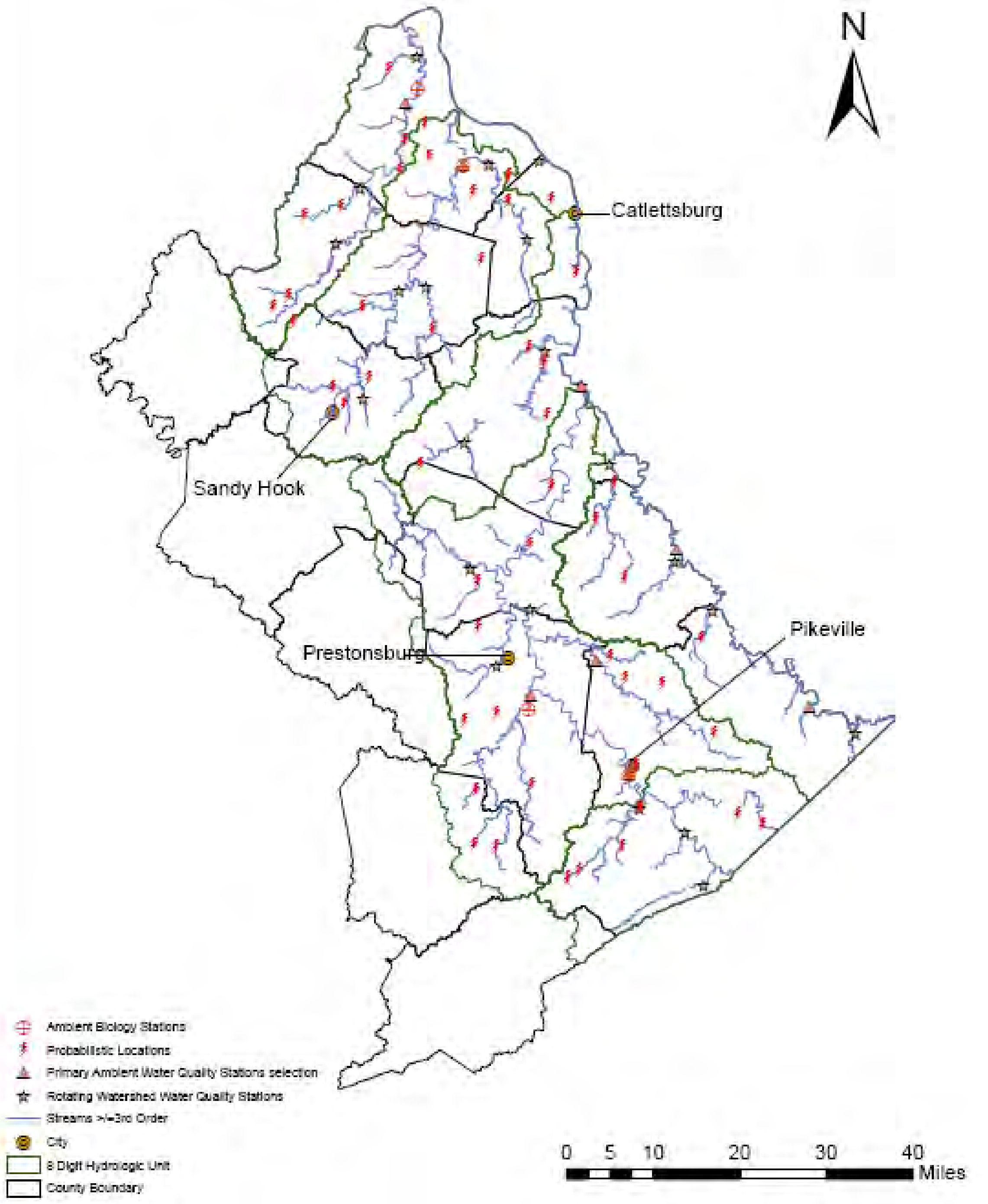


Table 3.1.2-1. Big Sandy-Little Sandy-Tygarts basin management unit rotating watershed water quality stations.

Site ID	Stream	Latitude	Longitude	Mile Point	Description
		Big Sandy River Basin (April 2007 – March 2008)			
BSW012	Shelby Creek	37.4067	-82.5071	2.6	at Shelbiana
BSW013	Russell Fork	37.3669	-82.4135	4.05	at Regina
BSW014	Wolf Creek	37.8199	-82.4140	1.3	near Lovely
BSW016	Big Creek	37.7342	-82.3386	0.9	at Big Canoe Branch
BSW017	Elkhorn Creek	37.2765	-82.3776	2.6	nr Elkhorn City
BSW018	Blaine Creek	38.0290	-82.8495	38.8	at Blaine
BSW019	Blaine Creek	38.1763	-82.6726		at Fallsburg
BSW021	Tug Fork	38.1169	-82.5988		Louisa
BSW022	Rockcastle Cr.	37.9859	-82.5455		nr Clifford
BSW025	Paint Creek	37.8187	-82.8456		nr Staffords-ville
BSW026	Johns Creek	37.7479	-82.7229		nr Nero
BSW027	Knox Creek	37.52068	-82.04824		nr Woodman
BSW031	Middle Creek	37.65458	-82.79706		at SR 114
		Little Sandy River Basin (April 2007 – March 2008)			
BSW002	Little Fork Little Sandy River	38.2918	-82.9208		nr Hitchins
BSW004	Little Sandy R.	38.11395	-83.11750		nr Sandy Hook
BSW005	Buffalo Creek	38.4594	-83.0546		nr Kehoe
BSW006	East Fork Little Sandy R.	38.4928	-82.7790		nr Danleyton
BSW007	East Fork Little Sandy R	38.3659	-82.7032		nr Cannons-burg
BSW011	Hood Creek	38.4953	-82.6708		nr Ashland
BSW030	Newcombe Cr.	38.10748	-83.06046		nr Burke

Figure 3.1.2-1. Big Sandy-Little Sandy-Tygarts basin management unit rotating water quality stations monitored 2007-8

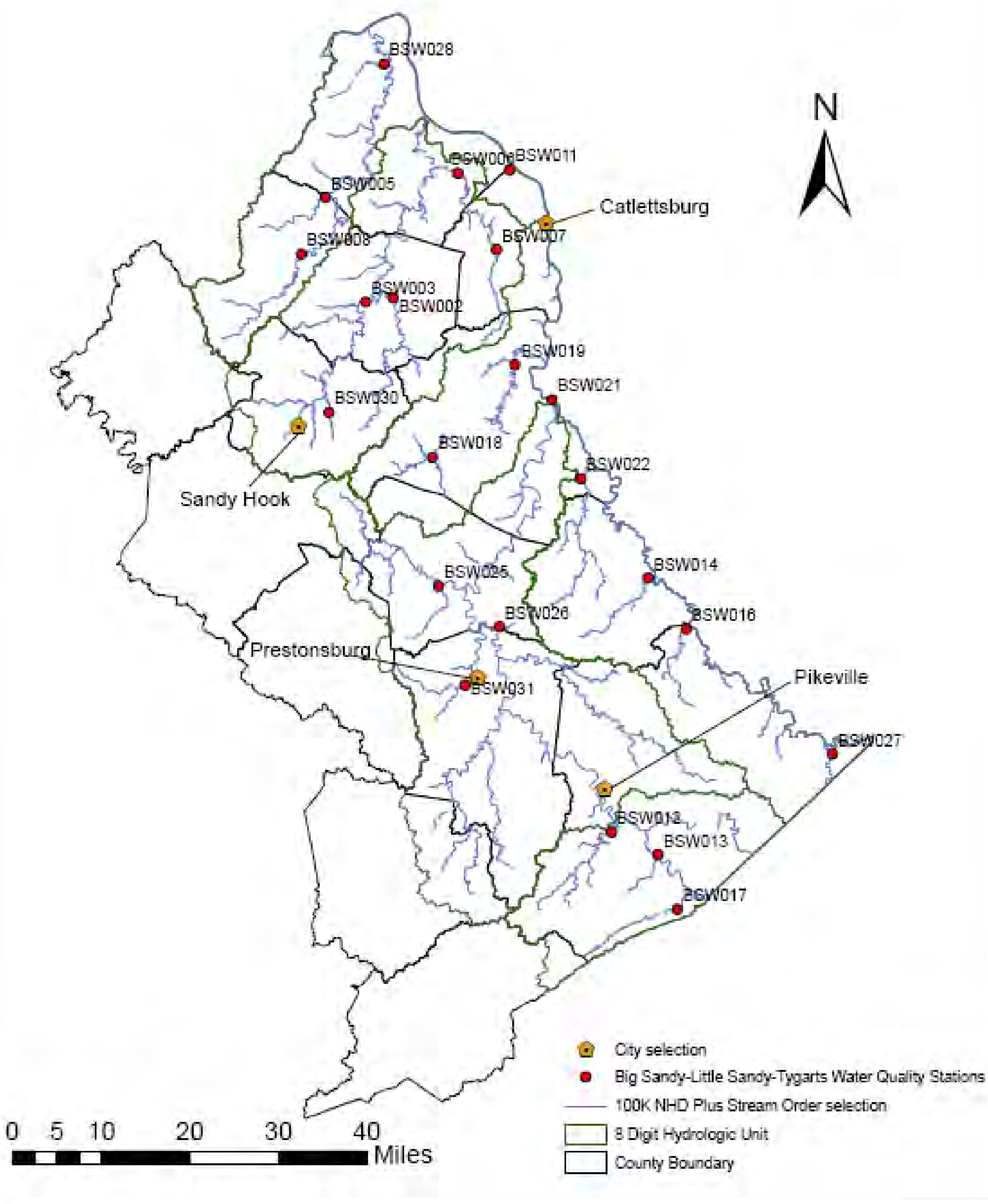
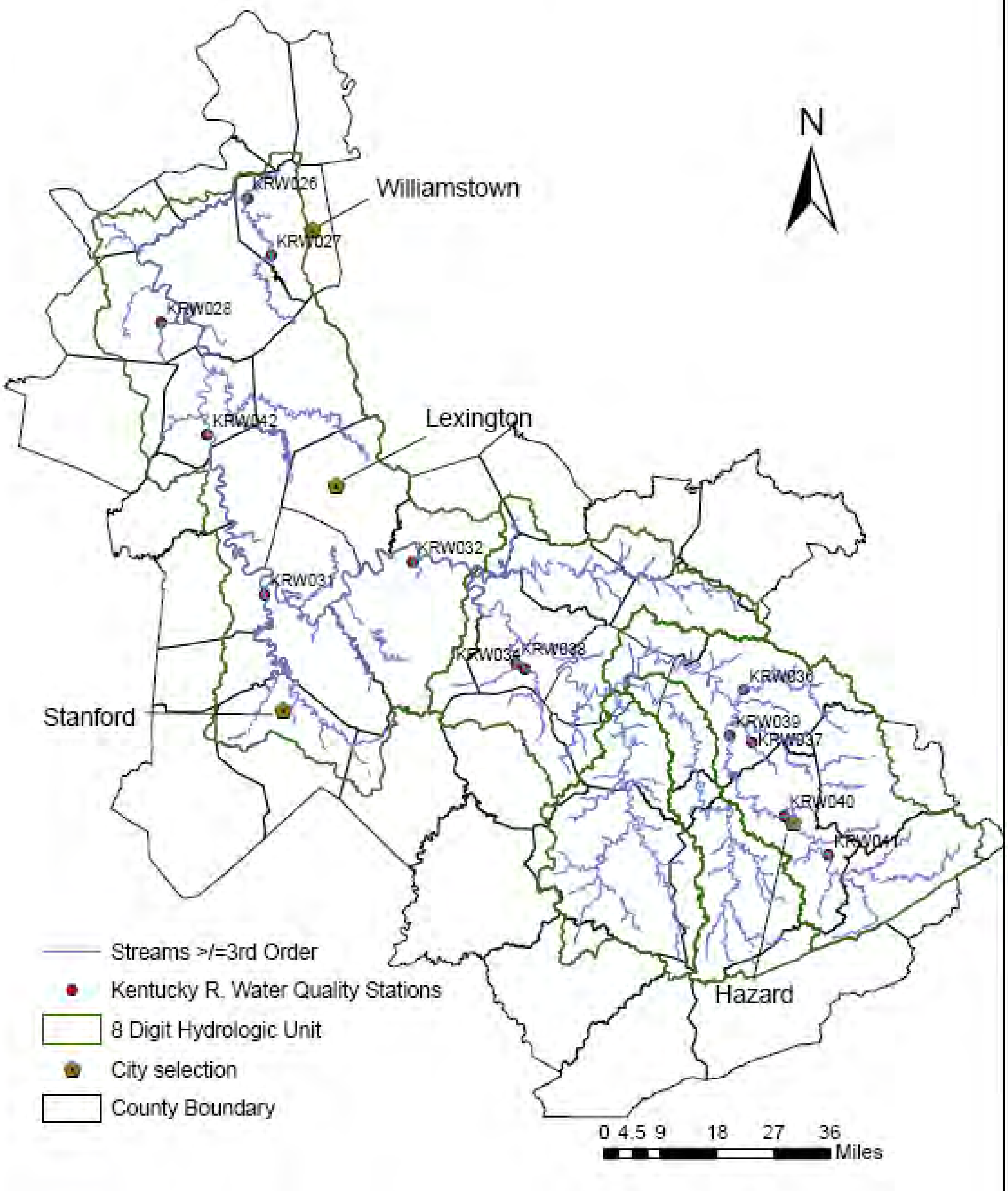


Table 3.1.2-2. Kentucky River basin management unit rotating watershed water quality stations.

Site ID	Stream	Latitude	Longitude	Mile Point	Description
		Kentucky River Basin (April 2008 – March 2009)			
KRW026	Tenmile Creek	38.71495	-84.74947	0.3	nr Folsom
KRW027	Eagle Creek	38.58317	-84.68011	49.45	nr Holbrook
KRW028	Sixmile Creek	38.4306	-85.0054	3.1	nr Lockport
KRW031	Dix River	37.8003	-84.7109	1.5	nr High Bridge
KRW032	Otter Creek	37.87086	-84.27899	1.8	nr Redhouse
KRW034	Station Camp Creek	37.61900	-83.95807	11.3	nr Wagersville
KRW036	Quicksand Cr.	37.55992	-83.32356	4.0	nr Noctor
KRW037	Lost Creek	37.43822	-83.30328	4.4	nr Watts
KRW038	Red Lick Cr.	37.63375	-83.98377	0.7	nr Jinks
KRW039	North Fork Kentucky River	37.45528	-83.36925	60.7	at Copeland
KRW040	North Fork Kentucky River	37.26648	-83.21702	96.4	at Combs
KRW041	North Fork Kentucky River	37.1736	-83.09199	118.1	at Fusonia
KRW042	Kentucky River	38.17066	-84.87386	70.9	upstream of Frankfort

Figure 3.1.2-2. Kentucky River basin management unit rotating water quality stations monitroed 2008-9.



3.1.3 Swimming Advisory Monitoring

KDOW continued to sample areas with long-standing swimming advisories in three basins in 2007: 12 sites in the upper Cumberland River basin on five streams, 16 watersheds or sites in the Northern Kentucky area (lower Licking River basin), and nine sites on the North Fork Kentucky River basin from Chavies to headwaters.

In 2007 the KDOW began monitoring large reservoirs for pathogen indicator (*Escherichia coli*). This effort will result in 12 reservoirs (three in the Kentucky River BMU), mostly USACE dam projects, being monitored for PCR at significant recreation areas.

3.1.4 Biomonitoring and Biosurvey Programs

Introduction. There are four biological monitoring programs within KDOW. Those programs have the same primary purpose of assessing the aquatic life use support of streams in the commonwealth. Although each program is driven by broad objectives, together they provide a comprehensive program that addresses aquatic life use attainment from several approaches: 1) random, overall snapshot of the ambient conditions; 2) the integration of conditions in relatively large watersheds monitored for long-term trend evaluation; 3) impact assessments related to nonpoint source pollution; 4) impact assessments related to point source pollution; and 5) a regional reference program to assess least impacted streams for development and refinement of metric benchmarks used to assess lotic ecosystems.

Reference Reach Program. In 1991, KDOW began a Reference Reach (RR) program to gather data from the state’s least impacted streams. Biologists first identified potential least impacted waters representative of Level-III Ecoregions. Then, data on physicochemical water quality, sediment quality, fish tissue residue, habitat condition, and biotic conditions were collected to define the potential environmental quality for the streams of a particular ecoregion; this to provide a baseline to compare other streams in the same ecoregion to those reference conditions. Data from the reference reach program provided the basis for the development of biocriteria for the various ecoregions of the commonwealth; results indicated multimetric indices could be developed resulting in four bioregions. Fifty-five stream sites from seven Level-III Ecoregions were initially sampled in the spring and fall of 1992-1993. Since that time, many additional potential reference reach streams were sampled. Some were adopted as reference reach streams; others were rejected because they did not possess adequate quality to represent least impacted condition. Currently, 194 RR stream and segment combinations totaling 1,240.3 miles are identified throughout the commonwealth (Table 3.1.4-1). Nine (33.1 miles) candidate exceptional or reference reach streams, or segments, are proposed for inclusion in 401 KAR 10:030 during the triennial review of 2011 (Table 3.1.4-2).

Watershed Biological Monitoring Program (WBMP). The WBMP monitored streams in a fixed-station network so long-term trends can be tracked in targeted fourth and fifth order watersheds (Figures 3.1.1-2 and 3.1.1-3). Targeted stations were placed in the downstream reaches of fourth, fifth and occasionally sixth order (on 1:24,000 scale USGS topographic maps) watersheds. One reason for this choice was that the number of these watersheds closely matched the available monitoring resources. Another favorable attribute of this design was that these watersheds were more hydrologically uniform in size than 11-digit HUC watersheds. A biosurvey was conducted at these stations which typically include two or three biological communities (macroinvertebrates, fishes, or diatoms) to determine the condition of wadeable streams. Also collected were nutrient samples (unionized ammonia, nitrite-nitrate, total phosphorus, and total Kjeldahl-nitrogen) in addition to bulk water quality variables (total suspended solids, chlorides, sulfates, alkalinity, hardness and total organic carbon). Physical measurements were also made at time of water quality sample collection; a multiparameter probe was used to measure pH, temperature, DO, percent DO saturation and specific conductance. Often, ambient water quality data were collected at these locations on a monthly basis during the BMU-cycle. These stations are revisited every five years.

Table 3.1.4-1. Reference reach streams in Kentucky with those in bold to emphasize streams in the Big Sandy-Little Sandy-Tygarts and Kentucky R. BMUs.

Stream	County	Location	Basin	Start Segment	End Segment	Total Miles
Hobbs Fork	**Martin**	**Mouth to headwaters**	**Big Sandy**	**3.9**	**0.0**	**3.9**
Hobbs Fork, UT	**Martin**	**Hobbs Fork to headwaters**	**Big Sandy**	**0.6**	**0.0**	**0.6**
Lower Pigeon Branch	**Pike**	**Left Fork to headwaters**	**Big Sandy**	**1.9**	**0.6**	**1.3**
Russell Fork	**Pike**	**Clinch Field RR Yd off SR 80 to Kentucky – Virginia state line**	**Big Sandy**	**16.5**	**15.0**	**1.5**
Toms Branch	**Pike**	**Mouth to headwaters**	**Big Sandy**	**1.6**	**0.0**	**1.6**
Bark Camp Creek	Whitley	Above backwaters to headwaters	Upper Cumberland	0.1	4.0	3.9
Bad Branch	Letcher	Mouth to headwaters	Upper Cumberland	0.0	3.0	3.0
Beaver Creek	McCreary	Above backwaters to Freeman and Middle Forks	Upper Cumberland	2.4	7.1	4.7
Brownies Creek	Bell, Harlan	Blacksnake Branch to headwaters	Upper Cumberland	9.3	16.75	7.45
Brushy Creek	Pulaski	Mouth to headwaters	Upper Cumberland	0.0	16.5	16.5
Buck Creek	Pulaski	Above backwaters to 0.8 mile upstream of confluence of Hurricane Creek	Upper Cumberland	11.7	55.0	43.3
Bunches Creek	Whitley	Mouth to headwaters	Upper Cumberland	0.0	3.3	3.3
Cane Creek	Whitley	Mouth to headwaters	Upper Cumberland	0.0	11.85	11.85
Cogur Fork	McCreary	Mouth to headwaters	Upper Cumberland	0.0	7.95	7.95
Dog Slaughter Creek	Whitley	Near mouth to North and South forks	Upper Cumberland	0.05	1.15	1.1
Eagle Creek	McCreary	Near mouth to headwaters	Upper Cumberland	0.05	6.75	6.7
Fugitt Creek	Harlan	Land use change to headwaters	Upper Cumberland	0.5	4.6	4.1
Horse Lick Creek	Jackson	Mouth to Clover Bottom	Upper Cumberland	0.0	12.3	12.3
Howards Creek	Clinton	Dale Hollow Lake backwaters to headwaters	Upper Cumberland	0.6	4.6	3.8
Indian Creek	McCreary	Laurel Fork to Barren Fork	Upper Cumberland	2.4	6.8	4.4
Jackie Branch	Whitley	Mouth to headwaters	Upper Cumberland	0.0	1.65	1.7
Laurel Fork of Clear Fork	Whitley	Tennessee state line to Tiny Branch/Pine Creek	Upper Cumberland	4.3	13.1	8.8
Laurel Fork of Middle Fork Rockcastle River	Jackson	Mouth to headwaters	Upper Cumberland	0.0	12.3	12.3
Little South Fork Cumberland River	McCreary/ Wayne	Lake Cumberland backwaters to Langham Branch	Upper Cumberland	4.4	35.5	31.1
Marsh Creek	McCreary	Laurel Creek to Kentucky/Tennessee State Line	Upper Cumberland	8.8	26.5	17.7
Mud Camp Creek	Cumberland	Mouth to Collins Branch	Upper Cumberland	0.0	1.2	1.2
Mud Camp Creek	Cumberland, Monroe	UT to headwaters	Upper Cumberland	3.8	8.8	5.0
Poor Fork Cumberland River	Letcher	Franks Creek to headwaters	Upper Cumberland	41.4	51.7	10.3

Table 3.1.4-1 (cont.). Reference reach streams in Kentucky with those in bold to emphasize streams in the Big Sandy-Little Sandy-Tygarts and Kentucky R. BMUs.

Stream	County	Location	Basin	Start Segment	End Segment	Total Miles
Presley House Branch	Letcher	Mouth to headwaters	Upper Cumberland	0.0	1.5	1.5
Puncheoncamp Branch	McCreary	Mouth to headwaters	Upper Cumberland	0.0	1.85	1.85
Rock Creek	McCreary	White Oak Creek to Kentucky/Tennessee state line	Upper Cumberland	4.0	21.5	17.5
Shilalah Creek	Bell	Mouth to headwaters	Upper Cumberland	0.0	5.5	5.5
Sinking Creek	Laurel	Mouth to White Oak Creek	Upper Cumberland	0.0	9.9	9.9
South Fork Dog Slaughter Creek	Whitley	Mouth to headwaters	Upper Cumberland	0.0	4.6	4.6
Sulphur Creek	Clinton	Dale Hollow Lake backwaters to headwaters	Upper Cumberland	1.7	5.1	3.4
UT of Rock Creek (at river mile 9.3)	McCreary	Mouth to headwaters	Upper Cumberland	0.0	1.3	1.3
UT of Rock Creek (at river mile 17.5)	McCreary	Mouth to headwaters	Upper Cumberland	0.0	1.2	1.2
Watts Branch	McCreary	Mouth to headwaters	Upper Cumberland	0.0	2.6	2.6
Watts Creek	Harlan	Camp Blanton Reservoir to headwaters	Upper Cumberland	2.4	4.4	2.0
Beaverdam Creek	Edmonson	Mouth to headwaters	Green	0.0	14.5	14.5
Caney Fork	Barren	Source to river mile 0.85	Green	6.6	0.0	6.6
Cane Run	Hart	Nolin River Reservoir backwaters to headwaters	Green	0.8	6.5	5.7
Clifty Creek	Todd	Sulphur Lick to Little Clifty Creek	Green	0.0	13.4	13.4
Clifty Creek	Grayson	Barton Runt to Western KY Pkwy	Green	7.5	17.3	9.8
E. Fork Little Barren River	Metcalfe	Leatherwood Creek to Flat Lick Creek	Green	18.9	20.7	1.8
Elk Lick C	Logan	0.6 mile above SR 106 to Edger Creek and Barren Fork	Green	3.6	11.8	8.2
Ellis Fork of Damron Creek	Adair, Russell	Mouth to headwaters	Green	0.0	3.2	3.2
Falling Timber Creek	Metcalfe	Landuse change to headwaters	Green	10.8	15.2	4.4
Fiddlers Creek	Breckinridge	Mouth to headwaters	Green	0.0	5.9	5.9
Forbes Creek	Christian	Mouth to UT	Green	0.0	4.1	4.1
Gasper River	Logan	Clear Fork to Wiggington Creek	Green	17.2	35.6	18.4
Goose Creek	Casey, Russell	Mouth to Little Goose Creek	Green	0.0	8.5	8.5
Green River, UT	Adair	Land use change to headwaters	Green	3.2	0.8	2.4
Halls Creek	Ohio	UT to headwaters	Green	4.8	9.6	4.8
Lick Creek	Simpson	Mouth to headwaters	Green	0.0	10.2	10.2
Linders Creek	Hardin	Mouth to Sutzer Creek	Green	0.0	7.9	7.9
Little Short Creek	Grayson	Mouth to headwaters	Green	0.0	3.1	3.1
Lynn Camp Creek	Hart	Mouth to Lindy Creek	Green	0.0	8.5	8.5
McFarland Creek	Christian, Hopkins	Grays Branch to UT	Green	1.5	5.0	3.5
Meeting Creek	Hardin	Little Meeting Cr to Petty Branch	Green	5.2	14.0	8.8

Table 3.1.4-1 (cont.). Reference reach streams in Kentucky with those in bold to emphasize streams in the Big Sandy-Little Sandy-Tygarts and Kentucky R. BMUs

Stream	County	Location	Basin	Start Segment	End Segment	Total Miles
Muddy Creek	Ohio	Landuse change to headwaters	Green	13.0	15.5	2.5
North Fork Rough River	Breckinridge	Buffalo Creek to reservoir dam	Green	22.1	26.9	4.8
Peter Creek	Barren	Candy Fork to Dry Fork	Green	11.6	18.5	6.9
Pond Run	Breckinridge, Ohio	Lane use change to headwaters	Green	1.4	6.8	5.4
Rough River	Hardin	Linders Creek to Vertrees Creek	Green	138.0	149.4	11.4
Russell Creek	Adair, Green	Mouth to Columbia STP	Green	0.0	40.0	40.0
Russell Creek	Adair, Russell	Reynolds Creek to Mt. Olive, Hudson and Williams Creek	Green	56.9	66.3	9.4
Sixes Creek	Ohio	Wild Branch to headwaters	Green	2.0	7.5	5.5
Sulphur Branch	Edmonson	Mouth to headwaters	Green	0.0	3.0	3.0
Trammel Creek	Allen, Warren	Mouth to Kentucky – Tennessee state line	Green	0.0	30.6	30.6
UT of Green River	Adair	Landuse change to headwaters	Green	1.7	3.2	1.5
W. Fork Pond River	Christian	UT to East Branch Pond River	Green	12.45	22.5	10.05
UT of White Oak Creek	Adair	SR 76 to Hovious Road Crossing	Green	0.0	2.4	2.4
Backbone Creek	**Henry, Shelby**	**Mouth to Scrabble Creek**	**Kentucky**	**0.0**	**1.65**	**1.65**
Big Double Creek	**Clay**	**Mouth to confluence of Left and Right Forks**	**Kentucky**	**0.0**	**4.4**	**4.4**
Bill Branch	**Leslie, Harlan**	**Mouth to Right and Left Fork of Bill Branch**	**Kentucky**	**0.0**	**0.3**	**0.3**
Buffalo Creek	**Owsley**	**Side road along mainstem**	**Kentucky**	**0.0**	**1.6**	**1.6**
Cavanaugh Creek	**Jackson**	**Mouth to headwaters**	**Kentucky**	**0.0**	**8.3**	**8.3**
Chester Creek	**Wolfe**	**Mouth to Headwaters**	**Kentucky**	**0.0**	**2.8**	**2.8**
Clear Creek	**Woodford**	**Hifner Rd bridge, 2.1 mi S of Mortonsville**	**Kentucky**	**0.0**	**9.0**	**9.0**
Clemmons Fork	**Breathitt**	**Mouth to headwaters**	**Kentucky**	**0.0**	**4.8**	**4.8**
Coles Fork	**Breathitt**	**in Robinson Forest**	**Kentucky**	**0.0**	**6.2**	**6.2**
Craig Creek	**Leslie**	**Mouth to UT**	**Kentucky**	**0.0**	**2.7**	**2.7**
Drennon Creek	**Henry**	**Flat Bottom Rd crossing**	**Kentucky**	**8.7**	**12.2**	**3.5**
East Fork Indian Creek	**Menifee**	**Mouth to headwaters**	**Kentucky**	**0.0**	**9.0**	**9.0**
Elisha Creek	**Leslie**	**Elisha Creek Road**	**Kentucky**	**0.95**	**3.3**	**2.35**
Evans Fork	**Estill**	**Mouth to headwaters**	**Kentucky**	**0.0**	**3.0**	**3.0**
Falling Rock Branch	**Breathitt**	**Mouth to headwaters**	**Kentucky**	**0.0**	**0.7**	**0.7**
Gladie Creek	**Menifee**	**0.2 mi upstream of bridge**	**Kentucky**	**0.0**	**8.4**	**8.4**
Griers Creek	**Woodford**	**Kentucky River backwaters to UT**	**Kentucky**	**0.1**	**3.5**	**3.4**
Grindstone Creek	**Franklin**	**Kentucky River backwaters to headwaters**	**Kentucky**	**0.1**	**2.1**	**2.0**
Hines Creek	**Madison**	**Kentucky River backwaters to UT**	**Kentucky**	**0.1**	**1.9**	**1.8**
Hopper Cave Branch	**Jackson**	**Mouth to headwaters**	**Kentucky**	**0.0**	**1.8**	**1.8**
Indian Creek	**Carroll**	**Mouth to headwaters**	**Kentucky**	**0.0**	**5.4**	**5.4**
Indian Fork	**Shelby**	**Mouth to headwaters**	**Kentucky**	**0.0**	**3.3**	**3.3**
Laurel Fork	**Owsley**	**Mouth to Big Branch**	**Kentucky**	**0.0**	**3.75**	**3.75**

Table 3.1.4-1 (cont.). Reference reach streams in Kentucky with those in bold to emphasize streams in the Big Sandy-Little Sandy-Tygarts and Kentucky R. BMUs

Stream	County	Location	Basin	Start Segment	End Segment	Total Miles
Left Fork Big Double Creek	**Clay**	**Mouth to headwaters**	**Kentucky**	**0.0**	**1.5**	**1.5**
Line Fork	**Letcher**	**Defeated Creek to headwaters**	**Kentucky**	**12.2**	**28.6**	**6.4**
Little Middle Fork Elisha Creek	**Leslie**	**Mouth to headwaters**	**Kentucky**	**0.0**	**0.75**	**0.75**
Little Millseat Branch	**Breathitt**	**Mouth to headwaters**	**Kentucky**	**0.0**	**1.2**	**1.2**
Little Sixmile Creek	**Henry**	**Mouth to headwaters**	**Kentucky**	**0.0**	**5.3**	**5.3**
Middle Fork Kentucky River	**Leslie**	**Hurts Creek to Greasy Creek**	**Kentucky**	**75.2**	**85.5**	**10.3**
Mill Creek	**Owen**	**Near mouth to headwaters**	**Kentucky**	**0.05**	**8.3**	**8.25**
Millseat Branch	**Breathitt**	**Mouth to headwaters**	**Kentucky**	**0.0**	**1.85**	**1.85**
Muddy Creek	**Madison**	**Elliston, KY to Viney Creek**	**Kentucky**	**13.8**	**20.65**	**6.85**
Musselman Creek	**Grant**	**Mouth to headwaters**	**Kentucky**	**0.0**	**9.0**	**9.0**
Right Fork Buffalo Creek	**Owsley**	**Mouth to headwaters**	**Kentucky**	**0.0**	**11.75**	**11.75**
Roaring Fork	**Breathitt**	**Mouth to headwaters**	**Kentucky**	**0.0**	**0.9**	**0.9**
Rock Lick Creek	**Jackson**	**Mouth to headwaters**	**Kentucky**	**0.0**	**9.6**	**9.6**
Sand Ripple Creek	**Franklin, Henry**	**Kentucky River backwaters to headwaters**	**Kentucky**	**0.1**	**3.9**	**3.9**
Severn Creek	**Owen**	**Kentucky River backwaters to North Fork Severn Creek**	**Kentucky**	**1.35**	**3.0**	**1.65**
Shelly Rock Fork	**Breathitt**	**Mouth to headwaters**	**Kentucky**	**0.0**	**0.6**	**0.6**
Sixmile Creek	**Henry, Shelby**	**Little Sixmile Creek to dam**	**Kentucky**	**7.1**	**15.3**	**8.2**
South Fork Station Camp Creek	**Jackson**	**Mouth to Rock Lick Creek**	**Kentucky**	**0.0**	**9.7**	**9.7**
Spruce Branch	**Clay**	**Mouth to Rock Lick Creek**	**Kentucky**	**0.0**	**1.0**	**1.0**
Station Camp Creek	**Estill**	**Off KY Hwy 1209 at Estill-Jackson County boundary**	**Kentucky**	**3.3**	**22.7**	**19.4**
Steer Fork	**Jackson**	**Mouth to headwaters**	**Kentucky**	**0.0**	**2.7**	**2.7**
Sturgeon Creek	**Lee, Owsley**	**Duck Fork to Little Sturgeon Creek**	**Kentucky**	**1.3**	**13.7**	**12.4**
Sugar Creek	**Leslie**	**Landuse change to headwaters**	**Kentucky**	**0.6**	**5.4**	**4.8**
Sulphur Creek	**Franklin**	**Mouth to headwaters**	**Kentucky**	**0.0**	**5.2**	**5.2**
UT of Cawood Branch	**Leslie**	**Mouth to headwaters**	**Kentucky**	**0.0**	**2.1**	**2.1**
UT of Cedar Creek	**Owen**	**Mouth to headwaters**	**Kentucky**	**0.0**	**1.4**	**1.4**
UT of Glenns Creek	**Woodford**	**Mouth to headwaters**	**Kentucky**	**0.0**	**1.9**	**1.9**
UT of Jacks Creek	**Madison**	**Mouth to headwaters**	**Kentucky**	**0.0**	**1.15**	**1.15**
UT of Kentucky River	**Franklin**	**Landuse change to headwaters**	**Kentucky**	**0.1**	**1.4**	**1.3**
UT of Line Fork	**Letcher**	**Mouth to headwaters**	**Kentucky**	**0.0**	**0.6**	**0.6**
Wolfpen Creek	**Menifee**	**Mouth to headwaters**	**Kentucky**	**0.0**	**3.6**	**3.6**
Blackwater Creek	Morgan	Eaton Creek to Greasy Creek	Licking	3.8	11.7	7.9
Botts Fork	Menifee	Mouth to landuse change	Licking	0.0	2.1	2.1
Brushy Fork	Menifee	Reservoir backwaters to headwaters	Licking	0.7	5.6	4.9
Brushy Fork	Pendleton	Mouth to headwaters	Licking	0.0	5.8	5.8
Bucket Branch	Morgan	Leisure – Paragon Rd bridge	Licking	0.0	1.9	1.9
Craney Creek	Rowan	Mouth to headwaters	Licking	0.0	11.2	11.2
Devils Fork	Morgan	Mouth to headwaters	Licking	0.0	8.5	8.5
Grovers Creek	Pendleton	Kincaid L. backwaters to UT	Licking	0.5	3.4	2.9
North Fork Licking River	Morgan	Cave Run L. backwaters to Devils Fk	Licking	8.4	13.4	5.0

Table 3.1.4-1 (cont.). Reference reach streams in Kentucky with those in bold to emphasize streams in the Big Sandy-Little Sandy-Tygarts and Kentucky R. BMUs

Stream	County	Location	Basin	Start Segment	End Segment	Total Miles
South Fork Grassy Creek	Pendleton	Mouth to Greasy Creek	Licking	0.0	19.8	19.8
West Creek	Harrison	Mouth to headwaters	Licking	0.0	9.8	9.8
Big Sinking Creek	**Carter**	**KY 986 bridge**	**Little Sandy**	**15.9**	**11.0**	**4.9**
Arabs Fork	**Elliott**	**KY 1620 bridge**	**Little Sandy**	**4.7**	**0.0**	**4.7**
Big Caney Creek	**Elliott**	**Grayson L. backwaters to headwaters**	**Little Sandy**	**15.3**	**1.8**	**13.5**
Big Sinking Creek	**Carter, Elliott**	**SR 986 to Clay and Arab forks**	**Little Sandy**	**15.2**	**10.7**	**4.5**
Laurel Creek	**Elliott**	**Carter School Rd Bridge**	**Little Sandy**	**14.7**	**7.6**	**7.1**
Meadow Branch	**Elliott**	**Mouth to headwaters**	**Little Sandy**	**1.4**	**0.0**	**1.4**
Middle Fork Little Sandy R.	**Elliott**	**Mouth to Sheepskin Branch**	**Little Sandy**	**3.4**	**0.0**	**3.4**
Nichols Creek	**Elliott**	**Green Branch to headwaters**	**Little Sandy**	**2.0**	**0.0**	**2.0**
Jackson Creek	Graves	Mouth to headwaters	Mississippi	0.0	3.0	3.0
Obion Creek	Hickman	Hurricane Creek to Little Creek	Mississippi	26.35	36.55	10.2
Terrapin Creek	Graves	Kentucky – Tennessee Stateline to East and West Forks	Mississippi	2.7	6.0	3.3
Crooked Creek	Crittenden	Rush Creek to City Lake Dam	Ohio	17.9	26.2	8.3
Double Lick Creek	Boone	Mouth to headwaters	Ohio	0.0	3.5	3.5
Garrison Creek	Boone	Mouth to headwaters	Ohio	0.0	4.7	4.7
Kinniconick Creek	Lewis	McDowell Creek to headwaters	Ohio	5.05	50.9	45.85
Middle Fork Massac Creek	McCracken	Hines Road to pond	Ohio	3.1	6.4	3.3
Second Creek	Boone	Backwaters to headwaters	Ohio	0.2	2.7	2.5
UT of Big Sugar Creek	Gallatin	I-71 to headwaters	Ohio	1.0	3.4	2.4
UT of Corn Creek	Trimble	Mouth to headwaters	Ohio	0.0	2.3	2.3
UT of Massac Creek	McCracken	Mouth to headwaters	Ohio	0.0	1.7	1.7
W. Fork Massac Creek	McCracken	SR 724 to Little Massac Creek	Ohio	3.6	6.2	2.6
Yellowbank Creek	Breckinridge	Ohio River backwaters to headwaters	Ohio	1.8	11.8	10.0
Blood River	Calloway	Grubbs Lane bridge; O.75 mi E of State Line Rd	Tennessee	15.15	18.7	3.55
Grindstone Creek	Calloway	Kentucky Lake backwaters to headwaters	Tennessee	0.7	2.9	2.2
Soldier Creek	Marshall	HWY 58 bridge	Tennessee	5.3	2.6	2.7
Panther Creek	Calloway	Kentucky Lake backwaters to headwaters	Tennessee	0.5	5.7	5.2
Soldier Creek	Marshall	Mouth to South Fork Soldier Cr.	Tennessee	0.0	5.7	5.7
Sugar Creek	Calloway	Kentucky Lake backwaters to Soldier Creek	Tennessee	2.5	3.2	0.7
Sugar Creek	Graves	Mouth to unnamed reservoir	Tennessee	0.0	3.9	3.9
Trace Creek	Graves	Mouth to Neely Branch	Tennessee	0.0	3.0	3.0
UT of Panther Creek	Graves	Mouth to headwaters	Tennessee	0.0	2.0	2.0
W. Fork Clarks River	Graves	Soldier Creek to Duncan Creek	Tennessee	20.1	23.5	3.4
Wildcat Creek	Calloway	Ralph Wright Road crossing to headwaters	Tennessee	3.6	6.8	3.2
East Fork Flynn Fork	Caldwell	Land use change to headwaters	Tradewater	2.15	4.6	2.45
Piney Creek	Caldwell	L. Beshear backwaters to headwaters	Tradewater	4.5	10.2	5.7
Tradewater River	Christian, Hopkins	Dripping Springs Br to Buntin Lake dam	Tradewater	131.1	123.2	7.9

Table 3.1.4-1 (cont.). Reference reach streams in Kentucky with those in bold to emphasize streams in the Big Sandy-Little Sandy-Tygarts and Kentucky R. BMUs

Stream	County	Location	Basin	Start Segment	End Segment	Total Miles
Sandlick Creek	Christian	Camp Creek to headwaters	Tradewater	4.5	8.6	4.1
Tradewater River	Christian	Dripping Springs to Buntin Lake	Tradewater	125.8	133.9	8.1
UT of Piney Creek	Caldwell	Mouth to headwaters	Tradewater	0.0	2.9	2.9
UT of Sandlick Creek	Christian	Mouth to headwaters	Tradewater	0.0	1.4	1.4
Cedar Creek	Bullitt	Mouth to Greens Branch	Salt	0.0	5.2	5.2
Chaplin River	Washington	Thompson Creek to Cornishville	Salt	40.9	54.2	13.3
Harts Run	Bullitt	Mouth to headwaters	Salt	0.0	2.3	2.3
Lick Creek	Washington	Mouth to 0.1 mile below dam	Salt	0.0	4.1	4.1
Otter Creek	Larue	Landuse change to East and Middle Forks Otter Creek	Salt	1.7	2.9	1.2
Overalls Creek	Bullitt	Mouth to headwaters	Salt	0.0	3.2	3.2
Salt Lick Creek	Marion	Mouth to headwaters	Salt	0.0	8.6	8.6
Sulphur Creek	Anderson	Mouth to Cheese Lick and Brush Cr	Salt	0.0	10.0	10.0
West Fork Otter Creek	Larue	Mouth to headwaters	Salt	0.0	5.4	5.4
Wilson Creek	Bullitt, Nelson	Mouth to headwaters	Salt	0.0	18.4	18.4
Crooked Creek	Trigg	Energy Lake backwaters to headwaters	Lower Cumberland	3.0	9.1	6.1
Donaldson Creek	Trigg	Lake Barkley backwaters to UT	Lower Cumberland	4.0	7.2	3.2
Elk Fork	Todd	Kentucky – Kentucky stateline to Dry Branch	Lower Cumberland	7.5	23.1	15.6
Sugar Creek	Livingston	Lick Creek to UT	Lower Cumberland	2.2	6.9	4.7
West Fork Red River	Christian	Carter Rd bridge	Lower Cumberland	14.7	32.2	17.5
Whippoorwill Creek	Logan	Mouth to Vicks Branch	Lower Cumberland	0.0	13.2	13.2

Table 3.1.4-2. Candidate exceptional streams and segments as defined in 401 KAR 10:030.

Basin	Stream	Segment Description	Segment Mile Points	Total Miles	Lat-Long (downstream)	Lat-Long (upstream)	County	Reference[a] or Exceptional[b]
Big Sandy								
	Thompson Fork	Mouth to Headwaters	0.0-1.0	1.0	37.68467 -82.66785	37.67509 -82.67561	Floyd	Exceptional
	UT of Open Fork Paint Creek	Mouth to Headwaters	0.0-0.8	0.8	37.97376 -83.05616	37.98494 -83.0521	Morgan	Exceptional
Kentucky								
	Bullskin Creek	Mouth to Headwaters	0.0-14.6	14.6	37.27327 -83.64432	37.19870 -83.48494	Clay	Exceptional
	Joyce Fork	Mouth to Headwaters	0.0-1.2	1.2	37.35043 -83.55770	37.35948 -83.54521	Owsley	Exceptional
	Little Sturgeon Creek	Mouth to Warren Chapel Branch	0.0-3.0	3.0	37.47850 -83.81356	37.44893 -83.78880	Owsley	Exceptional
	Low Gap Branch	Mouth to Headwaters	0.0-0.8	0.8	37.15323 -82.98323	37.15809 -82.9929	Letcher	Exceptional
	Lower Devil Creek	Mouth to Middle Fork Lower Devil Creek	0.0-4.65	4.65	37.64425 -83.60963	37.68870 -83.60403	Lee	Exceptional
Cumber-land	Clear Creek	Scaffold Cane Branch to Davis Branch	3.45-7.8	4.45	37.44225 -84.27864	37.48548 -84.25547	Rockcastle	Exceptional
	Little White Oak Creek	Mouth to Headwaters	0.0-2.6	2.6	37.10211 -84.19981	37.12675 -84.18402	Laurel	Exceptional

[a]Reference Reach streams and segments have the greatest biological integrity and intact habitat of those streams in a given bioregion.
[b]Exceptional streams and segments must score “excellent” on the MBI or KIBI based on 50th %tile for Mountain, Bluegrass and Pennyroyal and 75th %tile for the Mississippi Valley-Interior River Lowlands bioregions. *Streams that are already Exceptional in 401 KAR 10:030 but are proposed for a segment change based on new data, or to conform to NHD mile points.

Nonpoint Source Program (NPSP). The Kentucky Nonpoint Source Pollution Control Program's goal is to protect the quality of Kentucky's surface and groundwater from NPS pollutants, abate NPS threats and restore degraded waters to the extent that water quality standards are met and beneficial uses are supported. The NPSP is achieving this through federal, state, local and private partnerships which promote complementary, regulatory and non-regulatory nonpoint source pollution control initiatives at both statewide and watershed levels.

Nonpoint source pollution is sometimes referred to as runoff or diffuse pollution. Unlike pollution from industrial and sewage treatment plants, NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-produced pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters and even underground sources of drinking water. These pollutants include:

- Excess fertilizers, herbicides and insecticides from agricultural lands and residential areas;
- Oil, grease and toxic chemicals from urban runoff and energy production;
- Sediment from improperly managed construction sites, crop and silviculture lands and eroding streambanks;
- Acid mine drainage; and
- Bacteria and nutrients from livestock, pet wastes and faulty septic systems.

Atmospheric deposition and hydromodification are also sources of NPS pollution. NPS pollution is the primary contributor to water pollution in Kentucky.
Monitoring of streams impacted by NPS pollutants follows KDOW standard protocol; each biosurvey conducted at these stations typically included two biological communities, macroinvertebrates and fishes, to determine the condition of wadeable streams. Also collected were nutrient samples (unionized ammonia, nitrite-nitrate, total phosphorus, and total Kjeldahl-nitrogen) in addition to bulk water quality variables (total suspended solids, chlorides, sulfates, alkalinity, hardness and total organic carbon). Physical measurements were also made at time of water quality sample collection; a multiparameter probe was used to measure pH, temperature, DO, percent DO saturation and specific conductance.

Probabilistic Monitoring Program (PMP). KDOW conducts random biosurveys of streams across the commonwealth. Each year the Probabilistic Biosurvey Program Coordinator selects watersheds on the 8-digit HUC level to be monitored in a particular BMU. The target population is all wadeable streams 1st through 5th order within the HUCs of each BMU. Then a request is sent to EPA's National Health and Environmental Research Laboratory, Office of Research and Development, Corvallis, Oregon, where the EMAP Design Group uses EPA's Reach File Version 3 – Alpha (RF3-Alpha) as a sampling frame. A frequency table is established for the population candidate streams (based on stream order) across the HUCs and based on those frequencies, a random, weighted survey design is utilized to determine those streams and locations of the sample point for the study. A sample size of 50 sites with approximately an equivalent number (based on frequency) in each of the five stream order categories: 1st, 2nd, 3rd, 4th and 5th. An oversample of 200% (100 sites) for a total of 150 sites including the base sites are derived per study. This oversample provides reserve samples for alternative sites when those initial sites do not conform to target population parameters (e.g. non-wadeable, miss-mapped features), are inaccessible due to safety concerns, or to which access is denied by landowners. Standard protocol dictates that surrogate stream sample sites be selected sequentially from the oversample population when replacement of an initial sample site is necessary. Since the random design is weighted, no regard to replacement of an initial sample site with one of equivalent Strahler order is required.

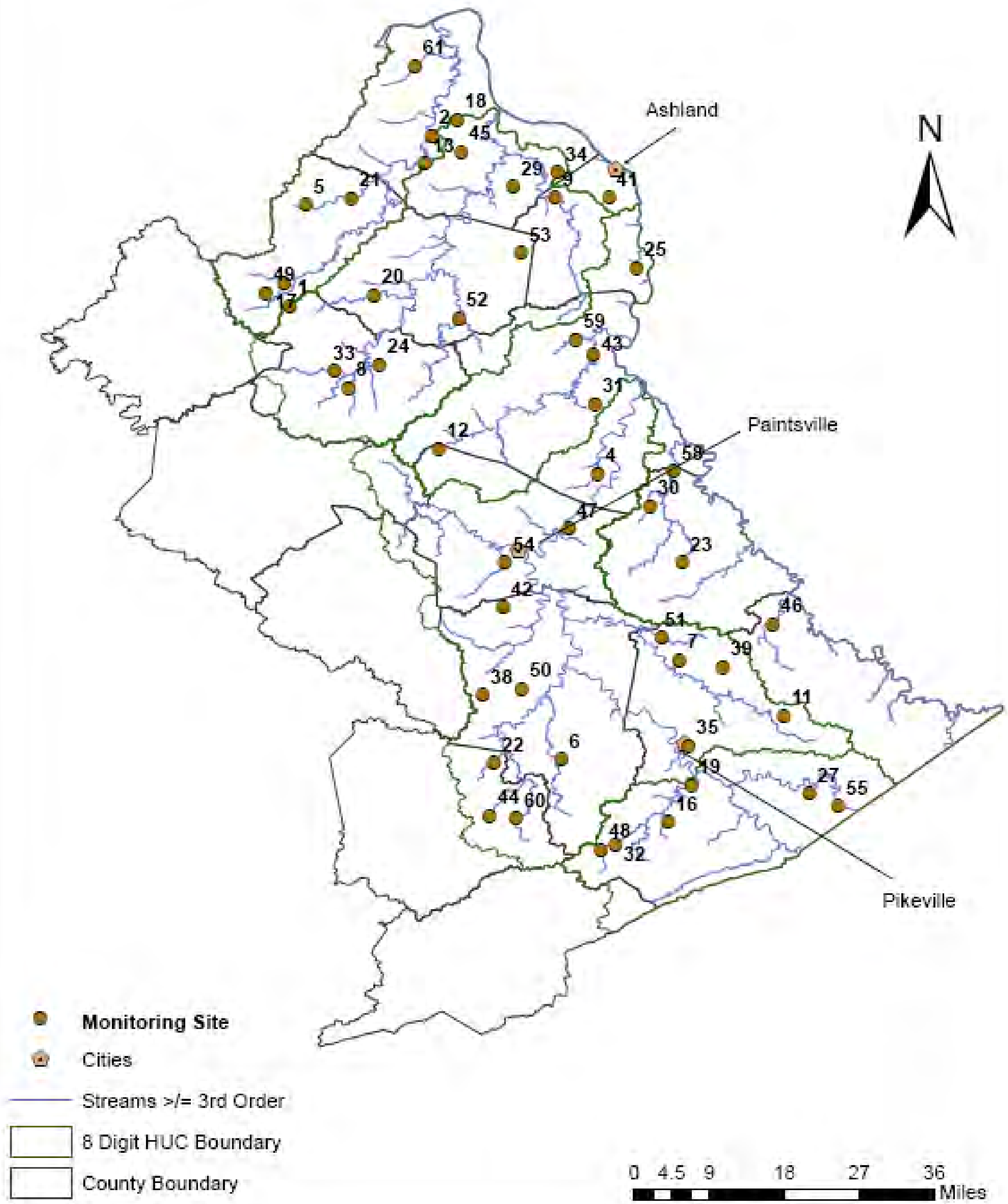
A biosurvey of the macroinvertebrate community was conducted to determine condition of wadeable streams; additionally, the probabilistic program collected nutrient samples (unionized ammonia, nitrite-nitrate, total phosphorus, and total Kjeldahl-nitrogen) in addition to bulk water quality variables (total suspended solids, chlorides, sulfates, alkalinity, hardness and total organic carbon). Physical measurements were also made at time of water quality sample collection; a Hydrolab® multiparameter probe was used to measure pH, temperature, DO, percent DO saturation and specific conductance. For this reporting cycle, probabilistic network consisted of 50 sites in the Big Sandy-Little Sandy-Tygarts BMU. Those sites, along with stream names, may be identified in Table 3.1.4-3 and Figure 3.1.4-1.

Table 3.1.4-3. Key to stream names sampled and assessed in the Big Sandy-Little Sandy-Tygarts BMU using probabilistic methodology.

1. UT of Clay Fork[a]	32. Long Fork
2. Tygarts Creek	33. Laurel Creek
4. Georges Creek	34. Rockhouse Fork
5. McGlone Fork	35. Lower Chloe Creek
6. Frasure Creek	38. Left Fork Middle Cr. Levisa Fork
7. Sycamore Creek	39. Brushy Fork
8. Bandy Branch	41. Hurricane Fork
9. East Fork Little Sandy River	42. Right Fork Little Paint Creek
11. Meathouse Fork	43. Blaine Creek
12. Keaton Fork	44. Caney Fork
13. Tygarts Creek	45. Raccoon Creek
16. Rob Fork	46. Big Creek
17. Tygarts Creek	47. Banjo Branch
18.Whetstone Creek	48. Long Fork
19. Shelby Creek	49. Soldier Fork
20. Big Sinking Creek	50. Long Fork
21. Buffalo Creek	51. Brushy Fork
22. Jones Fork	52. Little Fork Little Sandy River
23. Coldwater Fork	53. Williams Creek
24. Rose Creek	54. Jennys Creek
25. Lockwood Creek	55. Levisa Fork
27. Lick Creek	58. Rockcastle Creek
29. Near Fork Sandsuck Creek	59. Cat Fork
30. Rockhouse Fork	60. Right Fork Beaver Creek
31. Harriet Branch	61. Schultz Creek

[a]UT= Unnamed tributary

Figure 3.1.4-1. Probabilistic biological survey sites in the Big Sandy- Little Sandy- Tygarts Creek basin management unit (key to stream names on previous page).



3.1.5 Lake and Reservoir Monitoring

Lakes and reservoirs are monitored over the growing season (April through October) for designated use support determination and trophic state using the Carlson Trophic State Index (TSI) for chlorophyll *a*. This method of determining trophic state of lakes is convenient as it allows lakes to be ranked numerically according to increasing trophic state (oligotrophic, mesotrophic, eutrophic, and hyper-eutrophic). The growing season average TSI value is used to determine the trophic state of each lake.

Water quality and physical measurements were made in spring, summer and fall, typically with an interval of six to eight weeks to allow sufficient time for seasonal changes to occur. All publicly accessible lakes and reservoirs made-up the population of these resources monitored in Kentucky. Water quality variables, including nutrients (unionized ammonia, nitrite-nitrate, total phosphorus, TKN, total soluble phosphorus, soluble reactive orthophosphate and total organic carbon), chlorophyll *a*, standard variables (total suspended solids, chlorides, sulfates, alkalinity and hardness) and a profile of water column physical data (DO, pH, temperature and specific conductance) were monitored at each station per lake. The majority of these waters were small, usually several hundred acres or less in surface area; therefore, one sample station in the forebay was sufficient to characterize the status of the majority of lakes and reservoirs.

The Louisville USACE district cooperated in shared monitoring of their dam projects in the Kentucky River BMU. The water quality parameters described above were used to determine the trophic status of each reservoir. Multiple monitoring stations were placed in these large reservoirs. Often, the major in-flow and out-flow tributaries of each reservoir were monitored for water quality as well, often including pathogen indicators for recreation support determinations. These tributary streams were assessed for aquatic life use support based on physicochemical data.

Those lakes and reservoirs monitored in the Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs are presented in Table 3.1.5-1. Maps of use support assessment results follow in Appendix C.

Table 3.1.5-1. Lakes and reservoirs monitored in the Big Sandy-Little Sandy-Tygarts and Kentucky River basin management units during 2007 and 2008, respectively.

Lake or Reservoir Name	Size (Acres)	Basin	County	Latitude (dd)	Longitude (dd)
Dewey Lake	1100	Big Sandy	Floyd	37.73582	-82.72799
Elkhorn Lake[a]	16.3	Big Sandy	Letcher	37.16858	-82.63485
Fishtrap Lake	1143	Big Sandy	Pike	37.43383	-82.41503
Martin County Reservoir[a]	15.6	Big Sandy	Martin	37.87887	-82.51944
Yatesville Lake	2242	Big Sandy	Lawrence	38.12482	-82.69700
Grayson Lake	1512	Little Sandy	Carter, Elliott	38.25214	-82.98512
Greenbo Lake	181	Little Sandy	Greenup	38.49082	-82.86659
Paintsville Lake	1139	Little Sandy	Johnson, Morgan	37.84087	-82.87151
Smokey Valley Lake	36	Tygarts	Carter	38.36683	-83.1194
Boltz Lake	92	Kentucky	Grant	38.70662	-84.61886
Bullock Pen Lake	134	Kentucky	Grant	38.78908	-84.65611
Buck Creek Lake[a]	25	Kentucky	Lincoln	37.39438	-84.60832
Buckhorn Lake	1230	Kentucky	Leslie, Perry	37.33853	-83.47122
Campton Lake	26	Kentucky	Wolfe	37.74485	-83.54352
Carr Fork Reservoir	710	Kentucky	Knott	37.22904	-83.0335
Cedar Creek Lake	784	Kentucky	Lincoln	37.49271	-84.5522
Corinth Lake	139	Kentucky	Grant	38.50531	-84.58869
Cowbell Lake[a]	16.8	Kentucky	Madison	37.53895	-84.22800
Elmer Davis Lake	149	Kentucky	Owen	38.49571	-84.88222
Herrington Lake[b]	2940	Kentucky	Boyle, Garrard, Mercer	37.69465	-84.73371
Lake Reba	78	Kentucky	Madison	37.74111	-84.25194
Lake Vega	110	Kentucky	Madison	37.70098	-84.21787
Lexington (Jacobson) Reservoir No. 4[a]	271	Kentucky	Fayette	37.97889	-84.44639
Mill Creek Lake	41	Kentucky	Powell	37.76710	-83.67333
Owsley Fork Lake[a]	155	Kentucky	Madison	37.54583	-84.18222
Lake or Reservoir Name	Size (Acres)	Basin	County	Latitude (dd)	Longitude (dd)
Panbowl Lake	98	Kentucky	Breathitt	37.57020	-83.38100
Reservoir No. 1 (Lake Ellerslie) [a]	18.6	Kentucky	Fayette	38.01304	-84.46287
Silver Creek Lake (Lower) [a]	18	Kentucky	Madison	37.54325	-84.24184

Table 3.1.5-1. Lakes and reservoirs monitored in the Big Sandy-Little Sandy-Tygarts and Kentucky River basin management units during 2007 and 2008, respectively.

Silver Creek Lake (Upper) [a]	5.75	Kentucky	Madison	37.53418	-84.24437
Stanford Reservoir	43	Kentucky	Lincoln	37.48633	-84.67825
Wilgreen Lake	169	Kentucky	Madison	37.70338	-84.35658
Winchester Reservoir[a]	102	Kentucky	Clark	37.9476	-84.22944

[a]Lakes where data were evaluated rather than monitored (assessments for domestic water supply designated use).
[b]Insufficient data to assess warmwater aquatic habitat (WAH) designated use.

3.2 Assessment Methodology

General Assessment Methods. Beginning with the 2005 electronic 305(b) report submittal, the commonwealth began assigning assessed uses, and any associated nonassessed uses, of stream segments and lakes to the appropriate category of the five reporting categories recommended by EPA (U.S. EPA, 2005). Of those categories, two categories were divided to better define assessment results; categories 2B and 5B were added by KDOW to track assessed segments that did not conform to the predefined categories. Those categories used by the commonwealth are listed in Table 3.2-1. Many water body segments had monitored data for only one use assessment, typically aquatic life use (warmwater or coldwater aquatic habitat [WAH or CAH]).

Table 3.2-1. Reporting categories assigned to surface waters during the assessment process.

Category	Definition
1	All designated uses for water body fully supporting.
2	Assessed designated use(s) is/are fully supporting, but not all designated uses assessed.
2B	Segment currently supporting use(s), but 303(d) listed & proposed to EPA for delisting.
3	Designated use(s) has/have not been assessed (insufficient or no data available).
4A	Segment with an EPA approved or established TMDL for all listed uses not attaining full support.
4B	Nonsupport segment with an approved alternative pollution control plan (e.g. BMP) stringent enough to meet full support level of all uses within a specified time.
4C	Segment is not meeting full support of assessed use(s), but this is not attributable to a pollutant or combination of pollutants.
5	TMDL is required.
5B	Segment does not support designated uses based on evaluated data, but based on Kentucky listing methodology insufficient data are available to make a listing determination. No TMDL needed.

When considering waters for assessment, KDOW solicited data from a variety of entities. This included other government agencies, such as state agencies (e.g. Department of Fish & Wildlife), local agencies (e.g. Lexington-Fayette Urban County Government) and federal agencies such as USACE, USF&WS (United States Fish & Wildlife Service) and USGS. Also, data from universities and ORSANCO were considered.

Generally, data older than five years were not considered for assessment; however, assessment decisions were made on a case-by-case basis—not all data older than five years were excluded from consideration. Data older than five years were considered if they were the only data available for a water body.

A number of causes (pollutants) in EPA's 2006 IR guidance were considered pollution rather than pollutants. A water body found not supporting a use and shown to be impaired by pollution, without identified pollutants, does not require a TMDL, rather an alternative plan to bring the use back to full support (Category 4B). Causes considered pollution are found in Table 3.2-2. The rationale behind pollutant vs. pollution is that a pollutant is a measurable variable, and its presence above criteria results in designated use impairment. It is the causal variable, not the indicator or response variable of one or more pollutants (sedimentation/siltation, total phosphorus, ammonia, mercury, etc). An example of pollution is *alteration in stream-side or littoral vegetative cover*, a category that in and of itself may not directly attribute to impairment or water quality degradation. The loss of this vegetative integrity can result in excess nutrients and sedimentation/siltation (pollutants) that will subsequently affect biological communities, water quality, in-stream habitat and temperature. The previous example also serves to clarify why *habitat assessment (streams)* is also considered pollution. Pollutants such as sedimentation/siltation, nutrients, or water temperature are listed with those nonsupporting segments, directly identifying the pollutant(s) and associated pollution that should be addressed to restore full use support.

The cause *habitat assessment (streams)* was a commonly reported pollution for streams not supporting aquatic life use based on biological community results. It should be noted that streams with this identified pollution make their way on the 303(d) list since it is almost never without associated pollutants such as sedimentation/siltation because intact riparian vegetation abates excess sedimentation, removes excess nutrients and ameliorates water temperature. In the uncommon circumstance where *habitat assessment (streams)* was the only reported "cause", it was recognized that pollutants had not been observed or measured that were impacting the biological community(s). In these instances the cause *impairment unknown* was associated with those water bodies or segments, which as a pollutant-surrogate, resulting in assigning it to the 303(d) list. In

Table 3.2-2. List of those causes considered pollution by the KDOW (ADB numerical codes listed).

(67) Abnormal fish histology (lesions)
(84) Alteration in stream-side or littoral vegetative covers
(85) Alterations in wetland habitats
(105) Benthic-macroinvertebrate bioassessment (streams)
(150) Chlorophyll *a*
(161) Combination benthic/fishes bioassessments (streams)
(162) Combined biota/habitat bioassessments (streams)
(181) Debris/floatable/trash
(205) Dissolved oxygen saturation
(218) Eurasian water milfoil, *Myriophyllum spicatum*
(227) Excess algal growth
(228) Fish-passage barrier
(229) Fish kills
(230) Fishes bioassessment (streams)
(243) Habitat assessment (streams)
(266) Lake bioassessment
(270) Low flow alterations
(312) Non-native aquatic plants
(313) Non-native fish, shellfish, or zooplankton
(316) Odor threshold number
(319) Other flow regime alterations
(331) Particle distribution (embeddedness)
(336) Periphyton (Aufwuchs) indicator bioassessments (stream)
(344) Physical substrate habitat alterations
(368) Secchi disk transparency
(387) Suspended algae
(402) Total organic carbon
(412) Trophic State Index
(422) *Dreissena polymorpha*, zebra mussel
(445) Abnormal fish deformities, erosions, lesions, tumors
(446) Habitat assessment (lakes/reservoirs)
(450) High flow regime
(459) Taste and odor
(460) Aquatic plants (native)
(465) Fish advisory (no restriction)
(466) Sediment screening value exceedence
(471) Bottom deposits
(477) Bacterial slimes
(478) Aquatic plants (macrophytes)
(479) Aquatic algae

these instances more intensive investigation is needed to determine individual pollutants than the initial biosurvey provided. In this example the water body or segment will be assigned to category 5 (303[d] list) with the pollution, *habitat assessment (streams)*, included in the list of impairments in the 305(b) assessment table (Appendix A). It is recognized that to restore aquatic life use, pollution (e.g. riparian vegetative zone) must be rectified as part of the process in addressing the pollutant(s), in this example sedimentation/siltation.

Another group of causes considered pollution that may be recognized in stream biosurveys are those indicating non-native aquatic plants, non-native fish, shellfish, or zooplankton, for example zebra mussel, *Dreisenna polymorpha*. While these conditions are undesirable and can have a negative impact on the native plant or animal communities in a water body, non-natives, almost without exception, have been introduced accidentally or intentionally via commerce or recreation (ship ballasts, boating, aquarists, sportspersons [non-native trout], etc.). To develop and implement a TMDL to eliminate these non-natives would often be more damaging to the environment (e.g. biocides or mechanical removal), or unpopular in the case of trout species, then leaving them in-place because they are often widespread and prevalent. For example, if the non-native carp, *Cyprinus carpio*, found in many perennial streams and reservoirs in the state, was considered a pollutant rather than pollution, a TMDL would be required to address this in thousands of stream miles and reservoir acres. These examples are instances where the occurrence of impairments considered pollution (non-natives) alone will not result in a category 5 listing, rather a category 2 listing if all biological community metrics indicate the aquatic life use is supporting.

Causes that may be indicators (response variables) of nonsupport aquatic life use but are not pollutants themselves: 1) *benthic macroinvertebrate bioassessment (streams)*; 2) *chlorophyll a*; 3) *combination benthic/fishes bioassessment*; 4) *combined biota/habitat bioassessments (streams)*; 5) *dissolved oxygen saturation*; 6) *excess algal growth*; 7) *fishes bioassessment (streams)*; 8) *lake bioassessment*; 9) *periphyton (aufwuchs) indicator bioassessments (stream)*; 10) *Secchi disk transparency*; 11) *suspended algae*; 12) *trophic state index*; 13) *fish advisory – no restriction*; and 14) *particle distribution (embeddedness)*, are considered pollution. The KDOW uses macroinvertebrates and fishes routinely to make aquatic life use support determinations in streams. These biological indicators provided the data necessary to produce KDOW's multimetric indices through correlation with stressors resulting in the assignment of tolerance levels based on taxon, percent dominance of tolerant taxa, percent intolerant taxa, such as Ephemeroptera (mayflies), feeding strategy (e.g. filterers or scrapers), as well as watershed drainage area which naturally influences the population composition within each community. While these biological communities are robust environmental indicators of water quality and integrity of habitat, they are not pollutants, but a manifestation of those tolerant organisms exploiting conditions that will not support clean-water, intolerant populations. Through physicochemical variables collected at time of biosurveys and habitat assessment (in-stream habitat and land use observations), the most detrimental pollutants are usually recognized as contributors to the degraded biological community. Most stream miles in Kentucky not supporting aquatic life use were impaired primarily by the pollutants *sedimentation/siltation (habitat smothering)*, *nutrient enrichment*, and *cause unknown*, in addition to pollution in the form of habitat assessment (alterations) (often riparian zone related). All these pollutants affect in-stream habitat or physicochemical variables that manifest in the biological community structure. In cases where no pollutants were recognized, *impairment unknown* is listed, which places the water body or segment in category 5, requiring a TMDL.

The total number of assessed stream miles was determined by adding the miles represented by the site-specific random survey (not extrapolated data, the assessment segment) and the miles assessed by targeted monitoring. In other words, miles assessed by targeted monitoring in wadeable streams were included in miles assessed by the random biosurvey (1^{st} – 5^{th} Strahler order). However, results were also presented separately for targeted and random (extrapolated) total miles.

3.2.1 Aquatic Life Use

The water quality and biological data provided by the programs described in the preceding sections were used to assess use support in rivers and streams. Table 3.2.1-1 shows the core designated uses of Kentucky waters and the indicators employed to make those use support determinations. However, fish consumption is not an official designated use, it is strongly implied in water quality standards in 401 KAR 10:031 Section 2 and Section 6 for human health criteria for fish consumption. Given the comprehensive suite of parameters sampled by KDOW for many stream assessments, both biological and physicochemical, a determination can typically be made as to the cause(s) and source(s) of pollutant or pollution affecting the resource. Further investigation during TMDL development may lead to specific definition of causes and sources. Data were categorized as *monitored* or *evaluated* for assessment. Monitored data were derived from site-specific surveys and generally no more than five years old. Typically, data older than five years were considered evaluated, but this did not change the assessment category a water body and/or segment had been assigned unless there were more recent monitored data. In some instances where conditions were believed to have remained mostly unchanged, monitored data collected prior to 1995 were still considered valid, and waters described by these data were categorized as monitored. Additionally, data from the random survey network were used. Like the targeted stations, each random survey station was used to assess a limited reach of stream around the sample point. Few evaluated waters remain in the assessment database. Although all efforts in the watershed initiative were to gather defensible, monitored data, there were some data more than five years old, strong anecdotal information, and extrapolation of discharge data that resulted in evaluated assessments.

Water Quality Data. Chemical data collected by KDOW and others were assessed according to EPA guidance (U.S. EPA, 1997). Water quality data were compared to criteria contained in Kentucky Water Quality Regulations (401 KAR 10:031). The segment fully supported WAH use when criteria for dissolved oxygen, un-ionized ammonia, temperature and pH were not met in 10 percent or less of the samples collected. Impaired, partial support was indicated if any one criterion for these parameters was not met in 11-25 percent of the samples. A segment was impaired, not supporting if any one of these criteria was not met in more than 25 percent of the samples.

Data for total metals were analyzed for exceedences of acute criteria listed in state water quality standards regulations (401 KAR 10:031) using at least three years of data. The segment fully supported WAH use if all criteria were met at stations with quarterly

Table 3.2.1-1. Designated uses in Kentucky waters and the indicators used to assess level of support.

Use	Aquatic Life	Recreation	Fish Consumption[a]	Drinking Water[b]
Core Indicators	Stream: 1-3 biological communities: macroinvertebrates, diatoms and fishes Dissolved oxygen Temperature pH Specific conductance Lake/Reservoir: Dissolved oxygen Temperature pH Specific conductance Fish kills	Stream: Pathogen indicators: fecal coliform; *E. coli* pH Lakes/Reservoir: Pathogen indicators: fecal coliform or *E. coli* pH	Mercury PCBs	Inorganic chemicals Organic chemicals Pathogen indicators: fecal coliform, *E. coli*
Supplemental Indicators	Chlorophyll-*a* Trophic State Index (TSI) Secchi depth Indicator health (vigor) Chemical Sediments	Nuisance macrophytes Nuisance macroscopic algal growth Nuisance algal blooms Suspended sediment	Other chemicals of concern found in water quality standards	Odor Taste Treatment problems caused by poor water quality

[a]Implied designated use per 401 KAR 10:031 Sections 2 and 6
[b]All core indicators are based on "at the tap" MORs received from PWS

or less frequent sampling, or if only one exceedence occurred at stations with monthly sampling. Impaired, partial support was indicated if any one criterion was not met more than once but in less than 10 percent of the samples. The segment was impaired, not supporting, if criteria were exceeded in greater than 10 percent of the samples. The assessment criteria were closely linked to the way state and federal water quality criteria were developed. Aquatic life was considered protected if, on average, the acute criteria were not exceeded more than once every three years. Data were also compared to chronic criteria. Observations that equaled chronic criteria were not considered to exceed water quality standards. Toxic criteria were assessed based on 36 or more samples from the primary ambient water quality network; other stations were considered if the minimum samples were met. The segment fully supported WAH use if all criteria met or exceeded only once. Impaired, partial support was assessed if any criterion was not met more than once, but in less than 10 percent of samples. The segment was impaired, not supporting if criteria were exceeded in greater than 10 percent of samples.

Biological Data (streams). Decisions about use attainment for aquatic life were primarily made using biological data obtained from monitoring programs within the KDOW and other agencies. There are a number of reasons biological data are important in making level of support decisions for aquatic life use. Biological communities (indicators) integrate their environment and thus serve as good indicators of the conditions (physical, chemical, and habitat) they live in. The core indicators for bioassessment are outlined in Table 3.2.1-2. Level of use support was dependent on the indicator community(s) health and integrity, with supplemental physicochemical and habitat data. These results were applied for assessment purposes as outlined in Table 3.2.1-2.

Table 3.2.1-2. Biological criteria for assessment of warm- or coldwater aquatic habitat (streams) use support[a].

Indicator	Fully Supporting	Partial Support	Nonsupport
Algae	Diatom Bioassessment Index (DBI) Classification of excellent or good; biomass similar to reference/control.	DBI classification of fair; increased biomass (if nutrient enriched) of filamentous green algae.	DBI classification of poor; biomass very low (toxicity), or high (organic enrichment).
Macroinvertebrates	Macroinvertebrate Bioassessment Index (MBI) excellent or good, high EPT, sensitive species present.	MBI classification of fair, EPT lower than expected in relation to available habitat, reduction in relative abundance of sensitive taxa. Some alterations of functional groups evident.	MBI classification of poor; EPT low, total number of individuals of tolerant taxa very high. Most functional groups missing from community.
Fishes	Index of Biotic Integrity (IBI) excellent or good; presence of uncommon, endangered or species of special concern.	IBI fair.	IBI poor, very poor, or no fish.

[a]Acronyms used in this table: EPT= Ephemeroptera, Plecoptera, Trichoptera; RA= relative abundance; TNI- total number of individuals

Macroinvertebrates have been used extensively in water quality monitoring and impact assessment since the early 1900s. Today, macroinvertebrates are used throughout the world in water quality assessment as environmental indicators of biological integrity to describe water quality conditions or health of the aquatic ecosystem, and to identify causes (pollutants) of impairment. This indicator community is relatively sedentary, spending a significant portion of their life cycle in the aquatic environment. Various populations of a community are dependent on multiple habitats in the water column, occupy more than one consumer level throughout the food web (herbivores, omnivores, and carnivores) and, significantly, many sensitive taxa (benthos) live in or on the sediments of streams. These characteristics and habits make this a key indicator group of their environment. KDOW defines benthic macroinvertebrates as organisms large enough to be seen by the unaided eye, can be retained by a U.S. Standard Number 30 sieve (28 mesh/inch, 600 µm openings), and live at least part of their life cycle within or upon available substrates of a water body. In addition to determining use support level, biomonitoring will identify those Exceptional Waters (401 KAR 10:030) (those waters that are among the most biologically diverse and represent biological integrity to a high degree in a given bioregion) occurring across the commonwealth.

The evaluation of fish community structure is an important component of biological monitoring providing reliable assessments for the CWA, Section 305(b). The Kentucky Index of Biotic Integrity (KIBI) was developed based on reference conditions and tolerances, and community feeding structure of species present. Advantages of using fish as biological indicators include their widespread distribution, utilization of a variety of trophic levels, stable populations during summer months, and the availability of extensive life history information (Karr et al. 1986).

Algal (primarily diatoms) communities are important water quality indicators, particularly as it relates to trophic status (nutrient or organic enrichment) and toxicity conditions. This indicator group is critical to the food web of streams, beginning the process of primary production through photosynthesis. The Diatom Bioassessment Index (DBI) is used to assess this indicator community.

Federally Threatened and Endangered Species. Waters with federally threatened or endangered species in November 1975 have an existing designated use of

Outstanding State Resource Water (OSRW), and the loss or significant decline of one of these populations constitutes an impairment of use. Waters where previously unknown populations of federally listed species inhabit are automatically included in the OSRW designated use per 401 KAR 10:031.

Lakes and Reservoirs. Lakes and reservoirs were assessed for aquatic life use by measuring several physicochemical indicators and reported fish kills. The lack of a direct biological indicator is primarily due to most of this resource being manmade, thus supporting altered and unnatural biological communities that are composed almost exclusively of tolerant species (e.g. Tubificidae, *Chironomus* spp., *Chaoborus* spp., *Glyptotendipes* spp., etc.) that are capable of exploiting this often low DO-stressed environment. Thus, the core and supplemental indicators shown in Table 3.2.1-1 are of utmost importance to assure water quality conditions are suitable for supporting sportfish and associated prey fishes. Populations of these fishes are the primary concern for aquatic life use being met in these created environments. Table 3.2.1-3 outlines those criteria used in making use assessment decisions.

Trophic state was assessed in lakes and reservoirs using the Carlson Trophic State Index (TSI) for chlorophyll *a*. This method is convenient because it allows lakes and reservoirs to be ranked numerically according to increasing trophic state, and it also provides for a distinction between oligotrophic, mesotrophic, eutrophic, and hyper-eutrophic lakes and reservoirs. The growing season (March through October) average TSI value was used to rank each lake. Areas of lakes that exhibited trophic gradients or embayment differences often were analyzed separately.

3.2.2 Primary Contact Recreation Use Support

Fecal coliform or *Escherichia coli* and pH data were used to indicate the degree of support for primary contact recreation (PCR) (swimming) use. PCR assessment was based on six monthly bacteria grab samples collected during the recreation season of May through October. The use fully supported if *E. coli* criterion of 240 colonies per 100 mL (400 colonies per 100 mL for fecal coliform) was not met in less than 20 percent of samples; it was impaired, partial support, if either criteria were not met in greater than 20 to 33 percent of samples; and impaired, nonsupport, if either criteria were not met in

Table 3.2.1-3. Criteria for lake and reservoir use support classification.

Category	Fish Consumption	Warmwater Aquatic Habitat	Secondary Contact Recreation	Domestic Supply
Not Supporting:	(Pollutant specific)	(At least two of the following criteria)	(At least one of the following criteria)	(At least one of the following criteria)
	Methylmercury >1.0 ppm (fish tissue)	Fish kills caused by poor water quality	Widespread excess macrophytes/macro-scopic algal growth	
	PCBs >1.9 ppm (fish tissue)	Severe hypolimnetic (deepest layer in a thermally stratified lake or reservoir) oxygen depletion	Chronic nuisance algal blooms	Chronic treatment problems caused by poor water quality
		Dissolved oxygen average less than 4 mg/L in the epilimnion (upper most layer of water in a thermally stratified lake or reservoir)		Exceeds drinking water MCL
		Other specific cause (e.g. low pH)		
Partially Supporting: (At least one of the following criteria)	Methylmercury >0.3 – 1.0 ppm (fish tissue)	Dissolved oxygen average less than 5 mg/L in the epilimnion	Localized or seasonally excessive macrophytes/macroscopic algal growth	
	PCBs >0.2 ppm – 1.9 ppm (fish tissue)	Severe hypolimnetic oxygen depletion	Occasional nuisance algal blooms	Occasional treatment problems caused by poor water quality
		Other specific cause (e.g. low pH)	High suspended sediment concentrations during the recreation season	
Fully Supporting:	Methylmercury <0.3 ppm and PCBs <0.2 ppm	None of the above	None of the above	None of the above

greater than 33 percent of samples. Secondary contact recreation (SCR) was also assessed following the same method using fecal coliform data at the concentration of greater than 2000 colonies per 100 mL. Streams with pH less than 6.0 SU or greater than 9.0 SU were considered full support if these criteria were exceeded once, but in less than 10 percent of samples collected in the recreation season; impaired, partial support, if the standard was exceeded more than once, but in less than 10 percent of the samples during the recreation season; and impaired, nonsupport, if the criterion was exceeded in more than 10 percent of samples during the recreation season.

3.2.3 Other Data Sources

Discharge Monitoring Reports (DMRs). Discharge monitoring report (DMR) data, collected by Kentucky Pollutant Discharge Elimination System (KPDES) permit holders, were assessed through KDOW's permit compliance database. Depending on the relative sizes of the wastewater discharge, the receiving stream and the severity of the permit exceedences, it sometimes was possible to assess in-stream uses as nonsupporting either aquatic life or PCR. Because in-stream data were usually not collected, stream assessments based only on DMR data were considered evaluated, not monitored, and these segments were assigned to category 5B.

US Army Corps of Engineers (USACE) Reservoir Projects. Dam projects on major streams in Kentucky were monitored with the cooperation of the USACE. This collaborative effort resulted through the need for each agency to share stretched resources to monitor those reservoirs in each BMU of focus. Reservoir water quality variables were monitored over the growing season (March through October) as were major in-flow and out-flow tributaries of these reservoirs. Aquatic life use support level was determined using these monitored data for reservoir and monitored tributaries. The Louisville USACE District manages those dam projects in the Kentucky River BMU; the KDOW exclusively monitored those USACE reservoirs managed by the Huntington, West Virginia District in the Big Sandy-Little Sandy-Tygarts BMU.

3.2.4 Fish Consumption Use Support

Fish consumption, in conjunction with aquatic life use, assesses attainment of the fishable goal of the Clean Water Act. Assessment of the fishable goal was separated forming these two categories in 1992 because the fish consumption advisory does not preclude attainment of the aquatic life use and vis-à-vis. Separating fish consumption and aquatic life use support gives a clearer picture of actual water quality conditions. Table 3.2.1-1 relate those criteria used to make fish consumption use support decisions, and Table 3.2.1-3 show the concentrations of methylmercury and PCBs that result in a specific level of support; these concentrations apply to lakes, reservoirs and streams.

Kentucky revised its methodology for issuing fish consumption advisories in 1998 to a risk-based approach patterned after the Great Lakes Initiative. The risk-based approach generally is more conservative than the Food and Drug Administration (FDA) action levels that were used previously. For example, the FDA action level for mercury was 1.0 mg/Kg, but the risk-based number for issuing an advisory is as low as 0.12 mg/Kg. As a result of this change in methodology, a statewide advisory was issued in April 2000 for children under six and women of childbearing age to not consume more than one meal per week of any fish from Kentucky waters because of mercury. However, EPA issued a mercury water quality criterion of 0.3 mg/Kg concentration in fish tissue, and the commonwealth has subsequently adopted it. Therefore, for purposes of 305(b) reporting, waters were not considered impaired unless fish exhibited methylmercury tissue concentrations greater than 0.3 mg/Kg. In other words, the fish tissue concentration triggering the statewide advisory (0.12 mg/Kg) was considered more stringent than water quality standards.

Other than the statewide advisory for mercury explained above, the following criteria were used to assess support for the fish consumption use:

- Fully supporting- no fish consumption restrictions or bans in effect; highest species concentration ≤ 0.3 mg/Kg
- Impaired: Partial support- "restricted consumption," fish consumption advisory in effect for general population or a subpopulation that potentially could be at greater risk (e.g. pregnant women, children); highest species concentration > 0.3 mg/Kg – 1.0 mg/Kg. Restricted

consumption was defined as limits on the number of meals consumed per unit time for one or more fish species

- Impaired: Not supporting- a no consumption fish advisory or ban in effect for general population or a subpopulation that potentially could be at greater risk for one or more fish species, or a commercial fishing ban in effect; highest species concentration > 1.0 mg/Kg.

The Great Lakes Initiative for fish consumption advisories for PCB concentrations in fish tissue are triggered at the following tissue residue levels, and a restricted consumption results in less than full support of this use.

- Fully supporting- no fish consumption restrictions or bans in effect; highest species concentration < 0.2 mg/Kg
- Impaired: Partial support- “restricted consumption,” fish consumption advisory in effect for general population or a subpopulation that potentially could be at greater risk (e.g. pregnant women, children); highest species concentration > 0.2 mg/Kg – 1.9 mg/Kg. Restricted consumption was defined as limits on the number of meals consumed per unit time for one or more fish species
- Impaired: Not supporting- a no consumption fish advisory or ban in effect for general population or a subpopulation that potentially could be at greater risk for one or more fish species, or a commercial fishing ban in effect; highest species concentration > 1.9 mg/Kg.

3.2.5 Drinking Water Supply

Drinking water use support was determined in several ways (Table 3.2.1-1). First, compliance with maximum contaminant levels (MCLs) in finished water was determined by the annual average of quarterly samples. These MCL data were gleaned from monthly operating reports (MORs) submitted to KDOW, Compliance and Technical Assistance Branch, from treatment facilities. In-stream water quality data generally were not available to assess drinking water use.

3.2.6 Causes and Sources

Causes (pollutants and pollution) and sources were categorized according to EPA guidance. Causes for primary contact recreation, fish consumption, and water supply usually were easily identified. The majority of segments or water bodies not supporting aquatic life use were determined by biological monitoring supplemented by monitoring of select physicochemical parameters. Causes and sources of impairment may not be evident in the field and there may be other pollutants contributing to use impairment that were not listed. Once on the 303(d) list, subsequent intensive monitoring and watershed reconnaissance of land uses will more fully identify causes and sources of impairments.

3.2.7 Determination of Assessment Segments

Once an assessment was made on a water body, an appropriate segment or portion of the water body representative of the monitored area was determined. Part of this determination was based on the type of data collected (e.g. physicochemical, biological, bacteriological, fish tissue or variables for lake/reservoir assessment).

Aquatic Life, Recreation and Fish Consumption Uses. This monitoring activity occurred throughout the state at the Primary Ambient Water Quality Stations (Primary Network) and in the Rotating Watershed Stations particular to the BMU cycle phase. Since the Primary Network stations are located on large streams and rivers, assessed segments are taken downstream and upstream to significant tributary streams; significance of tributaries is based on the watershed area and relative volume. Another important factor considered in defining segments is significant changes in land use, such as from a contiguous forested area to a non-forested area with fragmented riparian vegetative zone. Habitat conditions along the corridor are assessed for the same reasons as physicochemical parameters for biological communities. Since many of KDOW’s PCR-SCR (recreation) monitoring locations are associated with the ambient water quality network, the same rationale is used to define these segments and typically is the same as the defined segment for the accompanying aquatic life use assessment.

Waters assessed for aquatic life use with biological community data often will be of shorter segment reach since biological indicators are typically more responsive to subtle changes in water quality as they integrate these conditions over a relatively long time. Typically the smaller the watershed, a proportionately greater segment will be defined since the conditions and influences from surrounding land use were often similar and localized. In larger watersheds, typically greater than five square miles, proportionately smaller assessment segments are defined because of the increased potential of pollutant sources and potential changes in habitat. These segments often are defined by upstream and downstream tributaries judged to be of significant drainage area to the receiving stream.

Fish consumption segments are defined in a similar method as those reaches assessed using only physicochemical or bacteria data. Many fish species are relatively far ranging, and that factor has significant consideration in defining segments. Also, with the plethora of sources, and the likelihood that much of the mercury contamination in waters comes via atmospheric deposition, relatively long reaches are typically defined when making these assessments. Still, significant tributaries are often used to make the upstream and downstream termini, with less consideration given to habitat for the reasons given above. In boatable streams that have locks and dams the intervening pool between each lock and dam is typically considered an assessment unit.

Drinking Water Use. Since this use was assessed utilizing finished water data supplied by Public Water Systems (PWS) the assessed segments were usually conservative when applied to the source water. The assessment segments were typically taken from the point of withdrawal and extended upstream one mile. A few exceptions to that rule occurred when multiple uses were assessed (e.g. fish tissue, aquatic life) in the same general area of PWS withdrawal points. Those segments were usually longer (see section above on these use assessment segments) in order to accommodate other uses that overlapped the PWS withdrawal point. For reservoirs, the assessment was applied to the water body.

3.3 Use Assessment Results, 2009-2010

Section Overview. This section of the IR presents assessment results focused primarily on two BMUs, the Big Sandy-Little Sandy-Tygarts and Kentucky River, which were monitored in water years 2007 and 2008, respectively. Additionally, a statewide summary updating many waters and segments assessed and incorporated into overall use support summaries is presented in the following subsection. Appendix "A" contains a table with all assessed waters and the support level per use assessed. Targeted and random biosurvey results of streams were presented with particular focus on the Big Sandy-Little Sandy-Tygarts BMU in this reporting cycle, while targeted biosurvey results only were presented for the Kentucky River BMU. The KDOW continues to census lakes and reservoirs in the commonwealth, and trend information on these reservoirs is presented following 25 years of data related to trophic state analyses. The USACE reservoirs were monitored by that agency and KDOW, and the results of those data and trophic status trends were also provided in the lakes section.

3.3.1 Statewide Assessment Results (Use Support)

Targeted Monitoring: Streams and Rivers. For this monitoring and reporting period (Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs) there were 282 stream segments representing 1,157 miles assessed in the Big Sandy-Little Sandy-Tygarts BMU. In the Kentucky River BMU there were 443 stream segments totaling 2,239 stream miles assessed. These data represent years five and one of the second and third five-year intensive monitoring effort based on rotating BMUs strategy. Probabilistic monitoring results are included in the targeted monitoring statistics since that method is used for both stream-specific reach assessments as well as extrapolation of data for aquatic life use support in a given BMU.

Table 3.3.1-1 lists the number of stream and spring miles, and lake, reservoir and pond acres assigned to the 305(b) reporting categories. Because of reporting requirements any water bodies or segments that have any assessed DU less than full support (e.g. Category 5), that segment and miles associated with it, are assigned to Category 5, even though one or more other DUs may be in Category 2 of a segment. Miles of streams with all assessed DUs fully supporting (Category 2) are 3,888 (35 percent) (Table 3.3.1-1). Streams not fully supporting all assessed uses (Categories 4A, 4B, 4C, 5 and 5B) total approximately 6,994 (63 percent). These results are a decrease by about nine percent of fully supporting Category 2 miles per segments, and an increase of about six percent in less than fully supporting (Categories 4A, 4B, 4C, 5 and 5 B) miles per segments compared to the 2008 IR.

Table: 3.3.1-1. Size of surface waters assigned to reporting categories[1] for Kentucky

Water Body Type	Category									Total	Total Segments
	1	2	2B[2]	3	4A	4B	4C	5	5B		
RIVER (MILES)	0	3,888.05	239.05	172.10	617.63	0.00	1.8	6,263.38	110.70	11,053.66	2296
FRESHWATER RESERVOIR (ACRES)	53,890.00	76,117.25	10,351.00	0.00	0.00	0.00	301.00	88,769.10	0.00	219,077.35	123
SPRING (MILES)	0.00	6.05	0.00	0.00	0.00	0.00	0.00	11.15	0.50	17.70	14
FRESHWATER LAKE (ACRES)	0.00	254.00	36.00	0.00	0.00	0.00	0.00	63.00	0.00	317.00	4
POND (ACRES)	0.00	3.30	0.00	0.00	0.00	0.00	0.00	1.50	0.00	4.80	2
FRESHWATER WETLANDS (ACRES)	0.00	0.00	0.00	324,000.00	0.00	0.00	0.00	0.00	0.00	324,000.00	0

[1]Refer to Table 3.2-1 on page 47 for a definition of each reporting category
[2]"Total in State" sum does not include miles in this subcategory as these miles may also occur in other categories (i.e. 1, 2, 4B, 5 and 5B)

Table 3.3.1-2. Individual designated use support summary for streams and rivers in Kentucky (miles)

Designated Use	Total in State	Total Assessed	Supporting-Attaining WQ Standards	Supporting-Attaining WQ Standards but Threatened	Not Supporting-Not Attaining WQ Standards	Not Assessed
Warm Water Aquatic Habitat	10,547.21	9,568.66	4,833.65	0.00	4,735.01	978.55
Cold Water Aquatic Habitat	432.85	398.35	333.50	0.00	64.85	34.50
Fish Consumption	10,942.86	1,210.40	754.20	0.00	456.20	9,732.46
Primary Contact Recreation	10,942.86	4,762.16	1,494.10	0.00	3,268.06	6,180.70
Secondary Contact Recreation	10,942.86	1,951.10	1,329.80	0.00	621.30	8,991.76
Drinking Water	809.05	689.50	689.50	0.00	0.00	119.55
Column Total	*44,617.69*	*18,580.17*	*9,434.75*	*0.00*	*9,145.42*	*26,037.52*

Of the 18,580 miles assessed per cumulative DU that fully support are 9,435 miles (Categories 1, 2), or 51 percent; streams and rivers with segments not fully supporting assessed uses (Categories 4A, 4B, 4C, 5 and 5B) total approximately 9,145 miles, or 49 percent (Table 3.3.1-2). Note that the column heading “Total in State” in Table 3.3.1-2 is based on the total waters in the state populated in the assessment database (ADB) for reporting purposes, not the full population of all streams in the commonwealth (>91,000 miles) (reported miles in a state accumulate as they are entered in ADB). These results represent a decrease in statewide cumulative designated use miles fully supporting by less than one percent since the 2008 IR.

Aquatic Life Use. Warmwater and coldwater aquatic habitat DU categories assessed number 9,967 miles with 5,167 miles fully supporting (Table 3.3.1-2), or nearly 52 percent of stream miles assessed. This is a decrease (by percent) of total assessed miles fully supporting by about one percent compared to the 2008 IR (KDOW, 2008). The number of miles not fully supporting is about 4,800 (48 percent), an increase of 326 miles (one percent) compared to the 2008 IR. Compared to the 2006 IR (KDOW, 2006b), stream miles that do not support aquatic life use have increased 1,059 miles; as a percent of assessed miles this represents an increase of nine percent.

Fish Consumption. The percentage of assessed stream miles that fail to support this DU is about 38 percent (Table 3.3.1-2), compared to 35 percent in the 2008 IR. Besides the statewide fish consumption advisory for mercury, longstanding waterbody-specific consumption advisories for fish remain in effect in several rivers and streams throughout the commonwealth (www.water.ky.gov/sw/advisories/) (accessed March 4, 2010). The 2009 advisory (most recent at time of writing) remained unchanged from that issued in 2008. Because of interstate issues and complexity of identifying all sources of mercury, EPA is conducting national studies and will likely be involved in eventual efforts to calculate TMDLs and reduce mercury inputs by setting new mercury limits. Polychlorinated biphenyl (PCB) contamination findings led to two water bodies (Knox Creek and Fish Trap Lake) added to that advisory; both water bodies occur in the Big Sandy River basin. Knox Creek originates in Virginia and is a tributary of Tug Fork River. Fishtrap Lake is approximately 1,100 surface acres and was formed by impounding the Levisa Fork. The fish consumption advisory includes the entire reservoir and the Levisa Fork from the reservoir backwaters to the Kentucky - Virginia state line. Virginia has a similar fish consumption advisory on Knox Creek to the headwaters and on a portion of Levisa Fork.

PCBs are man-made chemical products that are similar in chemical structure. These chemicals are toxic and persistent in the environment. In 1976 Congress passed legislation that prohibits the manufacture, process and distribution in commerce of PCBs. Polychlorinated biphenyls contaminate fish flesh in six streams totaling 142.8 miles as listed below:

- Knox Creek from mouth at Tug Fork River to Kentucky - Virginia state line

- Levisa Fork from Fishtrap Lake backwaters to Kentucky - Virginia state line
- Mud River from Hancock Lake Dam to mouth in Logan, Butler and Muhlenberg counties
- Town Branch Creek, headwaters to mouth in Logan, Butler and Muhlenberg counties
- West Fork Drakes Creek, dam at City of Franklin to mouth in Simpson and Warren counties
- Little Bayou Creek from headwaters to mouth in McCracken County

Primary (Swimming) Contact Recreation Use. The percentage of assessed stream miles that do not support primary contact recreation (PCR) continues as the highest of all uses at 69 percent representing, 3,268 stream miles (Table 3.3.1-2). This represents a decrease of 1.5 percent compared to 2008 IR. This designated use also represents the second highest number of assessed stream miles, 4,762 (Table 3.3.1-2) in the state. Note water quality bacteria criteria for this designated use apply during the recreation months of May through October; a criterion for pH also applies to this DU.

There continues to be a number of swimming advisories on segments of streams and rivers in Kentucky. Below are the water bodies and segments where advisories exist. Fish consumption advisories on the Ohio River may be found in Section 3.3.3. One may also access this information at: http://www.water.ky.gov/sw/advisories/swim.htm (accessed March 4, 2010).

Upper Cumberland River Basin

- Cumberland River from SR 2014 bridge to Pineville SR 66 bridge and from SR 219 bridge to Harlan
- Martins Fork from Harlan to Cawood Water Plant
- Catrons Creek
- Clover Fork
- Straight Creek
- Poor Fork from Harlan to Looney Creek
- Looney Creek from mouth to Lynch Water Plant Bridge

Lower Licking River Basin

- Banklick Creek
- Threemile Creek

North Fork Kentucky River Basin

- North Fork Kentucky River upstream of Chavies to source (headwaters)

Secondary Contact Recreation Use. Secondary contact recreation DU criteria apply year-round, and criteria for support of this use are based on fecal coliform standard of 2000 colonies/100mL in streams, lakes and reservoirs, in addition to pH. Of the 1,951 miles of streams assessed there are 621 miles not supporting this DU. This represents 32 percent of assessed streams, a slight increase (1.2 percent) from the 2008 IR (KDOW, 2008). Compared to 2006 results, this is an increase of 5.4 percent of assessed stream miles (KDOW, 2006b). No comparison for years prior to the 2006 IR can be made as no assessments for the SCR use in flowing waters were made based on pathogen indicator (bacteria) data. In streams and rivers, the secondary contact recreation standard is applied to protect people from incidental water contact or partial body emersion that may occur in such activities as fishing and boating; the same pH criterion applies to this DU as it does to primary contact recreation.

Drinking Water Use. Drinking water standards apply to the source water at point of intake. Drinking water use support was assessed by review of the average quarterly results for contaminants as reported in MORs (monthly operating reports) that are required by the Safe Drinking Water Act. The average annual result of these quarterly data is determined for compliance purposes. The MCLs (maximum contaminant levels) are based on concentration of each contaminant in the finished product distributed for public consumption. Of those stream miles assessed (690), all were fully supporting drinking (domestic) water use (Table 3.3.1-2).

Probability Monitoring: Aquatic Life Use. A simple question has been asked over the course of the history of the Clean Water Act: “What is the condition (health) of the nation’s waters?” Various studies have been undertaken to answer that question. However, findings concluded that while agencies have been good at collecting data about site-specific conditions of states’ waters, there exist no data to determine the overall condition and trend of the waters on a national scale. A national study was undertaken to answer that question and related questions (Are water quality [fishable and swimmable] conditions improving?). Are there new issues and threats related to aquatic ecosystem health or any successes? The national surveys were undertaken in-part to help citizens determine if more money and resources need to go toward water quality issues, or if the billions of dollars being spent to curb and control pollution is simply not working.

To begin to answer this complex question, it was determined that a statistically valid random biosurvey of the nation's streams was necessary. The EPA oversaw the development and implementation of a random design study of the nation's streams and was able to make substantive decisions concerning the ecological condition of wadeable streams in the contiguous states. The random survey may be likened to a political poll in which a random sample of likely, eligible voters in a given congressional district, or nationally in a presidential race, is polled to discover the likelihood of a particular candidate to win election. In the national survey, all eligible wadeable streams of Strahler order 1-4 in similar ecoregions, or group of similar ecoregions based on biological similarities known as bioregions, define the population from which to randomly select representative stream segments in order to draw scientifically sound conclusions on the findings of those data. The national study segregated the contiguous 48 states into three broad regions defined as West, Eastern Highlands and Lowlands (Wadeable Streams Assessment, U.S. EPA, 2006).

The next national probabilistic study implemented by EPA was to assess the condition of the nation's lakes and reservoirs. The monitoring occurred in summer and fall 2007, and a report on the findings was released in late 2009.

The first statewide random wadeable streams (Strahler order 1-5) biosurvey was completed in the initial phase of the five-year cycle in Kentucky. This program is now in the third five-year cycle and will be completed at the conclusion of the 2012 water-year. Results for the first completed 5-year cycle (1998 – 2002) were presented in Table 3.3.1-3 and Figure 3.3.1-1 of the 2006 IR (KDOW, 2006b). While other monitoring priorities prevented a probabilistic biosurvey of the Kentucky River BMU in water-year 2007, it is anticipated this BMU will be included in this program in 2013.

Causes and Sources Related to Nonsupport of Uses. The leading causes (pollutants only) for designated use nonsupport of Kentucky streams and rivers are: 1) sedimentation/siltation; 2) fecal coliform + *E. coli* (pathogen indicators); 3) nutrient/eutrophication biological indicators; 4) total dissolved solids; and 5) specific conductance (Table 3.3.1-3). The top three leading causes impairing Kentucky streams are unchanged since the 2008 IR (KDOW, 2008). The fourth and fifth leading causes of impairment are closely related, specific conductance is the measure of electrical conductivity (opposite of resistance) in the water column; the more ions in solution (total dissolved solids) the greater the electrical conductivity will be. The leading sources of these impairments are: 1) agricultural related; 2) habitat related (other than hydromodification); 3) source unknown; 4) urban or municipal; and 5) mining (Table 3.3.1-4). These are the same leading sources of pollutants, but the relative source-contribution has changed since the 2008 IR. Namely, agricultural sources displaced habitat related (excluding hydro-modification) in this reporting cycle. Of the 6,985.51 stream miles not supporting one or more DUs, about 55 percent of pollutant sources are from agriculture, with “habitat related (other than hydromodification)” a close second at 47.6 percent. The category “Agriculture” has the greatest increase of miles since the last biennium, an increase of nearly 1,100 stream miles or about 72 percent. The largest increase since 2008 relative to previous source-miles is the category “Fuel or Energy Related (other than coal)” with a 12.28 fold increase (Table 3.3.1-4) (KDOW, 2008). These statistics are the result of grouping related subcategories under broad categories to better reflect those significant sources that contribute to impairment of streams in the state.

Individual use support by major river basin is shown in Table 3.3.1-5. This overview of the commonwealth’s major river basins shows the greatest percentage of assessed river miles not supporting aquatic life use is found in the Big Sandy River basin (82.2 percent). The Mississippi River basin has the second highest percentage of miles not supporting (80 percent) followed by the Tradewater River basin (70 percent), the lower Cumberland River basin (61 percent) and the Ohio River minor tributaries (59 percent). Based on less than full support level, only the number one and two basins changed order of ranking since the 2008 IR. Those particular basins (Big Sandy, Mississippi, lower Cumberland, Ohio, and Tradewater) are each in areas of intensive land use. The Big Sandy River basin is one of the most intensive coal producing areas in the commonwealth, and the lower Cumberland River, Mississippi River, Ohio River minor tributaries and Tradewater River watersheds are in areas of large-scale crop production. Approximately one-third or less of assessed stream miles in the Big Sandy River, Mississippi River and Tradewater River basins, and about 40 percent of assessed river miles in the lower Cumberland River and Ohio River minor tributaries fully support aquatic life use (Figure 3.3.1-1). The Salt River, Tygarts Creek and upper Cumberland River basins have the highest percentage (64 to 66 percent, respectively) of assessed miles fully supporting aquatic life use (Figure 3.3.1-1).

The basins with the most assessed stream miles not supporting primary contact recreation are: Tennessee (94.4 percent); Mississippi (93.8 percent); Salt (85.8 percent); Kentucky River (76.7 percent) Big Sandy (75.9 percent); and Tradewater (75.0 percent) (Table 3.3.1-5). These basins (with the exception of Big Sandy) have one common denominator: widespread agriculture. The Tennessee and Mississippi basins are intensively managed for agriculture, especially row cropping of soybeans and corn, and livestock (primarily cattle) production. Data reported in the 2004 305(b) report (KDOW, 2004) identified the Big Sandy River basin as having a high percentage of stream miles not supporting PCR primarily because of the high percentage of monitored streams where frequent observations were made of straight-pipes from houses that discharged both gray and black water directly into streams. The associated pathogens with the straight-pipe discharge have no effect on the aquatic life as they target warm-blooded hosts. Compared to the 2008 IR, basins with an increase in percentage of assessed miles supporting PCR are the Tygarts and upper Cumberland (Figure 3.3.1-2). The upper Cumberland River basin has long been a problematic area for pathogen-related water quality concerns. Much of this region is mountainous with dense populations residing in the narrow stream valleys, the only areas suitable for human settlement and commerce. This landform does not have adequate soil types or land available outside floodplains for proper septic treatment. However, a significant change in this region over the past 10 years has been afforded through federal grant dollars becoming available to the area for constructing regional and cluster wastewater treatment facilities. This has successfully moved communities to these treatment facilities and out of floodplain and direct river discharge of untreated sewer water from straight-pipes.

To better contrast the changes of designated use (specifically aquatic life and primary contact recreation) support to the last 305(b) cycle on a basin-scale, Figure 3.3.1-2 illustrates the relative change in designated use support between the two periods (2008 and 2010). This graph highlights that while this reporting cycle is focused on the Big Sandy-Little Sandy-Tygarts BMUs, this report includes a comprehensive statewide update to all BMUs (specific comparisons of DU results on the two BMUs of focus in this reporting cycle to the last cycle that focused on each are made in sections following that report specifically on those BMUs). Those river basins that have a positive percent change (increase in full support) considering aquatic life use are the Tennessee, Salt, Green, and upper and lower Cumberland basins (Figure 3.3.1-2). The Tygarts Creek, Kentucky, lower and upper Cumberland and Mississippi river basins had positive change since the 2008 cycle (Table 3.3.1-5 and Figure 3.3.1-2). The greatest decline in aquatic life and primary contact recreation DUs occurred in the Big Sandy and Little Sandy basins (Figure 3.3.1-2). This may be attributed to ongoing land uses in these basins and more intensive monitoring in 303(d) listed watersheds as that program moves toward TMDL development for pollutants and their sources.

Table 3.3.1-3. Ranking of causes (pollutants) to Kentucky rivers and streams.

	Cause	Total Size
1.	Sedimentation/Siltation	3,198.00
2.	Fecal coliform + *E. coli* (pathogen indicators)	3,166.33
3.	Nutrient/eutrophication biological indicators	1,624.06
4.	Total dissolved solids	802.80
5.	Specific conductance	770.72
6.	Organic enrichment (sewage) biological indicators	766.11
7.	Cause unknown	666.85
8.	Physical substrate habitat alterations	378.70
9.	Ammonia (total)	340.15
10.	Sulfates	284.60
11.	Iron	257.00
12.	pH	256.23
13.	Turbidity	219.65
14.	Total Suspended Solids (TSS)	217.36
15.	Mercury in fish tissue	191.05
16.	Phosphorus (total)	165.10
17.	PCB in fish tissue	153.20
18.	Methylmercury	143.65
19.	Chlorine	106.70
20.	Nitrate/nitrite (nitrite + nitrate as N)	68.70
21.	Lead	61.40
22.	Polychlorinated biphenyls	52.10
23.	Copper	47.80
24.	Cadmium	40.20
25.	Ammonia (unionized)	39.00
26.	Nitrogen (total)	38.20
27.	Other	30.00
28.	Oil and Grease	20.91
29.	Beta particles and photon emitters	18.60
30.	Gross alpha	18.60
31.	Chloride	17.60
32.	BOD, carbonaceous	16.85
33.	Total Kjeldahl nitrogen (TKN)	14.40
34.	Zinc	11.80
35.	Mercury	11.40
36.	Manganese	7.70
37.	Ethylene glycol	6.90
38.	Nickel	3.60
39.	Chromium (total)	2.60
40.	Selenium	1.50
41.	Nitrates	0.20

Table 3.3.1-4. Probable sources of impairment to Kentucky rivers and streams.

Source Categories	**Miles**
Agriculture	
Agriculture	1,319.37
Non-irrigated crop production	599.60
Crop production (crop land or dry land)	563.55
Livestock (grazing or feeding operations)	441.00
Managed pasture grazing	328.80
Grazing in riparian or shoreline zones	198.65
Animal feeding operations (NPS)	117.35
Unrestricted cattle access	85.00
Irrigated crop production	84.90
Rangeland grazing	41.60
Manure runoff	38.55
Permitted runoff from confined animal feeding operations (CAFOS)	15.60
Dairies (outside milk parlor areas)	4.50
Specialty crop production	3.60
Category total (agriculture)	3,842.07
Habitat Related (other than hydromodification)	
Loss of riparian habitat	1,479.17
Channelization	690.65
Streambank modifications/destabilization	481.50
Habitat modification – other than hydromodification	365.16
Site clearance (land development or redevelopment)	199.65
Dredging (e.g. navigation channels)	108.35
Category total	3,324.48
Source Unknown (total)	2,406.51
Urban or Municipal	
Municipal point source discharges	826.31
Urban runoff/storm sewers	522.28
Unspecified urban stormwater	326.15
Municipal (urbanized high density area)	176.70
Sanitary sewer overflows (collection system failures)	78.70
Wet weather discharges (point source and combination of stormwater, SSO or CSO)	50.55
Wet weather discharges (non-point source)	40.55
Impervious surface/parking lot runoff	25.45
Discharges from municipal separate storm sewer systems (MS4)	8.30
Combined sewer overflows	4.30
Category total	2,059.29
Mining	
Surface mining	826.90
Coal mining	581.60

Table 3.3.1-4 (cont.). Probable sources of impairment to Kentucky rivers and streams.

Source Categories	**Miles**
Sand/gravel/rock mining or quarries	149.30
Acid mine drainage	123.43
Impacts from abandoned mine lands (inactive)	110.35
Mountaintop mining	74.05
Coal mining (subsurface)	43.2
Dredge mining	34.40
Coal mining discharges	17.90
Mine tailings	9.10
Reclamation of inactive mining	7.40
Subsurface (hardrock) mining	5.40
Category total	1,983.03
Residential Related	
Package plant or other permitted small flows discharges	590.36
On-site treatment systems (septic systems and similar decentralized systems)	457.80
Rural (residential areas)	145.35
Sewage discharges in unsewered areas	106.50
Unspecified domestic waste	66.65
Residential districts	31.52
Category total	1,398.18
Fuel or Energy Related (other than coal)	
Petroleum/natural gas activities	331.60
Petroleum/natural gas production activities (permitted)	219.60
Category total	551.20
Transportation	
Highway/road/bridge runoff (non-construction related)	357.77
Highways, roads, bridges, infrastructure (new construction)	83.15
Airports	1.70
Category total	442.62
Erosion and Sedimentation	
Post-development erosion and sedimentation	264.90
Channel erosion/incision from upstream hydromodifications	99.50
Erosion and Sedimentation (cont.)	
Sediment resuspension (contaminated sediment)	33.85
Erosion from derelict land (barren land)	15.75
Sediment resuspension (clean sediment)	11.55
Category total	425.55
Silviculture	
Silviculture activities	173.65
Silviculture harvesting	113.10

Table 3.3.1-4 (cont.). Probable sources of impairment to Kentucky rivers and streams.

Source Categories	**Miles**
Woodlot site clearance	25.70
Forest roads (road construction and use)	3.3
Woodlot site management	2.8
Category total	318.55
Miscellaneous	
Introduction of non-native organisms (accidental or intentional)	48.20
Other recreational pollution sources	29.40
Other spill related impacts	27.91
Runoff from forest/grassland/parkland	21.40
Golf courses	17.50
Off-road vehicles	10.40
Drought-related impacts	9.80
Drainage/filling/loss of wetlands	9.10
Sources outside state jurisdiction or borders	3.60
Upstream/downstream source	11.30
Marina/boating pumpout releases	2.60
NPS pollution from military base facilities (other than port facilities)	2.50
Category total	182.41
Industrial	
Industrial point source discharge	182.85
Unpermitted discharge (industrial/commercial wastes)	23.30
Industrial/commercial site stormwater discharge (permitted)	5.20
Commercial districts (industrial parks)	4.80
Commercial districts (shopping/office complexes)	2.60
Category total	218.75
W*aste Disposal*	
Illegal dumps or other inappropriate waste disposal	74.00
Inappropriate waste disposal	70.10
Landfills	42.40
Septage disposal	1.50
Category total	188.00
Hydromodifications: dams or impoundments (stream flow)	
Impacts from hydrostructure flow regulation/modification	69.30
Upstream impoundments (e.g. NRCS structures)	27.25
Dam or impoundment	18.60
Category total	115.15
Natural	
Natural Sources	28.20
Wildlife other than waterfowl	6.30

Table 3.3.1-4 (cont.). Probable sources of impairment to Kentucky rivers and streams.

Source Categories	**Miles**
Natural conditions – water quality standards use attainability analyses needed	1.20
Category total	39.00
Atmospheric Deposition	
Atmospheric deposition – toxics	22.25
Category total	22.25

Table 3.3.1-5. Number of river miles assessed and level of support by use in each major river basin. Those basins in bold type are emphasized this reporting cycle.

Basin	Total Assessed	Supporting	Partially Supporting	Not Supporting
Big Sandy				
Aquatic Life	**789.60**	**140.95**	**340.20**	**308.45**
Fish Consumption	**77.35**	**54.05**	**15.30**	**8.00**
Primary Contact Rec.	**451.10**	**108.60**	**36.10**	**306.40**
Secondary Contact Rec.	**51.60**	**0.00**	**2.50**	**49.10**
Drinking Water	**104.25**	**104.25**	**0.00**	**0.00**
Green River				
Aquatic Life	1883.80	1129.60	437.65	316.55
Fish Consumption	338.30	176.20	101.00	61.10
Primary Contact Rec.	1073.95	423.65	179.05	471.25
Secondary Contact Rec.	622.75	361.95	88.40	172.40
Drinking Water	252.00	252.00	0.00	0.00
Kentucky River				
Aquatic Life	**1944.90**	**1100.90**	**577.85**	**266.15**
Fish Consumption	**307.75**	**153.10**	**143.45**	**11.20**
Primary Contact Rec.	**939.35**	**218.65**	**179.00**	**541.70**
Secondary Contact Rec.	**444.20**	**398.65**	**8.90**	**36.65**
Drinking Water	**142.30**	**142.30**	**0.00**	**0.00**
Licking River				
Aquatic Life	860.17	397.65	240.55	221.97
Fish Consumption	55.40	55.40	0.00	0.00
Primary Contact Rec.	504.77	149.35	80.70	274.72
Secondary Contact Rec.	201.07	120.25	39.90	40.92
Drinking Water	36.30	36.30	0.00	0.00

Table 3.3.1-5 (cont.). Number of river miles assessed and level of support by use in each major river basin. Those basins in bold type are emphasized this reporting cycle.

Basin	Total Assessed	Supporting	Partially Supporting	Not Supporting
Little Sandy				
Aquatic Life	**230.75**	**96.25**	**105.20**	**29.30**
Fish Consumption	**8.00**	**8.00**	**0.00**	**0.00**
Primary Contact Rec.	**61.90**	**49.95**	**11.00**	**0.95**
Secondary Contact Rec.	**0.00**	**0.00**	**0.00**	**0.00**
Drinking Water	**2.00**	**2.00**	**0.00**	**0.00**
Lower Cumberland				
Aquatic Life	366.00	141.25	125.85	98.90
Fish Consumption	48.80	39.40	9.40	0.00
Primary Contact Rec.	181.90	52.75	38.60	90.55
Secondary Contact Rec.	2.40	0.00	2.40	0.00
Drinking Water	33.20	33.20	0.00	0.00
Mississippi River				
Aquatic Life	275.70	54.10	101.45	120.15
Fish Consumption	93.90	89.70	4.20	0.00
Primary Contact Rec.	59.65	3.70	3.60	52.35
Secondary Contact Rec.	5.40	0.00	0.00	5.40
Drinking Water	0.00	0.00	0.00	0.00
Ohio River (minor tribs)				
Aquatic Life	517.70	211.35	156.20	150.15
Fish Consumption	23.00	15.80	0.00	7.20
Primary Contact Rec.	158.95	54.90	12.60	91.45
Secondary Contact Rec.	79.40	60.90	0.00	18.50
Drinking Water	0.00	0.00	0.00	0.00
Salt River				
Aquatic Life	1061.10	700.10	216.50	144.50
Fish Consumption	73.35	47.00	14.30	12.05
Primary Contact Rec.	478.20	67.80	119.00	291.40
Secondary Contact Rec.	247.20	228.00	0.00	19.20
Drinking Water	5.15	5.15	0.00	0.00

Table 3.3.1-5 (cont.). Number of river miles assessed and level of support by use in each major river basin. Those basins in bold type are emphasized this reporting cycle

Basin	Total Assessed	Supporting	Partially Supporting	Not Supporting
Tennessee River				
Aquatic Life	292.20	158.90	90.45	45.85
Fish Consumption	26.40	15.10	11.30	0.00
Primary Contact Rec.	109.80	6.20	39.00	64.60
Secondary Contact Rec.	0.00	0.00	0.00	0.00
Drinking Water	0.00	0.00	0.00	0.00
Tradewater River				
Aquatic Life	365.20	110.40	144.00	110.80
Fish Consumption	0.00	0.00	0.00	0.00
Primary Contact Rec.	145.85	36.40	0.00	109.45
Secondary Contact Rec.	105.40	34.80	17.00	53.60
Drinking Water	25.80	25.80	0.00	0.00
Tygarts Creek				
Aquatic Life	**112.25**	**72.60**	**36.95**	**2.70**
Fish Consumption	**50.70**	**5.40**	**0.00**	**45.30**
Primary Contact Rec.	**55.50**	**55.50**	**0.00**	**0.00**
Secondary Contact Rec.	**0.00**	**0.00**	**0.00**	**0.00**
Drinking Water	**2.00**	**2.00**	**0.00**	**0.00**
Upper Cumberland				
Aquatic Life	1333.44	853.00	269.10	211.34
Fish Consumption	104.25	91.85	12.40	0.00
Primary Contact Rec.	538.04	266.65	51.60	219.79
Secondary Contact Rec.	191.68	125.25	4.00	62.43
Drinking Water	86.50	86.50	0.00	0.00

Figure 3.3.1-1. Aquatic life and primary (swimming) contact recreation use support by major river basins in Kentucky.

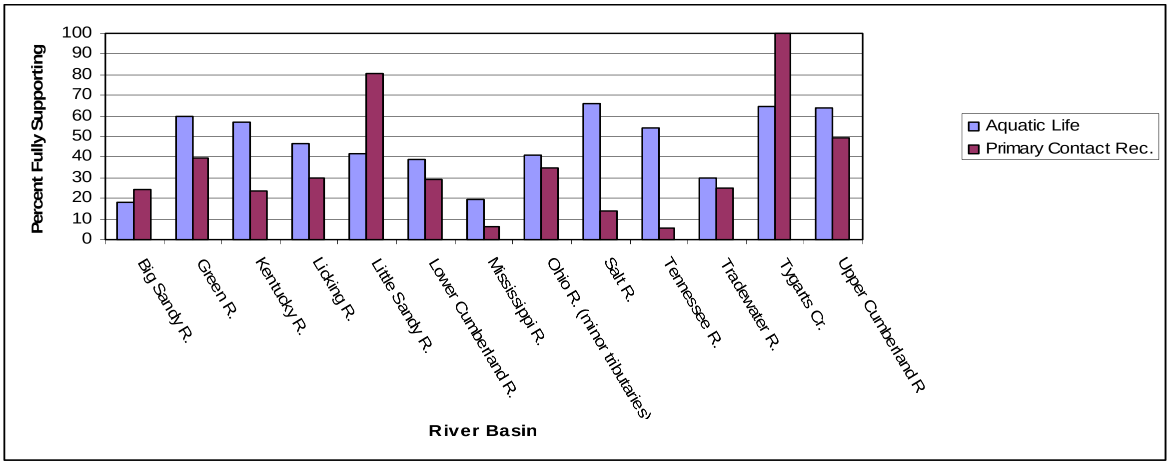
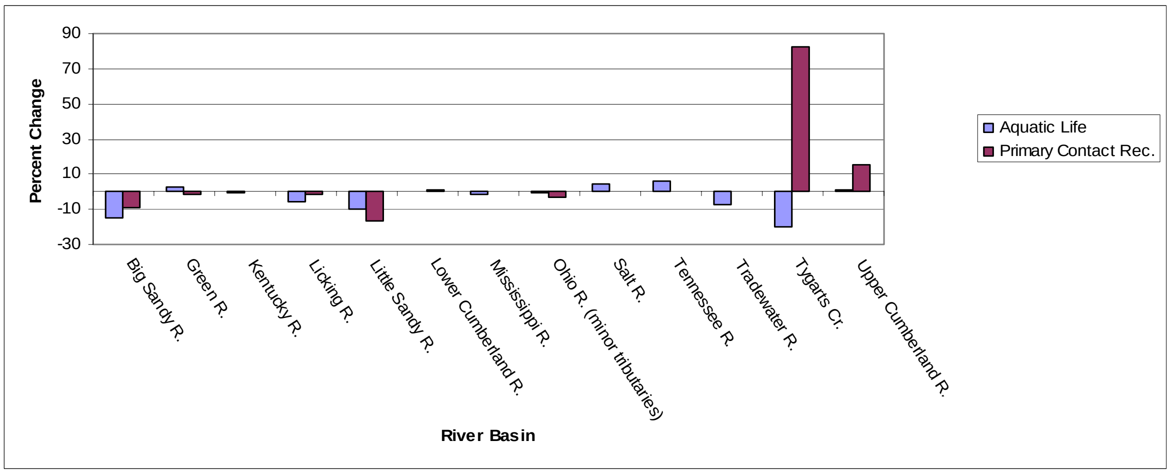


Figure 3.3.1-2. Percent change regarding full support level (based on stream miles) in major Kentucky river basins between 2008 and 2010 305(b) cycle.



3.3.2 Use Assessment Results for 305(b) Reporting Cycle 2010

Big Sandy-Little Sandy-Tygarts Basin Management Unit. This BMU is divided into three primary basins. The Big Sandy River is formed by two major tributaries, the Levisa Fork and the Tug Fork. These tributaries flow generally northward to Louisa, Kentucky where they meet forming the Big Sandy River. The Tug Fork rises in southwest West Virginia where it flows for 154 miles northwesterly forming part of the boundary between Kentucky and West Virginia. The drainage area is approximately 1,500 square miles; the topography of the basin is mountainous and rugged. Coal deposits are extensive in this heavily forested watershed, with population centers located in the narrow stream valleys. The Levisa Fork rises in the Appalachian Mountains in southwest Virginia and flows west into Kentucky where it receives the Russell Fork in Pike County. It then turns generally northeastward near Paintsville flowing to Louisa, Kentucky where it meets the Tug Fork. The drainage area of this basin is approximately 2,300 square miles and the river's length is 140 miles. In addition to the Russell Fork, other principal tributaries are Beaver and Paint creeks. In the 1960s, the USACE construction of a flood control reservoir formed Fishtrap Lake on the Levisa Fork near Millard, Kentucky. Downstream of the dam the river's course looped around downtown Pikeville, but was rerouted in the 1980s to bypass the city. The topography is generally mountainous and rugged with extensive coal deposits and is heavily forested. The confluence of the Tug and Levisa forks forms the Big Sandy River, and is approximately 27 miles long where it discharges into the Ohio River at Catlettsburg. The immediate area of the Big Sandy River is heavily industrialized and the river is a major hub for shipping coal. Barge traffic is heavy on the Big Sandy River as coal and petroleum products are moved down to the Ohio River and onto various ports for distribution. Principal cities of this BMU are: Ashland, Grayson, Paintsville, Pikeville and Prestonsburg.

The Big Sandy River basin is part of the Cumberland Plateau and Mountains physiographic region and is comprised of four level IV ecoregions, from northwest to southeast they are: 1) Carter Hills; 2) Ohio/Kentucky Carboniferous Plateau; 3) Monongahela Transition Zone; and 4) Dissected Appalachia Plateau. This region's natural community is a mixed mesophytic forest of the Appalachians and Cumberland Plateaus. This is considered the epicenter for development and dispersal of all other forest regions in the temperate deciduous forest biome. It is the most diverse ecosystem of Kentucky and North America.

The Little Sandy River rises in southern Elliott County and flows in a north-northeasterly direction for approximately 90 miles. It drains approximately 735 square miles and discharges into the Ohio River in Greenup County, near the city of Greenup. The major tributaries are the East Fork Little Sandy River and Little Fork Little Sandy River. A dam was built across the Little Sandy River south of Grayson to control flooding on the Little Sandy River. This USACE project was constructed in the early

1960s and the dam is an earth and rock structure forming Grayson Lake that covers approximately 1,500 acres. Most of the river drains the Ohio/Kentucky Carbiniferous Plateau ecoregion which is a mixture of woodland, pastureland and cropland. This area has more cleared land than of adjacent ecoregions and much of the broad valleys are used for cattle grazing. This region has some coal and oil production. Soils are sandy and streams in this region are characterized by sand or boulder substrate. Principal cities in this basin are Grayson, Greenup and Sandy Hook.

The Tygarts Creek rises in southwestern Carter County and flows north-northeastward for about 90 miles where it empties into the Ohio River near the city of South Shore; it drains an area of about 375 square miles. Tygarts Creek drains the Carter Hills ecoregion; this area contains hills, ridges and narrow valleys. Streams in this basin have moderate to high gradients with rock substrate, riffles and low waterfalls.

Following are highlights of data and statistical analyses related to this BMU. Both targeted and probability-based water quality and biosurveys were conducted to determine level of aquatic life use support, and other monitoring indicators as they relate to each of the five designated uses. Appendix A contains a complete table of monitoring results for each specific water body and segment as related to streams and rivers. This table contains all significant information in abbreviated form providing a quick reference for each assessed water body or segment, the level of support, pollutants, and related sources. For refinement to the degree of use support attainment, less than fully supporting stream miles were further subdivided into partial support and nonsupport categories based on physicochemical, MBI or KIBI scores and are reflected in this 305(b) assessment. This assists KDOW and the public in recognizing the relative degree of potential pollutant and habitat impacts on each system. Appendix B contains reach indexing maps of these assessment results based on NHD 1:24,000 scale data for this BMU.

Causes, Sources and Land Uses. Causes (pollutants) and sources of pollutants or pollution particular to the Big Sandy-Little Sandy-Tygarts BMU are listed in Table 3.3.2-1. The leading pollutant impairing aquatic life use in streams of the Big Sandy is sedimentation/siltation followed by specific conductance and total dissolved solids.

Table 3.3.2-1. Number of assessed river miles with the top five causes and sources in the major river basins within the Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs.

River Basin	Miles		Miles
Big Sandy			
Causes		*Sources*	
Sedimentation/Siltation	477.35	Coal Mining	794.35
Pathogens	355.50	Surface Mining	735.75
Specific conductance	347.20	Petroleum/natural gas activities	516.15
Total dissolved solids	338.75	On-site treatment systems (septic systems and similar decentralized systems)	508.10
Nutrient/Eutrophication Biological Indicators	230.95	Loss of riparian habitat	470.85
Little Sandy			
Sedimentation/Siltation	122.50	Loss of Riparian Habitat	98.80
Total dissolved solids	19.10	Source Unknown	52.10
Cause unknown	17.00	Surface mining	49.80
Sulfates	15.60	Habitat modification – other than hydromodification	43.60
Other flow regime alterations	14.50	Sand/gravel/rock mining or quarries	37.60
Tygarts Creek			
Methylmercury	45.30	Source Unknown	116.95
PCB in fish tissue	45.30	Nonpoint source	49.90
Sedimentation/Siltation	36.95	Loss of riparian habitat	43.20
Nutrient/Eutrophication Biological Indicators	11.30	Agriculture	39.10
Cause unknown	8.65	Channelization	18.30
Kentucky River			
Pathogens	748.20	Loss of Riparian Habitat	701.80
Sedimentation/siltation	578.40	Municipal point source discharges	649.25
Total dissolved solids	256.95	Source unknown	601.00
Nutrient/Eutrophication Biological Indicators	227.60	Agriculture	409.55
Specific conductance	132.70	Surface mining	401.90

These two pollutants (in the case of specific conductance a surrogate indicator-pollutant) are often associated with each other. Sediment movement carries with it constituents that are chemically bound to the soil, both organic and inorganic substances. When geologic strata are broke through intensive land uses this exposes those geologic layers resulting in leaching of chemicals that were once bound in the geology. Much of the leachate will be composed of salts (e.g., sodium, chloride and sulfate) and metals (e.g., iron, manganese and mercury) that enter the streams through either surface runoff or groundwater flowing through fractured geologic layers. Excess nutrients/eutrophication was identified as the fifth most common pollutant in the Big Sandy River basin. The primary source of the nutrients was from on-site treatment systems (septic systems) and straight-pipes. Bacteria (pathogen indicators) were the second most common pollutant affecting the streams of this basin. In areas of significant erosion/sedimentation pathogen indicators are usually high. This is a result of bacteria attached to soil particles and transported into streams via runoff. The same primary source (on-site treatment systems [septic systems]) for nutrients is a significant source of pathogen indicating bacteria, as well.

The most prevalent pollutant impairing streams in the Little Sandy River basin is sediments/siltation, affecting 122.50 assessed stream miles (Table 3.3.2-1). This is followed by total dissolved solids affecting 19.10 miles of streams. The most commonly identified source of pollutants was "loss of riparian habitat" associated with nearly 100 stream miles. Sources "surface mining and sand/gravel/rock mining or quarries" combined are associated with about 88 stream miles. Associated with loss of riparian habitat, about 44 miles are the source "habitat modification – other than hydromodification". Those habitat modifications exclude any hydromodifications and are thus associated with in-stream impacts to habitat not directly associated with flow. The loss of riparian habitat is closely related to in-stream sources of impacts, and pollutants. The riparian zone of vegetation functions as a habitat stabilizer and filter, absorbing nutrients, impeding overland flow reducing the effects of sedimentation that adsorb pollutants such as pathogens that otherwise find their way into the water bodies. The riparian zone is especially important to wadeable streams by attenuating the amount of solar radiation reaching the water, moderates the temperature and reduces the potential for excess algal blooms. It supplies leaf litter, an important food source necessary for development of aquatic communities that provide the foundation for biological integrity of flowing systems. Of note is that about 81 percent of assessed stream miles in this basin are fully supporting primary contact recreation (Table 3.3.1-5).

The pollutants in the Tygarts Creek basin affecting the most miles of streams assessed as less than full support are methylmercury (related to fish tissue) and PCB in fish tissue (Table 3.3.2-1). These pollutants affect fish consumption in the watershed. The sources of these pollutants are assigned to “source unknown” due to the many avenues these pollutants can enter the aquatic environment. The Ohio River is listed for PCB contamination, and for the first time many segments of the river are listed for mercury in fish tissue (ORSANCO, 2010). Sedimentation/siltation is identified as affecting about 37 miles of assessed stream miles in the basin. Significant sources of sediments in this watershed are from agriculture related activities and channelization. Removal of riparian zone vegetation is a common agricultural practice as landowners seek to maximize acreage devoted to production. This practice results in bank erosion and surface flows during rain events that carry sediments unimpeded into the stream. These sediments not only often carry other pollutants that are now in the stream, but both the physical smothering and loss of habitat often have a legacy effect on water bodies.

Targeted Monitoring: Aquatic Life Use. The targeted monitoring effort resulted in 310 miles (27 percent) fully supporting the DU out of 1,132 miles assessed for in the Big Sandy-Little Sandy-Tygarts BMU (Table 3.3.2-2). This DU may be considered the most sensitive to impairments of all DUs that apply to streams and lakes because all ecological elements of the aquatic environment must be of a sufficient level of integrity and quality to support aquatic communities dependent on the resource (both water quality and in-stream and out-of-stream habitat). While the majority of miles assessed at targeted monitoring locations for aquatic life were assessed based on biological monitoring and one-time grab samples for conventional pollutants, some of those miles were assessed using water column physicochemical data (including conventional and toxic pollutants) at long-term ambient watershed stations. The level of support of monitored streams decreased about 11 percent compared to the last intensive monitoring effort in this BMU that occurred in 2002 (KDOW, 2004). The relative percent change by individual basin since the 2008 305(b) cycle is shown in Figure 3.3.1-2).

Two additional stream segments totaling 1.8 miles in the Big Sandy River basin are proposed as exceptional waters for the next triennial review (Table 3.1.4-2). As each cycle phase is repeated it is likely fewer stream segments will be added to the exceptional category of waters (401 KAR 10:030). This is due to the focus of early monitoring strategy, especially the initial five-year BMU phase, to identify the best streams in the commonwealth. Streams representing the best biological integrity based on criteria for habitat, water quality, and biological community diversity and composition are identified as exceptional waters. However, through random monitoring and special studies it is anticipated exceptional waters will continue to be found.

Targeted Monitoring: Fish Tissue. Fish tissue samples were analyzed for mercury, PCB, chlordane, DDT and toxaphene contamination in this BMU. Of the 136 miles assessed for fish consumption, 67.5 miles (about 50 percent) were fully supporting (Table 3.3.1-5). Approximately 69 miles (50 percent) are not fully supporting this use. Most of the stream miles not supporting fish consumption are in the Tygarts Creek watershed, 45.30 miles. Compared to the 2002 intensive BMU survey the percentage of streams monitored that fully support fish consumption decreased by 34 percent (KDOW, 2004).

Table 3.3.2-2. Comparison of probability and targeted monitoring results for aquatic life use in the Big Sandy-Little Sandy-Tygarts BMU.

	Full Support		Partial Support		Nonsupport	
	Probability	Target	Probability	Target	Probability	Target
Miles	343	310	53	482	5250	340
Percent	6.1	27	0.9	43	93.0	30

Targeted Monitoring: Primary (Swimming) Contact Recreation. Water column samples were analyzed for the presence and quantity of *E. coli* or fecal coliform colonies to assess this DU. There were 568.5 river miles assessed in this BMU (Table 3.3.1-5). Of those river miles, 214 (38 percent) were fully supporting and approximately 355 miles (62 percent) were partially or not supporting (Table 3.3.1-5). The BMU-combined percentage of streams assessed that fully support this DU decreased by 21 percent since the 2002 BMU-year (KDOW, 2004). On a basin level, Tygarts Creek is fully supporting all stream miles (55) assessed. This is a sharp increase over the last results where only 10 of 56 miles fully supported this DU. Approximately 24 percent (109 miles) of the 451 assessed miles fully support this DU in the Big Sandy River basin; 343 miles (76 percent) are not supporting this DU (Table 3.3.1-5). Of the Little Sandy River basin assessment results, 50 of 62 stream miles (81 percent) fully support and 12 stream miles (19 percent) do not meet this DU (Table 3.3.1-5). An overview of this is shown in Figure 3.3.1-1; a relative percent change in support level since the 2008 IR shown in Figure 3.3.1-2. The topography of this region is hilly to mountainous resulting in limited suitable land for housing. It is in the stream valleys where much of the suitable land exists for housing and other related infrastructure. This restricts the available land and area needed for construction of septic systems with needed lateral fields. The soils in these bottomlands often are poorly drained, further restricting proper on-site treatment in rural areas. A related situation exists for the wastewater treatment facilities, which often are built in the flood zone of rivers, as these areas provide the limited locations to seat a facility. These land-related limitations are a primary reason streams in much of the Appalachian region have high bacteria concentrations and is reflected by "on-site treatment systems (septic systems and similar decentralized systems)" being a leading source in this BMU (Table 3.3.2-1).

Targeted Monitoring: Secondary Contact Recreation. This DU has both fecal coliform (pathogen indicator) and pH criteria in water quality standards. There are about 52 miles assessed for this designated use in the BMU (all miles occur in the Big Sandy River basin). Of those 52 miles, all are less than full support (Table 3.3.1-5).

Targeted Monitoring: Domestic Water Supply. All miles (108) assessed in this BMU are fully supporting this use (Table 3.3.1-5).

Probability Biosurvey of the BMU. A biosurvey of the Big Sandy-Little Sandy-Tygarts BMU was performed according to EMAP and Kentucky SOP protocol (www.water.ky.gov/NR/rdonlyres/DEA29166-BD4F-4BC9-86F6-725786135131/0/CollectionMethodsforBenthicMacroinvertebratesinWadeableWatersSOP.pdf [accessed March 12, 2010]), 2009. As Table 3.3.2-3 conveys, out of 6,711 miles of the defined stream population, 5,646 miles were represented in the probability analysis. Once the probability data were extrapolated, 343 miles or 6.1 percent of wadeable streams in this BMU were fully supporting aquatic life use, while 53 miles or 0.9 percent of wadeable streams were partially supporting, and 93 percent (5,250 miles) were not supporting aquatic life use (Table 3.3.2-3 and Figure 3.3.2-1).

A random biosurvey was conducted in 2002 using the same monitoring protocol for the same defined stream population. Those results were presented in the 2004 305(b) report (KDOW, 2004). The level of support was low at 12.5 percent per the 2002 data; however, it decreased to six percent according to the 2007 data reported here (Figure 3.3.2-1). The level of partial support was 43 percent per 2002 data, compared to one percent; whereas the proportion of nonsupporting stream miles increased by 48.7 percent compared with the 2002 data to 93 percent.

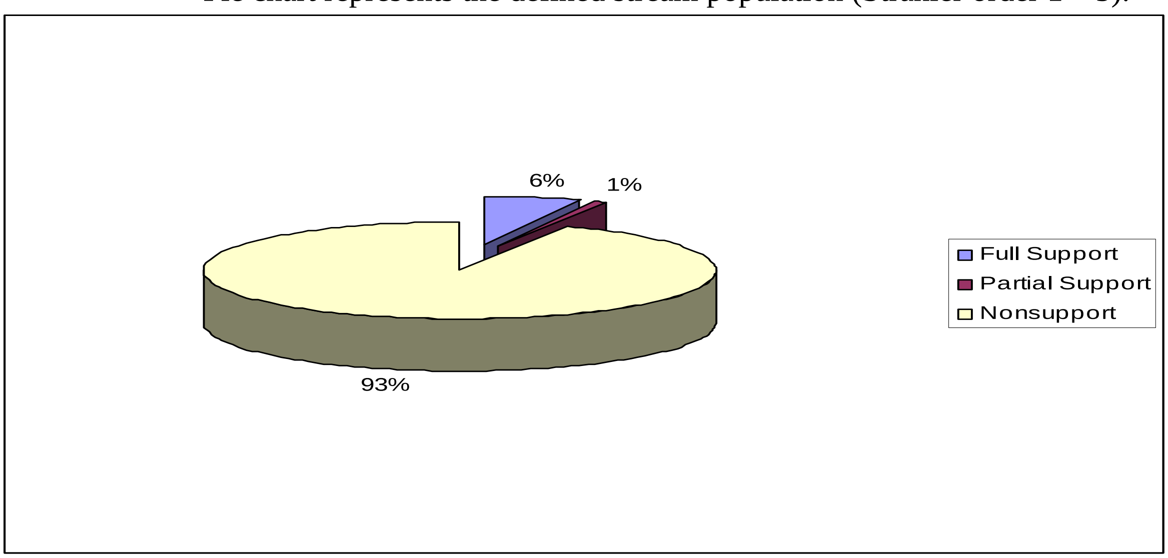
Probability and Targeted Monitoring Compared (Aquatic Life Use). Probability and targeted monitoring results differed in this BMU (Table 3.3.2-2). Twenty-seven percent of targeted monitored streams miles are fully supporting compared to 6.1 percent per the probabilistic findings. Likewise, 73 percent of targeted stream miles were less than full support compared to 94 percent per the probabilistic data. Of important consideration with these results, the targeted monitoring data represent 1,132 stream miles, a fraction (20 percent) of the random biosurvey stream miles of 5,646. In the mix of targeted streams a proportion of RR streams, and potential exceptional streams, are monitored each cycle to confirm the current status of aquatic life use condition of those special waters. Further consideration must be given as to the criteria for the selection of streams for probability monitoring compared to targeted. An equitable number of Strahler stream order 1 and 2 streams, in addition to Strahler order 3 – 5 are selected so the study is representative to all wadeable streams in the basin, whereas this is not the case with targeted monitoring. Smaller watersheds of low stream order show stress in biological communities to relatively smaller-scale perturbations than the large watersheds, which can often assimilate more disturbances relative to watershed size. Also, the approach to locating sample locations differs significantly between the two biological programs. The targeted stations are located in the best available stream reach

Table 3.3.2-3. Aquatic use attainment results based on the 2007 probability biosurvey of the Big Sandy-Little Sandy-Tygarts BMU (all numbers rounded to nearest integer).

Project ID	Big Sandy-Little Sandy-Tygarts Basin Management Unit
Target Population	Streams Strahler Order 1-5
Sample Frame	EPA River Reach File 3 (1:100,000 Scale)
Type of Water body	Wadeable Streams
Size of Defined Stream Population	6711 mi
Size of Non-Defined Population	314 mi
Size of Defined Sampled Population	5,646 mi
Designated Use	Aquatic Life
Attaining Full Use Support	343 mi
Not Attaining Full Use (partial support)	53 mi
Not Attaining Full Use (nonsupport)	5250 mi
Indicator	Biology (Macroinvertebrates)
Assessment Date	2009
Precision	90% at 95% Confidence Level

for most monitoring programs; whereas the probabilistic approach is designed to randomly detect the prevailing habitat and associated biological conditions in a defined stream population (like Strahler order watersheds) at randomly select locations throughout the study area (BMU) without regard to prevailing in-stream habitat (Section 3.1.4). Results of the probability-based survey are depicted in Figure 3.3.2-1.

Figure 3.3.2-1. Proportions of aquatic life use support level in the Big Sandy-Little Sandy-Tygarts basin management unit based on probability biosurveys. Pie chart represents the defined stream population (Strahler order 1 – 5).



Kentucky River Basin Management Unit. The Kentucky River mainstem is about 259 miles in length and is formed by the confluence of the North, Middle and South forks near the city of Beattyville, Lee County. Its meandering flow takes it in a generally northwest direction where it empties into the Ohio River near the city of Carrollton, Carroll County. The river drains an area of about 7,000 square miles and provides drinking water to more than 700,000 Kentuckians, including the state's second largest city, Lexington. The river has 14 locks along its course; however, all locks above lock 4 at Frankfort are closed preventing navigation upstream. These locks were closed and reinforced to maintain the pools used for drinking water supply. The principle tributaries of the Kentucky River are the Red River and Dix River. The Red River discharges into the Kentucky River near the town of Trapp. The Red River is designated an Outstanding National Resource Water and OSRW for much of its length. This is a scenic river and most of it flows through the Daniel Boone National Forest, including the Red River Gorge Geologic Area. The Dix River rises in southwest Rockcastle County. It flows north-northwest for about 79 miles where it discharges into the Kentucky River near High Bridge. The lower approximately 30 miles of the Dix River is impounded forming Herrington Lake, a private reservoir near Burgin. Principal cities in this basin are Danville, Lexington, Frankfort and Richmond.

The North Fork Kentucky River is one of three forks in the headwaters of the Kentucky River basin that forms the mainstem. The North Fork rises in Letcher County on the north side of Pine Mountain and flows northwest for approximately 167 miles. The watershed is mountainous and is an area of significant coal deposits. Carr Fork is a significant tributary in the upper watershed. The USACE created Carr Fork Reservoir for flood control; this lake is about 710 acres. Another significant tributary is the Troublesome Creek, a 6^{th} order stream that joins the North Fork near Haddix, Breathitt County. Finally, the North Fork Kentucky River receives the Middle Fork Kentucky River just several miles upstream of the confluence of the South Fork Kentucky River, forming the mainstem Kentucky River. Principal cities in this watershed are Hazard, Jackson and Whitesburg.

The Middle Fork Kentucky River rises in Harlan and Leslie counties on the north side of Pine Mountain. This stream flows north-northwestward for approximately 100 miles before discharging into the North Fork. The two principal tributaries of this stream are Cutshin Creek and Greasy Creek, both in the upper portion of the basin, upstream of Buckhorn Lake. This reservoir is a USACE project created to lessen flood potential in this area of narrow, steep valleys that are prone to such events. The reservoir is slightly over 1,200 acres and is located 30 miles west of Hazard. This watershed is a significant coal producing area. The principal city of this basin is Hyden.

The South Fork Kentucky River is formed by the confluence of the Redbird River and Goose Creek near the town of Oneida. The mainstem of the South Fork Kentucky River flows generally northward to its confluence with the North Fork near Beattyville. This stream is free flowing with no impoundments. The region is mountainous with much of the watershed within the proclamation boundary of the Daniel Boone National Forest, Redbird Purchase Unit. While there are coal deposits in this watershed, mining is limited compared to the watersheds of the other two forks. Principal cities of this watershed are Booneville and Manchester.

While the upper basin of the Kentucky River BMU (area of the three forks of the Kentucky River) is characterized as a region of rugged plateau and mountainous, the lower basin drains the rolling hills of the central Kentucky bluegrass region. Most of the upper basin drains the Dissected Appalachian Plateau, ecoregion 69d. This region consists of shale, sandstone, siltstone and coal of Pennsylvanian age. The natural vegetation cover is mixed mesophytic forest, although mixed oak forests occur on drier upper and south facing slopes. The upper mainstem of the Kentucky River from Beattyville to near Irvin drains parts of ecoregion 70f and 70g, the Ohio/Kentucky Carboniferous Plateau and Northern Forested Plateau Escarpment, respectively. This area is slightly less rugged and elevations lower than the adjacent ecoregion 69d. The streams of this ecoregion, and 69d, are typically cool with moderate to high gradients and riffles composed of boulders and cobble. Streams in these ecoregions are naturally low in nutrients; those in ecoregion 69d are the lower of the two. Logging, coal mining, gas and oil wells are major land uses with some agriculture occurring along the stream valleys where forest can be converted to pastureland. Agriculture is limited in the naturally nutrient-poor soils of ecoregions 69 and 70. The forest type potential is mixed mesophytic compared to the primarily oak-hickory forests to the west in Ecoregion 71.

The lower basin, including most of the mainstem of the Kentucky River, drains portions of the Interior Plateau, Ecoregion 71. Geologically, this region is underlain with Mississippian-age through Ordovician-age limestone, sandstone, siltstone and shale. This region has significant karst and much of the main streams are deeply incised. The Kentucky River is the principal example of these incised streams forming deep gorges. The level IV ecoregions in this watershed are 71d, Outer Bluegrass, 71k, Hills of the Bluegrass and 71l, Inner Bluegrass. The outer bluegrass is rolling to hilly, but less variable than the hillier Hills of the Bluegrass ecoregion. Pasture and cropland are the most common land uses in this ecoregion that once naturally supported open savanna of white oaks and dense stands of cane along stream courses. Streams are moderate to high gradient with riffles composed of cobble, boulder or bedrock. The Hills of the Bluegrass ecoregion is underlain by Ordovician calcareous shale, siltstone and limestone and soils are high in phosphorus content, but lower than Outer Bluegrass and Inner Bluegrass. This area is steeper than the Outer or Inner Bluegrass and soils are droughty and prone to greater erosion potential. The natural vegetative type is mixed forest of white oak, hickory and cedar. Land use is primarily in hay production, pasture and woodland.

Causes, Sources and Land Uses. The top five causes (pollutants) and their sources in this BMU are identified Table 3.3.2-1. Pathogens (bacteria indicators) are the leading cause of DU impairment in the Kentucky River BMU. This cause affects 748 assessed stream miles, or 54 percent of those miles assessed for PCR and SCR (the two DUs where this pollutant-indicator applies). The leading cause affecting the most stream miles (578) assessed for aquatic life use in this BMU is sedimentation/siltation. The third and fifth leading pollutants are related, total dissolved solids and specific conductance, affecting 711 miles of streams. Nutrients/eutrophication biological indicators are the third leading cause of impairment in the BMU impacting 228 miles (Table 3.3.2-1). Sedimentation ties-in with each of the other causes because many pollutants adsorb or absorb to clay particles readily and carry those pollutants in the aquatic system through erosion and runoff. When geologic strata are fractured through intensive land uses this exposes those geologic layers resulting in leaching of chemicals that were once bound in the geologic strata. This leachate is composed of salts (e.g. sodium, chloride and sulfate) and metals (e.g. iron, manganese and mercury) that enter the streams either through surface runoff, rainwater infiltration or groundwater flowing over the fractured geologic layers. A key habitat component, riparian vegetative zones, is identified as the leading source of causes identified in this BMU. This is a critical component of aquatic ecosystems maintaining the physicochemical and biological health. This zone of vegetation stabilizes stream banks as the rooted vegetation (primarily woody species) resists erosion of the soil. Additionally, this vegetation impedes and traps (filters) sediment runoff from surrounding land, and excess nutrients are utilized by this vegetation reducing the quantity of nutrients that may enter the water body. Municipal point source discharges are the second leading source of identified pollutants, along with agriculture and surface mining (Table 3.3.2-1). Agriculture is the fourth leading source of causes in the BMU and directly links to the causes sedimentation and pathogens. The lower basin drains an area that is a mosaic of urban and rural (agricultural) land uses, contrasted by the mountainous, coalfield in the upper basin. Those land uses are reflected in the identified causes and sources in this BMU.

Targeted Monitoring: Aquatic Life Use. Data analysis results from the targeted monitoring programs indicate 1,101 miles (57 percent) fully supporting this DU out of 1,945 miles (Table 3.3.2-4). Of the approximately 43 percent of stream miles not supporting this DU, 30 percent (578 miles) are partially supporting and 14 percent (266 miles). The aquatic life DU has the most assessed stream miles of any of the other DUs, both in this and other BMUs. This DU is sensitive to many possible perturbations due to the many physical, chemical and interdependent biological functions that require a relatively narrow range of variability (relative stasis) to maintain a healthy aquatic ecosystem. The majority of miles assessed for this DU were monitored using biological community function and integrity as the key indicator(s) (typically macroinvertebrates or fishes) along with water quality grab samples for conventional pollutants at time of biosurvey. However, miles associated with boatable waters and long-term ambient water quality stations were monitored for water quality using both conventional and toxic pollutants as indicators of level of DU support. The percent of stream miles assessed that fully support this DU increased by 13 percent since the last focused monitoring (KDOW, 2006b); however, given many streams in this BMU were assessed out of the BMU cycle in the 2008 305(b) reporting cycle the relative change about zero compared to the last Integrated Report (Figure 3.3.1-2) (KDOW, 2008).

There are five candidate exceptional stream segments identified in the Kentucky River BMU based on biological integrity (Table 3.1.4-2). These segments total 24.25 stream miles and will be submitted for inclusion in the exceptional category (401 KAR 10:030) in the next triennial review. Streams in this category have among the best biological integrity based on criteria associated with habitat, water quality, and biological community diversity and composition. The first BMU cycle strategy included a focused effort to identify as many RR or exceptional streams as possible as the KDOW was refining its multimetric biological indices. With each subsequent cycle it is likely few exceptional streams will be identified given that level of focus. However, through random monitoring and special studies it is anticipated exceptional waters will continue to be identified.

Table 3.3.2-4. Results for aquatic life use in the Kentucky River BMU based on targeted monitoring (Note: percentages rounded to nearest integer).

	Full Support Target	Partial Support Target	Nonsupport Target
Miles	1,101	578	266
Percent	57	30	14

Targeted Monitoring: Fish Tissue. Fish tissue samples were analyzed for mercury, PCB, chlordane, DDT and toxaphene contamination in this BMU. Of the approximately 308 stream miles assessed, 153 miles (50 percent) fully support this use (Table 3.3.1-5). One hundred forty-four miles (47 percent) partially support and 11 miles (4 percent) are not supporting fish consumption. In this BMU, mercury in fish tissue is the pollutant of concern. As a percent of assessed stream miles, those stream miles fully supporting this use decreased by 24 percent since the last basin monitoring cycle (KDOW, 2006b).

Targeted Monitoring: Primary (Swimming) Contact Recreation. Water column samples were analyzed for the presence and quantity of *E. coli* to assess this use. There were 939 stream miles assessed in this BMU; 23 percent (219 miles) of those stream miles fully support that use (Figure 3.3.1-1 and Table 3.3.1-5). Pathogens (*E. coli* is an indicator) are the most prevalent cause impairing stream miles in this BMU (Table 3.3.2-1). Since the last intensive BMU monitoring cycle, the percentage of assessed streams fully supporting this DU decreased by 31 percent (KDOW, 2006b). While the number of stream miles assessed less than full support have increased, this percentage is small (<1 percent) (Figure 3.3.1-2). The North Fork Kentucky River has a swimming advisory posted for the stream from Chavies to the headwaters. The North Fork watershed is mountainous and has limited areas to housing and other related infrastructure. Given much of the usable land for building is in the stream valleys those soils are often poorly drained bottomlands that are not suitable to on-site waste disposal, or septic tanks and lateral lines. Additionally, areas to seat wastewater treatment facilities are restricted and often are constructed in the floodplain. This can lead to problems associated with flooding.

Targeted Monitoring: Secondary Contact Recreation. This DU has both fecal coliform (pathogen indicator) and pH criteria in water quality standards. There are about 444 miles assessed for this designated use in the BMU and nearly 90 percent are fully supporting (Table 3.3.1-5).

Targeted Monitoring: Domestic Water Supply. Of the 142 stream miles assessed for domestic water supply all miles are fully supporting (Table 3.3.1-5). This level of support remained unchanged since the last reporting cycle (KDOW, 2006b).

Integrated Surfacewater and Groundwater Assessment of Large Karst Springs in the Kentucky River BMU. This project was a continuation of that stated in the Green – Tradewater River BMU in 2006b. The purpose of this project was to assess the nonpoint source (NPS) impacts to groundwater, and to integrate ground- and surface water quality information with biological data to better define the nexus between the two systems. Groundwater and surfacewater are conjunctive systems, no where more directly so than in karst terrain. This monitoring strategy provides needed information on spring conditions relative to NPS impacts to both the surfacewater and groundwater programs.

To assess surfacewater that had a direct nexus with groundwater, two karst springs with significant discharge were monitored monthly for one year (Table 3.3.2-5). Site selection was based on identifying large, well-developed karst basins where perennial surface streams are limited, and where large discrete springs discharge the drainage of these basins to surface waters. Other site selection criteria include accessibility and landowner cooperation. Additional considerations include whether these sites would provide new data, will support other programs (e. g. 305(b), TMDL, wellhead protection, etc.), and whether land use in the basins represents nonpoint source pollutants of concern. The drainage areas for most karst basins were previously identified.

Table 3.3.2-5. Springs monitored in the Kentucky River basin management unit during water-year 2008.

Spring Name	County	Karst Basin Area (mi^2)	Base Flow Discharge (ft^3/s)
Cedar Cove	Franklin and Woodford	5.4	0.47
Royal	Scott	23.4	2.8

Table 3.3.2-6 show the uses assessed statewide for springs and the miles from those assessments in the proper use support-level. The major cause (pollutants) affecting warmwater aquatic habitat for assessed springs in the Kentucky River BMU is total nitrogen and phosphorus. Drinking water is obtained from Royal Spring and information indicates full support for that DU.

Table 3.3.2-6. Individual designated use support summary for springs in Kentucky, 2010.

Designated Use	Total in State (miles)	Total Assessed (miles)	Supporting Water Quality Standards (miles)	Not Supporting Water Quality Standards (miles)	Size of Resource Not Assessed (miles)
Warm Water Aquatic Habitat	11.5	11.5	5.35	6.15	0.0
Fish Consumption	11.5	0	0	0	11.5
Primary Contact Recreation	11.5	9.95	0	9.95	1.55
Secondary Contact Recreation	11.5	0	0	0	11.5
Domestic Water Supply	0.7	0.7	0.7	0	0

3.3.3 Ohio River

ORSANCO assessed uses of the 664 miles of the Ohio River mainstem that forms Kentucky's northern border and a summary of those findings are presented in the ORSANCO 2010 305(b) report (in draft as this is written). No reaches of the Ohio River fully support all assessed uses. Drinking water and aquatic life (warmwater aquatic habitat) DUs are fully supported in all river miles. Thirty-one segments along this reach of river are not fully supporting primary contact recreation use due to pathogens. Of the 664 miles that form Kentucky's northern border, those 31 segments represent 385.5 miles (58 percent) that did not fully support the use. This limited support was often a result of combined sewer overflows (CSOs) during and immediately following rainfall events in and downstream of urban areas. All miles of the Ohio River partially supported the fish consumption use because of limited fish consumption advisories for PCB, dioxin and mercury (but not all miles were less than full support due to mercury).

3.3.4 Assessment Results of Lakes and Reservoirs: Focus on Big Sandy-Little Sandy-Tygarts and Kentucky River BMUs

Introduction. Since the initiation of the rotating basin approach in 1998, the commonwealth's significant publicly-owned lakes and reservoirs are monitored over a five year cycle instead of the previous seven to eight year cycle. During this two year reporting period, 37 lakes and reservoirs were monitored (maps located in Appendix C) in the two BMUs of focus.

Designated uses in lakes consist of Warmwater Aquatic Habitat (WAH) (sometimes in conjunction with Coldwater Aquatic Habitat (CAH) in lakes with a two-story fishery) and Primary and Secondary Contact Recreation (PCR and SCR). Many reservoirs also have a Domestic Water Supply (DWS) use. Indicators monitored or sampled for analysis to determine lake or reservoir health (water quality) may be found in Table 3.2.1-1. Assessment for fish consumption was made at lakes where fish tissue contaminant data existed.

3.3.4.1 Assessment of Trophic State and Use Support.

Trophic state is assessed in lakes using the Carlson Trophic State Index (TSI) for chlorophyll *a*. This method is convenient because it allows lakes to be ranked numerically according to increasing trophic state, and it also provides for a distinction between oligotrophic, mesotrophic, eutrophic, and hyper-eutrophic lakes. The growing season (April – October) average TSI value is used to rank each lake. Areas of lakes that exhibit trophic gradients or embayment differences often are analyzed separately. Use support in lakes is determined by criteria listed in Table 3.2.1-3.

3.3.4.2 Results

Statewide. Table 3.3.4.2-1 through 3.3.4.2-9 present statewide summaries of use support, impairments (causes) and sources of impairments of reservoirs, ponds and lakes in the state. The water quality assessment of lakes includes about 98 percent of the publicly-owned lakes, ponds and reservoirs acreage of Kentucky for at least one use (Table 3.3.4.2-1). Eighty-six of 129 lakes, ponds and reservoirs (67 percent) fully support their uses, and 43 (34 percent) do not support one or more uses. However, of those 86 water bodies that support all assessed DUs, two are currently in Category 2B/5 as they have been submitted to USEPA for delisting based on current data analysis. On an acreage basis per assessed designated use, approximately 88 percent (793,531 acres) of the 899,923 acres fully support assessed designated uses, and approximately 12 percent (106,392 acres designated use-acres) do not support one or more DUs (Table 3.3.4.2-1 – 3).

This compares to 74 lakes fully supporting assessed DUs, or 58 percent, reported in the 2008 IR. While there can be no statistical significance applied to this, it is a positive uptick of 12 lakes or reservoirs (15,423 acres) that are currently supporting assessed designated use-acres.

Table 3.3.4.2-1. Individual use support summary (in acres) for Kentucky reservoirs.

Use	Total Size	Size Assessed	Size Fully Supporting	Size Fully Supporting but Threatened	Size Not Supporting	Size Not Assessed
Warm Water Aquatic Habitat	219,186	217,486	208,929	0	8,557	1,700
Cold Water Aquatic Habitat	2,519	2,519	2,519	0	0	0
Fish Consumption	219,186	205,567	122,244	0	83,323	13,620
Primary Contact Recreation Water	219,186	62,149	62,149	0	0	157,037
Secondary Contact Recreation Water	219,186	217,047	204,646	0	12,401	2,139
Domestic Water Supply	195,751	194,226	193,597	0	629	1,525

The list of causes and sources for reservoirs and lakes is presented in Tables 3.3.4.2-7 – 9. Methylmercury (most frequent) and mercury in fish tissue were the two most frequently identified pollutants, accounting for 84,964 acres of reservoirs, lakes and ponds (Table 3.3.4.4 – 6). The third most frequently encountered pollutant affecting lake or reservoir acreage is PCB in fish tissue (Table 3.3.4.2-4). Nutrients/eutrophication biological indicators and pH were the fourth and fifth most frequent impairments affecting 9,290 and 8,270 acres respectively. Likely sources of these pollutants are identified in Tables 3.3.4.2-7 – 9. Given mercury is the most common pollutant the source "atmospheric deposition – toxics" is associated with 58,556 acres of lakes and reservoirs. The second most commonly identified source of pollutants is "source unknown" associated with 44,167 acres. The frequency of this unidentified source(s) is due to the pollutant mercury associated with these water bodies. This pollutant enters aquatic environments from multiple pathways. Ponds also had "source unknown" as the

Table 3.3.4.2-2. Individual use support summary for Kentucky lakes.

Use	Total Size	Size Assessed	Size Fully Supporting	Size Fully Supporting but Threatened	Size Not Supporting	Size Not Assessed
Warm Water Aquatic Habitat	571	571	254	0	36	281
Fish Consumption	571	63	0	0	63	508
Primary Contact Recreation Water	571	0	0	0	0	571
Secondary Contact Recreation Water	571	290	290	0	0	281

most common source (Table 3.3.4.2-9) due to methylmercury. A fish consumption advisory for PCBs is in place for two reservoirs of considerable size (Fishtrap and Green River lakes), resulting in a high percentage of lake acres impacted by priority organics (Table 3.3.4.2-4). Municipal point sources, agricultural-related sources and septic systems, were the most commonly identified sources related to nutrient impairments (Tables 3.3.4.2-7 and 8); "upstream sources" was the third most frequently reported source associated with inflow issues in upper watersheds. pH was the fourth most frequent "pollutant" with respect to reservoir and lake impairment. The listing of pH for exceeding water quality standards affects CAH, WAH and PCR and SCR uses (Table 3.3.4.2-4). Dissolved oxygen was displaced to sixth most frequent "pollutant" in these waters (Table 3.3.2-4 and 5). A related problem was the pollution-indicator, dissolved gas super-saturation, which often occurs with excess nutrients during daylight hours as photosynthesis from excess algae occurs. Naturally shallow lake or reservoir basins or those that have excessive sedimentation resulting in shallow basins often provide suitable habitat for the proliferation of nuisance aquatic plants that impair secondary contact recreation and account for the fifth highest cause of use nonsupport. Natural conditions such as manganese releases from anoxic hypolimnetic water (deepest water-layer in

Table 3.3.4.2-3. Individual use support summary for Kentucky ponds.

Use	Total Size	Size Assessed	Size Fully Supporting	Size Fully Supporting but Threatened	Size Not Supporting	Size Not Assessed
Warm Water Aquatic Habitat	4.8	0	0	0.0		4.8
Fish Consumption	4.8	4.8	3.3	0.0	1.5	0.0
Primary Contact Recreation Water	4.8	0.0	0.0	0.0	0.0	4.8
Secondary Contact Recreation Water	4.8	0.0	0.0	0.0	0.0	4.8

stratified reservoirs and lakes) and nutrients (resulting in high production of aquatic macrophytes and plankton) in runoff from relatively undisturbed watersheds affect domestic water supply and secondary contact uses, respectively. Suspended solids from surface mining activities decreased in severity as a source from previous years but continue to be problematic as the eighth most reported pollutant. This pollutant directly affects secondary contact recreation use in reservoirs.

Trophic state was determined for those acres of reservoirs and lakes for the four possible categories of TSI. For this presentation of data, a distinction between lakes (natural water bodies), ponds and reservoirs (manmade lakes or impoundments) is made. Tables 3.3.4.2-10 and 11 present these results.

Table 3.3.4.2-4. Number of acres of Kentucky reservoirs, lakes and ponds affected by individual causes.

Cause	Total Size
Methylmercury	63,170.50
Mercury in Fish Tissue	21,729.10
PCB in Fish Tissue	9,310
Nutrient/Eutrophication Biological Indicators	9,254
pH	8,270
Dissolved Oxygen	5,479
Organic Enrichment (Sewage) Biological Indicators	4,660
Total Suspended Solids (TSS)	3,040
Sedimentation/Siltation	2,318
Aquatic plants (macrophytes)	607
Chlorophyll-a	409
Manganese	317
Dissolved Oxygen Saturation	64
Taste and Odor	43
Cause Unknown	43

Table 3.3.4.2-5. Number of acres of Kentucky lakes (natural) affected by causes.

Cause	Total Size
Dissolved Oxygen	36
Nutrient/Eutrophication Biological Indicators	36
Methylmercury	36
Mercury in fish tissue	27

Table 3.3.4.2-6. Number of acres of Kentucky ponds affected by cause.

Cause	Total Size
Methylmercury	1.5

Table 3.3.4.2-7. Sources of causes (pollutants and pollution) to Kentucky reservoirs.

Source	Total Size
Atmospheric Deposition - Toxics	58,520
Source Unknown	44,138.10
Upstream Source	17,242
Municipal Point Source Discharges	12,258
Agriculture	10,483
Industrial Point Source Discharge	8,210
Surface Mining	4,270
On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)	7,660
Livestock (Grazing or Feeding Operations)	6,881
Internal Nutrient Recycling	6,487
Non-irrigated Crop Production	6,387
Surface Mining	4,980
Natural Sources	2,250
Rural (Residential Areas)	951
Unspecified Urban Stormwater	340
Septage Disposal	294
Crop Production (Crop Land or Dry Land)	274
Littoral/shore Area Modifications (Non-riverine)	243
Golf Courses	156
Shallow Lake/Reservoir Basin	150
Contaminated Sediments	18

Table 3.3.4.2-8. Sources of causes (pollutant) to Kentucky lakes (natural).

Source	Total Size
Internal Nutrient Recycling	72
Non-irrigated crop production	72
Rural (residential areas)	72
Shallow Lake/Reservoir Basin	72
Atmospheric Deposition – Toxics	36
Source Unknown	27

Table 3.3.4.2-9. Source of cause (pollutant) to Kentucky ponds.

Source	Total Size
Source Unknown	1.5

Table 3.3.4.2-10. Trophic state of reservoirs in Kentucky

Trophic State	Number of Reservoirs	Total Size
Oligotrophic	12	63,777.40
Mesotrophic	28	25,950
Eutrophic	50	124,689
Hypereutrophic	2	3,367
Dystrophic	0	0

Table 3.3.4.2-11. Trophic state of lakes in Kentucky

Trophic Status	Number of Lakes	Total Size
Oligotrophic	0	0
Mesotrophic	0	0
Eutrophic	9	308
Hypereutrophic	3	263

Big Sandy-Little Sandy-Tygarts BMU. Trophic state is calculated for all lakes and reservoirs that included monitoring for aquatic life use. Generally that is all reservoirs that are part of the clean lakes program. Many water bodies that are domestic water supply for communities have restricted access preventing monitoring for aquatic life use. Of the fully supporting reservoirs, two have decreasing trophic levels and one is increasing (Table 3.3.4.2-12). The one that shows an increasing trend is an oligotrophic reservoir (Greenbo Lake) in the Little Sandy River basin. Of the four reservoirs that are impaired for one or more DUs, two have decreasing trends and two are stable (Table 3.3.4.2-13); all are fully supporting aquatic life. Of the four reservoirs in this BMU not fully supporting all assessed DUs, two are impaired for fish consumption due to mercury in fish tissue (Table 3.3.4.2-13); Fishtrap Lake is not supporting this use due to PCBs in fish tissue. Dewey Lake is not fully supporting SCR due to total suspended solids, a result of excess erosion in the watershed.

Kentucky River BMU. Many small reservoirs (13) occur in this BMU along with two USACE reservoirs and Herrington Lake, a privately owned reservoir on the Dix River in central Kentucky. Ten additional reservoirs were assessed for DWS use only using monthly operating reports (MOR) to make those evaluations. Of the five reservoirs assessed for aquatic life use that are fully supporting all assessed DUs, three indicate decreasing tropic level and two are stable (Table 3.3.4.2-14). Data were not collected on one reservoir (General Butler State Park Lake) in 2008 due to access issues; the assessment from the previous BMU cycle was carried forward. Of the 10 reservoirs having one or more assessed DU not fully supporting, six indicate stable trophic state conditions, and three are decreasing (Table 3.3.4.2-15). Panbowl Lake in the North Fork Kentucky River basin continues to indicate eurtrophic conditions; however, current data indicate this is decreasing. This is positive result and current monitored data indicate it is fully supporting aquatic life use and a delisting will be requested for this reservoir. It was listed for nutrient levels due to septage disposal and internal nutrient recycling. Buckhorn Lake is currently listed as not supporting SCR due to sedimentation/siltation and total suspended solids, but current assessment indicates it is supporting this DU and it will be requested for delisting through EPA, also. Of the reservoirs in this BMU not supporting aquatic life DU, nutrients and associated dissolved oxygen or chlorophyll *a* are pollutants causing the impairment (Table 3.3.4.2-15). Excess nutrients (phosphorus and nitrogen) may result in the depletion of adequate DO in the water column through excess primary (phytoplankton) production; conversely, the resultant excess algal growth will result in super-saturation of DO during photosynthesis. Most of these reservoirs impaired for aquatic life are in the lower basin, associated with soils and parent material with relatively high concentrations of phosphorus in addition to cultural eutrophication in the populated areas.

Table 3.3.4.2-12. Big Sandy-Little Sandy-Tygarts Creek basin management unit reservoirs that fully support assessed use(s).

Lake/ Reservoir	Acres	County	Trophic State	Eutro- phication Trend	Uses
Curtis Crum Reservoir	15.6	Martin	___	___	WAH
Elkhorn Lake	16.3	Letcher	N/A	N/A	DWS
Greenbo Lake	181	Greenup	Oligotrophic	Increasing	C/WAH SCR
Martin County Reservoir	22	Martin	N/A	N/A	DWS
Smokey Valley Lake	36	Carter	Oligotrophic	Decreasing	WAH SCR
Yatesville Reservoir	2,242	Lawrence	Mesotrophic	Decreasing	WAH SCR

Table 3.3.4.2-13. Big Sandy-Little Sandy-Tygarts Creek basin management unit reservoirs not fully supporting assessed use(s).

Lake/Reservoir	Acres	County	Trophic State	Trend	Impaired Use	Cause (pollutant)	Source
Dewey Lake	1,100	Floyd	Oligotrophic	Decreasing	SCR	Total Suspended Solids	Surface Mining, Upstream Source
Fishtrap Lake	1141	Pike	Mesotrophic	Stable	FC	PCB in Fish Tissue	Upstream Source
Grayson Lake	1,512	Carter	Mesotrophic	Stable	FC	Methylmercury, Mercury in Fish Tissue	Source Unknown
Paintsville Reservoir	1,139	Johnson	Oligotrophic	Decreasing	FC	Mercury in Fish Tissue	Source Unknown

Table 3.3.4.2-14. Kentucky River basin management unit reservoirs that fully support assessed uses.

Reservoir/Lake	Acres	County	Trophic State	Eutrophication Trend	Uses
Beech Fork Reservoir	53	Powell	N/A	N/A	DWS
Bert Combs Lake	36	Clay	Oligotrophic	Decreasing	WAH, FC, SCR, DWS
Buck Creek Lake	25	Lincoln	N/A	N/A	DWS
Buckhorn Lake	1,230	Perry	Mesotrophic	Stable	WAH, SCR, DWS
Campton City Lake	26	Wolfe	N/A	N/A	DWS
Corinth Lake	139	Grant	Eutrophic	Decreasing	WAH, FC, SCR
Cowbell Lake	16.8	Madison	N/A	N/A	DWS
Fishpond Lake	32	Letcher	Mesotrophic	Stable	C/WAH SCR
Game Farm Lake	4.6	Franklin	N/A	N/A	FC
General Butler State Park Lake	29	Carroll	Eutrophic	N/A[1]	WAH SCR
Lake Ellerslie (Reservoir No.1)	19	Fayette	N/A	N/A	DWS
Lake Vega	110	Madison	N/A	N/A	DWS
Lexington Reservoir No. 4 (Jacobson Reservoir)	271	Fayette	N/A	N/A	DWS

Table 3.3.4.2-14 (cont.). Kentucky River basin management unit reservoirs that fully support assessed uses.

Lower Thomas Lake	7	Owen	N/A	N/A	DWS
Panbowl Lake	98	Breathitt	Mesotrophic	Decreasing	WAH, SCR
Owsley Fork Lake	155	Madison	N/A	N/A	DWS
Silver Creek Lake (lower lake)	18	Madison	N/A	N/A	DWS
Silver Creek Lake (upper lake)	5.75	Madison	N/A	N/A	DWS
Winchester Reservoir	102	Clark	N/A	N/A	DWS

[1]Due to access reservoir was not monitored in 2008.

Table 3.3.4.2-15. Kentucky River basin management unit reservoirs partially supporting assessed uses.

Reservoir/Lake	Acres	County	Trophic State	Trophic Trend	Use Impaired	Cause of Impairment	Source of Impairment
Boltz Lake	92	Grant	Eutrophic	N/A	WAH	Dissolved oxygen, nutrient/eutrophication biological indicators	Agriculture, unspecified urban stormwater
Bullock Pen Lake	134	Grant	Eutrophic	Stable	WAH	Dissolved oxygen, nutrient/eutrophication biological indicators	On-site treatment system (septic systems and similar decentralized systems), agriculture
Carr Fork Reservoir	710	Knott	Mesotrophic	Decreasing	FC	Mercury in fish tissue	Source unknown, surface mining
Cedar Creek Lake	784	Lincoln	Eutrophic	Stable	FC	Mercury in fish tissue	Source unknown
Elmer Davis Lake	149	Owen	Eutrophic	Stable	WAH	Dissolved oxygen, nutrient/eutrophication biological indicators	Agriculture

Table 3.3.4.2-15 (cont.). Kentucky River basin management unit reservoirs partially supporting assessed uses.

Reservoir/Lake	Acres	County	Trophic State	Trophic Trend	Use Impaired	Cause of Impairment	Source of Impairment
Herrington Lake	2,940	Garrard	Mesotrophic	Decreasing	WAH FC	Nutrient/eutrophication biological indicators, organic enrichment (sewage) biological indicators mercury in fish tissue	Internal nutrient recycling, municipal point source discharges, non-irrigated crop production, on-site treatment systems (septic systems and similar decentralized systems), source unknown
Stanford Reservoir	43	Lincoln	Mesotrophic	Stable	DWS	Taste and odor, cause unknown	Source unknown

Table 3.3.4.2-15 (cont.). Kentucky River basin management unit reservoirs partially supporting assessed uses.

Lake Reba	78	Madison	Eutrophic	Stable	WAH	Dissolved oxygen, nutrient/eutrophication biological indicators	Golf courses, unspecified urban stormwater
Wilgreen Lake	169	Madison	Eutrophic	Decreasing	WAH SCR	Chlorophyll-a, dissolved oxygen, nutrient/eutrophication biological indicators	Non-irrigated crop production, on-site treatment systems (septic systems and similar decentralized systems), livestock (grazing or feeding operations)

3.4 Water Quality Trend Analysis

In 2005 an USEPA §319(h) grant was awarded to USGS through the KDOW to undertake a study to detect potential trends in water quality from select long-term ambient water quality stations located throughout the commonwealth (Crain and Martin, 2009). A trend in water quality is a statistically significant change over time. This information is particularly important for resource managers to understand what monitoring, BMPs, remediation, water quality criteria or other tools are effective or warranted in management of water resources. Effective, informed decisions made related to water quality permits issued under the national pollutant discharge elimination system (NPDES) program can benefit from understanding particular pollutant trends. The following is a summary of the study findings.

Trends in water quality for 15 variables were analyzed at 37 stations (Table 3.4-1 and Figure 3.4-1) with drainage basins of 62 to 6,431 square miles. Physical properties, (pH, temperature, DO, specific conductance, hardness and suspended solids) major ions (sulfate and chloride), selected metals (iron, manganese), nutrients and fecal coliform were compiled from the ambient water quality network. The period of record considered was 1979 – 2004. Field measurements were collected 12 times per year (monthly) for most stations from 1979 to 1998. In 1998 monitoring frequency went to six times per year (every two months) every four of five years (stations at one of five BMUs are monitored monthly one of five years). This occurred as KDOW began a five year rotating BMU monitoring strategy and added stations to the long-term water quality network, bringing the number to 70. Thus, the new 33 stations were not included in this analysis due to lack of data over time.

Physical properties. Analysis results indicated no trends related to water temperature occurred at 36 of 37 stations. The station at South Fork Cumberland River (PRI008) had an increasing trend in temperature (p-value= 0.04).

Specific conductance increased at 13 stations (PRI002, 003, 009, 012, 013, 014, 017, 020, 022, 025, 027 034 and 064), with most in the eastern one-half of the state, and decreased at one station (South Fork Cumberland River (PRI008)). The remaining 23 stations had no change in specific conductance.

The pH criterion in Kentucky is a range between 6.0 to 9.0 standard units. This water quality variable is a useful measure (of hydrogen-ion activity) and has a major affect on the degree of toxicity and solubility of many compounds, metals in particular. pH can also have

Table 3.4-1. Station information for selected Kentucky ambient water-quality monitoring network stations for trend analysis.

Kentucky Division of Water Station Name	KDOW Station Number	Drainage Area (mi^2)	Latitude (decimal degrees)	Longitude (decimal degrees)	Major Drainage Basin
Tug Fork at Kermit, WV	PRI002	1,280	37.8378	-82.4097	Big Sandy
Levisa Fork near Pikeville	PRI006	1,238	37.4642	-82.5258	Big Sandy
Levisa Fork near Louisa	PRI064	2,326	38.0806	-82.6003	Big Sandy
Tygarts Creek at Load	PRI048	242	38.5994	-82.9528	Tygarts
Little Sandy at Argillite	PRI049	522	38.4906	-82.8342	Little Sandy
Kinniconick Creek near Tannery	PRI063	175	38.5744	-83.1881	Ohio River
South Fork Licking River at Morgan	PRI059	839	38.6033	-84.4008	Licking
North Fork Licking River at Milford	PRI060	290	38.5972	-84.1556	Licking
Licking River at Claysville	PRI061	1,993	38.5206	-84.1833	Licking
Licking River at West Liberty	PRI062	327	37.9147	-83.2619	Licking
Eagle Creek at Glencoe	PRI022	437	38.7061	-84.8256	Kentucky
Kentucky River at Frankfort (Lock 4)	PRI024	5,412	38.2128	-84.8725	Kentucky
North Fork Kentucky River at Jackson	PRI031	1,101	37.5511	-83.3844	Kentucky
Middle Fork Kentucky River at Tallega	PRI032	537	37.5550	-83.5939	Kentucky
South Fork Kentucky River at Booneville	PRI033	722	37.4750	-83.6706	Kentucky
Beech Fork near Maud	PRI041	436	37.8328	-84.2961	Kentucky
Dix River near Danville	PRI045	318	37.6417	-84.6608	Kentucky
Red River at Clay City	PRI046	362	37.8653	-83.9333	Kentucky
Kentucky River near Trapp	PRI058	3,246	37.8467	-84.0811	Kentucky
Kentucky River near Lockport (Lock 2)	PRI066	6,180	38.4450	-84.9569	Kentucky
Kentucky River at High Bridge (Lock 7)	PRI067	5,036	37.8189	-84.7064	Kentucky
Salt River at Shepherdsville	PRI029	1,197	37.9850	-85.7175	Ohio-Salt
Salt River near Glensboro	PRI052	172	38.0022	-85.0597	Ohio-Salt
Rolling Fork near Lebanon Junction	PRI057	1,375	37.8231	-85.7481	Ohio-Salt
Cumberland River near Burkesville	PRI007	6,053	36.7461	-85.3717	Upper Cumberland
South Fork Cumberland River at Blue Heron	PRI008	954	36.6703	-84.5489	Upper Cumberland
Cumberland River at Cumberland Falls	PRI009	562	36.8356	-84.3403	Upper Cumberland

Table 3.4-1 (cont.). Station information for selected Kentucky ambient water-quality monitoring network stations for trend analysis.

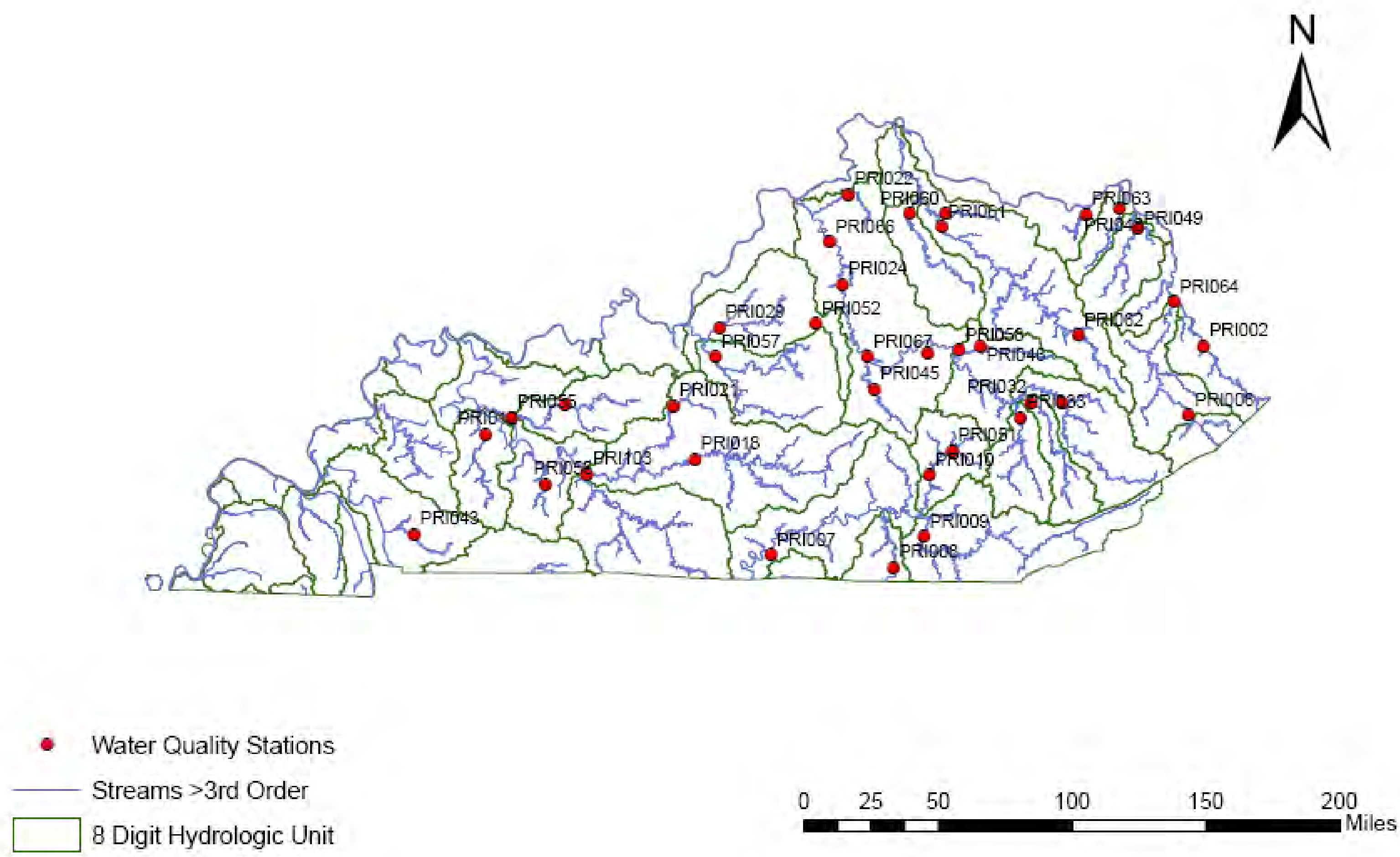
Kentucky Division of Water Station Name	KDOW Station Number	Drainage Area (mi^2)	Latitude (decimal degrees)	Longitude (decimal degrees)	Major Drainage Basin
Rockcastle River at Billows	PRI010	604	37.1714	-84.2967	Upper Cumberland
Little River near Cadiz	PRI043	244	36.8406	-87.7775	Lower Cumberland
Horse Lick Creek near Lamero	PRI051	62	37.3036	-84.1386	Upper Cumberland
Pond River near Sacramento	PRI012	523	37.3947	-87.3053	Green
Rough River near Dundee	PRI014	757	37.5628	-86.7708	Green
Green River at Munfordville	PRI018	1,673	37.2686	-85.8853	Green
Nolin River at White Mills	PRI021	357	37.5550	-86.0311	Green
Green River near Island	PRI055	6,431	37.4842	-87.1336	Green
Mud River near Gus	PRI056	268	37.1233	-86.9006	Green
Green River near Woodbury	PRI103	5,404	37.1833	-86.6158	Green

diurnal fluctuations as a result of photosynthesis and respiration of algae. There were 14 stations (PRI002, 006, 048, 049, 063, 032, 033, 045, 008, 009, 010, 014) primarily in the eastern-half of the commonwealth with increasing trends and one station, the Mud River (PRI056), with a decreasing trend.

Adequate dissolved oxygen is necessary in the aquatic environment for the maintenance and growth of aquatic organisms. Sources of dissolved oxygen include aeration (physical flow of streams) and photosynthesis of aquatic plants and algae. Water quality sampling generally occurs by KDOW during the day; so, trends should be considered with this in mind. Dissolved oxygen concentrations increased at 12 stations (PRI002, 006, 059, 061, 045, 046, 051, 058, 008, 010, 052 and 055). No trends were detected at the remaining 25 stations.

Hardness is generally the condition that prevents soap from dissolving, mostly as a result of calcium and magnesium. Water hardness is classified by the amount of calcium carbonate, and generally considered soft if the concentration is 0 to 60 mg/L and hard at levels above 120 mg/L. Limestone is a principal source of hardness. Hardness increased at 13 stations (PRI002, 006, 064, 063, 031, 032, 041, 046, 058, 024, 009, 021, 043), decreased at one station (PRI008) and remained unchanged at 23 stations. The decreasing station was the

Figure 3.4-1. Water quality stations included in the trend analysis.



South Fork Cumberland River, and this station had one of the lowest median concentrations of hardness (48 mg/L) of the 37 stations.

Sediment is one of the leading causes of impairment to waters in the United States and Kentucky. Excess sedimentation affects instream habitat by coating or smothering substrate and filling pools creating shallow streams, and damages or destroys the aquatic organisms that rely on these types of habitat, including aquatic macroinvertebrate and fish communities. This also affects plant and algal populations in water bodies by decreasing light penetration and coating these populations, diminishing the effectiveness of photosynthetic functions. When sediment enters water bodies it often carries pollutants such as metals, nutrients and bacteria. Total suspended solids (TSS) are a measure of neutrally buoyant matter in the water column. While the correlation between TSS and sediments is not exact, concentrations of TSS may be interpreted as an indicator of surface disturbance. Concentrations of total suspended solids (TSS) increased at one station (PRI067), decreased at 10 stations (PRI006, 022, 049, 041, 008, 009, 010, 051, 007 and 043) and did not change at 26 stations. On a regional scale, the upper Cumberland River basin stations (five) all had decreasing trends in TSS over the two decade period. This decline may be attributable to a decline in coal extraction or increased reclamation in this basin. This basin was the first to have considerable coal extraction in the commonwealth. The mining types were surface and underground mining; surface mining was primarily contour rather than mountaintop removal. Coal mining permit information (Table 3.4-2) was obtained from the Kentucky Department of Natural Resources (KDNR) to verify the perceived decrease in mined acreage. KDNR permit records the first five years of record (1983-1987) show that 175,623 acres were disturbed for mining and related activities and less than one percent of those acres were reclaimed. Of those disturbed acres, 79.4 percent was surface mines, 13.4 percent was underground mines, and 7.2 percent was other.

Beginning in 1988 the number of mine-reclaimed acreage increased considerably to 19,077 acres or about 48 percent compared to disturbed mine acres. Based on the permitting data over the period of record, the percentage of reclaimed acreage increases considerably beginning in 1988 and continues to 2002 in relation to mining activities in the basin. This percentage of reclaimed acreage to mined acreage increased to 75 percent in 1990. When the data are observed in four five-year periods (1983-2002) the number of reclaimed acreage to mined generally increases over time: 1983-1987= less than one percent; 1988-1992= 63 percent; 1993-1997= 76 percent; 1998-2002= 53 percent; and the final two years of the trends analyses record, 2003-2004= 68 percent.

Based on KDNR permit data (available from 1983 – 2004), on average during 1983-2004 underground mining accounted for 37 percent of mine permits. However, it only accounted for 22 percent (179,351 acres) of the disturbed mine acreage (825,062 acres) because underground mining disturbs less surface acreage than does surface mining. Of the remainder, surface mine permits represent 68 percent of the disturbed acres (564,396 acres) and the remainder is accounted for by other types of related mining disturbances (conveyor belts, management areas, etc.).

Compared to the earlier portion of this study's timeframe (1983 to 1993), during the period 1993 – 2002 the balance of acres disturbed has shifted toward underground mining. Since acres disturbed by underground mining have lessened impacts on surface water relative to surface mining, this may partially account for the increasing trend in surface water quality as seen in KDOW's ambient water quality station data. The 2003 – 2004 timeframe may be showing a similar pattern; however, three more years of data are needed to fully compare this period to the other (five-year) periods. The overall trend in the upper Cumberland River basin is one of a decreasing mining footprint coupled with increased mine reclamation.

Table 3.4-2. Mining permit data in the upper Cumberland River basin obtained from Kentucky Department of Natural Resources.

Years Sum	Mining Type	Number of Permits	Disturbed Acreage	Reclaimed Acreage
1983[1]-1987	Other[2]	355	12,604	
	Surface	5005	139,451	4
	Underground	1,884	23,568	
	Sum	7,244	175,623	4
1988-1992	Other[2]	568	17,310	2452
	Surface	2,518	148,551	112,176
	Underground	2,040	33,860	12,168
	Sum	5,126	199,721	126,796
1993-1997	Other[2]	535	21,052	4195
	Surface	1,264	122,901	112,069
	Underground	1,705	35,288	20,371
	Sum	3,504	179,241	136,635
1998-2002	Other[2]	430	22,052	5202
	Surface	780	111,078	94,951
	Underground	1,060	77,929	12,200
	Sum	2,270	211,059	112,353
2003-2004	Other[2]	152	8,297	1,339
	Surface	283	42,415	35,721
	Underground	308	8,706	3,231
	Sum	743	59,418	40,291

[1]1983 represents the first year coal permit information was stored under retrievable database.
[2]Relates to mine-associated surface disturbance such as, conveyor beltline, mine management area, etc.

Major ions. Major ions analyzed for trends in this study include chloride and sulfate. Chloride is present naturally in all waters, generally in low concentrations. However, exceptions include streams receiving industrial discharges or groundwater with high chloride concentrations. Fifteen stations (PRI006, 064, 049, 063, 062, 060, 061, 022, 024, 041, 045, 052, 057, 021 and 043) had increasing trends of chloride, decreasing trends at three stations (PRI024, 008 and 018), and no significant trend at the remaining 19 stations. Most of the stations with increasing trends in chloride are located in the north or east-quarter of Kentucky. Possible reasons for this trend at these stations are the increasing use of road salts for de-icing and resource extraction (coal, gas and oil).

Sulfate is a form of sulfur in an oxidized state. Reduced forms of sulfur are widely distributed in sedimentary and igneous rock. Sulfur concentrations in streams may be increased by human land-disturbing activities exposing greater areas of rock to weathering and leaching into the environment. Combustion of fossil fuels may increase sulfate in streams through atmospheric deposition (Smith and Alexander, 1986). Increasing trends of sulfate were detected at 7 stations (PRI002, 006, 064, 048, , 058 and 032,). These stations were located in the eastern-third of Kentucky where water quality may be impacted by coal extraction. Five stations (PRI008, 010, 051, 014 and 056) had decreasing trends, including three stations in the upper Cumberland River basin and two in the Green River basin. This may be a result of decreasing coal extraction, particularly in the upper Cumberland River basin. The two stations with the greatest median concentrations of sulfate (North Fork Kentucky River at Jackson and Pond River near Sacramento) had no trend for this ion.

Iron and manganese are metallic compounds commonly found in earth's crust and chemically similar (Hem, 1985). Natural background concentrations for these compounds vary depending on local geology and stream pH. Streams receiving acid mine drainage from coal mines typically have higher concentrations of iron and manganese. Concentrations of total iron increased at one station (Tygarts Creek, PRI048) and decreased at four stations (PRI006, 060, 052 and 008). The median concentration of total iron exceeded the USEPA's secondary drinking water standard of 300 µg/L at 34 stations. Of these 34 stations, four had decreasing trends, one station had increasing trend and 29 had no detectable trends. Total manganese concentrations increased at two stations (PRI062 and 0057). Thirteen stations scattered throughout the commonwealth had decreasing trends (PRI002, 006, 049, 060, 041, 032, 008, 009, 010, 051, 043, 012 and 007), including all six stations in the Cumberland River basin. This widespread decrease in the Cumberland River basin indicates a regional declining trend, and may be a result of decreased coal extraction over two decades. The median concentration of total manganese exceeded USEPA's secondary drinking water standard of 50 µg/L at 29 stations. Of these 29 stations, 11 had decreasing trends in concentration and two stations had increasing trends of total manganese, and 16 stations had no trend in concentrations.

Nutrients. Phosphorus is an essential plant nutrient, but in excessive concentrations can result in nuisance growth of aquatic plants and algae. Excessive plant growth may result in depletion of DO and physical changes in habitat, negatively impacting the fish and invertebrate communities. Sources of phosphorus include fertilizers, wastewater treatment plants, septic systems and weathering of phosphorus rocks. Soil erosion can result in excessive phosphorus since phosphorus tends to bind to soil particles. Total phosphorus decreased at 14 stations (PRI002, 006, 060, 041, 045, 029, 052, 007, 008, 009, 010, 014, 056 and 043), increased at four stations (PRI0066, 046, 032 and 103) and no significant trends occurred at 19 stations. Three of the four stations with increasing trend concentrations were in the Kentucky River basin, Middle Fork Kentucky River at Tallega, the Red River at Clay City and Kentucky River at Lockport; the fourth was the Green River at Woodbury.

Nitrogen is an essential macronutrient for plants and algae, similar to phosphorus. In excessive concentrations nitrogen can trigger nuisance growths of plants and algae in water bodies, similar to phosphorus. Total nitrogen includes nitrite-nitrate (NO_2+NO_3-nitrogen), total Kjeldahl nitrogen (organic bound form) and ammonia. The nitrogen species NO_2+NO_3-nitrogen represents the bioavailable form of nitrogen. Increasing trends in total nitrogen occurred at two stations (Little Sandy at Argillite [PRI049] and Little River near Cadiz [PRI043]), decreasing trend at 10 stations (PRI022, 024, 029, 031, 032, 007, 008, 009, 010 and 014). No trends were detected at 25 stations. The increasing trend at Little Sandy River and Little River may be attributable to a greater than 50 percent increase in developed land cover for the period of record. Four of five stations in the upper Cumberland River basin had decreasing trends indicating a regional cause.

Increasing trends of NO_2+NO_3-nitrogen were detected at four stations (Little River near Cadiz [PRI043], Nolin River at White Mills PRI021], Little Sandy River at Argillite [PRI049]and Levisa Fork near Pikeville [PRI006]). The Little River at Cadiz and Nolin River at White Mills had the highest median concentration of NO_2+NO_3-nitrogen at 3.08 and 2.69 mg/L, respectively. The major land use in both these watersheds was agriculture. The Little Sandy River and Levisa Fork watersheds had increased land development between 1992 and 2001. Decreasing trends in NO_2+NO_3-

nitrogen were detected at five stations statewide (PRI008, 051, 029, 014 and 007). Three of the five stations with decreasing trends were in the upper Cumberland River basin.

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Appendix A. 305(b) Statewide Assessment Results for Kentucky through 2010 305(b) Cycle

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Abbott Creek 0.0 to 3.2	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	1/26/2009	WAH, FC, PCR, SCR
Arkansas Creek 0.0 to 3.6	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/15/2009	WAH, FC, PCR, SCR
Arnold Fork 0.0 to 2.6	Big Sandy River	5070203	Knott	5-NS	3	3	3	3	12/15/2009	WAH, FC, PCR, SCR
Banjo Branch 0.0 to 1.5	Big Sandy River	5070203	Johnson	5-PS	3	3	3	3	1/26/2009	WAH, FC, PCR, SCR
Barnetts Creek 0.0 to 1.6	Big Sandy River	5070203	Johnson	5-PS	3	3	3	3	1/26/2009	WAH, FC, PCR, SCR
Bear Creek 0.0 to 2.0	Big Sandy River	5070204	Lawrence	2B(5)	5-NS	3	3	3	1/20/2004	WAH, FC, PCR, SCR
Beaver Creek 0.0 to 7.1	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/15/2009	WAH, FC, PCR, SCR
Bent Branch 0.0 to 0.8	Big Sandy River	5070203	Pike	3	5B-NS	3	3	3	1/26/2009	WAH, FC, PCR, SCR
Big Branch 0.0 to 2.7	Big Sandy River	5070201	Pike	2-FS	3	3	3	3	10/17/2007	WAH, FC, PCR, SCR
Big Creek 0.0 to 1.9	Big Sandy River	5070201	Pike	2-FS	5-NS	3	3	3	1/26/2009	WAH, FC, PCR, SCR
Big Creek 10.6 to 15.1	Big Sandy River	5070201	Pike	5-PS	3	3	3	3	11/12/2008	WAH, FC, PCR, SCR
Big Creek 7.3 to 10.6	Big Sandy River	5070201	Pike	5-PS	3	3	3	3	1/27/2009	WAH, FC, PCR, SCR
Big Mine Creek 1.4 to 3.9	Big Sandy River	5070203	Magoffin	5-PS	5-PS	5-PS	3	3	1/27/2004	WAH, FC, PCR, SCR
Big Mine Creek 5.8 to 8.4	Big Sandy River	5070203	Magoffin	5-PS	3	3	3	3	11/10/2003	WAH, FC, PCR, SCR
Big Sandy River 0.0 to 27.1	Big Sandy River	5070204	Boyd	5-NS	2-FS	3	2-FS	3	1/29/2009	WAH, FC, PCR, SCR, DWS
Bill D Branch 0.0 to 1.1	Big Sandy River	5070203	Knott	5-NS	3	3	3	3	12/15/2009	WAH, FC, PCR, SCR
Bill D Branch 1.1 to 2.9	Big Sandy River	5070203	Knott	5-NS	3	3	3	3	12/15/2009	WAH, FC, PCR, SCR
Blackberry Creek 1.2 to 5.9	Big Sandy River	5070201	Pike	2-FS	3	3	3	3	7/30/2004	WAH, FC, PCR, SCR
Blaine Creek 35.0 to 39.8	Big Sandy River	5070204	Lawrence	5-NS	5-NS	3	3	3	1/30/2009	WAH, FC, PCR, SCR
Blaine Creek 40.9 to 45.3	Big Sandy River	5070204	Lawrence	5-PS	3	3	3	3	1/30/2009	WAH, FC, PCR, SCR
Blaine Creek 8.2 to 17.6	Big Sandy River	5070204	Lawrence	5-NS	2-FS	3	3	3	1/29/2009	WAH, FC, PCR, SCR
Brushy Fork 0.0 to 10.0	Big Sandy River	5070203	Pike	5-PS	3	3	3	3	1/30/2009	WAH, FC, PCR, SCR
Buck Branch 0.0 to 2.8	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/15/2009	WAH, FC, PCR, SCR
Buffalo Creek 0.0 to 1.8	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	7/30/2004	WAH, FC, PCR, SCR
Buffalo Creek 0.0 to 1.5	Big Sandy River	5070203	Johnson	5B-NS	5B-NS	3	3	3	1/30/2009	WAH, FC, PCR, SCR
Caleb Fork 0.0 to 1.2	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/15/2009 - 12/17/2009	WAH, FC, PCR, SCR
Caney Creek 0.0 to 1.5	Big Sandy River	5070202	Pike	5B-NS	5B-NS	3	3	3	1/30/2009	WAH, FC, PCR, SCR
Caney Fork 0.0 to 7.5	Big Sandy River	5070203	Knott	5-NS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Caney Fork 7.5 to 11.3	Big Sandy River	5070203	Knott	5-NS	3	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Cat Fork 0.0 to 2.85	Big Sandy River	5070204	Lawrence	2-FS	3	3	3	3	1/30/2009	WAH, FC, PCR, SCR
Cat Fork 2.85 to 7.0	Big Sandy River	5070204	Lawrence	2-FS	3	3	3	3	1/30/2009	WAH, FC, PCR, SCR
Clear Creek 0.0 to 4.9	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Coldwater Fork 2.1 to 5.3	Big Sandy River	5070201	Martin	5-PS	3	3	3	3	11/17/2003	WAH, FC, PCR, SCR
Coldwater Fork 5.3 to 8.7	Big Sandy River	5070201	Martin	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Curtis Crum Reservoir	Big Sandy River	5070201	Martin	3	3	3	3	2-FS	2/20/2009	WAH, FC, PCR, SCR, DWS
Daniels Branch 0.0 to 0.4	Big Sandy River	5070201	Pike	2-FS	3	3	3	3	10/15/2007	WAH, FC, PCR, SCR
Dewey Lake	Big Sandy River	5070203	Floyd	2-FS	3	5-PS	3	3	5/24/2008	WAH, FC, PCR, SCR
Dry Creek 0.0 to 4.0	Big Sandy River	5070203	Knott	5-PS	3	3	3	3	12/17/2009	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Elkhorn Creek 0.0 to 10.7	Big Sandy River	5070202	Pike	5-PS	5-NS	3	3	3	2/2/2009	WAH, FC, PCR, SCR
Elkhorn Creek 10.7 to 18.2	Big Sandy River	5070202	Pike	3	3	3	2-FS	3	2/20/2009	WAH, FC, PCR, SCR
Elkhorn Lake	Big Sandy River	5070202	Letcher	3	3	3	3	2-FS	2/19/2009	WAH, FC, PCR, SCR, DWS
Fishtrap Reservoir	Big Sandy River	5070202	Pike	2-FS	3	2-FS	5-PS	3	5/29/2008 - 4/12/2010	WAH, FC, PCR, SCR
Frasure Creek 0.0 to 5.2	Big Sandy River	5070203	Floyd	2B(5)	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
Frasure Creek 0.0 to 5.2	Big Sandy River	5070203	Floyd	5-PS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Georges Creek 0.0 to 2.9	Big Sandy River	5070203	Lawrence	5-PS	3	3	3	3	2/2/2009	WAH, FC, PCR, SCR
Georges Creek 2.9 to 6.5	Big Sandy River	5070203	Lawrence	2-FS	3	3	3	3	2/2/2009	WAH, FC, PCR, SCR
Goose Creek 0.0 to 2.2	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Greasy Creek 0.0 to 4.7	Big Sandy River	5070203	Johnson	5-PS	3	3	3	3	2/2/2009	WAH, FC, PCR, SCR
Griffin Creek 0.0 to 2.5	Big Sandy River	5070203	Lawrence	2-FS	3	3	3	3	7/30/2004	WAH, FC, PCR, SCR
Hall Fork 0.0 to 2.0	Big Sandy River	5070203	Floyd	5-NS	2-FS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Harmond Branch 0.0 to 0.9	Big Sandy River	5070203	Pike	3	5B-NS	5B-NS	3	3	2/2/2009	WAH, FC, PCR, SCR
Harriett Branch 0.6 to 2.3	Big Sandy River	5070204	Lawrence	5-PS	3	3	3	3	2/2/2009	WAH, FC, PCR, SCR
Hobbs Fork 0.0 to 3.9	Big Sandy River	5070201	Martin	2-FS	3	3	3	3	2/2/2009	WAH, FC, PCR, SCR
Hobbs Fork 2.0 to 3.8	Big Sandy River	5070201	Martin	2-FS	3	3	3	3	11/21/2003	WAH, FC, PCR, SCR
Hood Creek 0.0 to 3.6	Big Sandy River	5070204	Lawrence	5-PS	3	3	3	3	1/27/2004	WAH, FC, PCR, SCR
Hood Creek 3.6 to 5.4	Big Sandy River	5070204	Lawrence	2-FS	3	3	3	3	11/21/2003	WAH, FC, PCR, SCR
Hurricane Creek 1.0 to 3.4	Big Sandy River	5070203	Pike	5B-NS	5B-NS	3	3	3	2/2/2009	WAH, FC, PCR, SCR
Ice Dam Creek 0.0 to 0.4	Big Sandy River	5070204	Boyd	5-NS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
Ice Dam Creek 0.4 to 2.4	Big Sandy River	5070204	Boyd	5-NS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
Indian Creek 0.0 to 3.5	Big Sandy River	5070202	Pike	5-PS	3	3	3	3	2/2/2009	WAH, FC, PCR, SCR
Island Creek 0.0 to 1.7	Big Sandy River	5070203	Pike	5-PS	3	3	3	3	11/20/2003	WAH, FC, PCR, SCR
Jacks Creek 0.0 to 4.4	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Jennys Creek 5.3 to 10.8	Big Sandy River	5070203	Johnson	5-NS	3	3	3	3	9/5/2003	WAH, FC, PCR, SCR
Jenny's Creek 0.0 to 3.1	Big Sandy River	5070203	Johnson	5-PS	3	3	3	3	2/3/2009	WAH, FC, PCR, SCR
Johns Branch 0.0 to 1.6	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Johns Creek 0.0 to 5.8	Big Sandy River	5070203	Johnson	5-PS	2-FS	3	3	3	2/3/2009	WAH, FC, PCR, SCR
Johns Creek 24.0 to 30.65	Big Sandy River	5070203	Pike	5-PS	5-NS	3	2-FS	3	1/21/2004 - 2/3/2009	WAH, FC, PCR, SCR
Johns Creek 34.4 to 42.5	Big Sandy River	5070203	Pike	5-NS	3	3	3	3	11/20/2003	WAH, FC, PCR, SCR
Johnson Branch 0.0 to 0.9	Big Sandy River	5070202	Pike	2-FS	3	3	3	3	10/27/2003	WAH, FC, PCR, SCR
Jones Fork 0.0 to 9.9	Big Sandy River	5070203	Knott	5-NS	3	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Keaton Fork 0.0 to 5.1	Big Sandy River	5070204	Johnson	5-NS	3	3	3	3	2/3/2009	WAH, FC, PCR, SCR
Knox Creek 0.0 to 8.0	Big Sandy River	5070201	Pike	5-PS	5-PS	3	5-NS	3	2/3/2009 - 4/12/2010	WAH, FC, PCR, SCR
Left Fork Beaver Creek 0.0 to 11.4	Big Sandy River	5070203	Floyd	5-PS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Left Fork Beaver Creek 13.55 to 18.7	Big Sandy River	5070203	Floyd	5-NS	2-FS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Left Fork Beaver Creek 11.4 to 13.55	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	2/8/2010	WAH, FC, PCR, SCR
Left Fork Beaver Creek 18.7 to 28.6	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Left Fork Blaine Creek 0.0 to 2.1	Big Sandy River	5070204	Lawrence	5-NS	5-NS	5-NS	3	3	1/27/2004	WAH, FC, PCR, SCR
Left Fork Malachi Branch 0.0 to 0.7	Big Sandy River	5070201	Pike	5-PS	3	3	3	3	10/15/2007	WAH, FC, PCR, SCR
Left Fork Middle Creek 0.0 to 10.3	Big Sandy River	5070203	Floyd	5-NS	5-NS	5-NS	3	3	2/4/2009	WAH, FC, PCR, SCR
Levisa Fork 0.0 to 5.8	Big Sandy River	5070203	Lawrence	5-NS	2-FS	3	3	3	2/4/2009	WAH, FC, PCR, SCR, DWS
Levisa Fork 116.0 to 124.4	Big Sandy River	5070202	Pike	5-NS	5-PS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Levisa Fork 5.8 to 15.3	Big Sandy River	5070203	Lawrence	5-PS	2-FS	3	5-PS	3	1/12/2004	WAH, FC, PCR, SCR
Levisa Fork 15.3 to 31.4	Big Sandy River	5070203	Lawrence	2-FS	2-FS	3	3	3	1/25/2006	WAH, FC, PCR, SCR
Levisa Fork 31.4 to 54.7	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	2-FS	2/4/2009	WAH, FC, PCR, SCR, DWS
Levisa Fork 57.4 to 58.4	Big Sandy River	5070203	Floyd	3	3	3	3	2-FS	2/4/2009	WAH, FC, PCR, SCR, DWS
Levisa Fork 65.2 to 98.0	Big Sandy River	5070202	Pike	5-PS	5-NS	3	3	2-FS	2/4/2009	WAH, FC, PCR, SCR, DWS
Levisa Fork 98.0 to 101.25	Big Sandy River	5070202	Pike	3	5-NS	3	2-FS	3	2/4/2009	WAH, FC, PCR, SCR
Lick Branch 0.0 to 1.3	Big Sandy River	5070201	Martin	5-NS	3	3	3	3	11/12/2008	WAH, FC, PCR, SCR
Lick Creek 0.3 to 4.7	Big Sandy River	5070202	Pike	5-PS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Little Cat Fork 1.1 to 3.7	Big Sandy River	5070204	Lawrence	2-FS	3	3	3	3	11/20/2003	WAH, FC, PCR, SCR
Little Fork 0.0 to 0.5	Big Sandy River	5070201	Pike	2-FS	3	3	3	3	10/17/2007	WAH, FC, PCR, SCR
Little Paint Creek 3.2 to 6.5	Big Sandy River	5070203	Johnson	5-PS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Little Paint Creek 6.5 to 11.6	Big Sandy River	5070203	Johnson	5-PS	5-NS	5-NS	3	3	2/13/2004	WAH, FC, PCR, SCR
Lockwood Creek 2.6 to 3.2	Big Sandy River	5070204	Boyd	5-PS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Long Branch 0.0 to 2.0	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	11/12/2003	WAH, FC, PCR, SCR
Long Fork 0.0 to 1.4	Big Sandy River	5070203	Floyd	5-PS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Long Fork 0.4 to 7.5	Big Sandy River	5070202	Pike	5-PS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Lower Chloe Creek 0.0 to 1.5	Big Sandy River	5070203	Pike	5-NS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Lower Elk Fork 0.4 to 2.4	Big Sandy River	5070201	Pike	2-FS	3	3	3	3	11/17/2003	WAH, FC, PCR, SCR
Lower Laurel Fork 0.0 to 7.9	Big Sandy River	5070204	Lawrence	5-PS	3	3	3	3	2/13/2004	WAH, FC, PCR, SCR
Lower Pigeon Branch 0.6 to 1.9	Big Sandy River	5070202	Pike	2-FS	3	3	3	3	11/12/2008	WAH, FC, PCR, SCR
Mare Creek 0.0 to 0.3	Big Sandy River	5070203	Floyd	5B-NS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Marrowbone Creek 1.4 to 11.3	Big Sandy River	5070202	Pike	5-PS	3	3	3	3	11/13/2003	WAH, FC, PCR, SCR
Martin County Lake	Big Sandy River	5070201	Martin	2-FS	3	3	3	3	1/1/1998	WAH, FC, PCR, SCR, DWS
Meade Branch 0.0 to 0.1	Big Sandy River	5070203	Lawrence	5B-NS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Meathouse Fork 0.0 to 2.9	Big Sandy River	5070203	Pike	5-PS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Middle Creek Levisa Fork 0.0 to 4.6	Big Sandy River	5070203	Floyd	5-NS	5-PS	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Middle Creek Levisa Frok 4.6 to 6.5	Big Sandy River	5070203	Floyd	5B-NS	5B-NS	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Middle Fork Rockcastle Creek 0.0 to 16.8	Big Sandy River	5070201	Martin	5-PS	3	3	3	3	11/18/2008	WAH, FC, PCR, SCR
Miller Creek 0.0 to 6.4	Big Sandy River	5070203	Johnson	5-NS	3	3	3	3	11/12/2003	WAH, FC, PCR, SCR
Mud Creek 0.0 to 2.7	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	2/13/2004	WAH, FC, PCR, SCR
Mudlick Branch 0.0 to 0.2	Big Sandy River	5070201	Martin	5B-NS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Mudlick Creek 3.7 to 4.1	Big Sandy River	5070203	Johnson	3	5B-NS	3	3	3	2/5/2009	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Nats Creek 0.0 to 3.1	Big Sandy River	5070203	Lawrence	5-PS	3	3	3	3	8/3/2004	WAH, FC, PCR, SCR
Old Road Fork 0.0 to 2.1	Big Sandy River	5070201	Martin	2-FS	3	3	3	3	2/5/2009	WAH, FC, PCR, SCR
Open Fork 6.4 to 11.3	Big Sandy River	5070203	Morgan	5-PS	5-NS	5-NS	3	3	1/15/2004	WAH, FC, PCR, SCR
Otter Creek 0.0 to 0.5	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Paddle Creek 0.0 to 1.4	Big Sandy River	5070204	Boyd	5-NS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
Paint Creek 0.0 to 7.1	Big Sandy River	5070203	Johnson	5-NS	5-NS	3	3	3	2/5/2009	CAH, FC, PCR, SCR
Paint Creek 7.1 to 8.3	Big Sandy River	5070203	Johnson	5-PS	5-NS	3	3	3	2/9/2009	CAH, FC, PCR, SCR
Paintsville Reservoir	Big Sandy River	5070203	Johnson	2-FS	3	2-FS	5-PS	3	5/29/2008	WAH, CAH, FC, PCR, SCR
Panther Fork 0.0 to 2.95	Big Sandy River	5070201	Martin	5-PS	3	3	3	3	2/8/2009	WAH, FC, PCR, SCR
Penhook Branch 0.0 to 0.35	Big Sandy River	5070203	Floyd	5B-NS	3	3	3	3	2/9/2009	WAH, FC, PCR, SCR
Peter Creek 0.0 to 5.8	Big Sandy River	5070201	Pike	5-NS	3	3	3	3	8/3/2004	WAH, FC, PCR, SCR
Pigeonroost Fork 0.0 to 1.3	Big Sandy River	5070201	Martin	5-NS	3	3	3	3	8/3/2004	WAH, FC, PCR, SCR
Pond Creek 0.0 to 9.7	Big Sandy River	5070201	Pike	5B-PS	5B-NS	3	3	3	2/11/2009	WAH, FC, PCR, SCR
Prater Creek 0.0 to 4.8	Big Sandy River	5070203	Floyd	2-FS	3	3	3	3	2/16/2004	WAH, FC, PCR, SCR
Puncheon Branch 0.0 to 3.6	Big Sandy River	5070203	Knott	5-PS	3	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Raccoon Creek 5.6 to 7.4	Big Sandy River	5070203	Pike	5-PS	3	3	3	3	11/17/2003	WAH, FC, PCR, SCR
Raccoon Creek 0.0 to 2.0	Big Sandy River	5070203	Pike	5B-NS	5B-NS	3	3	3	2/11/2009	WAH, FC, PCR, SCR
Right Fork Beaver Creek 0.0 to 17.4	Big Sandy River	5070203	Floyd	5-PS	5-NS	5-NS	3	3	12/17/2009	WAH, FC, PCR, SCR
Right Fork Beaver Creek 30.3 to 33.4	Big Sandy River	5070203	Knott	5-PS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Right Fork Beaver Creek 17.4 to 23.3	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Right Fork Beaver Creek 23.3 to 30.3	Big Sandy River	5070203	Knott	5-NS	2-FS	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Right Fork Beaver Creek 33.4 to 37.9	Big Sandy River	5070203	Knott	5-NS	3	3	3	3	12/17/2009	WAH, FC, PCR, SCR
Right Fork of Island Creek 0.0 to 1.7	Big Sandy River	5070203	Pike	5B-NS	5B-NS	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Right Fork of Little Paint Creek 0.4 to 2.1	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Right Fork of Panther Fork 0.0 to 1.05	Big Sandy River	5070201	Martin	5-NS	3	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Right Fork of Whitecabin Branch 0.0 to 1.1	Big Sandy River	5070201	Martin	5-NS	3	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Righthand Fork 0.0 to 2.0	Big Sandy River	5070203	Knott	5-NS	3	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Road Fork 1.3 to 1.9	Big Sandy River	5070201	Pike	5B-NS	3	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Rob Fork 0.0 to 1.0	Big Sandy River	5070202	Pike	5-NS	3	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Robinson Creek 0.0 to 2.1	Big Sandy River	5070202	Pike	2-FS	3	3	3	3	8/14/2002	WAH, FC, PCR, SCR
Rock Fork 0.0 to 7.0	Big Sandy River	5070203	Floyd	5-PS	2-FS	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Rockcastle Creek 13.25 to 15.3	Big Sandy River	5070201	Martin	5-NS	3	3	3	3	8/3/2004	WAH, FC, PCR, SCR
Rockcastle Creek 3.7 to 13.25	Big Sandy River	5070201	Martin	5-PS	3	3	2-FS	3	1/14/2004	WAH, FC, PCR, SCR
Rockcastle Creek 0.0 to 3.7	Big Sandy River	5070204	Lawrence	2B(5)	5-NS	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Rockhouse Fork 0.0 to 6.4	Big Sandy River	5070201	Martin	5-PS	3	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Russell Fork 6.2 to 9.2	Big Sandy River	5070202	Pike	2-FS	3	3	3	3	11/25/2003	WAH, FC, PCR, SCR
Russell Fork 0.0 to 6.3	Big Sandy River	5070202	Pike	2-FS	2B(5)	3	3	2-FS	2/13/2009	WAH, FC, PCR, SCR, DWS
Russell Fork 12.9 to 16.45	Big Sandy River	5070202	Pike	2-FS	3	3	3	2-FS	2/13/2009	WAH, FC, PCR, SCR, DWS

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Salisbury Branch 0.0 to 1.8	Big Sandy River	5070203	Knott	5-PS	3	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Salt Lick Creek 0.0 to 6.8	Big Sandy River	5070203	Floyd	5-PS	3	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Shannon Branch 0.0 to 0.75	Big Sandy River	5070201	Pike	2-FS	3	3	3	3	10/16/2007	WAH, FC, PCR, SCR
Shelby Creek 0.0 to 6.0	Big Sandy River	5070202	Pike	5-PS	5-PS	3	3	3	2/16/2009	WAH, FC, PCR, SCR
Shelby Creek 6.0 to 13.3	Big Sandy River	5070202	Pike	5-PS	3	3	3	3	2/17/2009	WAH, FC, PCR, SCR
Simpson Branch 0.0 to 1.8	Big Sandy River	5070203	Floyd	5-PS	3	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Sizemore Branch 0.0 to 2.0	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Spewing Camp Branch 0.0 to 3.1	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Spurlock Creek 0.0 to 0.6	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Spurlock Creek 0.6 to 4.0	Big Sandy River	5070203	Floyd	5-NS	2-FS	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Steele Creek 0.0 to 2.4	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Stephens Branch 0.0 to 2.6	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/18/2009	WAH, FC, PCR, SCR
Straight Fork 0.0 to 1.1	Big Sandy River	5070201	Martin	5-PS	3	3	3	3	2/17/2009	WAH, FC, PCR, SCR
Stratton Branch 0.4 to 2.1	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	2/17/2009	WAH, FC, PCR, SCR
Sturgeon Branch 0.0 to above 1.1	Big Sandy River	5070203	Johnson	3	3	3	3	3		WAH, FC, PCR, SCR
Sycamore Creek 0.0 to 3.8	Big Sandy River	5070203	Pike	5-PS	3	3	3	3	2/17/2009	WAH, FC, PCR, SCR
Thompson Fork 0.0 to 1.0	Big Sandy River	5070203	Floyd	2-FS	3	3	3	3	2/17/2009	WAH, FC, PCR, SCR
Toms Branch 0.0 to 1.6	Big Sandy River	5070202	Pike	2-FS	3	3	3	3	2/17/2009	WAH, FC, PCR, SCR
Toms Creek 0.0 to 8.0	Big Sandy River	5070203	Johnson	5-PS	3	3	3	3	8/3/2004	WAH, FC, PCR, SCR
Tug Fork 71.9 to 77.7	Big Sandy River	5070201	Pike	2-FS	3	3	5-PS	3	11/25/2003	WAH, FC, PCR, SCR
Tug Fork 0.0 to 10.45	Big Sandy River	5070201	Lawrence	2-FS	2-FS	3	3	3	2/17/2009	WAH, FC, PCR, SCR
Tug Fork 10.45 to 41.95	Big Sandy River	5070201	Martin	2-FS	2B(5)	3	3	2-FS	2/17/2009	WAH, FC, PCR, SCR, DWS
Tug Fork 78.2 to 84.8	Big Sandy River	5070201	Pike	2-FS	2B(5)	3	3	3	2/17/2009	WAH, FC, PCR, SCR
Turkey Creek 0.0 to 5.9	Big Sandy River	5070203	Floyd	5-NS	5-NS	3	3	3	12/22/2009	WAH, FC, PCR, SCR
Upper Pidgeon Branch 0.0 to 2.1	Big Sandy River	5070202	Pike	5-NS	3	3	3	3	10/27/2003	WAH, FC, PCR, SCR
UT of Barnetts Creek	Big Sandy River	5070203	Johnson	5B-NS	3	3	3	3	2/17/2009	WAH, FC, PCR, SCR
UT of Big Sandy River 0.0 to 0.9	Big Sandy River	5070204	Boyd	5B-NS	5B-NS	3	3	3	2/17/2009	WAH, FC, PCR, SCR
UT of Hobbs Fork 0.0 to 0.6	Big Sandy River	5070201	Martin	2-FS	3	3	3	3	8/1/2008	WAH, FC, PCR, SCR
UT of Johns Creek 0.0 to 0.2	Big Sandy River	5070203	Johnson	5B-NS	5B-NS	3	3	3	2/17/2009	WAH, FC, PCR, SCR
UT of Mud Creek 0.0 to 0.3	Big Sandy River	5070203	Floyd	3	5B-NS	3	3	3	2/19/2009	WAH, FC, PCR, SCR
UT of Mudlick Branch 0.0 to 0.6	Big Sandy River	5070201	Martin	5-NS	3	3	3	3	2/19/2009	WAH, FC, PCR, SCR
UT of Open Fork Paint Creek 0.0 to 0.8	Big Sandy River	5070203	Morgan	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
UT of Stave Branch 0.0 to 0.5	Big Sandy River	5070203	Johnson	5B-NS	3	3	3	3	2/18/2009	WAH, FC, PCR, SCR
Venters Branch 0.4 to 1.8	Big Sandy River	5070201	Martin	5-NS	3	3	3	3	2/18/2009	WAH, FC, PCR, SCR
Whites Creek 0.6 to 3.5	Big Sandy River	5070204	Boyd	2-FS	3	3	3	3	9/22/2003	WAH, FC, PCR, SCR
Williams Fork 0.0 to 0.2	Big Sandy River	5070203	Johnson	5B-NS	3	3	3	3	2/18/2009	WAH, FC, PCR, SCR
Wilson Creek 0.0 to 2.9	Big Sandy River	5070203	Floyd	5-NS	3	3	3	3	12/22/2009	WAH, FC, PCR, SCR
Wolf Creek 0.0 to 6.6	Big Sandy River	5070201	Martin	5-PS	5-PS	3	3	3	2/18/2009	WAH, FC, PCR, SCR
Wolf Creek 17.6 to 20.5	Big Sandy River	5070201	Martin	5-PS	3	3	3	3	2/18/2009	WAH, FC, PCR, SCR

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Wolf Creek 6.6 to 17.6	Big Sandy River	5070201	Martin	5-NS	3	3	3	3	2/18/2009	WAH, FC, PCR, SCR
Wolfpen Branch 0.0 to 1.7	Big Sandy River	5070202	Pike	5-NS	3	3	3	3	11/17/2003	WAH, FC, PCR, SCR
Yatesville Reservoir	Big Sandy River	5070204	Lawrence	2-FS	3	2-FS	3	3	5/29/2008	WAH, FC, PCR, SCR
Adams Fork 0.0 to 4.6	Green River	5110004	Ohio	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Adams Fork 8.9 to 9.8	Green River	5110004	Ohio	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Alexander Creek 0.0 to 3.6	Green River	5110001	Edmonson	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Alexander Creek 3.6 to 7.1	Green River	5110001	Edmonson	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Austin Creek 2.6 to 3.6	Green River	5110003	Logan	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Bacon Creek 0.2 to 17.2	Green River	5110001	Hart	2-FS	5-NS	3	2-FS	3	3/1/2003 - 10/25/2007	WAH, FC, PCR, SCR
Bacon Creek 27.1 to 32.6	Green River	5110001	Hart	2-FS	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Bacon Creek 17.2 to 27.1	Green River	5110001	Hart	5-PS	5-NS	3	3	3	2/26/2003	WAH, FC, PCR, SCR
Bacon Creek 32.6 to 33.5	Green River	5110001	Larue	5B-NS	5B-NS	3	3	3	10/29/2007	WAH, FC, PCR, SCR
Barnett Creek 0.0 to 3.5	Green River	5110004	Ohio	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Barnett Creek 3.5 to 10.4	Green River	5110004	Ohio	2-FS	3	3	3	3	10/29/2007	WAH, FC, PCR, SCR
Barren River 0.0 to 8.4	Green River	5110002	Butler	2-FS	2-FS	2-FS	3	3	1/4/2008	WAH, FC, PCR, SCR
Barren River 104.9 to 119.4	Green River	5110002	Allen	2-FS	5-NS	5-NS	3	3	1/4/2008	WAH, FC, PCR, SCR, DWS
Barren River 29.6 to 35.0	Green River	5110002	Warren	3	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Barren River 35.0 to 44.0	Green River	5110002	Warren	3	2-FS	3	3	2-FS	3/1/2003	WAH, FC, PCR, SCR, DWS
Barren River 8.4 to 15.1	Green River	5110002	Warren	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Barren River 78.9 to 79.9	Green River	5110002	Allen	2-FS	3	3	3	3	10/19/2006	WAH, FC, PCR, SCR
Barren River Reservoir	Green River	5110002	Allen	2-FS	3	2-FS	2-FS	3	1/28/2008	WAH, FC, PCR, SCR
Barren Run 0.0 to 6.1	Green River	5110001	Larue	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Bat East Creek 3.4 to 7.5	Green River	5110003	Muhlenberg	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Bat East Creek 0.0 to 3.3	Green River	5110003	Muhlenberg	5-PS	2-FS	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Bays Fork of Barren River 6.2 to 15.5	Green River	5110002	Allen	5-PS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Bear Creek 14.7 to 22.4	Green River	5110001	Edmonson	5-NS	3	3	3	3	2/28/2003	WAH, FC, PCR, SCR
Bear Creek 22.4 to 30.6	Green River	5110001	Grayson	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Bear Creek 8.05 to 12.7	Green River	5110001	Edmonson	2-FS	2-FS	2-FS	3	3	1/22/2008	WAH, FC, PCR, SCR
Beaver Creek 16.2 to 28.6	Green River	5110002	Barren	2-FS	3	3	3	2-FS	3/1/2003	WAH, FC, PCR, SCR, DWS
Beaver Creek 8.5 to 15.5	Green River	5110002	Barren	2-FS	5-NS	3	3	3	1/18/2008	WAH, FC, PCR, SCR
Beaverdam Creek 0.0 to 14.5	Green River	5110001	Edmonson	2-FS	3	3	3	3	11/12/2002	CAH, FC, PCR, SCR
Beech Creek 0.0 to 3.9	Green River	5110003	Muhlenberg	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
Big Brush Creek 0.0 to 5.0	Green River	5110001	Green	5-PS	4A-NS	2-FS	3	3	10/29/2007	WAH, FC, PCR, SCR
Big Brush Creek 13.0 to 17.4	Green River	5110001	Green	2-FS	3	3	3	3	10/27/2007	WAH, FC, PCR, SCR
BIg Brush Creek 5.0 to 7.1	Green River	5110001	Green	3	2-FS	2-FS	3	3	11/27/2007	WAH, FC, PCR, SCR
Big Brush Creek 7.1 to 13.0	Green River	5110001	Green	3	4A-NS	2-FS	3	3	11/27/2007	WAH, FC, PCR, SCR

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Big Creek 3.9 to 9.2	Green River	5110001	Adair	5-PS	4A-PS	4A-PS	3	3	3/1/2003 - 10/30/2007	WAH, FC, PCR, SCR
Big Pitman Creek 0.0 to 13.9	Green River	5110001	Green	2-FS	4A-NS	4A-PS	3	3	10/30/2007	WAH, FC, PCR, SCR
Big Pitman Creek 27.5 to 32.6	Green River	5110001	Taylor	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Big Pitman Creek 13.9 to 17.8	Green River	5110001	Green	3	4A-PS	2-FS	3	3	10/30/2007	WAH, FC, PCR, SCR
Big Pitman Creek 17.8 to 23.65	Green River	5110001	Taylor	3	4A-NS	2-FS	3	3	10/30/2007	WAH, FC, PCR, SCR
Big Reedy Branch 0.0 to 2.4	Green River	5110001	Edmonson	5-NS	3	3	3	3	3/19/2009	WAH, FC, PCR, SCR
Big Reedy Creek 6.9 to 11.5	Green River	5110001	Edmonson	5-PS	5-NS	3	3	3	3/1/2003 - 3/19/2009	WAH, FC, PCR, SCR
Billy Creek 0.0 to 4.8	Green River	5110001	Hardin	5-PS	4A-NS	3	2-FS	3	3/1/2003 - 10/30/2007	WAH, FC, PCR, SCR
Black Snake Branch 1.6 to 2.9	Green River	5110001	Taylor	5-PS	3	3	3	3	10/30/2007	WAH, FC, PCR, SCR
Blacklick Creek 11.3 to 12.3	Green River	5110002	Logan	5B-NS	3	3	3	3	1/15/2004	WAH, FC, PCR, SCR
Brier Creek 0.0 to 4.9	Green River	5110006	Muhlenberg	4A-NS	4A-NS	4A-NS	3	3	3/1/2003	WAH, FC, PCR, SCR
Briggs Lake	Green River	5110003	Logan	2-FS	3	2-FS	3	3	11/14/2006 - 11/14/2008	WAH, FC, PCR, SCR
Brush Creek 0.0 to 6.1	Green River	5110001	Casey	5-PS	3	3	3	3	10/30/2007	WAH, FC, PCR, SCR
Brush Creek 0.0 to 2.15	Green River	5110001	Green	3	4A-PS	2-FS	3	3	10/30/2007	WAH, FC, PCR, SCR
Brush Fork 0.0 to 4.4	Green River	5110005	McLean	5-NS	5-NS	5-NS	3	3	12/17/2002	WAH, FC, PCR, SCR
Brushy Pond Creek 1.4 to 6.0	Green River	5110004	Butler	2-FS	3	3	3	3	10/30/2007	WAH, FC, PCR, SCR
Buck Creek 0.0 to 8.0	Green River	5110005	McLean	5-PS	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Buck Creek 1.9 to 8.1	Green River	5110006	Christian	5-PS	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Buck Fork 13.0 to 19.3	Green River	5110006	Christian	5-PS	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Buck Fork 0.0 to 5.8	Green River	5110006	Todd	5-PS	3	3	3	3	10/31/2007	WAH, FC, PCR, SCR
Burnett Fork 0.0 to 1.3	Green River	5110005	Daviess	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Butler Fork 2.3 to 4.0	Green River	5110001	Adair	5-NS	4A-NS	2-FS	3	3	10/31/2007	WAH, FC, PCR, SCR
Calhoun Creek 0.0 to 2.8	Green River	5110001	Casey	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Campbellsville City Reservoir	Green River	5110001	Taylor	2-FS	3	5-PS	3	3	11/13/2006	WAH, FC, PCR, SCR, DWS
Cane Run 0.0 to 3.7	Green River	5110005	Daviess	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Cane Run 0.8 to 6.5	Green River	5110001	Hart	2-FS	3	3	3	3	9/14/2007	WAH, FC, PCR, SCR
Caney Creek 0.0 to 6.7	Green River	5110004	Ohio	2-FS	2-FS	2-FS	3	3	1/23/2008	WAH, FC, PCR, SCR
Caney Creek 13.1 to 17.0	Green River	5110004	Ohio	3	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Caney Creek 0.0 to 3.6	Green River	5110003	Muhlenberg	5-NS	3	3	3	3	3/19/2009	WAH, FC, PCR, SCR
Caney Creek 1.4 to 5.3	Green River	5110006	Muhlenberg	3	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Caney Creek 3.6 to 7.6	Green River	5110003	Muhlenberg	5-NS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Caney Creek 6.7 to 13.1	Green River	5110004	Ohio	3	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Caney Fork 0.0 to 6.7	Green River	5110002	Barren	2-FS	3	3	3	3	11/30/2007	WAH, FC, PCR, SCR

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Caneyville City Reservoir	Green River	5110004	Grayson	3	3	5-PS	3	5-PS	1/1/1992	WAH, FC, PCR, SCR, DWS
Casey Creek 3.6 to 4.75	Green River	5110001	Casey	2-FS	4A-PS	2-FS	3	3	10/30/2007 - 1/22/2008	WAH, FC, PCR, SCR
Casey Creek 19.4 to 21.7	Green River	5110001	Casey	2-FS	3	3	3	3	10/31/2007	WAH, FC, PCR, SCR
Casey Creek 8.05 to 12.25	Green River	5110001	Casey	2-FS	3	3	3	3	10/31/2007	WAH, FC, PCR, SCR
Cash Creek 0.0 to 5.8	Green River	5110005	Henderson	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Claylick Creek 4.1 to 5.3	Green River	5110001	Metcalfe	5-PS	3	3	3	3	12/3/2002	WAH, FC, PCR, SCR
Claylick Creek 2.4 to 3.4	Green River	5110001	Warren	5-PS	4A-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Clear Fork Creek 0.0 to 6.0	Green River	5110002	Warren	2-FS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Clifty Creek 0.0 to 13.4	Green River	5110003	Todd	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Clifty Creek 7.3 to 22.2	Green River	5110004	Grayson	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Cox's Run 0.0 to 3.4	Green River	5110001	Hardin	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Craborchard Creek 0.0 to 3.4	Green River	5110006	Hopkins	4A-NS	4A-NS	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Craborchard Creek 3.4 to 7.3	Green River	5110006	Hopkins	4A-NS	4A-NS	4A-NS	3	3	2/29/2008	WAH, FC, PCR, SCR
Crooked Creek 0.0 to 3.0	Green River	5110005	Daviess	3	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Cypress Creek 0.0 to 6.0	Green River	5110006	McLean	2-FS	5-NS	5-NS	3	3	1/10/2008	WAH, FC, PCR, SCR
Cypress Creek 23.1 to 26.5	Green River	5110006	Muhlenberg	5-NS	2B(5)	3	3	3	1/14/2010	WAH, FC, PCR, SCR
Cypress Creek 26.5 to 33.6	Green River	5110006	Muhlenberg	2B(5)	2B(5)	2B(5)	3	3	3/1/2003 - 1/14/2010	WAH, FC, PCR, SCR
Daniels Creek 0.0 to 5.7	Green River	5110004	Breckinridge	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Deer Creek 0.0 to 8.4	Green River	5110005	Webster	5-NS	2-FS	2-FS	3	3	1/9/2008	WAH, FC, PCR, SCR
Deer Creek 8.4 to 17.7	Green River	5110005	Webster	2-FS	3	3	3	3	11/5/2007	WAH, FC, PCR, SCR
Deserter Creek 0.0 to 3.1	Green River	5110005	Daviess	5-PS	5-NS	3	3	3	3/1/2003 - 3/19/2009	WAH, FC, PCR, SCR
Dismal Creek 0.0 to 3.2	Green River	5110001	Edmonson	2-FS	3	3	3	3	11/5/2007	WAH, FC, PCR, SCR
Dorsey Run 2.1 to 3.9	Green River	5110001	Hardin	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Drakes Creek 0.0 to 23.4	Green River	5110002	Warren	2-FS	2-FS	2-FS	5-PS	3	1/18/2008	WAH, FC, PCR, SCR
Drakes Creek 0.0 to 9.0	Green River	5110006	Hopkins	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
Dry Creek 0.0 to 3.7	Green River	5110001	Casey	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
East Branch 0.0 to 1.3	Green River	5110006	Christian	5-PS	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
East Fork of Barren River 4.2 to 8.6	Green River	5110002	Monroe	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
East Fork of Deer Creek 0.0 to 6.8	Green River	5110005	Webster	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
East Fork of Little Barren River 0.0 to 15.9	Green River	5110001	Metcalfe	2-FS	4A-NS	4A-PS	3	3	2/28/2003 - 11/30/2007	WAH, FC, PCR, SCR
East Fork of Little Barren River 18.9 to 20.7	Green River	5110001	Metcalfe	2-FS	2-FS	2-FS	3	3	10/1/2007	WAH, FC, PCR, SCR
East Fork of Little Barren River 20.7 to 30.0	Green River	5110001	Metcalfe	5-PS	4A-PS	2-FS	3	3	11/30/2007	WAH, FC, PCR, SCR
East Prong of Indian Camp Creek 0.0 to 6.25	Green River	5110003	Butler	5-PS	3	3	3	3	3/19/2009	WAH, FC, PCR, SCR

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Eaton Branch 0.0 to 1.9	Green River	5110002	Barren	5-PS	3	3	3	3	12/3/2007	WAH, FC, PCR, SCR
Eliis Fork of Damron Creek 0.0 to 3.2	Green River	5110001	Russell	2-FS	3	3	3	3	10/1/2004	WAH, FC, PCR, SCR
Elk Creek 0.0 to 5.4	Green River	5110006	Hopkins	5-NS	3	3	3	3	3/1/2002	WAH, FC, PCR, SCR
Elk Creek 7.6 to 10.6	Green River	5110006	Hopkins	3	5-NS	3	3	3	7/16/2001	WAH, FC, PCR, SCR
Elk Lick Creek 3.6 to 11.8	Green River	5110003	Logan	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Elk Pond Creek 0.0 to 4.5	Green River	5110006	Muhlenberg	5-NS	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Falling Timber Creek 0.0 to 6.9	Green River	5110002	Barren	2-FS	3	3	2-FS	3	2/28/2003 - 11/5/2007	WAH, FC, PCR, SCR
Falling Timber Creek 10.8 to 15.2	Green River	5110002	Metcalfe	2-FS	2-FS	2-FS	3	3	1/23/2008	WAH, FC, PCR, SCR
Fiddlers Creek 0.0 to 5.9	Green River	5110004	Breckinridge	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Flat Creek 0.0 to 10.9	Green River	5110006	Hopkins	5-NS	5-NS	5-NS	3	3	12/17/2002 - 11/6/2007	WAH, FC, PCR, SCR
Forbes Creek 0.0 to 7.75	Green River	5110006	Christian	2-FS	3	3	3	3	12/3/2007	WAH, FC, PCR, SCR
Ford Ditch 0.0 to 3.3	Green River	5110005	Daviess	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Freeman Lake	Green River	5110001	Hardin	2-FS	3	2-FS	3	3	1/28/2008	WAH, FC, PCR, SCR
Gasper River 14.6 to 17.2	Green River	5110002	Logan	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Gasper River 7.75 to 14.6	Green River	5110002	Warren	2-FS	2-FS	3	3	3	3/1/2003 - 1/18/2008	WAH, FC, PCR, SCR
Gasper River 17.2 to 35.6	Green River	5110002	Logan	2-FS	3	3	3	3	11/6/2007	WAH, FC, PCR, SCR
Gilles Ditch 0.0 to 5.4	Green River	5110005	Daviess	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Glens Fork 0.0 to 7.1	Green River	5110001	Adair	5-PS	4A-NS	4A-NS	3	3	3/1/2003 - 11/6/2007	WAH, FC, PCR, SCR
Goodman Springs (9000-0230)	Green River	5110001	Hardin	2-FS	5-NS	3	3	3	1/25/2008	WAH, FC, PCR, SCR
Goose Creek 0.0 to 8.5	Green River	5110001	Casey	2-FS	3	3	3	3	11/12/2001	WAH, FC, PCR, SCR
Goren Mill Spring (9000-0793)	Green River	5110001	Hart	5-PS	5-NS	3	3	3	1/25/2008	WAH, FC, PCR, SCR
Graham Spring (9000-0051)	Green River	5110002	Warren	5-PS	5-PS	3	3	3	1/25/2008	WAH, FC, PCR, SCR
Grapevine Lake	Green River	5110006	Hopkins	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
Grassy Creek 2.1 to 4.4	Green River	5110004	Ohio	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Green River 109.5 to 151.2	Green River	5110003	Butler	3	3	3	2-FS	2-FS	3/1/2003 - 1/8/2008	WAH, FC, PCR, SCR, DWS
Green River 151.2 to 170.4	Green River	5110001	Warren	2-FS	2-FS	2-FS	3	3	1/8/2008	WAH, FC, PCR, SCR
Green River 210.5 to 250.3	Green River	5110001	Hart	2-FS	2-FS	2-FS	5-PS	2-FS	3/1/2003 - 1/8/2008	WAH, FC, PCR, SCR, DWS
Green River 250.3 to 254.3	Green River	5110001	Hart	2-FS	2-FS	3	3	3	1/30/2003	WAH, FC, PCR, SCR
Green River 254.4 to 270.0	Green River	5110001	Green	2-FS	2-FS	2-FS	3	3	1/8/2008	WAH, FC, PCR, SCR
Green River 270.0 to 276.2	Green River	5110001	Green	2-FS	2-FS	2-FS	3	3	1/8/2008	WAH, FC, PCR, SCR
Green River 283.3 to 309.0	Green River	5110001	Taylor	2-FS	5-NS	2-FS	2-FS	2-FS	1/9/2008	WAH, FC, PCR, SCR, DWS
Green River 328.5 to 344.95	Green River	5110001	Adair	2-FS	2-FS	2-FS	3	3	1/9/2008	WAH, FC, PCR, SCR
Green River 359.6 to 366.6	Green River	5110001	Casey	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Green River 374.9 to 383.9	Green River	5110001	Lincoln	2-FS	3	3	3	2-FS	1/9/2008	WAH, FC, PCR, SCR, DWS

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Green River 46.3 to 55.2	Green River	5110005	McLean	2-FS	3	3	3	2-FS	1/8/2008	WAH, FC, PCR, SCR, DWS
Green River 63.4 to 71.9	Green River	5110005	McLean	3	3	3	3	2-FS	1/8/2008	WAH, FC, PCR, SCR, DWS
Green River 0.2 to 28.2	Green River	5110005	Henderson	2-FS	3	3	3	3	1/7/2008	WAH, FC, PCR, SCR
Green River 276.2 to 283.2	Green River	5110001	Green	3	2-FS	2-FS	2-FS	3	1/8/2008	WAH, FC, PCR, SCR
Green River 71.9 to 94.4	Green River	5110003	Muhlenberg	2-FS	5-PS	2-FS	2-FS	2-FS	1/8/2008	WAH, FC, PCR, SCR, DWS
Green River Reservoir	Green River	5110001	Taylor	2-FS	3	2-FS	5-PS	2-FS	10/23/2006	WAH, FC, PCR, SCR, DWS
Groves Creek 0.0 to 6.4	Green River	5110005	Webster	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Halls Creek 6.8 to 9.6	Green River	5110004	Ohio	5-PS	3	3	3	3	1/28/2008	WAH, FC, PCR, SCR
Havana Creek 0.0 to 1.9	Green River	5110005	Webster	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Head of Rough River Spring 154.85 to 155.8	Green River	5110004	Hardin	5-PS	5-NS	3	3	3	1/25/2008	WAH, FC, PCR, SCR
Indian Camp Creek 0.1 to 3.1	Green River	5110003	Butler	5-PS	2-FS	3	3	3	3/1/2003 - 11/6/2007	WAH, FC, PCR, SCR
Indian Camp Creek 3.1 to 10.4	Green River	5110003	Butler	5-PS	3	3	3	3	11/6/2007	WAH, FC, PCR, SCR
Indian Creek 0.0 to 7.5	Green River	5110003	Warren	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Indian Creek 0.6 to 5.3	Green River	5110002	Monroe	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Isaacs Creek 0.0 to 7.3	Green River	5110006	Muhlenberg	5-NS	5-NS	5-NS	3	3	3/1/2003	WAH, FC, PCR, SCR
Jarrels Creek 0.0 to 1.8	Green River	5110006	Muhlenberg	5-NS	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Jarret Fork 0.0 to 1.1	Green River	5110004	Grayson	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Jenny Hollow Branch 0.0 to 2.4	Green River	5110004	Ohio	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Joes Branch 0.0 to 4.4	Green River	5110005	Daviess	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Joes Run 0.0 to 4.8	Green River	5110005	Daviess	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Knoblick Creek 0.0 to 2.1	Green River	5110005	Daviess	3	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Knoblick Creek 0.0 to 9.1	Green River	5110005	Webster	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Lake Luzerne	Green River	5110003	Muhlenberg	2-FS	3	3	3	5-PS	1/1/1992	WAH, FC, PCR, SCR, DWS
Lake Malone	Green River	5110003	Logan	2-FS	3	2-FS	5-PS	2-FS	11/14/2006	WAH, FC, PCR, SCR, DWS
Lake Washburn	Green River	5110004	Ohio	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
Laurel Creek of Mud River 2.1 to 6.8	Green River	5110003	Logan	2-FS	3	3	3	3	11/6/2007	WAH, FC, PCR, SCR
Lewis Creek 0.0 to 11.8	Green River	5110003	Ohio	5-PS	2-FS	3	3	3	3/1/2001	WAH, FC, PCR, SCR
Lewisburg Lake	Green River	5110003	Logan	3	3	3	3	3		WAH, FC, PCR, SCR
Liberty Lake	Green River	5110001	Casey	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR, DWS
Lick Creek 0.0 to 10.2	Green River	5110002	Simpson	2-FS	3	3	3	3	3/19/2009	WAH, FC, PCR, SCR
Lick Creek 0.0 to 3.7	Green River	5110005	Henderson	5-NS	3	3	3	3	3/1/2001	WAH, FC, PCR, SCR
Lick Creek 5.0 to 13.8	Green River	5110005	Henderson	5-NS	3	3	3	3	2/1/2006	WAH, FC, PCR, SCR
Linders Creek 0.0 to 7.9	Green River	5110004	Hardin	2-FS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Lindy Creek 0.0 to 0.9	Green River	5110001	Hart	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Line Creek 0.0 to 7.2	Green River	5110002	Monroe	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Little Barren River 0.0 to 9.8	Green River	5110001	Green	2-FS	4A-	2-FS	3	3	1/2/2008	WAH, FC, PCR, SCR

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					PS					
Little Barren River 9.8 to 15.7	Green River	5110001	Green	3	4A-NS	4A-NS	3	3	1/2/2008	WAH, FC, PCR, SCR
Little Beaverdam Creek 0.0 to 11.4	Green River	5110001	Warren	5-PS	3	3	3	3	11/14/2007	WAH, FC, PCR, SCR
Little Brush Creek 3.2 to 13.2	Green River	5110001	Green	2-FS	4A-NS	2-FS	3	3	10/1/2007 - 11/14/2007	WAH, FC, PCR, SCR
Little Cypress Creek 0.0 to 8.7	Green River	5110006	Muhlenberg	5-PS	5-NS	3	3	3	1/14/2010	WAH, FC, PCR, SCR
Little Cypress Creek 8.7 to 10.1	Green River	5110006	Muhlenberg	5-NS	3	3	3	3	1/14/2010	WAH, FC, PCR, SCR
Little Muddy Creek 6.6 to 12.9	Green River	5110002	Butler	5-PS	3	3	3	3	3/1/2001	WAH, FC, PCR, SCR
Little Muddy Creek 5.2 to 6.6	Green River	5110002	Butler	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Little Pitman Creek 10.1 to 11.2	Green River	5110001	Taylor	2-FS	4A-NS	2-FS	3	3	2/5/2007	WAH, FC, PCR, SCR
Little Pitman Creek 0.0 to 10.1	Green River	5110001	Taylor	2-FS	4A-NS	4A-PS	3	3	10/1/2007 - 11/1/2007	WAH, FC, PCR, SCR
Little Russell Creek 0.0 to 5.1	Green River	5110001	Green	2-FS	4A-PS	2-FS	3	3	12/6/2007	WAH, FC, PCR, SCR
Little Short Creek 0.0 to 3.1	Green River	5110004	Grayson	2-FS	2-FS	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Little Trammel Creek 0.0 to 2.4	Green River	5110002	Allen	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Long Creek 0.0 to 3.3	Green River	5110006	Muhlenberg	5-PS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Long Falls Creek 0.0 to 7.6	Green River	5110005	McLean	5-PS	5-NS	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Long Falls Creek 7.6 to 11.8	Green River	5110005	McLean	5-PS	5-NS	5-NS	3	3	3/1/2003	WAH, FC, PCR, SCR
Long Fork 0.5 to 1.7	Green River	5110002	Monroe	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Long Lick Creek 4.6 to 7.2	Green River	5110004	Breckinridge	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Lost River Rise (9000-0054)	Green River	5110002	Warren	2-FS	5-NS	3	3	3	1/24/2008	WAH, FC, PCR, SCR
Lynn Camp Creek 0.0 to 8.3	Green River	5110001	Hart	2-FS	4A-NS	4A-NS	3	3	12/6/2007	WAH, FC, PCR, SCR
Mahurin Spring (9000-0202)	Green River	5110004	Grayson	2-FS	5-NS	3	3	3	1/24/2008	WAH, FC, PCR, SCR
McClure Fork of Bear Creek 3.1 to 4.1	Green River	5110001	Grayson	5B-NS	3	3	3	3	12/6/2007	WAH, FC, PCR, SCR
McCoy Bluehole Spring (9000-0792)	Green River	5110001	Hart	2-FS	5-NS	3	3	3	1/25/2008	WAH, FC, PCR, SCR
McFarland Creek 1.5 to 5.0	Green River	5110006	Christian	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
McGrady Creek 0.0 to 1.9	Green River	5110004	Ohio	5-PS	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Meadow Creek 0.0 to 0.8	Green River	5110001	Green	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Meadow Creek 0.8 to 7.4	Green River	5110001	Green	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Meeting Creek 5.2 to 14.0	Green River	5110004	Hardin	5-PS	3	3	3	3	12/6/2007	WAH, FC, PCR, SCR
Metcalfe County Lake	Green River	5110001	Metcalfe	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
Middle Fork of Drakes Creek 0.0 to 7.8	Green River	5110002	Warren	5-PS	3	3	3	3	12/6/2007	WAH, FC, PCR, SCR
Middle Fork of Drakes Creek 12.0 to 18.3	Green River	5110002	Allen	2-FS	3	3	3	3	12/6/2007	WAH, FC, PCR, SCR
Middle Pitman Creek 0.0 to 7.7	Green River	5110001	Green	2-FS	4A-NS	4A-NS	3	3	12/6/2007	WAH, FC, PCR, SCR
Middle Pitman Creek 8.2 to 10.1	Green River	5110001	Taylor	2-FS	4A-NS	2-FS	3	3	12/6/2007	WAH, FC, PCR, SCR
Mill Creek 0.0 to 2.6	Green River	5110001	Taylor	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Mill Creek 0.0 to 4.2	Green River	5110004	Ohio	3	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR

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Mill Creek 6.0 to 7.0	Green River	5110002	Monroe	3	3	3	3	2-FS	12/6/2007	WAH, FC, PCR, SCR, DWS
Mill Creek Lake (Monroe County)	Green River	5110002	Monroe	2-FS	3	2-FS	3	2-FS	11/14/2006	WAH, FC, PCR, SCR, DWS
Mill Spring (9000-1193)	Green River	5110001	Grayson	2-FS	5-NS	3	3	3	1/25/2008	WAH, FC, PCR, SCR
Motts Lick Creek 0.0 to 3.3	Green River	5110003	Logan	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Mud River 30.9 to 52.2	Green River	5110003	Logan	3	2-FS	3	5-NS	3	1/2/2008	WAH, FC, PCR, SCR
Mud River 52.2 to 64.0	Green River	5110003	Logan	3	3	3	5-NS	3	3/1/2003	WAH, FC, PCR, SCR
Mud River 9.1 to 30.9	Green River	5110003	Muhlenberg	5-NS	2-FS	2-FS	5-NS	3	1/2/2008	WAH, FC, PCR, SCR
Mud River 0.0 to 9.1	Green River	5110003	Muhlenberg	3	3	3	5-PS	3	12/6/2007	WAH, FC, PCR, SCR
Muddy Creek 0.0 to 5.9	Green River	5110003	Butler	2-FS	5-PS	3	3	3	1/18/2008	WAH, FC, PCR, SCR
Muddy Creek 1.9 to 4.9	Green River	5110004	Ohio	5-NS	2-FS	3	3	3	2/28/2003	WAH, FC, PCR, SCR
Muddy Creek 5.8 to 9.1	Green River	5110004	Ohio	5-PS	3	3	3	3	2/19/2008	WAH, FC, PCR, SCR
Muddy Creek 8.6 to 15.2	Green River	5110003	Butler	5-PS	3	3	3	3	12/6/2007	WAH, FC, PCR, SCR
Muddy Creek 9.1 to 15.5	Green River	5110004	Ohio	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Muddy Creek 0.0 to 5.0	Green River	5110004	Ohio	5-PS	3	3	3	3	8/2/2003	WAH, FC, PCR, SCR
Muddy Fork 0.0 to 4.65	Green River	5110006	Muhlenberg	2-FS	3	3	3	3	1/15/2010	WAH, FC, PCR, SCR
Narge Creek 2.6 to 4.1	Green River	5110006	Hopkins	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
No Creek 0.5 to 9.2	Green River	5110004	Ohio	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Nolin River 88.2 to 98.5	Green River	5110001	Hardin	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Nolin River 0.0 to 7.7	Green River	5110001	Edmonson	2-FS	3	3	3	3	10/25/2007	WAH, FC, PCR, SCR
Nolin River 37.6 to 88.2	Green River	5110001	Hardin	2-FS	4A-PS	3	2-FS	2-FS	3/1/2003 - 10/25/2007	WAH, FC, PCR, SCR, DWS
Nolin River Reservoir	Green River	5110001	Grayson	1-FS	1-FS	1-FS	1-FS	1-FS	10/24/2007	WAH, FC, PCR, SCR, DWS
Nolynn Spring (9000-2673)	Green River	5110001	Larue	5-PS	5-NS	3	3	3	1/25/2008	WAH, FC, PCR, SCR
N. Branch of South Fork of Panther Creek 0.0 to 4.2	Green River	5110005	Hancock	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
North Fork of Barnett Creek 0.0 to 2.3	Green River	5110004	Ohio	5-PS	3	3	3	3	3/19/2009	WAH, FC, PCR, SCR
North Fork of Nolin River 3.0 to 7.0	Green River	5110001	Larue	5-NS	3	3	3	2-FS	12/7/2007	WAH, FC, PCR, SCR, DWS
North Fork of Panther Creek 4.2 to 9.1	Green River	5110005	Daviess	5-PS	5-NS	3	3	3	3/1/2003 - 12/7/2007	WAH, FC, PCR, SCR
North Fork of Panther Creek 0.0 to 4.2	Green River	5110005	Daviess	5-PS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
North Fork of Rough River 11.5 to 14.1	Green River	5110004	Breckinridge	2-FS	3	3	3	3	12/7/2007	WAH, FC, PCR, SCR
North Fork of Rough River 14.1 to 21.5	Green River	5110004	Breckinridge	2-FS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
North Fork Panther Creek 9.7 to 12.7	Green River	5110005	Daviess	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Nortonville Lake	Green River	5110006	Hopkins	3	3	3	2-FS	3	1/29/2008	WAH, FC, PCR, SCR
Old Panther Creek 0.4 to 5.7	Green River	5110005	Daviess	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Old Panther Creek 5.7 to 8.8	Green River	5110005	Daviess	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Otter Creek 0.0 to 6.3	Green River	5110006	Hopkins	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Panther Creek 0.1 to 3.0	Green River	5110005	Daviess	5-NS	5-NS	5-NS	3	3	1/22/2008	WAH, FC, PCR, SCR

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Panther Creek 17.9 to 20.4	Green River	5110005	Daviess	5-NS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Panther Creek 0.0 to 3.6	Green River	5110003	Butler	5-PS	3	3	3	3	11/2/2008	WAH, FC, PCR, SCR
Panther Creek 3.0 to 5.9	Green River	5110005	Daviess	3	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Peter Creek 14.2 to 21.0	Green River	5110002	Barren	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Pettys Fork 0.0 to 6.1	Green River	5110001	Adair	5-PS	4A-PS	4A-PS	3	3	3/1/2003 - 10/30/2007	WAH, FC, PCR, SCR
Pigeon Creek 0.0 to 3.4	Green River	5110004	Ohio	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Pleasant Run 0.0 to 2.0	Green River	5110006	Hopkins	4A-NS	4A-NS	4A-NS	3	3		WAH, FC, PCR, SCR
Pleasant Run 2.0 to 7.8	Green River	5110006	Hopkins	4A-NS	4A-NS	4A-NS	3	3	4/1/1998	WAH, FC, PCR, SCR
Plum Creek 0.0 to 1.7	Green River	5110003	Muhlenberg	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Plum Creek 1.7 to 3.9	Green River	5110006	Muhlenberg	5-NS	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Pond Creek 0.0 to 4.8	Green River	5110003	Muhlenberg	2-FS	2-FS	2-FS	3	3	1/18/2008	WAH, FC, PCR, SCR
Pond Creek 14.4 to 18.1	Green River	5110003	Muhlenberg	4A-PS	4A-NS	4A-NS	3	3	12/31/2007	WAH, FC, PCR, SCR
Pond Creek 18.1 to 22.1	Green River	5110003	Muhlenberg	4A-PS	4A-NS	4A-NS	3	3	12/31/2007	WAH, FC, PCR, SCR
Pond Creek 4.8 to 7.6	Green River	5110003	Muhlenberg	5-NS	2-FS	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Pond Creek 7.6 to 11.7	Green River	5110003	Muhlenberg	4A-NS	4A-NS	4A-NS	3	3	12/31/2007	WAH, FC, PCR, SCR
Pond Creek 11.7 to 14.4	Green River	5110003	Muhlenberg	4A-NS	4A-NS	4A-NS	3	3	12/31/2007	WAH, FC, PCR, SCR
Pond Drain 0.0 to 2.3	Green River	5110006	McLean	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Pond River 1.0 to 20.8	Green River	5110006	Hopkins	5-PS	2-FS	2-FS	3	3	1/18/2008	WAH, FC, PCR, SCR
Pond River 0.0 to 1.0	Green River	5110006	Hopkins	3	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Pond River 20.8 to 31.1	Green River	5110006	Muhlenberg	5-PS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Pond River 57.7 to 61.2	Green River	5110006	Christian	2-FS	2-FS	2-FS	3	3	1/18/2008	WAH, FC, PCR, SCR
Pond River 61.2 to 71.4	Green River	5110006	Muhlenberg	5-PS	2-FS	3	3	3	3/2/2003	WAH, FC, PCR, SCR
Pond Run 0.0 to 6.8	Green River	5110004	Ohio	2-FS	5-PS	3	3	3	10/1/2007 - 1/23/2008	WAH, FC, PCR, SCR
Poplar Grove Branch 0.0 to 3.4	Green River	5110001	Taylor	3	4A-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Puncheon Creek 0.0 to 4.3	Green River	5110002	Allen	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Render Creek 0.0 to 3.6	Green River	5110003	Ohio	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
Rhodes Creek 0.0 to 1.9	Green River	5110005	Daviess	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Rhodes Creek 0.0 to 2.2	Green River	5110005	Daviess	5-NS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Rhodes Creek 2.2 to 7.5	Green River	5110005	Daviess	5-NS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Richland Slough 0.0 to 4.9	Green River	5110005	Henderson	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Robinson Creek 13.5 to 18.1	Green River	5110001	Taylor	2-FS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Robinson Creek 8.8 to 10.8	Green River	5110001	Taylor	5-PS	3	3	3	3	12/13/2007	WAH, FC, PCR, SCR
Rocky Creek 4.6 to 12.2	Green River	5110003	Muhlenberg	2-FS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Rough River 0.0 to 10.4	Green River	5110004	McLean	5-NS	5-NS	5-PS	3	3	1/2/2007 -	WAH, FC, PCR, SCR

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									1/2/2008	
Rough River 27.2 to 28.9	Green River	5110004	Ohio	3	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Rough River 125.2 to 149.4	Green River	5110004	Hardin	2-FS	5-PS	3	3	3	11/12/2002 - 10/25/2007	WAH, FC, PCR, SCR
Rough River 29.8 to 30.8	Green River	5110004	Ohio	3	3	3	3	2-FS	1/2/2008	WAH, FC, PCR, SCR, DWS
Rough River 55.1 to 64.3	Green River	5110004	Ohio	5-NS	5-NS	5-NS	3	3	1/2/2007 - 1/2/2008	WAH, FC, PCR, SCR
Rough River 87.0 to 90.3	Green River	5110004	Breckinridge	2-FS	3	3	3	3	10/24/2007	WAH, FC, PCR, SCR
Rough River Reservoir	Green River	5110004	Hardin	2-FS	2-FS	2-FS	5-PS	2-FS	10/23/2007	WAH, FC, PCR, SCR, DWS
Round Stone Creek 0.0 to 10.2	Green River	5110001	Hart	2-FS	3	3	3	3	3/1/2003	CAH, FC, PCR, SCR
Russell Creek 0.0 to 7.2	Green River	5110001	Green	2-FS	2-FS	3	3	3	12/18/2007	WAH, FC, PCR, SCR
Russell Creek 12.8 to 24.1	Green River	5110001	Green	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Russell Creek 23.8 to 40.0	Green River	5110001	Adair	2-FS	4A-NS	4A-PS	3	3	12/18/2007	WAH, FC, PCR, SCR
Russell Creek 40.0 to 42.2	Green River	5110001	Adair	2-FS	4A-NS	4A-NS	3	3	3/1/2003 - 12/18/2007	WAH, FC, PCR, SCR
Russell Creek 42.2 to 60.4	Green River	5110001	Adair	2-FS	3	3	3	2-FS	12/18/2007	WAH, FC, PCR, SCR, DWS
Russell Creek 60.4 to 66.3	Green River	5110001	Adair	2-FS	4A-NS	4A-NS	3	3	12/18/2007	WAH, FC, PCR, SCR
Russell Creek 7.2 to 12.8	Green River	5110001	Green	2-FS	2-FS	2-FS	3	3	12/18/2007	WAH, FC, PCR, SCR
Salem Lake	Green River	5110001	Larue	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR, DWS
Salt Lick Creek 0.0 to 1.4	Green River	5110002	Warren	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Salt Lick Creek 0.0 to 3.7	Green River	5110003	Muhlenberg	2-FS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Salt Lick Creek 1.8 to 4.6	Green River	5110002	Monroe	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Sand Lick Creek 0.0 to 4.0	Green River	5110003	Muhlenberg	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Shanty Hollow Lake	Green River	5110001	Warren	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
Sixes Creek 0.0 to 7.5	Green River	5110003	Ohio	2-FS	3	3	3	3	12/18/2007	WAH, FC, PCR, SCR
Skaggs Creek 5.5 to 23.3	Green River	5110002	Barren	2-FS	5-NS	3	3	3	10/22/2007	WAH, FC, PCR, SCR
Skees KW#1 (9000-1398)	Green River	5110001	Hardin	5-PS	5-NS	3	3	3	1/25/2008	WAH, FC, PCR, SCR
Smith Creek 0.0 to 4.4	Green River	5110004	Ohio	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
South Fork 0.0 to 2.2	Green River	5110001	Casey	2-FS	3	3	3	3	3/1/2001	WAH, FC, PCR, SCR
South Fork 2.2 to 7.5	Green River	5110001	Casey	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
South Fork Nolin River 0.0 to 6.4	Green River	5110001	Larue	2-FS	3	3	3	3	3/1/2001	WAH, FC, PCR, SCR
South Fork of Beaver Creek 0.0 to 3.2	Green River	5110002	Barren	5-PS	3	3	3	3	10/22/2007	WAH, FC, PCR, SCR
South Fork of Little Barren River 0.0 to 23.1	Green River	5110001	Metcalfe	2-FS	4A-NS	4A-NS	3	3	12/18/2007	WAH, FC, PCR, SCR
South Fork of Little Barren River 23.1 to 30.1	Green River	5110001	Metcalfe	5-PS	4A-PS	2-FS	3	3	12/18/2007	WAH, FC, PCR, SCR
South Fork of Panther Creek 0.0 to 2.4	Green River	5110005	Daviess	5-PS	5-NS	3	3	3	1/22/2008	WAH, FC, PCR, SCR

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South Fork of Panther Creek 14.0 to 18.3	Green River	5110005	Daviess	3	5-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
South Fork of Panther Creek 2.4 to 9.55	Green River	5110005	Daviess	5-NS	3	3	3	3	12/1/2001	WAH, FC, PCR, SCR
South Fork of Panther Creek 9.55 to 14.0	Green River	5110005	Daviess	5-PS	5-NS	3	3	3	12/17/2002	WAH, FC, PCR, SCR
South Fork of Russell Creek 0.0 to 6.4	Green River	5110001	Green	2-FS	2-FS	2-FS	3	3	12/19/2002 - 12/19/2007	WAH, FC, PCR, SCR
Spa Lake	Green River	5110003	Logan	2-FS	3	5-PS	3	3	11/14/2006	WAH, FC, PCR, SCR, DWS
Spurlington Lake	Green River	5110001	Taylor	2-FS	3	3	3	3	11/14/2006	WAH, FC, PCR, SCR
Sputzman Creek 1.3 to 4.4	Green River	5110005	Henderson	5-PS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Sulphur Branch 0.0 to 3.0	Green River	5110001	Edmonson	2-FS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Sulphur Creek 0.0 to 10.7	Green River	5110001	Adair	3	4A-PS	2-FS	3	3	12/19/2007	WAH, FC, PCR, SCR
Sulphur Creek 10.7 to 15.4	Green River	5110001	Adair	2-FS	3	3	3	3	12/19/2007	WAH, FC, PCR, SCR
Sulphur Fork Creek 0.0 to 5.3	Green River	5110002	Allen	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Sulphur Fork Creek 5.3 to 7.9	Green River	5110002	Allen	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Sunfish Creek 6.8 to 10.3	Green River	5110001	Grayson	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Sweepstakes Branch 1.0 to 4.0	Green River	5110005	Daviess	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Sycamore Creek 0.0 to 1.6	Green River	5110001	Edmonson	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Taylor Fork 0.0 to 4.0	Green River	5110001	Grayson	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Thompson Branch 0.0 to 1.5	Green River	5110002	Simpson	2-FS	3	3	3	3	9/13/2007	WAH, FC, PCR, SCR
Three Lick Fork 0.0 to 3.3	Green River	5110004	Ohio	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Town Branch 0.0 to 6.2	Green River	5110003	Logan	3	3	3	5-NS	3	12/19/2007	WAH, FC, PCR, SCR
Trammel Creek of Drakes Creek 0.0 to 24.0	Green River	5110002	Warren	2-FS	2-FS	3	3	3	1/18/2008	CAH, FC, PCR, SCR
Trammel Creek of Drakes Creek 24.0 to 30.6	Green River	5110002	Allen	2-FS	3	3	3	3	11/12/2002	CAH, FC, PCR, SCR
Tules Creek 5.2 to 13.5	Green River	5110004	Breckinridge	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Two Mile Creek 0.0 to 4.7	Green River	5110005	Daviess	2-FS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Upper Brush Creek 0.0 to 2.8	Green River	5110001	Taylor	3	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT of Cypress Creek 0.0 to 3.4	Green River	5110006	Muhlenberg	5-NS	5-NS	3	3	3	1/14/2010	WAH, FC, PCR, SCR
UT of White Oak Creek 0.0 to 3.3	Green River	5110001	Adair	2-FS	3	3	3	3	12/20/2007	WAH, FC, PCR, SCR
UT to Beaverdam Creek 0.0 to 1.3	Green River	5110001	Edmonson	2-FS	3	3	3	3	10/29/2007	WAH, FC, PCR, SCR
UT to Bull Run Creek 0.1 to 1.0	Green River	5110001	Casey	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to Butler Branch 0.0 to 1.7	Green River	5110001	Adair	5-PS	3	3	3	3	3/1/2001	WAH, FC, PCR, SCR
UT to Cool Springs Creek 0.0 to 1.6	Green River	5110001	Adair	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to Cypress Creek 0.0 to 1.45	Green River	5110006	Muhlenberg	5-PS	5-PS	3	3	3	1/15/2010	WAH, FC, PCR, SCR
UT to Cypress Creek 0.0 to 1.1	Green River	5110006	Muhlenberg	5-NS	2-FS	3	3	3	1/15/2010	WAH, FC, PCR, SCR
UT to Cypress Creek 0.0 to 3.0	Green River	5110006	Muhlenberg	3	5-NS	3	3	3	1/14/2010	WAH, FC, PCR, SCR
UT to Cypress Creek 0.0 to 8.1	Green River	5110006	Muhlenberg	5-PS	3	3	3	3	10/31/2007	WAH, FC, PCR, SCR
UT to Dorsey Run 0.0 to 1.0	Green River	5110001	Hardin	5B-NS	3	3	3	3	11/14/2007	WAH, FC, PCR, SCR
UT to Drakes Creek 0.0 to 2.2	Green River	5110006	Hopkins	5-PS	3	3	3	3	11/5/2007	WAH, FC, PCR, SCR
UT to Elk Creek 0.0 to 1.0	Green River	5110006	Hopkins	3	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
UT to ElK Creek 0.0 to 2.6	Green River	5110006	Hopkins	5-PS	3	3	3	3	11/5/2006	WAH, FC, PCR, SCR
UT to Flat Creek 0.0 to 3.1	Green River	5110006	Hopkins	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR

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UT to Flat Creek 3.1 to 4.1	Green River	5110006	Hopkins	3	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
UT to Gasper River 0.0 to 3.1	Green River	5110002	Logan	2-FS	3	3	3	3	11/6/2007	WAH, FC, PCR, SCR
UT to Green River 0.0 to 0.9	Green River	5110001	Casey	5B-NS	3	3	3	3	12/6/2007	WAH, FC, PCR, SCR
UT to Green River 0.0 to 3.2	Green River	5110001	Adair	2-FS	3	3	3	3	11/6/2007	WAH, FC, PCR, SCR
UT to Hatter Creek 1.2 to 1.8	Green River	5110001	Casey	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to Joes Branch 0.0 to 2.8	Green River	5110005	Daviess	5B-NS	3	3	3	3	11/6/2007	WAH, FC, PCR, SCR
UT to Little Cypress Creek 0.0 to 1.75	Green River	5110006	Muhlenberg	5-NS	5-NS	3	3	3	1/15/2010	WAH, FC, PCR, SCR
UT to Little Cypress Creek 0.0 to 3.25	Green River	5110002	Muhlenberg	5-NS	5-NS	3	3	3	1/21/2010	WAH, FC, PCR, SCR
UT to Mays Run 0.0 to 0.4	Green River	5110004	Hardin	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to Middle Pitman Creek 0.0 to 0.6	Green River	5110001	Taylor	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to Nolin River 0.0 to 0.4	Green River	5110001	Edmonson	3	5B-NS	5B-NS	3	3	1/2/2008	WAH, FC, PCR, SCR
UT to Nolin River 0.15 to 0.9	Green River	5110001	Hardin	5B-NS	3	3	3	3	12/7/2007	WAH, FC, PCR, SCR
UT to North Fork of Panther Creek 0.0 to 0.7	Green River	5110005	Daviess	5B-NS	3	3	3	3	12/7/2007	WAH, FC, PCR, SCR
UT to Pond Creek 0.0 to 2.4	Green River	5110003	Muhlenberg	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to Pond Run 0.0 to 0.8	Green River	5110004	Breckinridge	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
UT to Richland Creek 0.0 to 1.7	Green River	5110002	Butler	5-NS	3	3	3	3	12/13/2007	WAH, FC, PCR, SCR
UT to South Fork of Russell Creek 0.0 to 0.6	Green River	5110001	Green	4A-NS	3	3	3	3	7/31/2002	WAH, FC, PCR, SCR
UT to Tallow Creek 0.0 to 1.7	Green River	5110001	Taylor	2-FS	3	3	3	3	12/21/2007	WAH, FC, PCR, SCR
UT to UT of Rays Fork 0.0 to 0.25	Green River	5110002	Warren	5B-NS	5B-NS	3	3	3	12/13/2007	WAH, FC, PCR, SCR
UT to UT to Little Cypress Creek 0.0 to 2.6	Green River	5110002	Muhlenberg	5-NS	5-NS	3	3	3	1/21/2010	WAH, FC, PCR, SCR
UT to Welch Creek 0.0 to 0.9	Green River	5110003	Butler	5B-NS	5B-NS	3	3	3	12/19/2007	WAH, FC, PCR, SCR
UT to West Bays Fork	Green River	5110002	Allen	5-PS	3	3	3	3	12/19/2007	WAH, FC, PCR, SCR
UT to West Fork of Lewis Creek 0.0 to 2.2	Green River	5110003	Ohio	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to West Prong of Indian Camp Creek 0.0 to 0.8	Green River	5110003	Ohio	5B-NS	3	3	3	3	12/20/2007	WAH, FC, PCR, SCR
UT to Wiggington Creek 0.9 to 1.9	Green River	5110002	Logan	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Valley Creek 0.0 to 3.6	Green River	5110001	Hardin	5-PS	4A-NS	3	3	3	1/23/2008	WAH, FC, PCR, SCR
Valley Creek 10.8 to 12.6	Green River	5110001	Hardin	3	4A-NS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Valley Creek 8.4 to 10.8	Green River	5110001	Hardin	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Walters Creek 0.0 to 2.5	Green River	5110001	Larue	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Welch Creek 0.0 to 18.4	Green River	5110003	Butler	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
West Fork of Drakes Creek 0.0 to 23.3	Green River	5110002	Simpson	2-FS	2-FS	3	5-PS	3	1/4/2008 - 1/18/2008	WAH, FC, PCR, SCR
West Fork of Drakes Creek 26.7 to 32.1	Green River	5110002	Simpson	2-FS	3	3	5-PS	3	12/19/2007	WAH, FC, PCR, SCR
West Fork of Drakes Creek Reservoir	Green River	5110002	Simpson	3	3	3	3	2-FS	1/29/2008	WAH, FC, PCR, SCR, DWS
West Fork of Pond River 1.6 to 8.7	Green River	5110006	Christian	5-PS	2-FS	2-FS	3	3	1/10/2008	WAH, FC, PCR, SCR
West Fork of Pond River 20.3 to 26.0	Green River	5110006	Christian	5-NS	3	3	3	3	12/20/2007	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
West Fork of Pond River 8.7 to 20.3	Green River	5110006	Christian	2-FS	2-FS	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Wolf Branch Ditch 0.0 to 4.1	Green River	5110005	Daviess	5-PS	3	3	3	3	12/17/2002	WAH, FC, PCR, SCR
Wolf Lick Creek 0.0 to 14.6	Green River	5110003	Logan	5-PS	2-FS	3	3	3	1/18/2008	WAH, FC, PCR, SCR
Arnolds Creek 0.0 to 10.8	Kentucky River	5100205	Grant	5-PS	3	3	3	3	7/22/1999	WAH, FC, PCR, SCR
Back Creek 0.0 to 4.7	Kentucky River	5100205	Garrard	2-FS	3	3	3	3	9/17/1999	WAH, FC, PCR, SCR
Backbone Creek 0.0 to 1.65	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	1/27/2010	WAH, FC, PCR, SCR
Bailey Run 0.0 to 2.9	Kentucky River	5100205	Anderson	5-PS	3	3	3	3	10/1/2004	WAH, FC, PCR, SCR
Balls Branch 0.0 to 4.9	Kentucky River	5100205	Boyle	3	5-NS	3	3	3	1/31/2008	WAH, FC, PCR, SCR
Balls Fork 8.3 to 11.3	Kentucky River	5100201	Knott	5-NS	3	3	3	3	9/17/1999	WAH, FC, PCR, SCR
Baughman Creek 0.0 to 4.6	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/1/2008	WAH, FC, PCR, SCR
Baughman Fork 0.0 to 2.7	Kentucky River	5100205	Fayette	4A-PS	3	3	2-FS	3	12/15/1999	WAH, FC, PCR, SCR
Baughman Fork 3.4 to 5.9	Kentucky River	5100205	Fayette	2-FS	3	3	2-FS	3	12/29/1999	WAH, FC, PCR, SCR
Beals Run 0.0 to 1.9	Kentucky River	5100205	Woodford	5-NS	3	3	3	3	3/3/2005	WAH, FC, PCR, SCR
Bear Branch 0.3 to 1.2	Kentucky River	5100201	Letcher	2-FS	3	3	3	3	11/19/2009	WAH, FC, PCR, SCR
Beech Fork 0.0 to 8.0	Kentucky River	5100202	Leslie	2-FS	3	3	2-FS	3	12/29/1999	WAH, FC, PCR, SCR
Beech Fork Reservoir	Kentucky River	5100204	Powell	3	3	3	3	2-FS	12/9/2009	WAH, FC, PCR, SCR, DWS
Benson Creek 0.0 to 4.6	Kentucky River	5100205	Franklin	5-PS	3	3	3	3	7/23/1999	WAH, FC, PCR, SCR
Benson Creek 22.1 to 25.7	Kentucky River	5100205	Anderson	2-FS	3	3	3	3	9/17/1999	WAH, FC, PCR, SCR
Benson Creek 4.6 to 6.7	Kentucky River	5100205	Franklin	5-PS	3	3	3	3	7/23/1999	WAH, FC, PCR, SCR
Benson Creek 6.7 to 13.4	Kentucky River	5100205	Franklin	5-NS	3	3	3	3	7/23/1999	WAH, FC, PCR, SCR
Bert Combs Lake	Kentucky River	5100203	Clay	2-FS	3	2-FS	3	2-FS	12/4/2009	WAH, CAH, FC, PCR, SCR, DWS
Big Calaboose Creek 0.0 to 2.2	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Big Caney Creek 0.3 to 8.0	Kentucky River	5100201	Breathitt	5-PS	3	3	3	3	10/25/1999	WAH, FC, PCR, SCR
Big Creek 0.0 to 3.1	Kentucky River	5100201	Perry	3	3	3	3	3		WAH, FC, PCR, SCR
Big Creek 0.0 to 4.3	Kentucky River	5100203	Clay	2-FS	3	3	3	3	12/19/1999	CAH, FC, PCR, SCR
Big Dan Branch 0.0 to 1.2	Kentucky River	5100203	Clay	2-FS	3	3	3	3	12/29/1999	WAH, FC, PCR, SCR
Big Double Creek 0.0 to 4.4	Kentucky River	5100203	Clay	2-FS	3	3	3	3	1/1/2004	WAH, FC, PCR, SCR
Big Laurel Creek 3.6 to 6.4	Kentucky River	5100202	Harlan	2-FS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Big Middle Fork Elisha Creek 0.0 to 1.5	Kentucky River	5100203	Clay	2-FS	3	3	3	3	1/1/2005	WAH, FC, PCR, SCR
Big Sinking Creek 3.6 to 6.0	Kentucky River	5100204	Lee	2-FS	3	3	3	3	11/19/2009	WAH, FC, PCR, SCR
Big Twin Creek 0.0 to 3.8	Kentucky River	5100205	Owen	5-PS	3	3	3	3	7/23/1999	WAH, FC, PCR, SCR
Big Willard Creek 0.0 to 4.5	Kentucky River	5100201	Perry	5-NS	3	3	3	3	9/15/1999	WAH, FC, PCR, SCR
Bill Branch 0.0 to 0.3	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	1/1/2005	WAH, FC, PCR, SCR
Bill Oak Branch 0.0 to 0.6	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	1/27/2010	WAH, FC, PCR, SCR
Billey Fork 2.6 to 8.8	Kentucky River	5100204	Lee	2-FS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Black Creek 0.0 to 4.0	Kentucky River	5100204	Powell	2-FS	3	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Black John Branch 0.0 to 0.4	Kentucky River	5100201	Knott	5-NS	2-FS	3	3	3	10/28/2009	WAH, FC, PCR, SCR
Blair Branch 0.0 to 0.7	Kentucky River	5100201	Knott	5-NS	5-NS	3	3	3	10/28/2009	WAH, FC, PCR, SCR
Blue Lick 0.0 to 4.1	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/1/2008	WAH, FC, PCR, SCR
Bolen Branch 0.0 to 2.1	Kentucky River	5100201	Knott	2-FS	3	3	3	3	9/20/1999	WAH, FC, PCR, SCR
Boltz Lake	Kentucky River	5100205	Grant	5-PS	3	3	3	3	3/22/2004 -	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
									12/7/2009	
Boone Creek 0.0 to 7.4	Kentucky River	5100205	Fayette	2-FS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
Boone Creek 7.4 to 12.6	Kentucky River	5100205	Fayette	5-PS	5-NS	3	3	3	12/15/1999	WAH, FC, PCR, SCR
Boone Fork 1.0 to 3.3	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	11/19/2009	WAH, FC, PCR, SCR
Bowen Creek 0.0 to 1.5	Kentucky River	5100203	Leslie	5-PS	3	3	3	3	11/19/2009	WAH, FC, PCR, SCR
Breeding Branch 0.9 to 4.2	Kentucky River	5100201	Knott	5-NS	5-NS	3	3	3	10/28/2009	WAH, FC, PCR, SCR
Brush Creek 0.0 to 6.6	Kentucky River	5100204	Powell	5-PS	3	3	3	3	3/2/2001	WAH, FC, PCR, SCR
Brush Creek 0.0 to 9.7	Kentucky River	5100205	Owen	2-FS	3	3	3	3	7/1/1999	WAH, FC, PCR, SCR
Buck Creek 0.0 to 2.3	Kentucky River	5100204	Estill	2-FS	3	3	3	3	9/20/1999	WAH, FC, PCR, SCR
Buck Creek 0.0 to 4.0	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	7/22/1999	WAH, FC, PCR, SCR
Buck Creek Lake	Kentucky River	5130103	Lincoln	3	3	3	3	2-FS	11/2/2009	WAH, FC, PCR, SCR, DWS
Buck Run 0.0 to 5.7	Kentucky River	5100205	Owen	2-FS	3	3	3	3	1/1/2005	WAH, FC, PCR, SCR
Buckhorn Creek 2.4 to 6.8	Kentucky River	5100201	Breathitt	5-PS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
Buckhorn Creek 0.0 to 2.4	Kentucky River	5100201	Breathitt	2B(5)	5-NS	3	3	3	2/3/2006	WAH, FC, PCR, SCR
Buckhorn Lake	Kentucky River	5100202	Perry	2-FS	3	2B(5)	3	2-FS	8/15/2005 - 1/13/2010	WAH, FC, PCR, SCR, DWS
Buffalo Creek 0.0 to 1.6	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	11/23/2009	WAH, FC, PCR, SCR
Bull Creek 0.0 to 2.0	Kentucky River	5100203	Knox	5-PS	3	3	3	3	7/22/1999	WAH, FC, PCR, SCR
Bull Creek 0.0 to 4.1	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	12/13/1999	WAH, FC, PCR, SCR
Bullock Pen Creek 0.0 to 1.5	Kentucky River	5100205	Boone	2-FS	3	3	3	3	7/22/1999	WAH, FC, PCR, SCR
Bullock Pen Lake	Kentucky River	5100205	Grant	5-PS	3	2-FS	3	2-FS	11/2/2009	WAH, FC, PCR, SCR, DWS
Bullskin Creek 0.0 to 14.6	Kentucky River	5100203	Clay	2-FS	3	3	3	3	11/19/2009	WAH, FC, PCR, SCR
Campton City Lake	Kentucky River	5100204	Wolfe	3	3	2-FS	3	3	11/2/2009	WAH, FC, PCR, SCR, DWS
Cane Creek 0.0 to 3.1	Kentucky River	5100204	Powell	2-FS	4A-NS	3	3	3	12/15/1999	WAH, FC, PCR, SCR
Cane Creek 0.0 to 9.5	Kentucky River	5100201	Breathitt	2-FS	4A-NS	3	3	3	9/15/1999	WAH, FC, PCR, SCR
Cane Run 0.0 to 3.0	Kentucky River	5100205	Scott	5-NS	5-NS	5-PS	3	3	5/5/2009	WAH, FC, PCR, SCR
Cane Run 3.0 to 9.6	Kentucky River	5100205	Scott	5-NS	5-NS	3	3	3	10/30/2009	WAH, FC, PCR, SCR
Cane Run 9.6 to 17.4	Kentucky River	5100205	Fayette	5-NS	5-NS	5-NS	3	3	1/1/1999 - 5/5/2009	WAH, FC, PCR, SCR
Caney Creek 0.0 to 1.5	Kentucky River	5100205	Owen	5-PS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Canoe Creek 0.0 to 0.5	Kentucky River	5100202	Breathitt	2-FS	3	3	3	3	9/30/2005	WAH, FC, PCR, SCR
Carr Fork 0.0 to 5.9	Kentucky River	5100201	Perry	3	4A-PS	4A-PS	3	3	9/30/2005	WAH, FC, PCR, SCR
Carr Fork 15.6 to 26.4	Kentucky River	5100201	Knott	5-PS	5-NS	5-NS	3	3	8/19/2005 - 10/28/2009	WAH, FC, PCR, SCR
Carr Fork 6.2 to 8.9	Kentucky River	5100201	Knott	5-NS	2B(5)	2-FS	3	3	8/18/2005 - 10/28/2009	WAH, FC, PCR, SCR
Carr Fork Reservoir	Kentucky River	5100201	Knott	2B(5)	3	2B(5)	5-PS	3	1/12/2010	WAH, FC, PCR, SCR, DWS

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Cat Creek 0.0 to 8.0	Kentucky River	5100204	Powell	5-PS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
Cavanaugh Creek 0.0 to 8.3	Kentucky River	5100204	Jackson	2-FS	3	3	3	3	11/23/2009	WAH, FC, PCR, SCR
Cedar Cove Spring 0.0 to 0.35	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	11/23/2009	WAH, FC, PCR, SCR
Cedar Creek 0.0 to 0.5	Kentucky River	5100205	Lincoln	4C-PS	3	3	3	3	11/23/2009	WAH, FC, PCR, SCR
Cedar Creek 0.0 to 9.4	Kentucky River	5100205	Owen	5-PS	2-FS	2-FS	3	3	1/1/2005	WAH, FC, PCR, SCR
Cedar Creek Lake	Kentucky River	5100205	Lincoln	2-FS	3	2-FS	5-PS	3	12/4/2009	WAH, FC, PCR, SCR
Chambers Fork 0.7 to 1.1	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Cherry Run 0.0 to 0.9	Kentucky River	5100205	Scott	2-FS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
Chester Creek 0.0 to 2.8	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	11/23/2009	WAH, FC, PCR, SCR
Chimney Top Creek 0.0 to 4.6	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	11/23/2009	CAH, FC, PCR, SCR
Clarks Creek 0.0 to 5.2	Kentucky River	5100205	Grant	2-FS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Clarks Run 0.7 to 4.4	Kentucky River	5100205	Boyle	5-PS	5-NS	3	3	3	11/23/2009	WAH, FC, PCR, SCR
Clarks Run 4.4 to 6.7	Kentucky River	5100205	Boyle	2B(5)	5-NS	3	3	3	1/31/2002 - 11/23/2009	WAH, FC, PCR, SCR
Clarks Run 6.7 to 14.3	Kentucky River	5100205	Boyle	5-PS	5-NS	3	3	3	1/31/2008 - 11/23/2009	WAH, FC, PCR, SCR
Claylick Creek 0.0 to 5.5	Kentucky River	5100205	Owen	2-FS	3	3	3	3	1/1/2000	WAH, FC, PCR, SCR
Clear Creek 0.0 to 9.0	Kentucky River	5100205	Woodford	2-FS	3	3	3	3	11/23/2009	WAH, FC, PCR, SCR
Clemons Fork 2.2 to 4.8	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
Clifty Creek 0.0 to 2.0	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Coles Fork 0.0 to 5.5	Kentucky River	5100201	Breathitt	2-FS	3	3	2-FS	3	5/19/1998	WAH, FC, PCR, SCR
Collins Fork 2.4 to 6.3	Kentucky River	5100203	Clay	5-PS	3	3	3	3	12/13/1999	WAH, FC, PCR, SCR
Cope Fork 0.0 to 1.9	Kentucky River	5100201	Breathitt	5-PS	3	3	3	3	9/15/1999	WAH, FC, PCR, SCR
Copper Creek 2.2 to 5.05	Kentucky River	5100205	Rockcastle	2B(5)	3	3	3	3	3/7/2004	WAH, FC, PCR, SCR
Copper Creek 0.0 to 2.2	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/4/2008	WAH, FC, PCR, SCR
Corinth Lake	Kentucky River	5100205	Grant	2-FS	3	2-FS	3	3	12/7/2009	WAH, FC, PCR, SCR
Cow Creek 0.0 to 2.7	Kentucky River	5100204	Estill	2-FS	3	3	2-FS	3	12/15/1999	WAH, FC, PCR, SCR
Cow Creek 0.0 to 2.7	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	7/22/1999	WAH, FC, PCR, SCR
Cowbell Lake	Kentucky River	5100204	Madison	3	3	3	3	2-FS	12/9/2009	WAH, FC, PCR, SCR, DWS
Craig Creek 0.1 to 4.0	Kentucky River	5100205	Woodford	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Crane Creek 0.0 to 5.4	Kentucky River	5100203	Clay	5-PS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Crooked Creek 0.0 to 7.3	Kentucky River	5100204	Estill	2-FS	3	3	3	3	2/2/2000	WAH, FC, PCR, SCR
Crystal Creek 0.0 to 2.3	Kentucky River	5100201	Lee	5-PS	3	3	3	3	3/7/2004	WAH, FC, PCR, SCR
Cutshin Creek 9.7 to 10.7	Kentucky River	5100202	Leslie	5-PS	3	3	3	3	3/7/2003	WAH, FC, PCR, SCR
David Fork 0.0 to 1.65	Kentucky River	5100205	Fayette	3	5-NS	3	3	3	11/9/2009	WAH, FC, PCR, SCR
Deep Ford Branch 0.3 to 1.3	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	1/27/2010	WAH, FC, PCR, SCR
Defeated Creek 0.5 to 1.6	Kentucky River	5100201	Knott	5-NS	2B(5)	5-NS	3	3	9/30/2005 - 10/28/2009	WAH, FC, PCR, SCR
Dix River 0.0 to 3.1	Kentucky River	5100205	Garrard	2-FS	3	3	3	3	11/24/2009	CAH, FC, PCR, SCR
Dix River 33.3 to 36.1	Kentucky River	5100205	Garrard	2-FS	5-NS	2-FS	3	3	1/31/2008 - 12/14/2009	WAH, FC, PCR, SCR
Dix River 36.1 to 43.8	Kentucky River	5100205	Garrard	3	5-NS	3	3	3	1/31/2008	WAH, FC, PCR, SCR
Dix River 64.3 to 73.35	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	1/31/2008	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Dix River 73.35 to 78.7	Kentucky River	5100205	Rockcastle	2-FS	5-NS	3	3	3	1/31/2008 - 11/24/2009	WAH, FC, PCR, SCR
Dog Fork 0.0 to 2.3	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	1/10/2000	CAH, FC, PCR, SCR
Drakes Creek 1.15 to 7.3	Kentucky River	5100205	Lincoln	2-FS	5-NS	3	3	3	4/1/1999 - 2/4/2008	WAH, FC, PCR, SCR
Drennon Creek 8.7 to 12.2	Kentucky River	5100205	Henry	2-FS	3	3	3	3	3/7/2005	WAH, FC, PCR, SCR
Drowning Creek 0.05 to 9.3	Kentucky River	5100204	Madison	2-FS	3	3	3	3	11/24/2009	WAH, FC, PCR, SCR
Dry Run 0.0 to 3.1	Kentucky River	5100205	Scott	5-PS	3	3	3	3	12/16/1999	WAH, FC, PCR, SCR
Duck Fork 0.0 to 4.8	Kentucky River	5100204	Lee	5-PS	3	3	3	3	11/24/2009	WAH, FC, PCR, SCR
Eagle Creek 15.3 to 28.5	Kentucky River	5100205	Owen	2-FS	2B(5)	2-FS	3	3	2/22/2005 - 12/14/2009	WAH, FC, PCR, SCR
Eagle Creek 50.8 to 58.5	Kentucky River	5100205	Grant	5-PS	2-FS	2-FS	3	3	11/24/2009	WAH, FC, PCR, SCR
Eagle Creek 31.6 to 36.5	Kentucky River	5100205	Grant	5-NS	3	3	3	3	2/3/2006	WAH, FC, PCR, SCR
East Fork Indian Creek 0.0 to 9.1	Kentucky River	5100204	Menifee	2-FS	3	3	3	3	11/24/2009	CAH, FC, PCR, SCR
East Fork Mill Creek 0.0 to 3.1	Kentucky River	5100205	Carroll	2-FS	3	3	3	3	7/23/1999	WAH, FC, PCR, SCR
East Fork Otter Creek 0.0 to 2.7	Kentucky River	5100205	Madison	5-PS	3	3	3	3	12/17/1999	WAH, FC, PCR, SCR
East Hickman Creek 4.2 to 10.2	Kentucky River	5100205	Fayette	5-PS	5-NS	3	3	3	1/24/2000	WAH, FC, PCR, SCR
Edward Branch 0.0 to 1.7	Kentucky River	5100204	Menifee	2-FS	3	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Elisha Creek 0.8 to 1.8	Kentucky River	5100203	Leslie	2-FS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
Elk Creek 0.0 to 1.6	Kentucky River	5100205	Owen	5-PS	3	3	3	3	9/19/1999	WAH, FC, PCR, SCR
Elkhorn Creek 0.0 to 18.2	Kentucky River	5100205	Franklin	2-FS	2B(5)	2-FS	5-PS	3	3/1/2005 - 11/24/2009	WAH, FC, PCR, SCR
Elkhorn Creek 0.6 to 3.7	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	9/30/2005	WAH, FC, PCR, SCR
Elmer Davis Lake	Kentucky River	5100205	Owen	5-PS	3	3	3	3	6/3/2004 - 12/7/2009	WAH, FC, PCR, SCR
Emily Run 0.0 to 3.9	Kentucky River	5100205	Henry	2-FS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
Evans Fork 0.0 to 3.0	Kentucky River	5100204	Estill	2-FS	3	3	3	3	3/7/2005	WAH, FC, PCR, SCR
Fall Lick 0.0 to 2.2	Kentucky River	5100205	Lincoln	2-FS	3	3	3	3	11/24/2009	WAH, FC, PCR, SCR
Falling Rock Branch 0.0 to 0.7	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	3/7/2005	WAH, FC, PCR, SCR
Fishpond Lake	Kentucky River	5100201	Letcher	2-FS	3	2-FS	3	3	12/7/2009	WAH, CAH, FC, PCR, SCR
Five Mile Creek 0.0 to 2.7	Kentucky River	5100205	Henry	2-FS	3	3	3	3	9/21/1999	WAH, FC, PCR, SCR
Flat Creek 0.0 to 7.1	Kentucky River	5100205	Franklin	5-PS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
Flaxpatch Branch 0.1 to 2.6	Kentucky River	5100201	Knott	5-NS	5-NS	3	3	3	10/28/2009	WAH, FC, PCR, SCR
Four Mile Creek 0.0 to 7.4	Kentucky River	5100205	Clark	3	3	3	3	3		WAH, FC, PCR, SCR
Freeman Fork 0.0 to 1.4	Kentucky River	5100202	Breathitt	2-FS	3	3	3	3	12/17/1999	WAH, FC, PCR, SCR
Frog Branch 0.0 to 3.4	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/1/2008	WAH, FC, PCR, SCR
Frozen Creek 0.0 to 13.9	Kentucky River	5100201	Breathitt	5-PS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Game Farm Lake	Kentucky River	5100205	Franklin	3	3	3	2-FS	3	1/31/2008	WAH, FC, PCR, SCR
General Butler State Park Lake	Kentucky River	5100205	Carroll	2-FS	3	3	3	3	6/3/2004	WAH, FC, PCR, SCR
Gilberts Big Creek 0.0 to 5.1	Kentucky River	5100203	Leslie	2-FS	3	3	3	3	9/21/1999	WAH, FC, PCR, SCR
Gilberts Creek 0.0 to 1.25	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	1/31/2008	WAH, FC, PCR, SCR
Gilberts Creek 0.0 to 2.6	Kentucky River	5100205	Anderson	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Gilmore Creek 0.0 to 5.5	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	3/7/2001	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Gladie Creek 0.5 to 7.25	Kentucky River	5100204	Menifee	2-FS	3	3	3	3	11/24/2009	CAH, FC, PCR, SCR
Glenns Creek 0.0 to 5.2	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	7/22/1998	WAH, FC, PCR, SCR
Goose Creek 0.0 to 1.85	Kentucky River	5100205	Shelby	5-PS	3	3	3	3	7/22/1999	WAH, FC, PCR, SCR
Goose Creek 0.0 to 8.3	Kentucky River	5100203	Clay	2-FS	5-PS	2-FS	3	3	3/7/2005 - 12/22/2009	WAH, FC, PCR, SCR
Goose Creek 1.85 to 4.2	Kentucky River	5100205	Shelby	5-PS	3	3	3	3	9/21/1999	WAH, FC, PCR, SCR
Goose Creek 18.9 to 19.9	Kentucky River	5100203	Clay	3	3	3	3	2-FS	3/1/2005	WAH, FC, PCR, SCR, DWS
Granny's Branch 0.0 to 2.3	Kentucky River	5100203	Clay	2-FS	3	3	3	3	1/10/2000	WAH, FC, PCR, SCR
Grapevine Creek 0.0 to 1.1	Kentucky River	5100201	Perry	5-NS	3	3	3	3	9/13/1999	WAH, FC, PCR, SCR
Grassy Run 0.0 to 6.4	Kentucky River	5100205	Grant	2-FS	3	3	3	3	9/16/1999	WAH, FC, PCR, SCR
Greasy Creek 0.0 to 10.0	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	12/13/1999	WAH, FC, PCR, SCR
Greasy Creek 12.1 to 22.6	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	9/29/1999	WAH, FC, PCR, SCR
Griers Creek 0.0 to 3.5	Kentucky River	5100205	Woodford	2-FS	3	3	3	3	3/7/2005	WAH, FC, PCR, SCR
Grindstone Creek 0.1 to 1.9	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Hall Branch 0.7 to 1.2	Kentucky River	5100205	Scott	2-FS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Hammons Fork 0.0 to 4.9	Kentucky River	5100203	Knox	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Hanging Fork of Dix River 0.0 to 15.85	Kentucky River	5100205	Lincoln	2-FS	5-NS	3	3	3	12/17/1999 - 2/4/2008	WAH, FC, PCR, SCR
Hanging Fork of Dix River 15.85 to 24.15	Kentucky River	5100205	Lincoln	2-FS	5-NS	3	3	3	7/22/1999 - 2/4/2008	WAH, FC, PCR, SCR
Hanging Fork of Dix River 24.15 to 27.6	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/4/2008	WAH, FC, PCR, SCR
Hanging Fork of Dix River 27.6 to 32.2	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/4/2008	WAH, FC, PCR, SCR
Hardwick Creek 0.0 to 3.2	Kentucky River	5100204	Powell	2-FS	5-NS	3	3	3	12/17/1999	WAH, FC, PCR, SCR
Harris Creek 0.0 to 6.25	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/4/2008	WAH, FC, PCR, SCR
Harts Fork 3.2 to 4.2	Kentucky River	5100205	Madison	3	3	3	3	3		WAH, FC, PCR, SCR
Hatcher Creek 0.0 to 1.2	Kentucky River	5100204	Powell	2-FS	3	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Hatton Creek 0.0 to 4.2	Kentucky River	5100204	Powell	5-PS	3	3	3	3	3/2/2001	WAH, FC, PCR, SCR
Hawes Fork 0.0 to 4.4	Kentucky River	5100201	Breathitt	5-NS	3	3	3	3	9/10/1999	WAH, FC, PCR, SCR
Hector Branch 0.0 to 5.5	Kentucky River	5100203	Clay	5-PS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Hell Creek 0.0 to 3.5	Kentucky River	5100201	Lee	2B(5)	3	3	3	3	9/15/1999	WAH, FC, PCR, SCR
Hell For Certain Creek 0.0 to 2.1	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Hell for Certain Creek 2.1 to 4.9	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Herrington Lake	Kentucky River	5100205	Garrard	5-NS	2-FS	2-FS	5-PS	2-FS	3/18/2005	WAH, FC, PCR, SCR, DWS
Hickman Creek 6.0 to 25.5	Kentucky River	5100205	Jessamine	5-PS	3	3	3	3	10/4/2005	WAH, FC, PCR, SCR
Hickman Creek 0.0 to 6.0	Kentucky River	5100205	Jessamine	5-PS	3	3	3	3	2/3/2006	WAH, FC, PCR, SCR
Hines Creek 0.1 to 1.9	Kentucky River	5100205	Madison	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Holly Creek 0.0 to 6.2	Kentucky River	5100201	Wolfe	5-PS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Honey Branch 0.0 to 1.35	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Hopper Cave Branch 0.0 to 1.8	Kentucky River	5100204	Jackson	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Horse Creek 0.0 to 8.3	Kentucky River	5100203	Clay	5-PS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Hoys Fork 0.0 to 3.8	Kentucky River	5100204	Estill	2-FS	3	3	3	3	2/2/2000	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Hunting Creek 0.0 to 2.7	Kentucky River	5100201	Breathitt	2B(5)	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
Indian Creek 0.0 to 5.4	Kentucky River	5100205	Carroll	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Indian Creek 2.6 to 7.8	Kentucky River	5100204	Menifee	5-PS	3	3	3	3	10/4/2004	CAH, FC, PCR, SCR
Indian Creek 1.25 to 2.6	Kentucky River	5100204	Menifee	2-FS	3	3	3	3	11/25/2009	CAH, FC, PCR, SCR
Indian Fork 0.0 to 3.3	Kentucky River	5100205	Shelby	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Irishman Creek 0.0 to 4.3	Kentucky River	5100201	Knott	5-NS	5-PS	3	3	3	10/28/2009	WAH, FC, PCR, SCR
Jessamine Creek 0.0 to 5.3	Kentucky River	5100205	Jessamine	2-FS	3	3	3	3	7/1/1998	WAH, FC, PCR, SCR
John Carpenter Fork 0.0 to 1.2	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
John Littles Branch 0.0 to 1.7	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	9/18/2007	WAH, FC, PCR, SCR
Johnson Fork 0.0 to 0.5	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	10/4/2004	WAH, FC, PCR, SCR
Joyce Fork 0.0 to 1.2	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Judy Creek 0.0 to 1.5	Kentucky River	5100204	Powell	5-NS	3	3	3	3	3/2/2001	WAH, FC, PCR, SCR
Judy Creek 1.5 to 3.4	Kentucky River	5100204	Powell	2-FS	3	3	3	3	9/29/1999	WAH, FC, PCR, SCR
Katies Creek 0.0 to 4.05	Kentucky River	5100203	Clay	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Keens Fork 0.0 to 1.8	Kentucky River	5100203	Clay	2-FS	3	3	3	3	5/1/1994	WAH, FC, PCR, SCR
Kentucky River 0.3 to 11.5	Kentucky River	5100205	Owen	3	3	3	5-NS	3	3/9/2005	WAH, FC, PCR, SCR
Kentucky River 120.8 to 121.1	Kentucky River	5100205	Mercer	3	3	3	3	2-FS	3/10/2005 - 12/15/2009	WAH, FC, PCR, SCR, DWS
Kentucky River 121.1 to 138.5	Kentucky River	5100205	Jessamine	2-FS	2-FS	2-FS	5-PS	3	12/15/2009	WAH, FC, PCR, SCR
Kentucky River 153.75 to 209.8	Kentucky River	5100204	Jessamine	2-FS	2-FS	2-FS	5-PS	2-FS	12/15/2009	WAH, FC, PCR, SCR, DWS
Kentucky River 17.4 to 53.2	Kentucky River	5100205	Owen	2-FS	2B(5)	3	2-FS	3	3/3/2005 - 12/14/2009	WAH, FC, PCR, SCR
Kentucky River 223.1 to 224.1	Kentucky River	5100204	Estill	3	3	3	3	2-FS	11/2/2009	WAH, FC, PCR, SCR, DWS
Kentucky River 225.9 to 253.7	Kentucky River	5100204	Estill	3	3	3	2-FS	3	3/10/2005	WAH, FC, PCR, SCR
Kentucky River 53.2 to 66.95	Kentucky River	5100205	Franklin	2-FS	2-FS	2-FS	5-PS	2-FS	2/22/2005 - 12/14/2009	WAH, FC, PCR, SCR, DWS
Kentucky River 145.0 to 146.0	Kentucky River	5100205	Garrard	3	3	3	3	2-FS	12/15/2009	WAH, FC, PCR, SCR, DWS
Kentucky River 67.0 to 84.25	Kentucky River	5100205	Franklin	2-FS	2-FS	3	5-PS	2-FS	12/14/2009	WAH, FC, PCR, SCR, DWS
Kentucky River 85.9 to 88.5	Kentucky River	5100205	Anderson	3	3	3	3	2-FS	12/14/2009	WAH, FC, PCR, SCR, DWS
Kentucky River 99.1 to 119.9	Kentucky River	5100205	Jessamine	3	3	3	5-PS	2-FS	12/14/2009	WAH, FC, PCR, SCR, DWS
Knob Lick Branch 0.0 to 2.8	Kentucky River	5100204	Estill	2-FS	3	3	3	3	10/6/2004	WAH, FC, PCR, SCR
Knoblick Creek 0.0 to 4.8	Kentucky River	5100205	Lincoln	2-FS	5-NS	3	3	3	7/22/1999 - 2/4/2008	WAH, FC, PCR, SCR
Lacy Creek 0.0 to 7.25	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Lake Reba	Kentucky River	5100205	Madison	5-PS	3	2-FS	3	3	12/7/2009	WAH, FC, PCR, SCR
Lake Vega	Kentucky River	5100205	Madison	3	3	3	3	2-FS	12/9/2009	WAH, FC, PCR, SCR, DWS
Lanes Run 0.0 to 0.5	Kentucky River	5100205	Scott	3	5B-	3	3	3	2/6/2006	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
					NS					
Laurel Creek 3.8 to 4.8	Kentucky River	5100203	Clay	5-PS	3	3	3	3	9/29/1999	WAH, FC, PCR, SCR
Laurel Fork 0.0 to 4.2	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Leatherwood Creek 0.0 to 4.2	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	8/1/1998	WAH, FC, PCR, SCR
Leatherwood Creek 0.6 to 8.2	Kentucky River	5100201	Perry	2-FS	2-FS	3	3	3	12/21/1999	WAH, FC, PCR, SCR
Leatherwood Creek 1.55 to 3.1	Kentucky River	5100202	Perry	5-PS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
LeComptes Run 0.0 to 1.9	Kentucky River	5100205	Scott	2-FS	3	3	3	3	12/17/1999	WAH, FC, PCR, SCR
Lee Branch 0.0 to 1.0	Kentucky River	5100205	Woodford	3	5B-NS	3	3	3	11/9/2009	WAH, FC, PCR, SCR
Left Fork Big Double Creek 0.0 to 1.5	Kentucky River	5100203	Clay	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Left Fork Buffalo Creek 0.0 to 3.1	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	12/14/1999	WAH, FC, PCR, SCR
Left Fork Elisha Creek 0.0 to 3.9	Kentucky River	5100203	Leslie	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Left Fork Island Creek 0.0 to 5.0	Kentucky River	5100203	Owsley	5-PS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
Left Fork Millstone Creek 1.6 to 2.9	Kentucky River	5100201	Letcher	5-NS	3	3	3	3	3/22/2005 - 2/10/2010	WAH, FC, PCR, SCR
Lexington Reservoir No. 4 (Jacobson Reservoir)	Kentucky River	5100205	Fayette	3	3	3	3	2-FS	12/9/2009	WAH, FC, PCR, SCR, DWS
Lick Creek 0.0 to 5.4	Kentucky River	5100205	Carroll	5-PS	3	3	3	3	10/6/2004	WAH, FC, PCR, SCR
Line Fork 9.1 to 11.6	Kentucky River	5100201	Letcher	5-PS	3	3	3	3	10/6/2004	WAH, FC, PCR, SCR
Line Fork 11.6 to 27.5	Kentucky River	5100201	Letcher	2-FS	5-PS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Little Carr Fork 0.0 to 4.8	Kentucky River	5100201	Knott	5-NS	5-NS	3	3	3	10/29/2009	WAH, FC, PCR, SCR
Little Goose Creek 0.0 to 7.6	Kentucky River	5100203	Clay	3	3	3	3	3		WAH, FC, PCR, SCR
Little Middle Fork Elisha Creek 0.0 to 0.75	Kentucky River	5100203	Leslie	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Little Millseat Branch 0.0 to 1.2	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Little Negro Creek 0.0 to 2.45	Kentucky River	5100205	Rockcastle	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Little Sexton Creek 0.0 to 2.8	Kentucky River	5100203	Clay	2-FS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
Little Sinking Creek 0.0 to 4.0	Kentucky River	5100204	Lee	2-FS	3	3	3	3	9/30/1999	WAH, FC, PCR, SCR
Little Sixmile Creek 0.0 to 5.3	Kentucky River	5100205	Henry	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Little Smith Branch 0.3 to 1.4	Kentucky River	5100201	Knott	5-NS	5-NS	3	3	3	10/29/2009	WAH, FC, PCR, SCR
Little Sturgeon Creek 0.0 to 3.0	Kentucky River	5100204	Owsley	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Little Sturgeon Creek 3.0 to 5.5	Kentucky River	5100204	Owsley	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Little Sturgeon Creek 5.5 to 7.8	Kentucky River	5100204	Owsley	2-FS	3	3	3	3	11/25/2009	WAH, FC, PCR, SCR
Little Willard Creek 0.0 to 2.5	Kentucky River	5100201	Perry	5-NS	3	3	3	3	10/6/2004	WAH, FC, PCR, SCR
Log Lick Creek 0.0 to 2.6	Kentucky River	5100204	Clark	3	3	3	3	3		WAH, FC, PCR, SCR
Logan Creek 0.0 to 3.15	Kentucky River	5100205	Lincoln	2-FS	5-NS	3	3	3	10/4/2005	WAH, FC, PCR, SCR
Long Fork 0.0 to 2.0	Kentucky River	5100203	Clay	2-FS	3	3	3	3	9/30/1999	WAH, FC, PCR, SCR
Long Fork 0.0 to 4.6	Kentucky River	5100201	Breathitt	5-PS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Lost Creek 0.0 to 3.7	Kentucky River	5100201	Breathitt	2-FS	5-NS	2-FS	3	3	2/22/2005	WAH, FC, PCR, SCR
Lost Creek 3.7 to 8.95	Kentucky River	5100201	Breathitt	5-NS	3	3	3	3	2/6/2006	WAH, FC, PCR, SCR
Lotts Creek 0.4 to 1.0	Kentucky River	5100201	Knott	5-PS	3	3	3	3	10/6/2004	WAH, FC, PCR, SCR
Lotts Creek 1.2 to 6.0	Kentucky River	5100201	Perry	5-NS	3	3	3	3	2/6/2006	WAH, FC, PCR, SCR
Low Gap Branch 0.0 to 0.8	Kentucky River	5100201	Letcher	2-FS	3	3	3	3	11/30/2009	WAH, FC, PCR, SCR
Lower Buffalo Creek 0.0 to 2.4	Kentucky River	5100203	Owsley	2B(5)	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Lower Cane Creek 0.0 to 4.1	Kentucky River	5100204	Powell	2-FS	4A-NS	3	3	3	11/9/2009	WAH, FC, PCR, SCR
Lower Devil Creek 0.0 to 4.65	Kentucky River	5100201	Lee	2-FS	3	3	3	3	11/30/2009	WAH, FC, PCR, SCR
Lower Hood Branch 0.0 to 1.3	Kentucky River	5100204	Powell	2-FS	3	3	3	3	1/11/1998	WAH, FC, PCR, SCR
Lower Howard Creek 2.65 to 6.2	Kentucky River	5100205	Clark	5-NS	3	3	3	3	12/17/1999	WAH, FC, PCR, SCR
Lower Howard Creek 0.0 to 2.7	Kentucky River	5100205	Clark	2-FS	3	3	3	3	1/27/2010	WAH, FC, PCR, SCR
Lower Thomas Lake	Kentucky River	5100205	Owen	3	3	3	3	2-FS	3/23/2005	WAH, FC, PCR, SCR, DWS
Lulbegrud Creek 0.0 to 7.3	Kentucky River	5100204	Clark	5-PS	3	3	2-FS	3	12/17/1999	WAH, FC, PCR, SCR
Lulbegrud Creek 16.9 to 22.2	Kentucky River	5100204	Montgomery	3	3	3	3	3		WAH, FC, PCR, SCR
Lulbegrud Creek 7.3 to 16.9	Kentucky River	5100204	Powell	2-FS	3	3	3	3	2/28/2001	WAH, FC, PCR, SCR
Lytles Fork 0.0 to 14.7	Kentucky River	5100205	Scott	2B(5)	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Maces Creek 0.0 to 0.2	Kentucky River	5100201	Perry	2-FS	2-FS	3	3	3	12/21/1999	WAH, FC, PCR, SCR
Marble Creek 0.05 to 3.9	Kentucky River	5100205	Jessamine	5-PS	3	3	3	3	11/30/2009	WAH, FC, PCR, SCR
McConnell Run 0.0 to 4.4	Kentucky River	5100205	Scott	5-PS	3	3	3	3	12/17/1999	WAH, FC, PCR, SCR
McKinney Branch 0.0 to 1.9	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/1/2008	WAH, FC, PCR, SCR
Meadow Creek 0.5 to 3.7	Kentucky River	5100203	Owsley	5-PS	3	3	3	3	10/6/2004	WAH, FC, PCR, SCR
Middle Fork Kentucky River 36.9 to 43.8	Kentucky River	5100202	Perry	2-FS	2-FS	2-FS	3	3	3/3/2005	WAH, FC, PCR, SCR, DWS
Middle Fork Kentucky River 6.45 to 12.6	Kentucky River	5100202	Lee	2-FS	5-PS	2-FS	3	3	12/22/2009	WAH, FC, PCR, SCR, DWS
Middle Fork Kentucky River 75.4 to 75.9	Kentucky River	5100202	Leslie	3	3	3	3	2-FS	3/11/2005	WAH, FC, PCR, SCR, DWS
Middle Fork Kentucky River 75.9 to 84.3	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR, DWS
Middle Fork of Kentucky River 67.0 to 73.4	Kentucky River	5100202	Leslie	5-PS	5-PS	2-FS	3	3	3/3/2005	WAH, FC, PCR, SCR
Middle Fork Quicksand Creek 0.0 to 10.0	Kentucky River	5100201	Knott	2-FS	3	3	3	3	9/20/1999	WAH, FC, PCR, SCR
Middle Fork Red River 13.0 to 15.4	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	3/23/2005	WAH, FC, PCR, SCR
Middle Fork Red River 5.85 to 7.3	Kentucky River	5100204	Powell	2-FS	3	3	3	3	11/30/2009	WAH, FC, PCR, SCR
Middle Fork Red River 8.9 to 13.0	Kentucky River	5100202	Wolfe	2-FS	3	3	3	3	11/30/2009	CAH, FC, PCR, SCR
Middle Fork Right Fork Cane Creek 0.0 to 2.8	Kentucky River	5100204	Powell	3	4A-NS	3	3	3	11/9/2009	WAH, FC, PCR, SCR
Middle Fork, Kentucky River 61.5 to 64.2	Kentucky River	5100202	Leslie	2-FS	5-NS	5-NS	3	3	8/16/2005	WAH, FC, PCR, SCR, DWS
Mike Branch 0.0 to 0.7	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	1/27/2010	WAH, FC, PCR, SCR
Mill Creek 0.0 to 3.3	Kentucky River	5100201	Letcher	5-NS	3	3	3	3	10/7/2004	WAH, FC, PCR, SCR
Mill Creek 0.0 to 5.7	Kentucky River	5100205	Carroll	2-FS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
Mill Creek 0.5 to 8.3	Kentucky River	5100205	Owen	2-FS	3	3	3	3	3/23/2005	WAH, FC, PCR, SCR
Mill Creek Lake	Kentucky River	5100204	Powell	2-FS	3	2-FS	3	2-FS	6/3/2004 - 12/7/2009	WAH, CAH, FC, PCR, SCR, DWS
Millers Creek 0.0 to 6.7	Kentucky River	5100204	Lee	2-FS	2-FS	3	3	3	12/17/1999	WAH, FC, PCR, SCR
Millseat Branch 0.0 to 1.85	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	3/23/2005	WAH, FC, PCR, SCR
Mocks Branch 1.6 to 5.7	Kentucky River	5100205	Boyle	5-PS	3	3	3	3	3/11/2005	WAH, FC, PCR, SCR

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Morris Creek 0.1 to 3.7	Kentucky River	5100204	Powell	3	3	3	3	3		WAH, FC, PCR, SCR
Moseby Branch 0.0 to 2.2	Kentucky River	5100205	Owen	5-NS	3	3	3	3	9/16/1999	WAH, FC, PCR, SCR
Muddy Creek 0.0 to 20.2	Kentucky River	5100205	Madison	2-FS	5-NS	3	2-FS	3	12/1/1999	WAH, FC, PCR, SCR
Muddy Creek 20.2 to 29.2	Kentucky River	5100205	Madison	2-FS	3	3	3	3	1/2/2000	WAH, FC, PCR, SCR
Muncy Creek 2.7 to 4.7	Kentucky River	5100202	Leslie	5-NS	3	3	3	3	9/30/2004	WAH, FC, PCR, SCR
Musselman Creek 0.0 to 9.0	Kentucky River	5100205	Grant	2-FS	3	3	3	3	3/23/2005	WAH, FC, PCR, SCR
Negro Creek 0.8 to 2.9	Kentucky River	5100205	Rockcastle	2-FS	3	3	3	3	11/30/2009	WAH, FC, PCR, SCR
Noland Creek 0.05 to 1.2	Kentucky River	5100204	Estill	5-PS	3	3	3	3	3/11/2005	WAH, FC, PCR, SCR
North Benson Creek 0.8 to 2.0	Kentucky River	5100205	Franklin	5-PS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
North Elkhorn Creek 0.7 to 7.4	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	7/24/2003	WAH, FC, PCR, SCR
North Elkhorn Creek 33.6 to 34.6	Kentucky River	5100205	Scott	3	3	3	3	2-FS	3/11/2005	WAH, FC, PCR, SCR, DWS
North Elkhorn Creek 44.75 to 66.0	Kentucky River	5100205	Fayette	5-PS	3	3	3	3	10/30/2009	WAH, FC, PCR, SCR
North Fork Elkhorn Creek 66.0 to 73.75	Kentucky River	5100205	Fayette	5-PS	5-NS	3	3	3	10/4/2005	WAH, FC, PCR, SCR
North Fork Kentucky River 110.9 to 125.0	Kentucky River	5100201	Breathitt	2-FS	4A-NS	3	3	3	1/5/2010	WAH, FC, PCR, SCR
North Fork Kentucky River 125.0 to 131.0	Kentucky River	5100201	Breathitt	3	4A-NS	3	3	3	2/17/2010	WAH, FC, PCR, SCR
North Fork Kentucky River 55.4 to 77.1	Kentucky River	5100201	Perry	2-FS	4A-NS	3	3	3	1/4/2010	WAH, FC, PCR, SCR
North Fork Kentucky River 77.7 to 89.75	Kentucky River	5100201	Perry	3	4A-NS	3	3	3	2/17/2010	WAH, FC, PCR, SCR
North Fork Kentucky River 89.75 to 99.95	Kentucky River	5100201	Perry	2-FS	4A-NS	3	3	3	1/4/2010	WAH, FC, PCR, SCR
North Fork Kentucky River 99.95 to 104.1	Kentucky River	5100201	Perry	3	4A-NS	3	3	3	2/17/2010	WAH, FC, PCR, SCR
North Fork Lulbegrud Creek 0.0 to 2.4	Kentucky River	5100204	Montgomery	2-FS	3	3	3	3	3/2/2001	WAH, FC, PCR, SCR
North Fork North Benson Creek 0.0 to 2.2	Kentucky River	5100205	Franklin	5-PS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
North Fork of Kentucky River 1.3 to 2.3	Kentucky River	5100201	Lee	3	4A-NS	3	3	2-FS	11/2/2009	WAH, FC, PCR, SCR, DWS
North Fork of Kentucky River 104.1 to 105.1	Kentucky River	5100201	Perry	3	4A-NS	3	3	2-FS	1/4/2010	WAH, FC, PCR, SCR, DWS
North Fork of Kentucky River 131.0 to 132.0	Kentucky River	5100201	Letcher	3	4A-NS	3	3	2-FS	1/5/2010	WAH, FC, PCR, SCR, DWS
North Fork of Kentucky River 145.5 to 147.9	Kentucky River	5100201	Letcher	5-NS	4A-NS	3	3	3	9/28/2005	WAH, FC, PCR, SCR
North Fork of Kentucky River 147.9 to 162.0	Kentucky River	5100201	Letcher	5-NS	4A-NS	3	3	2-FS	1/5/2010	WAH, FC, PCR, SCR, DWS
North Fork of Kentucky River 2.3 to 35.7	Kentucky River	5100201	Lee	3	4A-NS	3	2-FS	3	3/11/2005	WAH, FC, PCR, SCR
North Fork of Kentucky River 35.7 to 47.2	Kentucky River	5100201	Breathitt	2-FS	4A-NS	2-FS	3	3	12/22/2009	WAH, FC, PCR, SCR
North Fork of Kentucky River 47.2 to 48.2	Kentucky River	5100201	Breathitt	3	4A-NS	3	3	2-FS	11/2/2009	WAH, FC, PCR, SCR, DWS

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North Fork of Kentucky River 48.2 to 55.4	Kentucky River	5100201	Breathitt	3	4A-NS	3	3	3		WAH, FC, PCR, SCR, DWS
North Fork of Kentucky River 0.0 to 1.3	Kentucky River	5100201	Lee	3	4A-NS	3	3	3		WAH, FC, PCR, SCR, DWS
North Fork of Kentucky River 105.1 to 110.9	Kentucky River	5100201	Perry	3	4A-NS	3	3	3		WAH, FC, PCR, SCR, DWS
North Fork of Kentucky River 132.0 to 145.5	Kentucky River	5100201	Letcher	3	4A-NS	3	3	3		WAH, FC, PCR, SCR
North Severn Creek 0.0 to 2.1	Kentucky River	5100205	Owen	2-FS	3	3	3	3	10/7/2004	WAH, FC, PCR, SCR
Otter Creek 0.0 to 4.1	Kentucky River	5100205	Madison	2B(5)	2-FS	2-FS	2-FS	3	2/22/2005	WAH, FC, PCR, SCR
Owsley Fork Lake	Kentucky River	5100205	Madison	3	3	3	3	2-FS	6/3/2004 - 12/9/2009	WAH, FC, PCR, SCR, DWS
Paint Lick Creek 0.0 to 7.5	Kentucky River	5100205	Garrard	2-FS	3	3	3	3	10/25/1999	WAH, FC, PCR, SCR
Paint Lick Creek 7.5 to 22.2	Kentucky River	5100205	Madison	2-FS	3	3	3	3	9/16/1999	WAH, FC, PCR, SCR
Panbowl Lake	Kentucky River	5100201	Breathitt	2B(5)	3	2	3	3	6/3/2004 - 12/7/2009	WAH, FC, PCR, SCR
Parched Corn Creek 0.0 to 2.2	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Peyton Creek 0.0 to 4.1	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/4/2008	WAH, FC, PCR, SCR
Plum Branch 0.0 to 3.9	Kentucky River	5100204	Powell	5-PS	3	3	3	3	1/1/2005	WAH, FC, PCR, SCR
Polls Creek 0.0 to 4.7	Kentucky River	5100202	Leslie	5-PS	3	3	3	3	9/30/1999	WAH, FC, PCR, SCR
Potter Fork 0.0 to 4.4	Kentucky River	5100201	Letcher	5-NS	3	3	3	3	9/30/1999	WAH, FC, PCR, SCR
Puncheon Camp Creek 0.0 to 3.2	Kentucky River	5100202	Breathitt	5-PS	3	3	3	3	12/21/1999	WAH, FC, PCR, SCR
Quicksand Creek 0.0 to 17.0	Kentucky River	5100201	Breathitt	5-PS	5-PS	2-FS	3	3	1/5/2010	WAH, FC, PCR, SCR
Quicksand Creek 21.7 to 30.8	Kentucky River	5100201	Breathitt	5-NS	3	3	3	3	2/6/2006	WAH, FC, PCR, SCR
Rattlesnake Creek 0.0 to 1.2	Kentucky River	5100205	Grant	5-NS	3	3	3	3	9/16/1999	WAH, FC, PCR, SCR
Red Bird River 0.0 to 15.3	Kentucky River	5100203	Clay	2-FS	5-PS	2-FS	3	3	1/5/2010	WAH, FC, PCR, SCR
Red Lick Creek 0.0 to 5.0	Kentucky River	5100204	Estill	2B(5)	5-PS	2-FS	3	3	2/22/2005 - 12/1/2009	WAH, FC, PCR, SCR
Red River 21.8 to 30.7	Kentucky River	5100204	Powell	2-FS	2-FS	2-FS	3	3	12/1/2009	WAH, FC, PCR, SCR
Red River 31.0 to 32.0	Kentucky River	5100204	Powell	3	3	3	3	2-FS	3/3/2005	WAH, FC, PCR, SCR, DWS
Red River 50.1 to 60.9	Kentucky River	5100204	Powell	2-FS	3	3	3	3	3/14/2005	WAH, FC, PCR, SCR
Red River 64.1 to 67.6	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	10/1/2004	WAH, FC, PCR, SCR
Red River 70.0 to 83.9	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	10/1/2004	WAH, FC, PCR, SCR
Red River 89.5 to 93.4	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	3/14/2005	WAH, FC, PCR, SCR
Reservoir No. 1 (Lake Ellerslie)	Kentucky River	5100205	Fayette	3	3	3	3	2-FS	12/9/2009	WAH, FC, PCR, SCR, DWS
Richland Creek 0.0 to 0.8	Kentucky River	5100205	Owen	5-PS	3	3	3	3	1/12/2000	WAH, FC, PCR, SCR
Right Fork Beehive Branch 0.6 to 1.8	Kentucky River	5100201	Perry	2-FS	3	3	3	3	12/1/2009	WAH, FC, PCR, SCR
Right Fork Big Double Creek 0.0 to 2.1	Kentucky River	5100203	Clay	2-FS	3	3	3	3	3/3/2005	WAH, FC, PCR, SCR
Right Fork Buffalo Creek 0.0 to 2.1	Kentucky River	5100203	Owsley	2B(5)	3	3	3	3	10/7/2004	WAH, FC, PCR, SCR
Right Fork Cane Creek 2.2 to 5.2	Kentucky River	5100204	Powell	3	4A-PS	3	3	3	11/9/2009	WAH, FC, PCR, SCR
Right Fork Elisha Creek 0.0 to 3.3	Kentucky River	5100203	Leslie	2-FS	3	3	3	3	3/15/2005	WAH, FC, PCR, SCR

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Right Fork Lacy Creek 0.0 to 2.2	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	10/4/2005	WAH, FC, PCR, SCR
Right Fork Millstone Creek 0.0 to 1.6	Kentucky River	5100201	Letcher	5-NS	3	3	3	3	3/15/2005	WAH, FC, PCR, SCR
Roaring Fork 0.0 to 0.9	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	3/15/2005	WAH, FC, PCR, SCR
Rock Lick Creek 0.0 to 9.6	Kentucky River	5100204	Jackson	2-FS	3	3	3	3	1/28/2010	WAH, FC, PCR, SCR
Rockbridge Fork 0.0 to 3.3	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	12/1/2009	WAH, FC, PCR, SCR
Rockhouse Creek 0.0 to 3.6	Kentucky River	5100201	Letcher	5-PS	5-NS	3	3	3	9/20/1999	WAH, FC, PCR, SCR
Rockhouse Creek 4.0 to 5.2	Kentucky River	5100202	Leslie	3	3	3	3	3		WAH, FC, PCR, SCR
Rose Fork 0.0 to 3.1	Kentucky River	5100204	Wolfe	5-NS	3	3	3	3	10/5/2005	WAH, FC, PCR, SCR
Ross Creek 2.7 to 7.3	Kentucky River	5100204	Lee	2-FS	3	3	3	3	12/1/2009	WAH, FC, PCR, SCR
Royal Spring 0.0 to 0.7	Kentucky River	5100205	Scott	5-NS	3	3	3	2-FS	1/7/2010	WAH, FC, PCR, SCR, DWS
Salt Fork 0.0 to 0.8	Kentucky River	5100204	Menifee	2-FS	3	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Salt River of Sixmile Creek 0.0 to 4.5	Kentucky River	5100205	Henry	5-PS	3	3	3	3	7/22/1999	WAH, FC, PCR, SCR
Sand Lick Fork 0.0 to 5.3	Kentucky River	5100204	Powell	4A-PS	3	3	3	3	12/1/2009	WAH, FC, PCR, SCR
Sand Ripple Creek 0.1 to 3.9	Kentucky River	5100205	Henry	2-FS	3	3	3	3	3/15/2005	WAH, FC, PCR, SCR
Sawdridge Creek 0.0 to 3.35	Kentucky River	5100205	Owen	2-FS	3	3	3	3	3/15/2005	WAH, FC, PCR, SCR
Severn Creek 0.55 to 1.35	Kentucky River	5100205	Owen	3	3	3	3	2-FS	3/15/2005	WAH, FC, PCR, SCR, DWS
Severn Creek 1.35 to 3.0	Kentucky River	5100205	Owen	2-FS	3	3	3	3	12/1/2009	WAH, FC, PCR, SCR
Sexton Creek 0.1 to 17.2	Kentucky River	5100203	Clay	5-PS	2-FS	2-FS	3	3	2/22/2005	WAH, FC, PCR, SCR
Shaker Creek 0.1 to 1.4	Kentucky River	5100205	Mercer	2-FS	3	3	3	3	3/15/2005	WAH, FC, PCR, SCR
Shallow Ford Creek 5.9 to 6.9	Kentucky River	5100205	Madison	5B-NS	3	3	3	3	1/26/2000	WAH, FC, PCR, SCR
Shelly Rock Fork 0.0 to 0.6	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	3/15/2005	WAH, FC, PCR, SCR
Shop Fork 0.0 to 1.4	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	10/6/2004	WAH, FC, PCR, SCR
Silver Creek 0.0 to 11.1	Kentucky River	5100205	Madison	2-FS	2B(5)	2-FS	3	3	3/2/2005 - 12/1/2009	WAH, FC, PCR, SCR
Silver Creek 11.1 to 29.8	Kentucky River	5100205	Madison	5-NS	3	3	3	3	12/1/2009	WAH, FC, PCR, SCR
Silver Creek Lake (Lower Lake)	Kentucky River	5100205	Madison	3	3	3	3	2-FS	12/9/2009	WAH, FC, PCR, SCR, DWS
Silver Creek Lake (Upper Lake) No. 2	Kentucky River	5100205	Madison	3	3	3	3	2-FS	12/9/2009	WAH, FC, PCR, SCR, DWS
Sixmile Creek 0.1 to 11.9	Kentucky River	5100205	Henry	2-FS	2-FS	2-FS	3	3	12/1/2009	WAH, FC, PCR, SCR
Smith Branch 0.7 to 2.5	Kentucky River	5100201	Knott	5-NS	2-FS	3	3	3	10/29/2009	WAH, FC, PCR, SCR
Snow Creek 0.0 to 3.9	Kentucky River	5100204	Powell	5-PS	3	3	3	3	10/8/2004	WAH, FC, PCR, SCR
South Benson Creek 0.0 to 5.4	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
South Elkhorn Creek 5.05 to 16.6	Kentucky River	5100205	Franklin	5-PS	5-NS	2-FS	3	3	3/16/2005 - 11/9/2009	WAH, FC, PCR, SCR
South Elkhorn Creek 16.6 to 34.5	Kentucky River	5100205	Woodford	5-PS	5-NS	2-FS	3	3	3/16/2005 - 11/9/2009	WAH, FC, PCR, SCR
South Elkhorn Creek 34.5 to 52.7	Kentucky River	5100205	Woodford	5-PS	5-NS	2-FS	3	3	11/9/2009 - 12/2/2009	WAH, FC, PCR, SCR
South Fork Kentucky River 11.75 to 18.9	Kentucky River	5100203	Owsley	2-FS	5-NS	2-FS	3	2-FS	12/2/2009	WAH, FC, PCR, SCR, DWS
South Fork Quicksand Creek 0.0 to 16.9	Kentucky River	5100201	Breathitt	5-NS	3	3	3	3	10/11/2004	WAH, FC, PCR, SCR

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South Fork Red River 0.0 to 3.9	Kentucky River	5100204	Powell	4A-NS	3	3	3	3	12/22/1999	WAH, FC, PCR, SCR
South Fork Red River 3.9 to 10.1	Kentucky River	5100204	Powell	4A-NS	3	3	3	3	12/22/1999	WAH, FC, PCR, SCR
South Fork Station Camp Creek 0.0 to 9.7	Kentucky River	5100204	Jackson	2-FS	3	3	3	3	12/2/2009	WAH, FC, PCR, SCR
South Fork Station Camp Creek 9.6 to 26.3	Kentucky River	5100204	Jackson	2-FS	3	3	3	3	2/2/2000	WAH, FC, PCR, SCR
Spears Creek 1.0 to 6.2	Kentucky River	5100205	Boyle	5-PS	3	3	3	3	12/2/2009	WAH, FC, PCR, SCR
Spring Creek 0.0 to 1.8	Kentucky River	5100203	Clay	2-FS	3	3	3	3	12/2/2009	WAH, FC, PCR, SCR
Spring Fork 3.1 to 6.9	Kentucky River	5100201	Breathitt	5-NS	3	3	3	3	9/10/1999	WAH, FC, PCR, SCR
Spruce Branch 0.0 to 1.8	Kentucky River	5100203	Clay	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Squabble Creek 0.0 to 4.7	Kentucky River	5100202	Perry	5-PS	3	3	3	3	10/11/2004	WAH, FC, PCR, SCR
Stanford Reservoir	Kentucky River	5100205	Lincoln	2-FS	3	3	3	2B(5)	6/3/2003 - 11/2/2009	WAH, FC, PCR, SCR, DWS
State Road Fork 0.0 to 4.0	Kentucky River	5100204	Wolfe	2-FS	3	3	3	3	3/7/2001	WAH, FC, PCR, SCR
Station Camp Creek 0.0 to 21.3	Kentucky River	5100204	Jackson	5-PS	2-FS	2-FS	3	3	12/2/2009	WAH, FC, PCR, SCR
Steammill Branch 0.6 to 1.6	Kentucky River	5100205	Grant	5B-PS	3	3	3	3	1/26/2000	WAH, FC, PCR, SCR
Steeles Run 0.0 to 5.1	Kentucky River	5100205	Fayette	2-FS	5-NS	5-NS	3	3	3/16/2005 - 11/9/2009	WAH, FC, PCR, SCR
Steer Fork 0.0 to 2.7	Kentucky River	5100204	Jackson	2-FS	3	3	3	3	3/16/2005	WAH, FC, PCR, SCR
Stevens Creek 0.0 to 14.4	Kentucky River	5100205	Grant	3	3	3	3	3		WAH, FC, PCR, SCR
Stevens Creek 14.4 to 17.1	Kentucky River	5100205	Owen	5-PS	3	3	3	3	10/13/1999	WAH, FC, PCR, SCR
Stillwater Creek 0.0 to 3.5	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	3/16/2005	WAH, FC, PCR, SCR
Stinnett Creek 1.3 to 4.7	Kentucky River	5100202	Leslie	5-NS	3	3	3	3	10/11/2004	WAH, FC, PCR, SCR
Stump Cave Branch 0.0 to 2.4	Kentucky River	5100204	Powell	4A-NS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Sturgeon Creek 8.0 to 12.2	Kentucky River	5100204	Lee	5-PS	3	3	3	3	10/11/2004	WAH, FC, PCR, SCR
Sudduth Branch 0.0 to 2.55	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	12/2/2009	WAH, FC, PCR, SCR
Sugar Creek 0.6 to 5.4	Kentucky River	5100203	Leslie	2-FS	3	3	3	3	1/1/2005	WAH, FC, PCR, SCR
Sugar Creek 4.8 to 6.0	Kentucky River	5100205	Garrard	5-PS	3	3	3	3	10/13/2004	WAH, FC, PCR, SCR
Sulphur Creek 0.0 to 1.4	Kentucky River	5100205	Henry	5-NS	3	3	3	3	4/1/1999	WAH, FC, PCR, SCR
Sulphur Lick Creek 0.0 to 5.2	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	7/31/2008	WAH, FC, PCR, SCR
Swift Camp Creek 0.0 to 13.95	Kentucky River	5100204	Wolfe	5-PS	3	3	3	3	12/2/2009	CAH, FC, PCR, SCR
Tate Creek 0.0 to 6.5	Kentucky River	5100205	Madison	5-NS	3	3	3	3	12/22/1999	WAH, FC, PCR, SCR
Tate Creek 6.5 to 11.5	Kentucky River	5100205	Madison	2-FS	2-FS	3	3	3	12/22/1999	WAH, FC, PCR, SCR
Ten Mile Creek 0.0 to 3.0	Kentucky River	5100205	Grant	5-PS	5-NS	2-FS	3	3	12/2/2009	WAH, FC, PCR, SCR
Three Forks Creek 0.0 to 7.6	Kentucky River	5100205	Grant	5-PS	3	3	3	3	9/15/1999	WAH, FC, PCR, SCR
Town Branch 0.0 to 9.2	Kentucky River	5100205	Fayette	5-PS	5-NS	3	3	3	1/18/2000 - 11/4/2009	WAH, FC, PCR, SCR
Town Branch 10.8 to 12.1	Kentucky River	5100205	Fayette	5-NS	5-NS	5-NS	3	3	11/4/2009	WAH, FC, PCR, SCR
Town Branch 9.2 to 10.8	Kentucky River	5100205	Fayette	5-PS	5-NS	3	3	3	1/18/2000 - 11/4/2009	WAH, FC, PCR, SCR
Town Creek 2.5 to 3.5	Kentucky River	5100205	Henry	5B-NS	3	3	3	3	1/26/2000	WAH, FC, PCR, SCR
Trace Fork 1.25 to 3.4	Kentucky River	5100201	Knott	5-NS	5-PS	5-NS	3	3	10/29/2009	WAH, FC, PCR, SCR
Troublesome Creek 0.0 to 45.1	Kentucky River	5100201	Breathitt	5-NS	4A-NS	2-FS	3	3	12/2/2009	WAH, FC, PCR, SCR
Two Mile Creek 0.0 to 3.1	Kentucky River	5100205	Owen	3	3	3	3	3		WAH, FC, PCR, SCR
Upper Devil Creek 0.0 to 1.0	Kentucky River	5100201	Wolfe	5-PS	3	3	3	3	9/15/1999	WAH, FC, PCR, SCR

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Upper Hood Branch 0.0 to 1.6	Kentucky River	5100204	Powell	2-FS	3	3	3	3	1/18/2000	WAH, FC, PCR, SCR
Upper Howard Creek 0.0 to 3.2	Kentucky River	5100205	Clark	5-PS	3	3	3	3	12/22/1999	WAH, FC, PCR, SCR
Upper Jacks Creek 0.0 to 2.2	Kentucky River	5100203	Clay	5-PS	3	3	3	3	12/3/2009	WAH, FC, PCR, SCR
Upper Twin Creek 0.0 to 3.6	Kentucky River	5100202	Breathitt	5-PS	3	3	3	3	12/22/1999	WAH, FC, PCR, SCR
UT of East Hickman Creek 0.8 to 2.2	Kentucky River	5100205	Fayette	3	5-NS	3	3	3	3/3/2010	WAH, FC, PCR, SCR
UT to Baughman Fork 0.0 to 1.1	Kentucky River	5100205	Fayette	4A-NS	3	3	3	3	7/5/2003	WAH, FC, PCR, SCR
UT to Cane Run 0.0 to 3.5	Kentucky River	5100205	Scott	5-NS	5-NS	3	3	3	1/6/2010	WAH, FC, PCR, SCR
UT to Cane Run 0.0 to 2.1	Kentucky River	5100205	Fayette	5-NS	3	3	3	3	5/5/2009	WAH, FC, PCR, SCR
UT to Cane Run 0.0 to 2.4	Kentucky River	5100205	Fayette	5-NS	3	3	3	3	5/5/2009	WAH, FC, PCR, SCR
UT to Cawood Branch 0.0 to 2.1	Kentucky River	5100202	Leslie	2-FS	3	3	3	3	1/1/2005	WAH, FC, PCR, SCR
UT to Cedar Creek 0.0 to 1.4	Kentucky River	5100205	Owen	2-FS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
UT to Clear Creek 0.0 to 4.3	Kentucky River	5100205	Woodford	2-FS	3	3	3	3	1/18/2000	WAH, FC, PCR, SCR
UT to Engle Fork 0.0 to 0.5	Kentucky River	5100201	Perry	5-NS	3	3	3	3	10/13/2004	WAH, FC, PCR, SCR
UT to Flat Creek 0.0 to 1.5	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	3/7/2005	WAH, FC, PCR, SCR
UT to Glenns Creek 0.0 to 1.9	Kentucky River	5100205	Woodford	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
UT to Hanging Fork 0.0 to 1.3	Kentucky River	5100205	Casey	2-FS	3	3	3	3	10/13/2004	WAH, FC, PCR, SCR
UT to Jacks Creek 0.0 to 1.15	Kentucky River	5100205	Madison	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
UT to Kentucky River 0.1 to 1.4	Kentucky River	5100205	Franklin	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
UT to Line Fork 0.0 to 0.6	Kentucky River	5100201	Letcher	2-FS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
UT to N. Elkhorn Creek 0.0 to 5.6	Kentucky River	5100205	Fayette	5-PS	3	3	3	3	10/14/2004	WAH, FC, PCR, SCR
UT to North Branch Lulbegrud Creek 0.0 to 2.2	Kentucky River	5100204	Montgomery	5-NS	3	3	3	3	2/7/2006	WAH, FC, PCR, SCR
UT to North Elkhorn Creek 0.0 to 3.5	Kentucky River	5100205	Fayette	3	5-NS	3	3	3	11/9/2009	WAH, FC, PCR, SCR
UT to Smith Fork 0.0 to 0.55	Kentucky River	5100205	Madison	5-PS	3	3	3	3	3/16/2005	WAH, FC, PCR, SCR
UT to Swift Camp Creek 0.0 to 1.5	Kentucky River	5100204	Wolfe	5-NS	3	3	3	3	10/14/1999	WAH, FC, PCR, SCR
UT to Tanyard Branch 1.0 to 1.6	Kentucky River	5100203	Clay	2-FS	3	3	3	3	10/13/2004	WAH, FC, PCR, SCR
UT to Trace Fork 0.05 to 0.7	Kentucky River	5100201	Knott	3	5-PS	3	3	3	10/29/2009	WAH, FC, PCR, SCR
UT to Upper Howards Creek 2.1 to 2.7	Kentucky River	5100205	Clark	2-FS	3	3	3	3	1/14/2005	WAH, FC, PCR, SCR
Walker Creek 0.0 to 5.4	Kentucky River	5100201	Lee	2-FS	3	3	3	3	10/14/1999	WAH, FC, PCR, SCR
Walnut Meadows Branch 0.0 to 3.9	Kentucky River	5100205	Madison	3	3	3	3	3		WAH, FC, PCR, SCR
War Creek 0.0 to 3.1	Kentucky River	5100201	Breathitt	2-FS	3	3	3	3	9/15/1999	WAH, FC, PCR, SCR
War Fork 0.0 to 13.8	Kentucky River	5100204	Jackson	2-FS	3	3	3	3	12/3/2009	CAH, FC, PCR, SCR
Watches Fork 0.0 to 1.0	Kentucky River	5100203	Owsley	2-FS	3	3	3	3	1/28/2010	WAH, FC, PCR, SCR
West Fork Mill Creek 0.0 to 1.0	Kentucky River	5100205	Carroll	5-PS	3	3	3	3	7/23/1999	WAH, FC, PCR, SCR
West Fork Otter Creek 0.0 to 2.8	Kentucky River	5100205	Madison	2-FS	3	3	3	3	12/17/1999	WAH, FC, PCR, SCR
West Fork Sugar Creek 0.0 to 2.6	Kentucky River	5100205	Garrard	2-FS	3	3	3	3	3/3/2005	WAH, FC, PCR, SCR
West Hickman Creek 0.0 to 3.1	Kentucky River	5100205	Jessamine	5-PS	5-PS	3	3	3	1/24/2000	WAH, FC, PCR, SCR
West Hickman Creek 3.1 to 8.4	Kentucky River	5100205	Fayette	5-PS	2-FS	3	3	3	1/18/2000 - 11/4/2009	WAH, FC, PCR, SCR
White Lick Creek 0.0 to 2.8	Kentucky River	5100205	Garrard	5-PS	3	3	3	3	9/16/1999	WAH, FC, PCR, SCR
White Oak Creek 0.0 to 2.7	Kentucky River	5100204	Estill	3	3	3	3	3		WAH, FC, PCR, SCR
White Oak Creek 0.0 to 2.8	Kentucky River	5100205	Garrard	5-NS	5-NS	3	3	3	10/14/2004 - 1/31/2008	WAH, FC, PCR, SCR

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White Oak Creek 0.0 to 3.4	Kentucky River	5100205	Lincoln	3	5-NS	3	3	3	2/1/2008	WAH, FC, PCR, SCR
Wild Dog Creek 0.0 to 0.6	Kentucky River	5100204	Owsley	2-FS	3	3	3	3	12/3/2009	WAH, FC, PCR, SCR
Wilgreen Lake	Kentucky River	5100205	Madison	5-PS	3	5-PS	3	3	12/8/2009	WAH, FC, PCR, SCR
Winchester Reservoir	Kentucky River	5100205	Clark	3	3	3	3	2-FS	11/2/2009	WAH, FC, PCR, SCR, DWS
Wolf Run 0.0 to 4.4	Kentucky River	5100205	Fayette	5-PS	5-NS	5-NS	3	3	1/13/2000 - 10/30/2009	WAH, FC, PCR, SCR
Wolfpen Creek 0.0 to 3.3	Kentucky River	5100204	Menifee	2-FS	3	3	3	3	3/26/1998	WAH, FC, PCR, SCR
Wooten Creek 0.0 to 3.0	Kentucky River	5100202	Leslie	5-PS	3	3	3	3	12/22/1999	WAH, FC, PCR, SCR
A.J.Jolly Lake (Campbell County Lake)	Licking River	5100101	Campbell	2-FS	3	3	3	3	8/26/2005	WAH, FC, PCR, SCR
Allison Creek 0.0 to 4.9	Licking River	5100101	Fleming	5-NS	4A-NS	3	3	3	2/5/2001	WAH, FC, PCR, SCR
Banklick Creek 0.0 to 3.5	Licking River	5100101	Kenton	5-PS	5-NS	3	3	3	2/23/2001	WAH, FC, PCR, SCR
Banklick Creek 3.5 to 8.2	Licking River	5100101	Kenton	5-NS	5-NS	3	3	3	4/13/2001	WAH, FC, PCR, SCR
Banklick Creek 8.2 to 19.2	Licking River	5100101	Kenton	5-PS	5-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Beaver Creek 10.0 to 14.4	Licking River	5100101	Menifee	5-PS	3	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Beaver Creek 7.6 to 15.4	Licking River	5100101	Harrison	2-FS	3	3	3	3	10/19/2005	WAH, FC, PCR, SCR
Big Half Mountain Creek 0.0 to 4.0	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/4/2009	WAH, FC, PCR, SCR
Blacks Creek 0.0 to 3.4	Licking River	5100102	Bourbon	5-PS	3	3	3	3	8/1/2000	WAH, FC, PCR, SCR
Blackwater Creek 3.8 to 11.7	Licking River	5100101	Morgan	2-FS	5-NS	2-FS	3	3	9/20/2005	WAH, FC, PCR, SCR
Blanket Creek 0.0 to 1.9	Licking River	5100101	Pendleton	2-FS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
Boone Creek 0.0 to 5.0	Licking River	5100102	Bourbon	5-PS	3	3	3	3	8/1/2000	WAH, FC, PCR, SCR
Botts Fork 0.0 to 2.1	Licking River	5100101	Menifee	2-FS	3	3	3	3	10/24/2005	WAH, FC, PCR, SCR
Bowman Creek 0.0 to 6.0	Licking River	5100101	Kenton	2-FS	3	3	3	3	10/24/2005	WAH, FC, PCR, SCR
Broadtree Fork 0.0 to 1.6	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/4/2009	WAH, FC, PCR, SCR
Broke Leg Creek 0.0 to 1.0	Licking River	5100101	Morgan	5-PS	3	3	3	3	10/25/2005	WAH, FC, PCR, SCR
Broke Leg Creek 1.0 to 4.4	Licking River	5100101	Morgan	5-PS	3	3	3	3	6/24/2005	WAH, FC, PCR, SCR
Brushy Fork 0.0 to 2.2	Licking River	5100101	Fleming	2-FS	3	3	3	3	8/1/2000	WAH, FC, PCR, SCR
Brushy Fork 0.7 to 5.6	Licking River	5100101	Menifee	2-FS	3	3	3	3	10/25/2005	WAH, FC, PCR, SCR
Brushy Fork 0.0 to 5.8	Licking River	5100101	Pendleton	5-PS	3	3	3	3	7/13/2005	WAH, FC, PCR, SCR
Bucket Branch 0.0 to 1.9	Licking River	5100101	Morgan	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Buffalo Creek 0.0 to 2.85	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/4/2009	WAH, FC, PCR, SCR
Bull Fork 2.4 to 4.4	Licking River	5100101	Rowan	2-FS	3	3	3	3	10/25/2005	WAH, FC, PCR, SCR
Burning Fork 0.0 to 3.3	Licking River	5100101	Magoffin	5-NS	5-NS	3	3	3	10/25/2003 - 3/5/2009	WAH, FC, PCR, SCR
Burning Fork 3.3 to 7.9	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Caney Creek 0.0 to 4.2	Licking River	5100101	Morgan	5-PS	3	3	3	3	2/9/1999	WAH, FC, PCR, SCR
Carlisle Water Supply Lake	Licking River	5100102	Nicholas	3	3	3	3	2-FS	11/15/2005	WAH, FC, PCR, SCR, DWS
Caskey Fork 0.0 to 2.3	Licking River	5100101	Morgan	5-NS	3	3	3	3	10/27/2005	WAH, FC, PCR, SCR
Cassidy Creek 0.0 to 3.9	Licking River	5100101	Fleming	3	4A-NS	3	3	3	1/1/2001	WAH, FC, PCR, SCR
Cassidy Creek 0.5 to 5.0	Licking River	5100101	Nicholas	3	3	3	3	3		WAH, FC, PCR, SCR
Cave Run Lake	Licking River	5100101	Rowan	2-FS	3	2B(5)	5-PS	3	1/3/2006	WAH, FC, PCR, SCR,

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										DWS
Cedar Creek 0.0 to 1.7	Licking River	5100101	Robertson	2-FS	3	3	3	3	10/27/2005	WAH, FC, PCR, SCR
Christy Creek 0.0 to 4.3	Licking River	5100101	Rowan	5-PS	3	3	3	3	5/12/2001	WAH, FC, PCR, SCR
Clarks Run 0.0 to 2.1	Licking River	5100101	Mason	5-PS	3	3	3	3	10/27/2005	WAH, FC, PCR, SCR
Coffee Creek 0.0 to 4.1	Licking River	5100101	Morgan	5-NS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Cooks Branch 0.0 to 2.9	Licking River	5100101	Montgomery	2-FS	3	3	3	3	4/26/2004	WAH, FC, PCR, SCR
Cooper Run 0.0 to 10.1	Licking River	5100102	Bourbon	5-NS	3	3	3	3	8/2/2000	WAH, FC, PCR, SCR
Coopertown Creek 0.0 to 4.8	Licking River	5100102	Grant	2-FS	3	3	3	3	10/27/2005	WAH, FC, PCR, SCR
Craintown Branch 0.0 to 3.6	Licking River	5100101	Fleming	5-PS	4A-PS	3	3	3	4/20/2001	WAH, FC, PCR, SCR
Crane Creek 0.0 to 2.9	Licking River	5100101	Fleming	5-PS	3	3	3	3	6/30/2004	WAH, FC, PCR, SCR
Craney Creek 0.0 to 5.9	Licking River	5100101	Rowan	2-FS	3	3	3	3	9/20/2005	CAH, FC, PCR, SCR
Craney Creek 5.9 to 10.0	Licking River	5100101	Rowan	2-FS	3	3	3	3	4/9/2001	CAH, FC, PCR, SCR
Crooked Creek 0.0 to 9.1	Licking River	5100101	Nicholas	3	5-NS	3	3	3	8/14/2000	WAH, FC, PCR, SCR
Crooked Creek 0.5 to 6.8	Licking River	5100102	Harrison	2-FS	3	3	3	3	10/27/2005	WAH, FC, PCR, SCR
Cruises Creek 0.0 to 8.6	Licking River	5100101	Kenton	2-FS	2-FS	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Devils Fork 0.0 to 8.5	Licking River	5100101	Morgan	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Doe Run Lake	Licking River	5100101	Kenton	5-PS	3	2-FS	3	3	8/26/2004	WAH, FC, PCR, SCR
Doty Branch 0.0 to 2.3	Licking River	5100101	Fleming	5-NS	4A-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Dry Creek 0.0 to 2.5	Licking River	5100101	Rowan	5-PS	3	3	3	3	10/27/2005	WAH, FC, PCR, SCR
Elk Fork 0.0 to 4.9	Licking River	5100101	Morgan	5-PS	3	3	3	3	4/9/2001	WAH, FC, PCR, SCR
Elk Fork 12.6 to 14.7	Licking River	5100101	Morgan	5-PS	3	3	3	3	8/3/2000	WAH, FC, PCR, SCR
Elk Fork 4.9 to 10.5	Licking River	5100101	Morgan	5-NS	3	3	3	3	8/3/2000	WAH, FC, PCR, SCR
Evans Branch Impoundment	Licking River	5100101	Rowan	3	3	3	3	2-FS	11/15/2005	WAH, FC, PCR, SCR, DWS
Fannins Branch 1.5 to 3.4	Licking River	5100101	Morgan	5-PS	3	3	3	3	11/1/2005	WAH, FC, PCR, SCR
Flat Creek 0.0 to 0.9	Licking River	5100101	Bath	2-FS	5-NS	3	3	3	1/5/2001	WAH, FC, PCR, SCR
Flat Run 0.0 to 2.2	Licking River	5100102	Bourbon	5-NS	3	3	3	3	8/3/2000	WAH, FC, PCR, SCR
Fleming Creek 12.8 to 16.0	Licking River	5100101	Fleming	5-PS	4A-NS	3	3	3	1/9/2001	WAH, FC, PCR, SCR
Fleming Creek 20.8 to 39.4	Licking River	5100101	Fleming	5-NS	4A-NS	3	3	3	1/8/2001	WAH, FC, PCR, SCR
Fleming Creek 0.0 to 12.8	Licking River	5100101	Fleming	5-PS	4A-NS	3	3	3	1/8/2001	WAH, FC, PCR, SCR
Fleming Creek 16.0 to 20.8	Licking River	5100101	Fleming	2-FS	4A-NS	3	3	3	7/8/2004	WAH, FC, PCR, SCR
Flemingsburg Lake	Licking River	5100101	Fleming	3	3	3	3	2-FS	11/15/2005	WAH, FC, PCR, SCR, DWS
Flour Creek 0.0 to 2.2	Licking River	5100101	Pendleton	2-FS	3	3	3	3	11/1/2005	WAH, FC, PCR, SCR
Fox Creek 0.0 to 10.1	Licking River	5100101	Fleming	5-PS	5-PS	5-PS	2-FS	3	12/8/2005	WAH, FC, PCR, SCR
Fox Creek 20.1 to 22.7	Licking River	5100101	Fleming	5-NS	3	3	3	3	8/3/2000	WAH, FC, PCR, SCR
Grassy Creek 0.0 to 1.3	Licking River	5100101	Pendleton	3	2-FS	3	3	3	8/14/2000	WAH, FC, PCR, SCR

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Grassy Creek 4.6 to 10.0	Licking River	5100101	Morgan	5-PS	3	3	3	3	11/1/2005	WAH, FC, PCR, SCR
Grassy Lick Creek 0.0 to 4.6	Licking River	5100102	Montgomery	2-FS	3	3	3	3	7/21/2004	WAH, FC, PCR, SCR
Green Creek 0.0 to 8.15	Licking River	5100102	Bourbon	5-PS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Green Creek 8.45 to 9.7	Licking River	5100102	Clark	5-PS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Greenbriar Lake	Licking River	5100101	Montgomery	2-FS	3	2-FS	3	3	8/26/2005	WAH, FC, PCR, SCR, DWS
Grovers Creek 0.5 to 3.4	Licking River	5100101	Pendleton	2-FS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Hancock Creek 4.3 to 7.6	Licking River	5100102	Clark	5-NS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Hillsboro Branch 0.0 to 2.7	Licking River	5100101	Fleming	2-FS	3	3	3	3	3/8/2005	WAH, FC, PCR, SCR
Hinkston Creek 0.0 to 12.6	Licking River	5100102	Bourbon	2-FS	5-NS	2-FS	2-FS	3	9/20/2005	WAH, FC, PCR, SCR
Hinkston Creek 20.8 to 31.0	Licking River	5100102	Bourbon	2-FS	5-PS	3	3	3	8/4/2000	WAH, FC, PCR, SCR
Hinkston Creek 31.0 to 33.3	Licking River	5100102	Nicholas	2-FS	3	3	3	3	8/4/2000	WAH, FC, PCR, SCR
Hinkston Creek 41.8 to 49.1	Licking River	5100102	Bourbon	5-PS	5-NS	3	3	3	8/4/2000	WAH, FC, PCR, SCR
Hinkston Creek 51.5 to 65.9	Licking River	5100102	Montgomery	5-NS	3	3	3	3	10/1/1999	WAH, FC, PCR, SCR
Hinkston Creek 68.0 to 71.5	Licking River	5100102	Montgomery	2-FS	3	3	3	3	1/10/2001	WAH, FC, PCR, SCR
Hinkston Creek 13.3 to 14.3	Licking River	5100102	Bourbon	3	3	3	3	2-FS	11/3/2005	WAH, FC, PCR, SCR, DWS
Hoods Creek 0.0 to 6.3	Licking River	5100102	Clark	5-NS	5-NS	5-NS	3	3	3/5/2009	WAH, FC, PCR, SCR
Houston Creek 0.0 to 9.0	Licking River	5100102	Bourbon	3	5-NS	3	3	3	8/14/2000	WAH, FC, PCR, SCR
Houston Creek 9.0 to 12.7	Licking River	5100102	Bourbon	5-PS	3	3	3	3	8/7/2000	WAH, FC, PCR, SCR
Howard Branch 0.0 to 2.0	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Hutchison Creek 0.0 to 5.4	Licking River	5100102	Bourbon	3	3	3	3	3		WAH, FC, PCR, SCR
Indian Creek 0.0 to 0.7	Licking River	5100102	Bourbon	3	5B-NS	5B-NS	3	3	9/29/2005	WAH, FC, PCR, SCR
Johnson Creek 0.0 to 3.5	Licking River	5100101	Robertson	2-FS	5-NS	2-FS	3	3	12/8/2005	WAH, FC, PCR, SCR
Johnson Creek 0.0 to 0.9	Licking River	5100102	Clark	5-PS	5-NS	5-NS	3	3	3/5/2009	WAH, FC, PCR, SCR
Johnson Creek 0.0 to 3.1	Licking River	5100101	Magoffin	5-NS	5-NS	3	3	3	2/13/2001	WAH, FC, PCR, SCR
Johnson Creek 14.6 to 21.8	Licking River	5100101	Fleming	2-FS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Johnson Creek 6.0 to 8.6	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Kincaid Lake	Licking River	5100101	Pendleton	5-PS	3	2-FS	3	3	8/26/2005	WAH, FC, PCR, SCR
Knox Hill Branch 0.0 to 2.8	Licking River	5100101	Bath	2-FS	3	3	3	3	11/21/2005	WAH, FC, PCR, SCR
Lake Carnico	Licking River	5100102	Nicholas	2-FS	3	2-FS	3	3	8/26/2004	WAH, FC, PCR, SCR
Lees Creek 0.0 to 4.3	Licking River	5100101	Mason	5-PS	3	3	3	3	11/3/2005	WAH, FC, PCR, SCR
Left Fork of Johnson Creek 0.0 to 3.15	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Left Fork of Licking River 0.0 to 1.4	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/11/2009	WAH, FC, PCR, SCR
Left Fork White Oak Creek 0.0 to 1.8	Licking River	5100101	Morgan	5-PS	3	3	3	3	8/7/2000	WAH, FC, PCR, SCR
Lick Branch 0.0 to 2.3	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/5/2009	WAH, FC, PCR, SCR
Lick Creek 0.0 to 2.15	Licking River	5100101	Magoffin	5-PS	3	3	3	3	11/3/2005	WAH, FC, PCR, SCR
Lick Creek 2.15 to 4.6	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/6/2009	WAH, FC, PCR, SCR
Licking River 0.0 to 4.8	Licking River	5100101	Campbell	2-FS	5-PS	3	3	3	12/8/2005	WAH, FC, PCR, SCR

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Licking River 102.5 to 103.5	Licking River	5100101	Nicholas	3	3	3	3	2-FS	11/3/2005	WAH, FC, PCR, SCR, DWS
Licking River 110.2 to 130.1	Licking River	5100101	Nicholas	3	2-FS	2-FS	3	2-FS	10/1/2005	WAH, FC, PCR, SCR, DWS
Licking River 14.9 to 21.5	Licking River	5100101	Campbell	3	2-FS	3	3	3	2/8/2001	WAH, FC, PCR, SCR
Licking River 145.2 to 148.6	Licking River	5100101	Fleming	3	2-FS	2-FS	3	3	3/6/2001	WAH, FC, PCR, SCR
Licking River 224.3 to 241.3	Licking River	5100101	Morgan	2-FS	5-NS	5-PS	3	3	12/7/2005	WAH, FC, PCR, SCR, DWS
Licking River 265.0 to 271.6	Licking River	5100101	Magoffin	5-PS	3	3	3	3	3/6/2009	WAH, FC, PCR, SCR
Licking River 271.6 to 294.1	Licking River	5100101	Magoffin	5-PS	3	3	3	3	3/6/2009	WAH, FC, PCR, SCR
Licking River 31.0 to 37.6	Licking River	5100101	Kenton	2-FS	5-PS	2-FS	3	3	12/8/2005	WAH, FC, PCR, SCR
Licking River 4.8 to 14.9	Licking River	5100101	Campbell	3	5-PS	3	3	3	2/8/2001	WAH, FC, PCR, SCR, DWS
Licking River 52.8 to 53.8	Licking River	5100101	Pendleton	3	3	3	3	2-FS	11/3/2005	WAH, FC, PCR, SCR, DWS
Licking River 159.6 to 170.6	Licking River	5100101	Rowan	2-FS	3	3	3	3	7/31/2008	WAH, FC, PCR, SCR
Licking River 174.4 to 180.8	Licking River	5100101	Rowan	2-FS	2-FS	5-PS	3	2-FS	11/3/2005	CAH, FC, PCR, SCR, DWS
Licking River 294.1 to 302.4	Licking River	5100101	Magoffin	5-NS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Licking River 76.8 to 88.9	Licking River	5100101	Harrison	2-FS	2-FS	2-FS	3	3	12/8/2005	WAH, FC, PCR, SCR
Little Beaver Creek 0.0 to 3.3	Licking River	5100101	Harrison	5-PS	3	3	3	3	11/3/2005	WAH, FC, PCR, SCR
Little Flat Creek 0.0 to 2.3	Licking River	5100101	Bath	2-FS	3	3	3	3	8/8/2000	WAH, FC, PCR, SCR
Little Stoner Creek 0.0 to 5.0	Licking River	5100102	Clark	3	5-NS	3	3	3	8/14/2000	WAH, FC, PCR, SCR
Lockegee Branch 0.0 to 1.5	Licking River	5100101	Rowan	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Locust Creek 0.0 to 11.8	Licking River	5100101	Fleming	5-PS	3	3	3	3	11/4/2005	WAH, FC, PCR, SCR
Logan Run 0.0 to 2.3	Licking River	5100101	Fleming	5-NS	4A-NS	3	3	3	3/23/2001	WAH, FC, PCR, SCR
Long Branch 0.0 to 3.9	Licking River	5100101	Magoffin	5-NS	3	3	3	3		WAH, FC, PCR, SCR
Mash Fork 0.0 to 3.0	Licking River	5100101	Magoffin	5-PS	3	3	3	3	11/4/2005	WAH, FC, PCR, SCR
Middle Fork of Licking River 0 to 2.5	Licking River	5100101	Magoffin	2-FS	5-NS	3	2-FS	3	4/9/2001	WAH, FC, PCR, SCR
Mill Creek 0.0 to 2.6	Licking River	5100101	Bath	2-FS	3	3	3	3	8/8/2000	WAH, FC, PCR, SCR
Mill Creek 0.0 to 21.6	Licking River	5100102	Harrison	5-PS	3	3	3	3	11/4/2005	WAH, FC, PCR, SCR
Mill Creek 0.0 to 6.4	Licking River	5100101	Mason	2-FS	3	3	3	3	11/4/2005	WAH, FC, PCR, SCR
Minor Creek 0.0 to 2.8	Licking River	5100101	Morgan	2-FS	3	3	3	3	9/20/2005	CAH, FC, PCR, SCR
Minor Creek 2.8 to 7.0	Licking River	5100101	Morgan	2-FS	3	3	3	3	11/4/2005	WAH, FC, PCR, SCR
North Fork Licking River 18.5 to 52.5	Licking River	5100101	Bracken	5-NS	5-NS	3	3	3	3/6/2001	WAH, FC, PCR, SCR
North Fork Licking River 2.3 to 18.5	Licking River	5100101	Bracken	2-FS	2-FS	2-FS	3	3	11/7/2005	WAH, FC, PCR, SCR
North Fork Licking River 12.0 to 13.1	Licking River	5100101	Morgan	5-PS	3	3	3	3	6/22/2004	WAH, FC, PCR, SCR
North Fork Licking River 8.4 to 12.0	Licking River	5100101	Morgan	2-FS	5-NS	2-FS	3	3	9/20/2005	WAH, FC, PCR, SCR
North Fork Triplett Creek 1.2 to 14.9	Licking River	5100101	Rowan	3	3	3	3	3		WAH, FC, PCR, SCR
North Fork Triplett Creek 14.9 to 15.9	Licking River	5100101	Rowan	2-FS	3	3	3	3	12/31/2000	WAH, FC, PCR, SCR
Oakley Creek 0.0 to 0.9	Licking River	5100101	Magoffin	3	3	3	3	3		WAH, FC, PCR, SCR
Oldfield Fork 0.0 to 3.6	Licking River	5100101	Morgan	5-NS	3	3	3	3	11/4/2005	WAH, FC, PCR, SCR
Passenger Branch 0.0 to 1.8	Licking River	5100101	Rowan	2-FS	3	3	3	3	1/18/2001	WAH, FC, PCR, SCR

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Phillips Creek 0.0 to 5.3	Licking River	5100101	Campbell	3	5-NS	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Poplar Creek 0.0 to 2.9	Licking River	5100101	Fleming	3	4A-NS	3	3	3	1/1/2001	WAH, FC, PCR, SCR
Powder Lick Branch 0.0 to 3.5	Licking River	5100101	Lewis	2-FS	3	3	3	3	11/8/2005	WAH, FC, PCR, SCR
Pretty Run 0.0 to 8.0	Licking River	5100102	Clark	5-NS	3	3	3	3		WAH, FC, PCR, SCR
Prickly Ash Creek 0.0 to 3.1	Licking River	5100101	Bath	5-NS	3	3	3	3	8/9/2000	WAH, FC, PCR, SCR
Puncheon Camp Creek 0.0 to 1.1	Licking River	5100101	Magoffin	3	5-NS	3	3	3	8/14/2000	WAH, FC, PCR, SCR
Raven Creek 0.0 to 5.5	Licking River	5100102	Harrison	2-FS	3	3	3	3	11/8/2005	WAH, FC, PCR, SCR
Right Fork of Middle Fork of Licking River 3.1 to 4.6	Licking River	5100101	Magoffin	5-PS	3	3	3	3	3/11/2009	WAH, FC, PCR, SCR
Rock Fork 0.0 to 4.0	Licking River	5100101	Rowan	5-PS	3	3	3	3	11/8/2005	WAH, FC, PCR, SCR
Rock Lick 0.0 to 0.8	Licking River	5100101	Fleming	3	3	3	3	3		WAH, FC, PCR, SCR
Rockhouse Creek 0.0 to 4.6	Licking River	5100101	Morgan	3	3	3	3	3		WAH, FC, PCR, SCR
Salt Lick Creek 3.0 to 8.0	Licking River	5100101	Bath	5-PS	3	3	3	3	6/1/1999	WAH, FC, PCR, SCR
Salt Lick Creek 8.8 to 14.9	Licking River	5100101	Bath	2-FS	3	3	3	3	6/30/2004	WAH, FC, PCR, SCR
Salt Spring Branch 0.7 to 2.0	Licking River	5100101	Menifee	2-FS	3	3	3	3	11/8/2005	WAH, FC, PCR, SCR
Sand Lick Creek 6.0 to 8.1	Licking River	5100101	Fleming	2-FS	3	3	3	3	6/23/2005	WAH, FC, PCR, SCR
Sand Lick Creek 0.0 to 5.8	Licking River	5100101	Fleming	2-FS	3	3	3	3	8/1/1999	WAH, FC, PCR, SCR
Sandlick Creek Lake	Licking River	5100101	Fleming	2-FS	3	4C-PS	3	3	8/26/2005	WAH, FC, PCR, SCR
Sawyers Fork 0.0 to 3.3	Licking River	5100101	Kenton	2-FS	3	3	3	3	11/8/2005	WAH, FC, PCR, SCR
Scrubgrass Creek 0.0 to 1.6	Licking River	5100101	Nicholas	5-NS	3	3	3	3	8/9/2000	WAH, FC, PCR, SCR
Shannon Creek 0.0 to 8.7	Licking River	5100101	Mason	2-FS	3	3	3	3	11/8/2005	WAH, FC, PCR, SCR
Short Creek 0.0 to 7.9	Licking River	5100102	Pendleton	2-FS	3	3	3	3	11/8/2005	WAH, FC, PCR, SCR
Slabcamp Creek 0.0 to 3.7	Licking River	5100101	Rowan	2-FS	3	3	3	3	9/20/2005	CAH, FC, PCR, SCR
Slate Creek 0.0 to 13.6	Licking River	5100101	Bath	2-FS	5-PS	2-FS	2-FS	3	11/9/2005	WAH, FC, PCR, SCR
Slate Creek 17.2 to 18.2	Licking River	5100101	Bath	3	3	3	3	2-FS	11/9/2005	WAH, FC, PCR, SCR, DWS
Slate Creek 36.1 to 37.1	Licking River	5100101	Montgomery	3	3	3	3	2-FS	11/15/2005	WAH, FC, PCR, SCR, DWS
Slate Creek 42.8 to 52.2	Licking River	5100101	Montgomery	3	2-FS	3	3	3	2/15/2001	WAH, FC, PCR, SCR
Slate Creek 52.2 to 56.6	Licking River	5100101	Menifee	3	3	3	3	3		WAH, FC, PCR, SCR
Sleepy Run 0.0 to 2.8	Licking River	5100101	Fleming	3	4A-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Somerset Creek 0.0 to 4.4	Licking River	5100102	Nicholas	3	3	3	3	3		WAH, FC, PCR, SCR
South Fork Grassy Creek 10.4 to 15.2	Licking River	5100101	Pendleton	2-FS	2-FS	2-FS	3	3	11/9/2005	WAH, FC, PCR, SCR
South Fork Licking River 11.6 to 16.95	Licking River	5100102	Pendleton	2-FS	2-FS	2-FS	3	3	9/20/2005	WAH, FC, PCR, SCR
South Fork Licking River 16.6 to 27.2	Licking River	5100102	Harrison	2-FS	2-FS	3	3	3	8/11/2000	WAH, FC, PCR, SCR
South Fork Licking River 2.0 to 6.8	Licking River	5100102	Pendleton	2-FS	2-FS	3	3	3	8/11/2000	WAH, FC, PCR, SCR
South Fork Licking River 35.0 to 46.4	Licking River	5100102	Harrison	2-FS	2-FS	3	3	3	8/11/2000	WAH, FC, PCR, SCR
South Fork Licking River 51.1 to 52.1	Licking River	5100102	Harrison	3	3	3	3	2-FS	11/14/2005	WAH, FC, PCR, SCR, DWS
South Fork Licking River 6.8 to 11.3	Licking River	5100102	Pendleton	2-FS	3	3	3	3	8/11/2000	WAH, FC, PCR, SCR

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Spruce Creek 0.0 to 1.7	Licking River	5100101	Montgomery	5-PS	3	3	3	3	11/14/2005	WAH, FC, PCR, SCR
State Road Fork 0.0 to 5.8	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/11/2009	WAH, FC, PCR, SCR
Stinson Creek 0.0 to 3.3	Licking River	5100101	Magoffin	5-NS	3	3	3	3	3/11/2009	WAH, FC, PCR, SCR
Stonecoal Branch 0.0 to 2.5	Licking River	5100101	Rowan	2-FS	3	3	3	3	4/11/2001	WAH, FC, PCR, SCR
Stoner Creek 0.0 to 5.5	Licking River	5100102	Bourbon	2-FS	5-PS	2-FS	3	3	9/20/2005	WAH, FC, PCR, SCR
Stoner Creek 16.7 to 17.3	Licking River	5100102	Bourbon	3	3	3	3	2-FS	11/14/2005	WAH, FC, PCR, SCR, DWS
Stoner Creek 17.3 to 30.1	Licking River	5100102	Bourbon	3	2-FS	3	3	3	8/14/2000	WAH, FC, PCR, SCR
Stoner Creek 44.8 to 60.5	Licking River	5100102	Bourbon	3	2-FS	3	3	3	3/6/2001	WAH, FC, PCR, SCR
Stoner Creek 5.5 to 15.0	Licking River	5100102	Bourbon	3	5-NS	3	3	3	8/14/2000	WAH, FC, PCR, SCR
Stoner Creek 60.5 to 72.2	Licking River	5100102	Clark	3	3	3	3	3		WAH, FC, PCR, SCR
Stony Creek 0.0 to 3.0	Licking River	5100101	Nicholas	5-NS	3	3	3	3	8/10/2000	WAH, FC, PCR, SCR
Straight Creek 0.0 to 1.8	Licking River	5100101	Morgan	5-NS	3	3	3	3	8/10/2000	WAH, FC, PCR, SCR
Strodes Creek 2.7 to 7.9	Licking River	5100102	Bourbon	5-PS	5-PS	2-FS	2-FS	3	3/11/2009	WAH, FC, PCR, SCR
Strodes Creek 7.9 to 19.3	Licking River	5100102	Bourbon	5-PS	5-NS	5-NS	2-FS	3	3/12/2009	WAH, FC, PCR, SCR
Strodes Creek 19.3 to 26.4	Licking River	5100102	Clark	5-NS	5-NS	5-NS	3	3	3/12/2009	WAH, FC, PCR, SCR
Threemile Creek 0.1 to 4.7	Licking River	5100101	Campbell	5-NS	5-NS	3	3	3	10/1/1999	WAH, FC, PCR, SCR
Town Branch 0.0 to 4.0	Licking River	5100101	Fleming	3	4A-NS	3	3	3	4/11/2001	WAH, FC, PCR, SCR
Town Branch 0.3 to 2.3	Licking River	5100102	Bath	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Townsend Creek 0.0 to 4.9	Licking River	5100102	Bourbon	2-FS	5-NS	3	3	3	11/14/2005	WAH, FC, PCR, SCR
Townsend Creek 4.9 to 15.4	Licking River	5100102	Bourbon	2-FS	3	3	3	3	11/14/2005	WAH, FC, PCR, SCR
Trace Fork 0.0 to 3.1	Licking River	5100101	Magoffin	5-PS	3	3	3	3	8/10/2000	WAH, FC, PCR, SCR
Triplett Creek 12.3 to 15.7	Licking River	5100102	Rowan	3	3	3	3	2-FS	3/25/2002	WAH, FC, PCR, SCR, DWS
Triplett Creek 15.7 to 20.5	Licking River	5100101	Rowan	2-FS	3	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Triplett Creek 5.9 to 12.3	Licking River	5100101	Rowan	5-PS	5-NS	5-PS	3	3	12/7/2005	WAH, FC, PCR, SCR
UT to Flat Creek 0.0 to 2.2	Licking River	5100101	Bath	2-FS	3	3	3	3	4/26/2005	WAH, FC, PCR, SCR
UT to Fleming Creek 0.0 to 2.1	Licking River	5100101	Fleming	3	4A-NS	3	3	3	1/1/2001	WAH, FC, PCR, SCR
UT to Hancock Creek 0.0 to 3.72	Licking River	5100102	Clark	5-NS	5-NS	5-NS	3	3	3/16/2009	WAH, FC, PCR, SCR
UT to Mill Creek 0.0 to 4.0	Licking River	5100101	Fleming	5-NS	3	3	3	3	6/29/2004	WAH, FC, PCR, SCR
UT to Shannon Creek 0.0 to 2.2	Licking River	5100101	Mason	2-FS	3	3	3	3	4/29/2004	WAH, FC, PCR, SCR
UT to Strodes Creek 0.0 to 3.8	Licking River	5100102	Clark	5-NS	5-NS	5-NS	3	3	3/12/2009	WAH, FC, PCR, SCR
UT to UT to Lees Creek 0.0 to 1.6	Licking River	5100101	Mason	5-NS	3	3	3	3	11/3/2005	WAH, FC, PCR, SCR
Welch Fork 0.0 to 1.0	Licking River	5100101	Menifee	2-FS	3	3	3	3	11/14/2005	WAH, FC, PCR, SCR
West Creek 0.0 to 9.8	Licking River	5100101	Harrison	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Williams Creek 0.0 to 5.3	Licking River	5100101	Morgan	5-PS	5-NS	3	3	3	3/12/2009	WAH, FC, PCR, SCR
Williamstown Lake	Licking River	5100101	Grant	2-FS	3	2-FS	3	2-FS	8/26/2005	WAH, FC, PCR, SCR, DWS
Willow Creek 0.0 to 6.7	Licking River	5100101	Bracken	2-FS	3	3	3	3	3/12/2009	WAH, FC, PCR, SCR
Wilson Run 0.0 to 5.1	Licking River	5100101	Fleming	3	4A-NS	3	3	3	4/11/2001	WAH, FC, PCR, SCR

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Woodruff Creek 0.0 to 3.7	Licking River	5100102	Clark	5-NS	5-NS	5-NS	3	3	3/12/2009	WAH, FC, PCR, SCR
Allcorn Creek 0.7 to 3.2	Little Sandy River	5090104	Greenup	5-NS	3	3	3	3	11/7/2003	WAH, FC, PCR, SCR
Arabs Fork 0.0 to 5.1	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	11/12/2008	WAH, FC, PCR, SCR
Bandy Branch 0.0 to 1.4	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	1/19/2009	WAH, FC, PCR, SCR
Barrett Creek 0.0 to 7.2	Little Sandy River	5090104	Carter	5-PS	3	3	3	3	1/21/2004	WAH, FC, PCR, SCR
Big Caney Creek 1.8 to 13.4	Little Sandy River	5090104	Elliott	2-FS	2-FS	3	3	3	1/16/2004	CAH, FC, PCR, SCR
Big Sinking Creek 0.0 to 5.7	Little Sandy River	5090104	Carter	2-FS	3	3	3	3	1/19/2009	WAH, FC, PCR, SCR
Big Sinking Creek 5.7 to 15.85	Little Sandy River	5090104	Carter	2-FS	2-FS	3	3	3	1/19/2009	WAH, CAH, FC, PCR, SCR
Buffalo Branch 1.3 to 2.1	Little Sandy River	5090104	Greenup	3	5B-NS	3	3	3	1/19/2009	WAH, CAH, FC, PCR, SCR
Cane Creek 0.0 to 4.1	Little Sandy River	5090104	Greenup	5-PS	3	3	3	3	1/21/2004	WAH, FC, PCR, SCR
Caney Fork 0.9 to 3.5	Little Sandy River	5070204	Lawrence	2-FS	3	3	3	3	11/11/2003	WAH, FC, PCR, SCR
Clay Fork 0.0 to 4.0	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	2/9/2004	WAH, FC, PCR, SCR
Dry Fork 1.2 to 4.5	Little Sandy River	5090104	Lawrence	5-PS	3	3	3	3	1/22/2004	WAH, FC, PCR, SCR
East Fork Little Sandy River 24.9 to 26.4	Little Sandy River	5090104	Boyd	2-FS	5-PS	3	3	3	1/20/2009	WAH, FC, PCR, SCR
East Fork Little Sandy River 27.6 to 30.9	Little Sandy River	5090104	Boyd	5-PS	3	3	3	3	1/20/2009	WAH, FC, PCR, SCR
East Fork Little Sandy River 4.7 to 14.2	Little Sandy River	5090104	Greenup	2-FS	5-PS	3	3	3	1/19/2009	WAH, FC, PCR, SCR
East Fork Little Sandy River 16.9 to 24.9	Little Sandy River	5090104	Boyd	4A-NS	3	3	3	3	1/20/2009	WAH, FC, PCR, SCR
East Fork Little Sandy River 26.4 to 26.8	Little Sandy River	5090104	Boyd	5B-PS	3	3	3	3	1/20/2009	WAH, CAH, FC, PCR, SCR
Ellingtons Bear Cr 0.0 to 1.5	Little Sandy River	5090104	Boyd	5-PS	3	3	3	3	11/10/2003	WAH, FC, PCR, SCR
Everman Cr 0.0 to 5.7	Little Sandy River	5090104	Carter	5-PS	3	3	3	3	1/21/2004	WAH, FC, PCR, SCR
Garner Cr 0.0 to 1.8	Little Sandy River	5090104	Boyd	5-PS	3	3	3	3	1/22/2004	WAH, FC, PCR, SCR
Grayson Lake	Little Sandy River	5090104	Carter	2-FS	3	2-FS	5-PS	2-FS	5/29/2008	WAH, FC, PCR, SCR, DWS
Green Br 0.0 to 1.4	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	9/22/2003	WAH, FC, PCR, SCR
Greenbo Lake	Little Sandy	5090104	Greenup	2-FS	3	2-FS	3	3	5/29/2008	WAH, CAH, FC, PCR,

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	River									SCR
Hurricane Fork 0.0 to 2.2	Little Sandy River	5090103	Boyd	5-NS	3	3	3	3	1/20/2009	WAH, CAH, FC, PCR, SCR
Laurel Branch 1.0 to 2.6	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
Laurel Creek 0.0 to 7.6	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	9/22/2003	CAH, FC, PCR, SCR
Laurel Creek 7.6 to 11.4	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	11/12/2008	CAH, FC, PCR, SCR
Laurel Creek 11.4 to 14.7	Little Sandy River	5090104	Rowan	2-FS	3	3	3	3	10/10/2006	WAH, CAH, FC, PCR, SCR
Left Fork Howard's Creek (Lft Fk Redwine Crk) 0.0 to 1.2	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	11/7/2003	WAH, FC, PCR, SCR
Lick Fork 0.0 to 5.2	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
Little Fork Little Sandy River 12.1 to 23.8	Little Sandy River	5090104	Carter	5-PS	3	3	3	3	1/20/2009	WAH, FC, PCR, SCR
Little Fork Little Sandy River 2.3 to 5.0	Little Sandy River	5090104	Carter	2-FS	2-FS	3	3	3	1/20/2009	WAH, FC, PCR, SCR
Little Fork Little Sandy River 23.8 to 27.7	Little Sandy River	5090104	Elliott	5-NS	3	3	3	3	1/22/2004	WAH, FC, PCR, SCR
Little Fork Little Sandy River 27.7 to 30.5	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	11/11/2003	WAH, FC, PCR, SCR
Little Fork Little Sandy River 5.0 to 6.0	Little Sandy River	5090104	Carter	5-PS	3	3	3	3	1/20/2009	WAH, FC, PCR, SCR
Little Fork Little Sandy River 6.0 to 12.1	Little Sandy River	5090104	Carter	5-PS	3	3	3	3	1/20/2009	WAH, FC, PCR, SCR
Little Sandy River 0.15 to 0.3	Little Sandy River	5090104	Greenup	3	5-NS	3	3	3	1/20/2009	WAH, FC, PCR, SCR
Little Sandy River 0.7 to 1.7	Little Sandy River	5090104	Greenup	3	3	3	3	2-FS	1/21/2009	WAH, FC, PCR, SCR, DWS
Little Sandy River 12.1 to 20.1	Little Sandy River	5090104	Greenup	5-PS	2-FS	3	2-FS	3	11/12/2008 - 1/21/2009	WAH, FC, PCR, SCR
Little Sandy River 42.5 to 48.1	Little Sandy River	5090104	Grayson	2-FS	2-FS	3	3	3	1/21/2009	WAH, FC, PCR, SCR
Little Sandy River 72.7 to 75.5	Little Sandy River	5090104	Elliott	2-FS	2-FS	3	3	3	1/20/2009	WAH, FC, PCR, SCR
Little Sandy River 40.1 to 41.1	Little Sandy River	5090104	Carter	3	3	3	3	2-FS	1/21/2009	WAH, FC, PCR, SCR, DWS
Little Sinking Creek 0.0 to 6.2	Little Sandy River	5090104	Carter	2-FS	3	3	3	3	1/22/2004	WAH, FC, PCR, SCR
Lower Stinson Creek 0.0 to 1.1	Little Sandy River	5090104	Carter	5-PS	3	3	3	3	2/11/2004	WAH, FC, PCR, SCR
Meadow Branch 0.0 to 1.4	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	9/22/2003	WAH, FC, PCR, SCR
Middle Fork Little Sandy River 0.0 to 5.8	Little Sandy	5090104	Elliott	2-FS	3	3	3	3	11/12/2008	WAH, FC, PCR, SCR

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	River									
Middle Fork Little Sandy River 5.8 to 7.5	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	1/22/2004	WAH, FC, PCR, SCR
Near Fork Sandsuck Creek 1.1 to 2.0	Little Sandy River	5090104	Greenup	5-PS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
Newcombe Creek 1.1 to 7.3	Little Sandy River	5090104	Elliott	2B(4A)	2-FS	3	3	3	1/27/2009	WAH, FC, PCR, SCR
Nichols Fork 0.0 to 1.6	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	9/22/2003	WAH, FC, PCR, SCR
Oldtown Creek 0.0 to 1.9	Little Sandy River	5090104	Greenup	5-PS	3	3	3	3	11/10/2003	WAH, FC, PCR, SCR
Pigeon Roost Creek 1.6 to 2.0	Little Sandy River	5090104	Boyd	5B-NS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
Raccoon Creek 0.0 to 5.0	Little Sandy River	5090104	Greenup	5B-PS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
Right Fork Newcombe Creek 0.0 to 4.2	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
Rocky Branch 0.0 to 3.2	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
S. Fork Ruin Creek 0.0 to 0.7	Little Sandy River	5090104	Elliott	3	3	3	3	3		WAH, FC, PCR, SCR
South Fork Ruin Creek 0.7 to 5.5	Little Sandy River	5090104	Elliott	5-NS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
Star Creek 0.0 to 0.6	Little Sandy River	5090104	Carter	5B-NS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
Straight Creek 0.0 to 3.8	Little Sandy River	5090104	Carter	5-PS	3	3	3	3	1/22/2004	WAH, FC, PCR, SCR
Tunnel Branch 0.0 to 1.7	Little Sandy River	5090104	Greenup	5-NS	3	3	3	3	11/10/2003	WAH, FC, PCR, SCR
UT of Barrett Creek 0.0 to 0.7	Little Sandy River	5090104	Carter	5B-NS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
UT of Clay Fork 0.0 to 1.2	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
UT to East Fork Little Sandy River 0.0 to 0.3	Little Sandy River	5090104	Greenup	5-NS	3	3	3	3	11/6/2003	WAH, FC, PCR, SCR
UT to Newcombe Creek 0.0 to 0.95	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
UT to Newcombe Creek 0.0 to 1.35	Little Sandy River	5090104	Elliott	2-FS	3	3	3	3	12/10/2003	WAH, FC, PCR, SCR
Wells Creek 0.0 to 3.5	Little Sandy River	5090104	Elliott	5-PS	3	3	3	3	1/22/2004	WAH, FC, PCR, SCR
Whetstone Creek 1.2 to 3.3	Little Sandy River	5090104	Greenup	5-NS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
Williams Creek 0.0 to 2.9	Little Sandy River	5090104	Boyd	5-PS	3	3	3	3	1/22/2009	WAH, FC, PCR, SCR
Casey Creek 0.0 to 3.6	Lower	5130205	Trigg	5-PS	2-FS	3	3	3	3/25/2002	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
	Cumberland									
Claylick Creek 14.8 to 15.7	Lower Cumberland	5130205	Crittenden	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Claylick Creek 4.8 to 10.7	Lower Cumberland	5130205	Crittenden	5-NS	5-NS	3	3	3	3/22/2006 - 3/22/2007	WAH, FC, PCR, SCR
Claylick Creek 1.9 to 4.8	Lower Cumberland	5130205	Crittenden	2-FS	5-NS	3	3	3	1/10/2002	WAH, FC, PCR, SCR
Claylick Creek 10.7 to 13.9	Lower Cumberland	5130205	Crittenden	5-PS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Crab Creek 0.0 to 4.8	Lower Cumberland	5130205	Lyon	5-PS	3	3	3	3	2/26/2007	WAH, FC, PCR, SCR
Crooked Creek 2.9 to 9.1	Lower Cumberland	5130205	Trigg	2-FS	3	3	3	3	2/27/2007	WAH, FC, PCR, SCR
Cumberland River 0.0 to 30.6	Lower Cumberland	5130205	Livingston	2-FS	3	3	2-FS	2-FS	2/27/2007	WAH, FC, PCR, SCR, DWS
Cypress Creek 0.1 to 6.1	Lower Cumberland	5130205	Livingston	5-NS	3	3	3	3	3/22/2007	WAH, FC, PCR, SCR
Donaldson Creek 4.1 to 7.2	Lower Cumberland	5130205	Trigg	2-FS	3	3	3	3	3/16/2009	WAH, FC, PCR, SCR
Donaldson Creek 7.2 to 9.3	Lower Cumberland	5130205	Trigg	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Dry Creek 0.0 to 3.65	Lower Cumberland	5130205	Caldwell	5-PS	5-NS	3	3	3	4/1/1998 - 3/10/2006	WAH, FC, PCR, SCR
Dry Fork 0.0 to 7.3	Lower Cumberland	5130206	Logan	5-PS	3	3	3	3		WAH, FC, PCR, SCR
Dry Fork Creek 5.8 to 6.6	Lower Cumberland	5130206	Christian	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Dry Fork Creek 0.0 to 8.4	Lower Cumberland	5130205	Lyon	2-FS	3	3	3	3		WAH, FC, PCR, SCR
Eddy Creek 8.4 to 10.5	Lower Cumberland	5130205	Lyon	3	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Eddy Creek 10.1 to 12.9	Lower Cumberland	5130205	Caldwell	2-FS	3	3	3	3	7/13/2000	WAH, FC, PCR, SCR
Eddy Creek 13.0 to 15.7	Lower Cumberland	5130205	Caldwell	5-NS	5-NS	3	3	3	3/10/2006	WAH, FC, PCR, SCR
Elk Fork 22.3 to 31.1	Lower Cumberland	5130206	Todd	5-NS	5-PS	3	3	3	2/28/2007	WAH, FC, PCR, SCR
Elk Fork 7.5 to 22.3	Lower Cumberland	5130206	Todd	2-FS	3	3	3	3	7/5/2001	WAH, FC, PCR, SCR
Energy Lake	Lower Cumberland	5130205	Trigg	2-FS	3	2-FS	3	3	3/3/2006	WAH, FC, PCR, SCR
Ferguson Creek 0.0 to 1.2	Lower Cumberland	5130205	Livingston	3	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Ferguson Creek 1.2 to 2.3	Lower Cumberland	5130205	Livingston	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Franklin Creek 0.0 to 2.4	Lower	5130206	Trigg	3	3	3	3	3		WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
	Cumberland									
Fulton Creek 2.7 to 5.9	Lower Cumberland	5130205	Lyon	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Hammond Creek 2.0 to 2.2	Lower Cumberland	5130205	Lyon	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Hematite Lake	Lower Cumberland	5130205	Trigg	5-NS	3	5-PS	3	3	1/25/2010	WAH, FC, PCR, SCR
Hickory Creek 0.0 to 3.9	Lower Cumberland	5130205	Livingston	2-FS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Honker Lake	Lower Cumberland	5130205	Lyon	2-FS	3	4C-PS	3	3	3/3/2006	WAH, FC, PCR, SCR
Kenady Creek 0.0 to 4.0	Lower Cumberland	5130205	Trigg	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Lake Barkley	Lower Cumberland	5130205	Lyon	2-FS	3	2-FS	2-FS	2-FS	3/9/2006	WAH, FC, PCR, SCR, DWS
Lake Blythe	Lower Cumberland	5130205	Christian	2-FS	3	2-FS	3	3	3/3/2006	WAH, FC, PCR, SCR
Lake Morris	Lower Cumberland	5130205	Christian	2-FS	3	2-FS	3	3	1/1/2000	WAH, FC, PCR, SCR, DWS
Laura Furnace Creek 0.0 to 2.9	Lower Cumberland	5130205	Trigg	3	3	3	3	3		WAH, FC, PCR, SCR
Little River 14.7 to 20.6	Lower Cumberland	5130205	Trigg	5-PS	3	3	3	3	12/4/2006	WAH, FC, PCR, SCR
Little River 20.6 to 30.0	Lower Cumberland	5130205	Trigg	5-PS	2-FS	3	5-PS	3	1/3/2002 - 10/10/2006	WAH, FC, PCR, SCR
Little River 30.0 to 31.4	Lower Cumberland	5130205	Trigg	5-NS	5-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little River 31.4 to 45.5	Lower Cumberland	5130205	Trigg	5-PS	5-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little River 45.5 to 57.7	Lower Cumberland	5130205	Christian	5-NS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Whipporwill Creek 0.0 to 4.2	Lower Cumberland	5130206	Logan	2-FS	3	3	3	3	6/22/2000	WAH, FC, PCR, SCR
Livingston Creek 4.6 to 7.0	Lower Cumberland	5130205	Lyon	5-PS	5-PS	5-PS	3	3	3/1/2007	WAH, FC, PCR, SCR
Livingston Creek 11.6 to 15.5	Lower Cumberland	5130205	Lyon	5-NS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Long Creek 0.4 to 3.5	Lower Cumberland	5130205	Trigg	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Long Pond Branch 2.7 to 3.2	Lower Cumberland	5130205	Trigg	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Lower Branch 3.4 to 9.3	Lower Cumberland	5130205	Christian	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Middle Branch of North Fork of Little River 1.3 to 3.9	Lower Cumberland	5130205	Christian	5-PS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Muddy Fork 14.5 to 26.6	Lower	5130205	Trigg	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
	Cumberland									
Muddy Fork 3.0 to 6.1	Lower Cumberland	5130205	Trigg	2-FS	2-FS	3	3	3	3/12/2007	WAH, FC, PCR, SCR
North Fork of Little River 0.0 to 0.3	Lower Cumberland	5130205	Christian	5-NS	5-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
North Fork of Little River 7.0 to 10.9	Lower Cumberland	5130205	Christian	5-NS	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
North Fork of Little River 0.3 to 7.0	Lower Cumberland	5130205	Christian	5-PS	5-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
North Fork of Little River 10.9 to 16.2	Lower Cumberland	5130205	Christian	5-NS	5-NS	3	3	3	5/2/2002 - 9/14/2007	WAH, FC, PCR, SCR
Pleasant Grove Creek 0.0 to 2.2	Lower Cumberland	5130206	Logan	5-PS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Red River 50.8 to 54.5	Lower Cumberland	5130206	Logan	2-FS	5-NS	3	3	3	3/13/2007	WAH, FC, PCR, SCR
Red River 54.5 to 56.9	Lower Cumberland	5130206	Logan	2B(5)	3	3	3	3	9/14/2007	WAH, FC, PCR, SCR
Red River 57.0 to 65.8	Lower Cumberland	5130206	Logan	2-FS	5-NS	3	2-FS	3	1/3/2002 - 3/13/2007	WAH, FC, PCR, SCR
Red River 65.8 to 74.3	Lower Cumberland	5130206	Logan	5-PS	3	3	3	3	3/17/2009	WAH, FC, PCR, SCR
Red River 74.3 to 81.3	Lower Cumberland	5130206	Simpson	5-PS	3	3	3	3	6/23/2000	WAH, FC, PCR, SCR
Richland Creek 0.7 to 5.4	Lower Cumberland	5130205	Livingston	3	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Sandy Creek 0.0 to 2.3	Lower Cumberland	5130205	Livingston	3	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Sinkhole Near Muddy Fork	Lower Cumberland	5130205	Trigg	5B-NS	3	3	3	3	3/14/2007	WAH, FC, PCR, SCR
Sinking Fork 2.2 to 5.6	Lower Cumberland	5130205	Trigg	5-NS	2-FS	3	3	3	2/26/2009	WAH, FC, PCR, SCR
Sinking Fork 24.45 to 30.95	Lower Cumberland	5130205	Christian	2-FS	3	3	3	3	2/26/2009	WAH, FC, PCR, SCR
Sinking Fork 13.6 to 16.8	Lower Cumberland	5130205	Christian	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Sinking Fork 31.0 to 32.7	Lower Cumberland	5130205	Christian	5-NS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Skinframe Creek 0.0 to 4.8	Lower Cumberland	5130205	Lyon	5-PS	5-NS	3	3	3	5/2/2002	CAH, FC, PCR, SCR
Skinner Creek 0.0 to 5.8	Lower Cumberland	5130205	Trigg	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
South Fork of Little River 0.0 to 10.3	Lower Cumberland	5130205	Christian	5-NS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
South Fork of Little River 10.3 to 20.3	Lower Cumberland	5130205	Christian	5-PS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
South Fork of Little River 21.3 to 26.1	Lower	5130205	Christian	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
	Cumberland									
South Fork of Red River 0.0 to 7.85	Lower Cumberland	5130206	Logan	2-FS	2-FS	3	3	3	10/10/2006 - 3/17/2009	WAH, FC, PCR, SCR
South Fork Red River 5.3 to 7.9	Lower Cumberland	5130206	Logan	3	3	3	3	2-FS	5/2/2002	WAH, FC, PCR, SCR, DWS
Spring Creek 3.0 to 3.5	Lower Cumberland	5130205	Lyon	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Spring Creek 14.4 to 16.3	Lower Cumberland	5130206	Todd	2-FS	3	3	3	3	3/15/2007	WAH, FC, PCR, SCR
Sugar Creek 1.0 to 1.4	Lower Cumberland	5130205	Christian	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Sugar Creek 2.2 to 6.9	Lower Cumberland	5130205	Livingston	2-FS	5-PS	3	3	3	5/2/2002 - 10/10/2006	WAH, FC, PCR, SCR
Sulphur Spring Creek 0 to 6.6	Lower Cumberland	5130206	Simpson	2-FS	3	3	3	3	6/23/2000	WAH, FC, PCR, SCR
Upper Branch 0.0 to 2.8	Lower Cumberland	5130205	Christian	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR, DWS
UT to Dry Creek 0.0 to 2.1	Lower Cumberland	5130205	Trigg	5-NS	3	3	3	3	10/3/2007	WAH, FC, PCR, SCR
UT to Fulton Creek 0.0 to 0.8	Lower Cumberland	5130205	Lyon	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
UT to Little Whippoorwill Creek 0.1 to 0.6	Lower Cumberland	5130206	Logan	5-NS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
West Fork Creek (not named on map) 0.6 to 2.0	Lower Cumberland	5130206	Todd	5B-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
West Fork Red River 14.2 to 26.4	Lower Cumberland	5130206	Christian	5-PS	2-FS	3	3	3	3/19/2007	CAH, FC, PCR, SCR
Whippoorwill Creek 0.0 to 13.2	Lower Cumberland	5130206	Logan	2-FS	2-FS	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Bayou de Chien 0.0 to 4.2	Mississippi River	8010201	Fulton	3	3	3	5-PS	3	2/20/2009	WAH, FC, PCR, SCR
Bayou de Chien 14.3 to 28.2	Mississippi River	8010201	Hickman	2-FS	4A-NS	3	2-FS	3	3/21/2006	WAH, FC, PCR, SCR
Bayou de Chien 8.8 to 14.3	Mississippi River	8010201	Fulton	5-NS	5-NS	3	3	3	2/27/2007	WAH, FC, PCR, SCR
Brush Creek 0.0 to 6.3	Mississippi River	8010201	Hickman	5-PS	3	3	3	3	7/7/2000	WAH, FC, PCR, SCR
Brush Creek 0.0 to 8.4	Mississippi River	8010201	Graves	5-PS	3	3	3	3	7/5/2001	WAH, FC, PCR, SCR
Caldwell Creek 0.0 to 3.0	Mississippi River	8010202	Graves	5-NS	3	3	3	3	6/26/2000	WAH, FC, PCR, SCR
Cane Creek 0.0 to 5.3	Mississippi River	8010201	Hickman	5-PS	3	3	3	3	7/12/2000	WAH, FC, PCR, SCR
Cane Creek 0.3 to 4.1	Mississippi River	8010100	Ballard	5-PS	3	3	3	3	7/6/2000	WAH, FC, PCR, SCR
Cane Creek 3.3 to 4.1	Mississippi River	8010201	Graves	5B-PS	5B-PS	3	3	3	5/4/2002	WAH, FC, PCR, SCR
Cane Creek 0.0 to 4.4	Mississippi River	8010201	Hickman	5-NS	3	3	3	3	2/23/2007	WAH, FC, PCR, SCR
Central Creek 0.8 to 2.5	Mississippi River	8010201	Carlisle	3	4A-NS	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Cooley Creek 0.65 to 2.3	Mississippi River	8010201	Graves	3	4A-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR

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Gilbert Creek 1.7 to 3.5	Mississippi River	8010201	Graves	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Goose Creek 0.0 to 4.4	Mississippi River	8010201	Graves	5-PS	3	3	3	3	6/29/2000	WAH, FC, PCR, SCR
Hazel Creek 0.0 to 3.7	Mississippi River	8010100	Ballard	5-NS	3	3	3	3	7/6/2000	WAH, FC, PCR, SCR
Hurricane Creek 0.0 to 3.7	Mississippi River	8010201	Carlisle	5-PS	3	3	3	3	3/21/2006	WAH, FC, PCR, SCR
Jackson Creek 0.0 to 3.0	Mississippi River	8010201	Graves	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Key Creek 0.0 to 1.9	Mississippi River	8010201	Graves	5-NS	3	3	3	3	2/28/2007	WAH, FC, PCR, SCR
Knob Creek 1.3 to 3.0	Mississippi River	8010202	Graves	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Lick Creek 0.0 to 2.2	Mississippi River	8010201	Carlisle	5-PS	3	3	3	3	2/28/2007	WAH, FC, PCR, SCR
Little Bayou de Chein 10.0 to 12.3	Mississippi River	8010201	Fulton	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Bayou de Chien 0.0 to 1.3	Mississippi River	8010201	Hickman	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Creek 0.0 to 5.3	Mississippi River	8010201	Hickman	5-NS	3	3	3	3	7/7/2000	WAH, FC, PCR, SCR
Little Cypress Creek 0.0 to 2.0	Mississippi River	8010201	Graves	5-NS	3	3	3	3	6/26/2000	WAH, FC, PCR, SCR
Little Cypress Creek 0.0 to 3.6	Mississippi River	8010201	Hickman	5-PS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Little Cypress Creek 5.8 to 9.2	Mississippi River	8010201	Hickman	2-FS	3	3	3	3	11/7/2001	WAH, FC, PCR, SCR
Little Mayfield Creek 0.0 to 10.6	Mississippi River	8010201	Graves	5-PS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Little Mud Creek 0.0 to 1.95	Mississippi River	8010201	Fulton	5-PS	3	3	3	3	7/12/2000	WAH, FC, PCR, SCR
Long Creek 0.0 to 0.8	Mississippi River	8010201	Carlisle	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Mayfield Creek 2.2 to 5.5	Mississippi River	8010201	Carlisle	5-PS	3	3	3	3	7/10/2000	WAH, FC, PCR, SCR
Mayfield Creek 36.1 to 38.2	Mississippi River	8010201	Graves	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Mayfield Creek 59.6 to 62.3	Mississippi River	8010201	Calloway	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Mayfield Creek 11.1 to 16.5	Mississippi River	8010201	Carlisle	5-NS	5-NS	5-NS	3	3	10/10/2006	WAH, FC, PCR, SCR
Mayfield Creek 16.5 to 36.1	Mississippi River	8010201	McCracken	5-NS	3	3	3	3	6/20/2007	WAH, FC, PCR, SCR
Mayfield Creek 38.2 to 40.8	Mississippi River	8010201	Graves	5-NS	5-NS	3	3	3	3/2/2007	WAH, FC, PCR, SCR
Mayfield Creek 40.8 to 43.7	Mississippi River	8010201	Graves	5-NS	3	3	3	3	7/25/2006	WAH, FC, PCR, SCR
Mississippi River 886.9 to 953.5	Mississippi River	8010100	Fulton	3	3	3	2-FS	3	3/2/2007	WAH, FC, PCR, SCR
Mud Creek 0.0 to 7.8	Mississippi River	8010201	Fulton	5-NS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Obion Creek 39.65 to 43.1	Mississippi River	8010201	Hickman	5-NS	3	3	3	3	2/25/2009	WAH, FC, PCR, SCR
Obion Creek 43.1 to 48.6	Mississippi River	8010201	Hickman	5-PS	3	3	3	3	2/25/2009	WAH, FC, PCR, SCR
Obion Creek 0.0 to 16.2	Mississippi River	8010201	Fulton	5-NS	5-NS	3	3	3	2/26/2009	WAH, FC, PCR, SCR
Obion Creek 25.0 to 31.9	Mississippi River	8010201	Carlisle	2-FS	3	3	3	3	2/25/2009	WAH, FC, PCR, SCR
Obion Creek 31.9 to 35.2	Mississippi River	8010201	Hickman	5-NS	3	3	3	3	2/25/2009	WAH, FC, PCR, SCR
Obion Creek 48.6 to 54.4	Mississippi River	8010201	Graves	5-PS	3	3	3	3	2/26/2009	WAH, FC, PCR, SCR
Opossum Creek 0.0 to 2.3	Mississippi River	8010201	Graves	5-NS	3	3	3	3	6/26/2000	WAH, FC, PCR, SCR
Relict (Natural Channel) Mayfield Creek 17.4 to 20.4	Mississippi River	8010201	Carlisle	5-NS	3	3	3	3	10/3/2007	WAH, FC, PCR, SCR
Running Slough 0.0 to 16.2	Mississippi River	8010202	Fulton	5-PS	3	3	3	3	7/5/2001	WAH, FC, PCR, SCR
Sand Creek 0.0 to 3.7	Mississippi River	8010201	Graves	2-FS	3	3	3	3	12/12/2001	WAH, FC, PCR, SCR
Shawnee Creek 3.2 to 12.4	Mississippi River	8010100	Ballard	5-PS	3	3	2-FS	3	3/17/2009	WAH, FC, PCR, SCR
Shawnee Creek Slough 0.0 to 3.7	Mississippi River	8010100	Ballard	5-NS	2-FS	3	3	3	3/14/2007	WAH, FC, PCR, SCR
South Fork Bayou de Chien 2.0 to 7.4	Mississippi River	8010201	Graves	5-NS	3	3	3	3	7/5/2001	WAH, FC, PCR, SCR
South Fork of Bayou de Chien 0.0 to 2.0	Mississippi River	8010201	Graves	5-PS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Stovall Creek 0.0 to 3.8	Mississippi River	8010201	Ballard	2-FS	3	3	3	3	7/6/2000	WAH, FC, PCR, SCR

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Sugar Creek 0.0 to 1.3	Mississippi River	8010201	Ballard	5-PS	3	3	3	3	6/29/2000	WAH, FC, PCR, SCR
Swan Pond	Mississippi River	8010100	Ballard	2-FS	3	2-FS	3	3	3/6/2006	WAH, FC, PCR, SCR
Terrapin Creek 2.7 to 6.0	Mississippi River	8010202	Graves	2-FS	5-NS	3	3	3	3/20/2007 - 3/23/2007	WAH, FC, PCR, SCR
Torian Creek 0.0 to 0.8	Mississippi River	8010201	Graves	5B-PS	5B-PS	3	3	3	8/2/2002	WAH, FC, PCR, SCR
Truman Creek 2.0 to 3.2	Mississippi River	8010201	Carlisle	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Truman Creek 3.2 to 4.1	Mississippi River	8010201	Carlisle	5-PS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
UT to Brush Creek 0.0 to 1.9	Mississippi River	8010201	Hickman	5-NS	3	3	3	3		WAH, FC, PCR, SCR
UT to Mayfield Creek 0.0 to 1.0	Mississippi River	8010201	McCracken	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Mayfield Creek 1.1 to 3.5	Mississippi River	8010201	Graves	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Mud Creek 0.0 to 2.2	Mississippi River	8010201	Fulton	5-NS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
UT to Obion Creek 1.6 to 2.2	Mississippi River	8010201	Hickman	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
West Fork Mayfield Creek 5.3 to 15.5	Mississippi River	8010201	Carlisle	2-FS	3	3	3	3	3/21/2006	WAH, FC, PCR, SCR
Wilson Creek 0.0 to 2.1	Mississippi River	8010201	Carlisle	5-NS	5-NS	3	3	3	3/23/2007	WAH, FC, PCR, SCR
Wilson Creek 2.1 to 8.0	Mississippi River	8010201	Carlisle	2-FS	3	3	3	3	7/7/2000	WAH, FC, PCR, SCR
Alexandria Park Lake	Ohio River	5090201	Campbell	3	3	3	5-PS	3	1/31/2008	WAH, FC, PCR, SCR
Allen Fork 2.0 to 4.6	Ohio River	5090203	Boone	5-PS	3	3	3	3	4/11/2001	WAH, FC, PCR, SCR
Bayou Creek 0.5 to 11.9	Ohio River	5140206	McCracken	5-PS	3	3	2-FS	3	2/24/2009	WAH, FC, PCR, SCR
Bayou Creek 0.0 to 19.1	Ohio River	5140203	Livingston	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Bear Run 1.6 to 1.9	Ohio River	5140201	Breckinridge	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Beech Fork 0.05 to 3.3	Ohio River	5140201	Breckinridge	2-FS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Bell Ditch 0.0 to 2.8	Ohio River	5140201	Daviess	5-NS	3	3	3	3	1/23/2008	WAH, FC, PCR, SCR
Big Bone Creek 1.2 to 10.7	Ohio River	5090203	Boone	2-FS	3	3	3	3	3/3/2005	WAH, FC, PCR, SCR
Big South Fork 2.3 to 4.3	Ohio River	5090203	Boone	5-PS	3	3	3	3	3/4/2009	WAH, FC, PCR, SCR
Big Sugar Creek 0.7 to 2.0	Ohio River	5090203	Gallatin	5-PS	3	3	3	3	3/3/2005	WAH, FC, PCR, SCR
Blackford Creek 0.2 to 4.0	Ohio River	5140201	Hancock	2-FS	5-NS	3	3	3	1/22/2008	WAH, FC, PCR, SCR
Blackford Creek 4.0 to 8.4	Ohio River	5140201	Hancock	5-PS	3	3	3	3	2/28/2003	WAH, FC, PCR, SCR
Blackford Creek 8.4 to 10.4	Ohio River	5140201	Hancock	2-FS	3	3	3	3	1/23/2008	WAH, FC, PCR, SCR
Bracken Creek 2.8 to 11.0	Ohio River	5090201	Bracken	5-PS	3	3	3	3	10/25/2005	WAH, FC, PCR, SCR
Briery Branch 0.2 to 2.2	Ohio River	5090201	Lewis	5-PS	3	3	3	3	10/24/2005	WAH, FC, PCR, SCR
Brush Creek 0.0 to 1.6	Ohio River	5090201	Campbell	2-FS	5-NS	3	3	3	2/5/2001	WAH, FC, PCR, SCR
Buck Creek 0.0 to 7.6	Ohio River	5140203	Livingston	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Butchers Branch 0.0 to 0.3	Ohio River	5140201	Hancock	2-FS	2-FS	2-FS	3	3	6/3/2005	WAH, FC, PCR, SCR
Butchers Branch 0.3 to 2.4	Ohio River	5140201	Hancock	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
Cabin Creek 3.6 to 11.3	Ohio River	5090201	Mason	5-NS	3	3	3	3	2/5/2001	WAH, FC, PCR, SCR
Camp Creek 0.0 to 4.3	Ohio River	5140203	Crittenden	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Canoe Creek 2.4 to 5.0	Ohio River	5140202	Henderson	5-NS	5-NS	5-NS	3	3	1/23/2008	WAH, FC, PCR, SCR
Carpenter Lake	Ohio River	5140201	Daviess	5-PS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
Casey Creek 0.6 to 9.7	Ohio River	5140202	Union	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR

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Clanton Creek 0.0 to 4.9	Ohio River	5140206	Ballard	5-NS	3	3	3	3	7/6/2000	WAH, FC, PCR, SCR
Clary Branch 0.0 to 1.9	Ohio River	5090201	Lewis	5-PS	3	3	3	3	4/28/2004	WAH, FC, PCR, SCR
Clover Creek 7.7 to 9.2	Ohio River	5140201	Breckinridge	5-PS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Coefield Creek 0.0 to 8.9	Ohio River	5140203	Crittenden	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Craigs Creek 2.9 to 6.7	Ohio River	5090203	Gallatin	3	3	3	3	3		WAH, FC, PCR, SCR
Crawford Lake	Ohio River	5140206	McCracken	3	3	3	2-FS	3	2/20/2009	WAH, FC, PCR, SCR
Crooked Creek 0.0 to 12.1	Ohio River	5140203	Crittenden	5-PS	3	3	3	3	2/26/2003	WAH, FC, PCR, SCR
Crooked Creek 0.0 to 5.6	Ohio River	5090201	Lewis	2-FS	3	3	3	3	8/2/2000	WAH, FC, PCR, SCR
Crooked Creek 12.1 to 26.4	Ohio River	5140203	Crittenden	5-NS	5-NS	3	3	3	1/24/2008	WAH, FC, PCR, SCR
Deer Creek 0.0 to 8.1	Ohio River	5140203	Livingston	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Dennis O'nan Ditch/Cypress Creek 0.4 to 10.9	Ohio River	5140203	Union	2-FS	5-NS	2-FS	3	3	1/7/2008	WAH, FC, PCR, SCR
Double Lick Creek 0.0 to 3.5	Ohio River	5090203	Boone	2-FS	3	3	3	3	3/7/2005	WAH, FC, PCR, SCR
Dry Creek 0.2 to 7.0	Ohio River	5090203	Boone	5-PS	3	3	3	3	8/3/2000	WAH, FC, PCR, SCR
Dry Creek 1.1 to 3.0	Ohio River	5090203	Gallatin	5-PS	3	3	3	3	8/3/2000	WAH, FC, PCR, SCR
Dyer Hill Creek 0.4 to 6.0	Ohio River	5140203	Livingston	5-PS	3	3	3	3	1/23/2008	WAH, FC, PCR, SCR
East Fork Cabin Creek 0.0 to 4.7	Ohio River	5090201	Lewis	2-FS	3	3	3	3	10/27/2005	WAH, FC, PCR, SCR
East Fork of Canoe Creek 0.0 to 4.4	Ohio River	5140202	Henderson	5-PS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Elijahs Creek 0.0 to 5.2	Ohio River	5090203	Boone	4A-NS	3	3	3	3	4/11/2001	WAH, FC, PCR, SCR
Fish Lake	Ohio River	5140206	Ballard	3	3	3	5-PS	3	1/31/2008	WAH, FC, PCR, SCR
Fourmile Creek 0.2 to 8.5	Ohio River	5090201	Campbell	2-FS	5-NS	3	3	3	8/3/2000	WAH, FC, PCR, SCR
Fourmile Creek 8.5 to 9.4	Ohio River	5090201	Campbell	2-FS	3	3	3	3	4/10/2001	WAH, FC, PCR, SCR
Garrison Creek 0.0 to 4.85	Ohio River	5090203	Boone	2-FS	3	3	3	3	3/7/2005	WAH, FC, PCR, SCR
Goose Creek 0.0 to 1.9	Ohio River	5090201	Bracken	5-PS	3	3	3	3	8/3/2000	WAH, FC, PCR, SCR
Goose Pond Ditch/Wardens Slough 0.0 to 13.6	Ohio River	5140203	Union	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Grassy Fork 0.0 to 3.9	Ohio River	5090201	Lewis	2-FS	3	3	3	3	11/2/2005	WAH, FC, PCR, SCR
Gunpowder Creek 0.0 to 15.0	Ohio River	5090203	Boone	5-NS	3	3	3	3	1/8/2001	WAH, FC, PCR, SCR
Gunpowder Creek 15.4 to 17.1	Ohio River	5090203	Boone	4A-NS	3	3	3	3	8/3/1999	WAH, FC, PCR, SCR
Gunpowder Creek 18.9 to 21.6	Ohio River	5090203	Boone	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Highland Creek 0.0 to 7.6	Ohio River	5140202	Union	5-PS	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Highland Creek 7.6 to 21.4	Ohio River	5140202	Henderson	5-NS	5-NS	5-NS	3	3	1/22/2008	WAH, FC, PCR, SCR
Hood Creek 0.15 to 0.9	Ohio River	5090103	Boyd	5B-NS	5B-NS	3	3	3	1/19/2009	WAH, FC, PCR, SCR
Humphrey Creek 0.0 to 3.7	Ohio River	5140206	Ballard	5-PS	2-FS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Humphrey Creek 3.7 to 11.6	Ohio River	5140206	Ballard	2-FS	5-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Humphrey Creek 11.6 to 13.0	Ohio River	5140206	Ballard	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Indian Creek 0.0 to 9.4	Ohio River	5090201	Lewis	2-FS	3	3	3	3	1/10/2001	WAH, FC, PCR, SCR
Kingfisher Lake	Ohio River	5140201	Daviess	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
Kinniconick Creek 0.8 to 50.9	Ohio River	5090201	Lewis	2-FS	2-FS	2-FS	3	3	9/20/2005	WAH, FC, PCR, SCR
Lake George (Marion City Lake)	Ohio River	5140203	Crittenden	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR, DWS
Lake Jericho	Ohio River	5140101	Henry	5-NS	3	2-FS	3	3	8/26/2005	WAH, FC, PCR, SCR

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Laurel Fork 5.8 to 15.9	Ohio River	5090201	Lewis	5-PS	3	3	3	3	11/3/2005	WAH, FC, PCR, SCR
Lawrence Creek 2.6 to 4.2	Ohio River	5090201	Mason	2-FS	3	3	3	3	11/3/2005	WAH, FC, PCR, SCR
Lead Creek 0.0 to 0.8	Ohio River	5140201	Hancock	2-FS	2-FS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Lead Creek 3.5 to 4.5	Ohio River	5140201	Hancock	5B-NS	5B-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Lee Creek 0.0 to 2.0	Ohio River	5090201	Mason	3	3	3	3	3		WAH, FC, PCR, SCR
Lick Run Creek 0.0 to 3.5	Ohio River	5140104	Breckinridge	5-PS	3	3	3	3	3/4/2009	WAH, FC, PCR, SCR
Little Bayou Creek 0.0 to 7.2	Ohio River	5140206	McCracken	4A-NS	3	3	5-NS	3	2/24/2009	WAH, FC, PCR, SCR
Little Kentucky River 21.5 to 27.65	Ohio River	5140101	Henry	5-PS	3	3	3	3	3/4/2009	WAH, FC, PCR, SCR
Little South Fork 1.2 to 5.9	Ohio River	5090203	Boone	2-FS	3	3	3	3	4/24/2004	WAH, FC, PCR, SCR
Locust Creek 0.0 to 4.1	Ohio River	5090201	Bracken	2-FS	5-NS	3	3	3	8/8/2000	WAH, FC, PCR, SCR
Locust Creek 4.1 to 12.2	Ohio River	5090201	Bracken	5-NS	3	3	3	3	8/8/2000	WAH, FC, PCR, SCR
Massac Creek 4.1 to 4.7	Ohio River	5140206	McCracken	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Massac Creek 4.7 to 7.9	Ohio River	5140206	McCracken	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Mauzy Lake	Ohio River	5140202	Union	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
McCools Creek 0.0 to 6.7	Ohio River	5090203	Carroll	3	3	3	3	3		WAH, FC, PCR, SCR
McCoys Fork 0.0 to 2.2	Ohio River	5090203	Boone	3	3	3	3	3		WAH, FC, PCR, SCR
Metropolis Lake	Ohio River	5140206	McCracken	5-PS	3	2-FS	2B(5)	3	1/1/2000 - 3/6/2006	WAH, FC, PCR, SCR
Middle Creek 0.4 to 5.6	Ohio River	5090203	Boone	5-PS	3	3	3	3	3/6/2009	WAH, FC, PCR, SCR
Middle Fork of Massac Creek 0.0 to 6.4	Ohio River	5140206	McCracken	5-PS	3	3	3	3	3/21/2007	WAH, FC, PCR, SCR
Mitchell Lake	Ohio River	5140206	Ballard	3	3	3	3	3		WAH, FC, PCR, SCR
Montgomery Creek 0.0 to 6.5	Ohio River	5090201	Lewis	5-PS	3	3	3	3	3/11/2005	WAH, FC, PCR, SCR
Mudlick Creek 0.2 to 6.1	Ohio River	5090203	Boone	2-FS	3	3	3	3	3/11/2009	WAH, FC, PCR, SCR
Mudlick Creek 6.6 to 11.3	Ohio River	5090203	Boone	3	3	3	3	3		WAH, FC, PCR, SCR
Newberry Branch 0.0 to 2.8	Ohio River	5090103	Greenup	5-NS	3	3	3	3	11/11/2003	WAH, FC, PCR, SCR
Newtons Creek 0.3 to 8.2	Ohio River	5140206	McCracken	5-PS	3	3	3	3	3/12/2007	WAH, FC, PCR, SCR
Pleasant Run Creek 0.2 to 3.4	Ohio River	5090203	Kenton	2-FS	3	3	3	3	7/9/2004	WAH, FC, PCR, SCR
Pup Creek 2.4 to 7.25	Ohio River	5140201	Daviess	2-FS	3	3	3	3	1/24/2008	WAH, FC, PCR, SCR
Reformatory Lake	Ohio River	5140101	Oldham	2-FS	3	2-FS	2-FS	3	8/26/2005	WAH, FC, PCR, SCR
Rock Run 0.0 to 5.5	Ohio River	5090201	Lewis	2-FS	3	3	3	3	9/18/2007	WAH, FC, PCR, SCR
Rockhouse Fork 0.0 to 2.1	Ohio River	5090103	Greenup	5-PS	3	3	3	3	2/13/2009	WAH, FC, PCR, SCR
Sadler Creek 0.0 to 2.4	Ohio River	5140203	Livingston	5-PS	3	3	3	3	1/24/2008	WAH, FC, PCR, SCR
Salt Lick Creek 0.2 to 7.2	Ohio River	5090201	Lewis	5-PS	3	3	3	3	6/24/2004	WAH, FC, PCR, SCR
Scenic Lake	Ohio River	5140202	Henderson	5-PS	3	3	3	3	1/1/1992	WAH, FC, PCR, SCR
Second Creek 0.5 to 2.9	Ohio River	5090203	Boone	2-FS	3	3	3	3	11/8/2005	WAH, FC, PCR, SCR
Shawnee Creek 0.0 to 3.2	Ohio River	8010100	Ballard	5-NS	5-PS	3	2-FS	3	1/28/2008	WAH, FC, PCR, SCR
Snag Creek 0.5 to 5.5	Ohio River	5090201	Bracken	3	5-NS	3	3	3	8/14/2000	WAH, FC, PCR, SCR
South Fork Gunpowder Creek 4.1 to 6.8	Ohio River	5090203	Boone	3	5-NS	3	3	3	3/3/2001	WAH, FC, PCR, SCR
South Fork Gunpowder Creek 0.0 to 2.0	Ohio River	5090203	Boone	5-NS	3	3	3	3	4/10/2001	WAH, FC, PCR, SCR
Stephens Creek 0.0 to 1.8	Ohio River	5090203	Gallatin	2-FS	3	3	3	3	8/10/2000	WAH, FC, PCR, SCR
Straight Fork 0.0 to 1.9	Ohio River	5090201	Lewis	2-FS	3	3	3	3	4/11/2001	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Sugg Creek 0.0 to 1.3	Ohio River	5140203	Union	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Tenmile Creek 0.05 to 1.15	Ohio River	5090201	Campbell	5-PS	3	3	3	3	3/16/2005	WAH, FC, PCR, SCR
Trace Creek 0.2 to 4.6	Ohio River	5090201	Lewis	5-PS	3	3	3	3	11/14/2005	WAH, FC, PCR, SCR
Turner Lake	Ohio River	5140206	Ballard	2-FS	3	2-FS	3	3	1/23/2006	WAH, FC, PCR, SCR
Twelve Mile Creek 3.5 to 9.0	Ohio River	5090201	Campbell	2-FS	3	3	3	3	8/11/2000	WAH, FC, PCR, SCR
Twelvemile Creek 10.4 to 13.2	Ohio River	5090201	Campbell	2-FS	3	3	3	3	11/14/2005	WAH, FC, PCR, SCR
UT to Big Sugar Creek 1.0 to 1.8	Ohio River	5090203	Gallatin	2-FS	3	3	3	3	3/4/2005	WAH, FC, PCR, SCR
UT to Chinns Branch 0.0 to 1.1	Ohio River	5090103	Greenup	5-NS	3	3	3	3	11/10/2003	WAH, FC, PCR, SCR
UT to Eagle Creek 0.0 to 1.6	Ohio River	5140203	Union	5B-NS	5B-NS	3	3	3	1/24/2008	WAH, FC, PCR, SCR
UT to Humphrey Branch 0.0 to 1.4	Ohio River	5140206	Ballard	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Massac Creek 0.0 to 0.4	Ohio River	5140206	McCracken	5B-PS	5B-PS	3	3	3	3/1/2007	WAH, FC, PCR, SCR
UT to Massac Creek 0.0 to 0.7	Ohio River	5140206	McCracken	3	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Massac Creek 0.0 to 1.7	Ohio River	5140206	McCracken	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
UT to Ohio River 3.55 to 3.7	Ohio River	5140206	McCracken	5B-PS	3	3	3	3	3/12/2007	WAH, FC, PCR, SCR
UT to Rush Creek 0.0 to 1.3	Ohio River	5140203	Crittenden	5-PS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
UT to UT to Eagle Creek	Ohio River	5140203	Union	5B-NS	3	3	3	3	1/24/2008	WAH, FC, PCR, SCR
UT to UT to West Fork of Massac Creek 0.0 to 0.7	Ohio River	5140206	McCracken	5B-NS	5B-NS	3	3	3	3/19/2007	WAH, FC, PCR, SCR
UT to West Fork Massac Creek 0.0 to 0.8	Ohio River	5140206	McCracken	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to West Fork of Massac Creek 0.0 to 0.8	Ohio River	5140206	McCracken	5B-PS	3	3	3	3	3/19/2007	WAH, FC, PCR, SCR
UT to West Fork of Massac Creek 1.75 to 2.0	Ohio River	5140203	McCracken	5-PS	3	3	3	3	3/19/2007	WAH, FC, PCR, SCR
Waterson Lake	Ohio River	5140101	Jefferson	3	3	3	2-FS	3	3/4/2009	WAH, FC, PCR, SCR
West Fork of Massac Creek 0.0 to 0.3	Ohio River	5140206	McCracken	5B-PS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
West Fork of Massac Creek 1.0 to 6.2	Ohio River	5140206	McCracken	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Woolper Creek 11.9 to 14.0	Ohio River	5090203	Boone	5-NS	5-NS	3	3	3	8/10/2000	WAH, FC, PCR, SCR
Woolper Creek 2.8 to 7.2	Ohio River	5090203	Boone	3	5-NS	3	3	3	8/10/2000	WAH, FC, PCR, SCR
Ashes Creek 0.4 to 6.6	Salt River	5140102	Nelson	2-FS	3	3	3	3	10/5/2005	WAH, FC, PCR, SCR
Beargrass Creek 0.5 to 1.8	Salt River	5140101	Jefferson	2B(5)	3	3	3	3	3/3/2009	WAH, FC, PCR, SCR
Beaver Creek 0.0 to 20.9	Salt River	5140103	Anderson	2-FS	3	3	3	3	4/9/2001	WAH, FC, PCR, SCR
Beaver Lake	Salt River	5140103	Anderson	2-FS	3	5-PS	5-PS	3	3/4/2009	WAH, FC, PCR, SCR
Beech Creek 4.6 to 19.6	Salt River	5140102	Shelby	2-FS	5-NS	5-NS	3	3	10/5/2005	WAH, FC, PCR, SCR
Beech Fork 109.7 to 111.9	Salt River	5140103	Marion	2-FS	3	3	3	3	10/5/2005	WAH, FC, PCR, SCR
Beech Fork 39.5 to 50.4	Salt River	5140103	Nelson	2-FS	5-NS	2-FS	2-FS	3	9/20/2005	WAH, FC, PCR, SCR
Beech Fork 49.7 to 56.5	Salt River	5140103	Washington	2-FS	3	3	3	3	8/11/2000	WAH, FC, PCR, SCR
Beech Fork 56.5 to 85.3	Salt River	5140103	Washington	2-FS	3	3	3	3	8/11/2000	WAH, FC, PCR, SCR
Beech Fork 0.0 to 12.0	Salt River	5140103	Nelson	2-FS	3	3	3	3	12/2/2005	WAH, FC, PCR, SCR
Big South Fork 16.6 to 18.0	Salt River	5140103	Marion	2-FS	3	3	3	3	10/6/2005	WAH, FC, PCR, SCR
Big South Fork 0.0 to 12.4	Salt River	5140103	Marion	2-FS	5-PS	2-FS	3	3	9/11/2000	WAH, FC, PCR, SCR
Blue Spring Ditch 0.0 to 2.1	Salt River	5140102	Jefferson	2-FS	5-NS	3	3	3	2/22/2006	WAH, FC, PCR, SCR

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Brashears Creek 0.0 to 13.0	Salt River	5140102	Spencer	2-FS	5-NS	2-FS	3	3	12/2/2005	WAH, FC, PCR, SCR
Brashears Creek 13.0 to 25.8	Salt River	5140102	Shelby	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Brooks Run 0.0 to 2.5	Salt River	5140102	Bullitt	5-PS	2-FS	3	3	3	2/9/2001	WAH, FC, PCR, SCR
Brooks Run 2.5 to 4.1	Salt River	5140102	Bullitt	5-PS	5-PS	3	3	3	2/7/2006	WAH, FC, PCR, SCR
Brooks Run 4.1 to 6.1	Salt River	5140102	Bullitt	5-PS	5-NS	3	3	3	2/7/2006	WAH, FC, PCR, SCR
Buchanan Creek 0.0 to 3.7	Salt River	5140102	Mercer	2-FS	3	3	3	3	10/6/2005	WAH, FC, PCR, SCR
Buckhorn Creek 0.0 to 2.3	Salt River	5140103	Marion	2-FS	2-FS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Bullitt Lick Creek 0.0 to 2.3	Salt River	5140102	Bullitt	5-PS	3	3	3	3	7/28/2000	WAH, FC, PCR, SCR
Bullskin Creek 0.0 to 3.4	Salt River	5140102	Shelby	2-FS	3	3	3	3	6/28/2005	WAH, FC, PCR, SCR
Cane Run 0.0 to 7.6	Salt River	5140102	Jefferson	2-FS	3	3	3	3	2/5/2001	WAH, FC, PCR, SCR
Cartwright Creek 0.0 to 6.6	Salt River	5140103	Washington	5-PS	5-NS	3	2-FS	3	4/9/2001	WAH, FC, PCR, SCR
Cartwright Creek 6.6 to12.6	Salt River	5140103	Washington	5-PS	3	3	3	3	4/6/2001	WAH, FC, PCR, SCR
Cedar Creek 0.0 to 5.2	Salt River	5140102	Bullitt	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Cedar Creek 4.2 to 11.1	Salt River	5140102	Jefferson	2-FS	2-FS	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Chaplin River 0.0 to 23.1	Salt River	5140103	Nelson	2-FS	5-NS	2-FS	3	3	12/1/2005	WAH, FC, PCR, SCR
Chaplin River 40.9 to 54.2	Salt River	5140103	Washington	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Chaplin River 63.0 to 69.7	Salt River	5140103	Mercer	5-NS	3	3	3	3	4/9/2001	WAH, FC, PCR, SCR
Chaplin River 69.7 to 78	Salt River	5140103	Mercer	2-FS	3	3	3	3	4/9/2001	WAH, FC, PCR, SCR
Chaplin River 32.6 to 32.8	Salt River	5140103	Washington	2-FS	3	3	3	3	4/9/2001	WAH, FC, PCR, SCR
Cheese Lick 0.7 to 4.4	Salt River	5140103	Anderson	5-PS	3	3	3	3	10/6/2005	WAH, FC, PCR, SCR
Chenoweth Run 0.0 to 5.2	Salt River	5140102	Jefferson	4A-PS	5-NS	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Chenoweth Run 5.2 to 9.2	Salt River	5140102	Jefferson	4A-PS	5-NS	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Chickasaw Park Pond	Salt River	5140101	Jefferson	3	3	3	5-PS	3	10/7/2005	WAH, FC, PCR, SCR
Clear Creek 0 to 4.4	Salt River	5140103	Hardin	5-NS	3	3	3	3	4/6/2001	WAH, FC, PCR, SCR
Clear Creek 0.0 to 11.0	Salt River	5140102	Shelby	5-NS	3	3	3	3	1/12/2001	WAH, FC, PCR, SCR
Corn Creek 0.0 to 4.1	Salt River	5140101	Trimble	2-FS	3	3	3	3	8/2/2000	WAH, FC, PCR, SCR
Cox Creek 11.2 to 15.5	Salt River	5140102	Nelson	5-PS	3	3	3	3	7/28/2000	WAH, FC, PCR, SCR
Cox Creek 0.0 to 4.7	Salt River	5140102	Bullitt	2-FS	5-PS	2-FS	3	3	12/2/2005	WAH, FC, PCR, SCR
Crooked Creek 1.0 to 10.1	Salt River	5140102	Spencer	2-FS	3	3	3	3	8/2/2000	WAH, FC, PCR, SCR
Crooked Creek 5.6 to 12.8	Salt River	5140103	Bullitt	5-NS	3	3	3	3	8/11/2000	WAH, FC, PCR, SCR
Currys Fork 0.0 to 4.8	Salt River	5140102	Oldham	5-PS	5-NS	2-FS	3	3	12/1/2005	WAH, FC, PCR, SCR
Doctors Fork 0.0 to 3.8	Salt River	5140103	Boyle	2-FS	3	3	3	3	10/7/2005	WAH, FC, PCR, SCR
Doe Run 4.1 to 7.9	Salt River	5140104	Meade	2-FS	5-NS	3	3	3	3/6/2001	CAH, FC, PCR, SCR
Doe Valley Lake	Salt River	5140104	Meade	3	3	3	3	2-FS	11/15/2005	WAH, FC, PCR, SCR, DWS
East Fork Beech Fork 0.0 to 1.9	Salt River	5140103	Washington	5-PS	3	3	3	3	10/7/2005	WAH, FC, PCR, SCR
East Fork Cox Creek 0.0 to 4.3	Salt River	5140102	Bullitt	2-FS	3	3	3	3	8/4/2000	WAH, FC, PCR, SCR
Fagan Branch Reservoir	Salt River	5140103	Marion	3	3	3	3	2-FS	10/18/2005	WAH, FC, PCR, SCR, DWS
Fern Creek 1.3 to 4.4	Salt River	5140102	Jefferson	5-NS	5-NS	3	3	3	5/2/2001	WAH, FC, PCR, SCR
Fern Creek 0.0 to 1.3	Salt River	5140102	Jefferson	5-PS	5-NS	3	3	3	3/22/2001	WAH, FC, PCR, SCR
Fern Creek 4.4 to 5.9	Salt River	5140102	Jefferson	5-PS	5-NS	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Fishpool Creek 0.0 to1.9	Salt River	5140102	Jefferson	2-FS	2-FS	3	3	3	3/22/2001	WAH, FC, PCR, SCR

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Floyds Fork 0.0 to 11.6	Salt River	5140102	Bullitt	2-FS	5-NS	2-FS	2-FS	3	9/20/2005	WAH, FC, PCR, SCR
Floyds Fork 11.6 to 24.2	Salt River	5140102	Jefferson	4A-NS	5-NS	3	3	3	10/15/1999	WAH, FC, PCR, SCR
Floyds Fork 24.2 to 34.1	Salt River	5140102	Jefferson	5-NS	5-PS	2-FS	3	3	12/1/2005	WAH, FC, PCR, SCR
Floyds Fork 34.1 to 61.9	Salt River	5140102	Shelby	4A-PS	3	3	3	3	12/1/2005	WAH, FC, PCR, SCR
Glens Creek 0.0 to 4.8	Salt River	5140103	Washington	5-PS	3	3	3	3	10/10/2005	WAH, FC, PCR, SCR
Goose Creek 0.3 to 3.6	Salt River	5140101	Jefferson	2B(5)	5-NS	3	3	3	3/3/2009	WAH, FC, PCR, SCR
Goose Creek 3.6 to 13.0	Salt River	5140101	Jefferson	2B(5)	5-NS	3	3	3	3/3/2009	WAH, FC, PCR, SCR
Gravel Creek 0.7 to 2.9	Salt River	5140102	Bullitt	2-FS	3	3	3	3	10/10/2005	WAH, FC, PCR, SCR
Guist Creek 0.0 to 15.4	Salt River	5140102	Shelby	2-FS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Guist Creek 15.4 to 27.6	Salt River	5140102	Shelby	5-PS	3	3	2-FS	3	3/25/2002	WAH, FC, PCR, SCR
Guist Creek Lake	Salt River	5140102	Shelby	5-NS	3	2-FS	5-PS	5-PS	3/4/2009	WAH, FC, PCR, SCR, DWS
Hammond Creek 0.0 to 5.2	Salt River	5140102	Anderson	3	3	3	2-FS	3	8/4/2000	WAH, FC, PCR, SCR
Hardins Creek 0.0 to 5.0	Salt River	5140104	Breckinridge	5-NS	3	3	3	3	7/28/2000	WAH, FC, PCR, SCR
Hardins Creek 0.0 to 7.0	Salt River	5140103	Washington	2-FS	3	3	3	3	3/7/2001	WAH, FC, PCR, SCR
Hardins Creek 13.3 to 22.9	Salt River	5140103	Marion	5-PS	3	3	3	3	6/8/2004	WAH, FC, PCR, SCR
Hardins Creek 5.2 to 11.4	Salt River	5140104	Breckinridge	5-PS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Hardy Creek 1.6 to 5.6	Salt River	5140101	Trimble	5-PS	3	3	3	3	3/22/2005	WAH, FC, PCR, SCR
Hardy Creek 0.0 to 1.4	Salt River	5140101	Trimble	5-NS	3	3	3	3	8/1/1999	WAH, FC, PCR, SCR
Harrods Creek 0.0 to 3.2	Salt River	5140101	Oldham	4A-NS	5-PS	2-FS	3	3	12/1/2005	WAH, FC, PCR, SCR
Harrods Creek 3.2 to 33.3	Salt River	5140101	Oldham	3	5-PS	2-FS	3	3	12/1/2005	WAH, FC, PCR, SCR
Harts Run 0.0 to 1.8	Salt River	5140103	Bullitt	2-FS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Hayden Creek 0.0 to 1.3	Salt River	5140103	Mercer	5-NS	3	3	3	3	3/8/2005	WAH, FC, PCR, SCR
Hite Creek 0.0 to 5.5	Salt River	5140101	Jefferson	5-NS	3	3	3	3	4/9/2001	WAH, FC, PCR, SCR
Indian Creek 0.0 to 2.9	Salt River	5140103	Mercer	2-FS	3	3	3	3	3/8/2005	WAH, FC, PCR, SCR
Jeptha Creek 0.0 to 0.7	Salt River	5140102	Shelby	5-NS	3	3	3	3	8/7/2000	WAH, FC, PCR, SCR
Jones Creek 0.0 to 3.9	Salt River	5140103	Marion	5-PS	3	3	3	3	4/6/2001	WAH, FC, PCR, SCR
Lick Creek 0.0 to 4.1	Salt River	5140103	Washington	2-FS	3	3	3	3	3/10/2005	WAH, FC, PCR, SCR
Little Goose Creek 0.0 to 9.2	Salt River	5140101	Jefferson	2-FS	5-PS	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Little Kentucky River 0.2 to 21.4	Salt River	5140101	Trimble	2-FS	2-FS	2-FS	3	3	12/2/2005	WAH, FC, PCR, SCR
Little South Fork of North Rolling Fork 0.0 to 3.7	Salt River	5140103	Casey	2-FS	3	3	3	3	9/19/2005	WAH, FC, PCR, SCR
Locust Creek 0.0 to 2.0	Salt River	5140101	Carroll	2-FS	3	3	3	3	8/8/2000	WAH, FC, PCR, SCR
Long Lick Creek 0.0 to 10.5	Salt River	5140102	Bullitt	5-NS	3	3	3	3	10/12/2005	WAH, FC, PCR, SCR
Long Lick Creek 3.1 to 21.3	Salt River	5140103	Washington	2-FS	3	3	3	3	6/9/2004	WAH, FC, PCR, SCR
Long Run 0.0 to 10.0	Salt River	5140102	Jefferson	2-FS	5-NS	3	3	3	3/13/2001	WAH, FC, PCR, SCR
Long Run Lake	Salt River	5140102	Jefferson	2-FS	3	2-FS	2-FS	3	8/26/2005	WAH, FC, PCR, SCR
Marion County Sportsman Lake	Salt River	5140103	Marion	2-FS	3	2-FS	3	3	8/26/2005	WAH, FC, PCR, SCR
McNeely Lake	Salt River	5140102	Jefferson	2-FS	3	2-FS	5-NS	3	8/26/2005	WAH, FC, PCR, SCR
Mellins Branch 0.0 to 1.5	Salt River	5140101	Carroll	5-PS	3	3	3	3	3/10/2005	WAH, FC, PCR, SCR
Middle Fork Beargrass Creek 0.0 to 2.0	Salt River	5140101	Jefferson	2B(5)	5-NS	3	3	3	3/13/2001	WAH, FC, PCR, SCR
Middle Fork of Beargrass Creek 2.0 to 2.9	Salt River	5140101	Jefferson	2B(5)	5-NS	3	3	3	3/3/2009	WAH, FC, PCR, SCR

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Middle Fork of Beargrass Creek 2.9 to 15.3	Salt River	5140101	Jefferson	2B(5)	5-NS	3	3	3	3/3/2001 - 3/3/2009	WAH, FC, PCR, SCR
Middle Fork Otter Creek 0.0 to 4.2	Salt River	5140103	Larue	2-FS	3	3	3	3	4/6/2001	WAH, FC, PCR, SCR
Miles Park Pond #4	Salt River	5140102	Jefferson	3	3	3	2-FS	3	1/31/2008	WAH, FC, PCR, SCR
Mill Creek 0.0 to 11.2	Salt River	5140101	Jefferson	5-NS	5-NS	3	3	3	3/13/2001	WAH, FC, PCR, SCR
Mill Creek 11.8 to 23.6	Salt River	5140102	Hardin	2-FS	3	3	3	3	2/6/2001	WAH, FC, PCR, SCR
Mill Creek 6.0 to 7.0	Salt River	5140102	Hardin	3	3	3	5B-NS	3	2/6/2001	WAH, FC, PCR, SCR
Mill Creek 7.0 to 11.8	Salt River	5140102	Hardin	2-FS	3	3	3	3	2/6/2001	WAH, FC, PCR, SCR
Mill Creek 0.0 to 2.7	Salt River	5140103	Nelson	2-FS	3	3	3	3	10/12/2005	WAH, FC, PCR, SCR
Mill Creek Branch 0.0 to 0.7	Salt River	5140102	Hardin	5B-PS	3	3	3	3	2/6/2001	WAH, FC, PCR, SCR
Mill Creek Cutoff 0.0 to 6.7	Salt River	5140101	Jefferson	2-FS	5-NS	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Monks Creek 0.0 to 1.6	Salt River	5140103	Nelson	2-FS	3	3	3	3	10/12/2005	WAH, FC, PCR, SCR
Muddy Fork Beargrass Creek 0.0 to 6.9	Salt River	5140101	Jefferson	2-FS	5-NS	3	3	3	3/12/2001	WAH, FC, PCR, SCR
Mussin Branch 0.0 to 1.7	Salt River	5140103	Marion	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
North Rolling Fork 0.0 to 3.7	Salt River	5140103	Marion	2-FS	3	3	3	3	4/6/2001	WAH, FC, PCR, SCR
North Rolling Fork 16.7 to 20.9	Salt River	5140103	Boyle	2-FS	3	3	3	3	4/6/2001	WAH, FC, PCR, SCR
Northern Ditch 0.0 to 7.3	Salt River	5140102	Jefferson	5-PS	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Otter Creek 0.0 to 10.7	Salt River	5140104	Meade	2-FS	5-PS	3	3	3	3/13/2001	CAH, FC, PCR, SCR
Otter Creek 0.0 to 2.9	Salt River	5140103	Larue	2-FS	5-PS	2-FS	3	3	3/4/2009	WAH, FC, PCR, SCR
Overalls Creek 0.0 to 1.3	Salt River	5140103	Bullitt	2-FS	3	3	3	3	10/13/2005	WAH, FC, PCR, SCR
Pennsylvania Run 0.0 to 3.3	Salt River	5140102	Jefferson	5-NS	5-NS	3	3	3	4/16/2004	WAH, FC, PCR, SCR
Pleasant Run 4.2 to 6.9	Salt River	5140103	Washington	5-PS	3	3	3	3	10/13/2005	WAH, FC, PCR, SCR
Plum Creek 0.0 to 17.8	Salt River	5140102	Spencer	5-NS	3	3	3	3	10/13/2005	WAH, FC, PCR, SCR
Pond Creek 0.0 to 1.5	Salt River	5140101	Oldham	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Pond Creek/Southern Ditch 5.1 to 8.1	Salt River	5140102	Jefferson	5-NS	5-NS	3	3	3	3/13/2001	WAH, FC, PCR, SCR
Pope Creek 0.0 to 2.1	Salt River	5140103	Marion	2-FS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Pope Lick Creek 2.0 to 5.2	Salt River	5140102	Jefferson	2-FS	5-NS	3	3	3	3/14/2001	WAH, FC, PCR, SCR
Pottinger Creek 0.0 to 5.0	Salt River	5140103	Nelson	2-FS	3	3	3	3	3/7/2001	WAH, FC, PCR, SCR
Prather Creek 0.0 to 3.1	Salt River	5140103	Marion	2-FS	3	3	3	3	4/6/2001	WAH, FC, PCR, SCR
Road Run 0.0 to 7.1	Salt River	5140103	Washington	5-PS	3	3	3	3	10/13/2005	WAH, FC, PCR, SCR
Rolling Fork 100.2 to 107.9	Salt River	5140103	Marion	3	3	3	3	3		WAH, FC, PCR, SCR
Rolling Fork 41.8 to 62.5	Salt River	5140103	Larue	2-FS	3	3	3	3	4/10/2001	WAH, FC, PCR, SCR
Rolling Fork 62.5 to 76.3	Salt River	5140103	Larue	2-FS	3	3	3	3	8/11/2000	WAH, FC, PCR, SCR
Rolling Fork 76.3 to 93.7	Salt River	5140103	Marion	2-FS	3	3	3	3	3/7/2001	WAH, FC, PCR, SCR
Rolling Fork 98.25 to 99.25	Salt River	5140103	Marion	3	3	3	3	2-FS	10/18/2005	WAH, FC, PCR, SCR, DWS
Rolling Fork 0.0 to 40.7	Salt River	5140103	Larue	2-FS	5-NS	2-FS	3	3	12/2/2005	WAH, FC, PCR, SCR
Rowan Creek 0.0 to 7.4	Salt River	5140103	Nelson	2-FS	3	3	3	3	4/10/2000	WAH, FC, PCR, SCR
Salt Lick Creek 0.0 to 8.4	Salt River	5140103	Marion	2-FS	3	3	3	3	8/9/2000	WAH, FC, PCR, SCR
Salt River 11.9 to 26.2	Salt River	5140102	Bullitt	2-FS	5-NS	2-FS	5-PS	3	11/30/2005	WAH, FC, PCR, SCR
Salt River 49.7 to 55.4	Salt River	5140102	Spencer	2-FS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Salt River 55.4 to 55.9	Salt River	5140102	Spencer	2-FS	3	3	2-FS	3	3/2/2001	WAH, FC, PCR, SCR

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Salt River 57.1 to 61.25	Salt River	5140102	Spencer	2-FS	2-FS	2-FS	3	2-FS	2/28/2006	WAH, FC, PCR, SCR, DWS
Salt River 88.5 to 111.2	Salt River	5140102	Anderson	2-FS	3	3	3	3	8/11/2000	WAH, FC, PCR, SCR
Salt River 135.5 to 142.8	Salt River	5140102	Mercer	2-FS	3	3	3	3	10/14/2005	WAH, FC, PCR, SCR
Salt River 79.0 to 90.05	Salt River	5140102	Anderson	2-FS	2-FS	2-FS	5-NS	3	10/1/1999 - 3/4/2009	WAH, FC, PCR, SCR
Scrubgrass Branch 0.2 to 0.7	Salt River	5140103	Boyle	2-FS	3	3	3	3	4/6/2001	WAH, FC, PCR, SCR
Shelby Lake	Salt River	5140102	Shelby	5-PS	3	3	3	3	11/1/1999	WAH, FC, PCR, SCR
Short Creek 0.0 to 5.0	Salt River	5140103	Washington	5-PS	3	3	3	3	6/10/2004	WAH, FC, PCR, SCR
Simpson Creek 0.0 to 6.8	Salt River	5140102	Spencer	3	2-FS	3	3	3	2/1/2001	WAH, FC, PCR, SCR
Sinking Creek 15.4 to 39.7	Salt River	5140104	Breckinridge	2-FS	5-PS	3	3	3	12/1/2005	CAH, FC, PCR, SCR
Sinking Creek 5.9 to 8.7	Salt River	5140104	Breckinridge	3	3	3	3	3		CAH, FC, PCR, SCR
Sinking Creek 8.7 to 15.4	Salt River	5140104	Breckinridge	5-PS	5-NS	3	3	3	9/10/2000	CAH, FC, PCR, SCR
South Fork Beargrass Creek 2.7 to 13.6	Salt River	5140101	Jefferson	5-NS	5-NS	3	3	3	3/15/2001	WAH, FC, PCR, SCR
South Fork of Beargrass Creek 0.0 to 2.7	Salt River	5140101	Jefferson	2B(5)	5-NS	3	3	3	3/3/2009	WAH, FC, PCR, SCR
Southern Ditch 0.0 to 5.9	Salt River	5140102	Jefferson	2-FS	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Sulphur Creek 0.0 to 10.0	Salt River	5140103	Anderson	2-FS	5-PS	2-FS	3	3	12/1/2005	WAH, FC, PCR, SCR
Sympson Lake	Salt River	5140103	Nelson	2-FS	3	2-FS	3	2-FS	8/26/2005	WAH, FC, PCR, SCR, DWS
Taylorsville Reservoir	Salt River	5140102	Spencer	4A-PS	3	2-FS	5-PS	3	2/28/2006	WAH, FC, PCR, SCR
Thompson Creek 0.0 to 9.2	Salt River	5140103	Mercer	5-PS	3	3	3	3	3/17/2005	WAH, FC, PCR, SCR
Tioga Creek 0.0 to 2.5	Salt River	5140104	Hardin	5-PS	3	3	3	3	10/14/2005	WAH, FC, PCR, SCR
Tom Wallace Lake	Salt River	5140102	Jefferson	3	3	3	2-FS	3	9/25/2007	WAH, FC, PCR, SCR
Town Creek 0.0 to 4.1	Salt River	5140103	Nelson	2-FS	3	3	3	3	4/11/2001	WAH, FC, PCR, SCR
UT to Brooks Run 0.0 to 2.0	Salt River	5140102	Bullitt	5-NS	5-NS	3	3	3	8/5/1999	WAH, FC, PCR, SCR
UT to Buffalo Run 0.0 to 1.1	Salt River	5140102	Bullitt	5-NS	3	3	3	3	4/8/2004	WAH, FC, PCR, SCR
UT to Carmon Creek 0.0 to 1.9	Salt River	5140101	Henry	3	5B-NS	5B-NS	3	3	9/30/2005	WAH, FC, PCR, SCR
UT to Corn Creek 0.0 to 2.0	Salt River	5140101	Trimble	2-FS	3	3	3	3	10/10/2005	WAH, FC, PCR, SCR
UT to Glens Creek 0.0 to 2.3	Salt River	5140103	Washington	2-FS	3	3	3	3	4/6/2004	WAH, FC, PCR, SCR
UT to Hammond Creek 0.0 to 1.8	Salt River	5140102	Anderson	5-NS	3	3	3	3	4/6/2004	WAH, FC, PCR, SCR
UT to N. Fork Currys Fork 0.0 to 0.1	Salt River	5140102	Oldham	3	5B-NS	3	3	3	9/28/2005	WAH, FC, PCR, SCR
UT to Pond Creek 0.0 to 0.5	Salt River	5140101	Oldham	5-NS	3	3	3	3	4/12/2001	WAH, FC, PCR, SCR
UT to Pond Creek 0.5 to 0.9	Salt River	5140101	Oldham	2-FS	3	3	3	3	4/12/2001	WAH, FC, PCR, SCR
UT to Rolling Fork 0.0 to 0.6	Salt River	5140103	Marion	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
UT to Salt River 0.0 to 2.4	Salt River	5140102	Mercer	5-PS	3	3	3	3	5/4/2004	WAH, FC, PCR, SCR
UT to Southern Ditch 0.0 to 2.6	Salt River	5140102	Jefferson	5-NS	3	3	3	3	4/16/2004	WAH, FC, PCR, SCR
UT to UT to Guist Creek 0.0 to 2.4	Salt River	5140102	Shelby	5-PS	3	3	3	3	10/10/2005	WAH, FC, PCR, SCR
West Fork Otter Creek 0.0 to 3.1	Salt River	5140103	Larue	2-FS	3	3	3	3	10/17/2005	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Wetwoods Creek (Slop Ditch) 0.0 to 3.7	Salt River	5140102	Jefferson	5-PS	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
White Sulphur Creek 0.0 to 3.9	Salt River	5140101	Henry	3	3	3	3	3		WAH, FC, PCR, SCR
Willisburg Lake	Salt River	5140103	Washington	5-PS	3	2-FS	3	2-FS	8/26/2005	WAH, FC, PCR, SCR, DWS
Willow Pond	Salt River	5140101	Jefferson	3	3	3	2-FS	3	10/7/2005	WAH, FC, PCR, SCR
Wilson Creek 0.0 to 2.2	Salt River	5140103	Bullitt	5-NS	3	3	3	3	10/17/2005	WAH, FC, PCR, SCR
Wilson Creek 9.5 to 18.4	Salt River	5140103	Bullitt	2-FS	3	3	3	3	3/4/2009	WAH, FC, PCR, SCR
Withrow Creek 0.0 to 3.9	Salt River	5140103	Nelson	5-PS	3	3	3	3	10/17/2005	WAH, FC, PCR, SCR
Wolf Creek 0.0 to 8.7	Salt River	5140104	Meade	3	3	3	3	3		WAH, FC, PCR, SCR
Yellowbank Creek 1.5 to 12.0	Salt River	5140104	Breckinridge	5-PS	3	3	3	3	9/20/2005	WAH, FC, PCR, SCR
Younger Creek 0.0 to 4.5	Salt River	5140103	Hardin	5-PS	3	3	3	3	10/17/2005	WAH, FC, PCR, SCR
Anderson Creek 1.9 to 5.0	Tennessee River	6040005	Calloway	2-FS	3	3	3	3	2/21/2007	WAH, FC, PCR, SCR
Angle Creek 0.0 to 0.8	Tennessee River	6040006	Marshall	5-PS	5-NS	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Bear Creek 0.6 to 1.6	Tennessee River	6040006	Graves	5B-PS	5B-PS	3	3	3	5/4/2002	WAH, FC, PCR, SCR
Bear Creek 4.0 to 7.2	Tennessee River	6040005	Marshall	3	5-NS	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Bee Creek 0.0 to 0.7	Tennessee River	6040006	Calloway	5-NS	5-NS	3	3	3	3/25/2002 - 2/22/2007	WAH, FC, PCR, SCR
Bee Creek 0.7 to 2.0	Tennessee River	6040006	Calloway	2-FS	5-NS	3	3	3	3/25/2002 - 1/1/2007	WAH, FC, PCR, SCR
Beechy Creek 0.5 to 3.7	Tennessee River	6040005	Calloway	2-FS	3	3	3	3	8/10/2000	WAH, FC, PCR, SCR
Blizzard Pond 4.8 to 5.8	Tennessee River	6040006	McCracken	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Blizzard Pond Drainage Canal 0.0 to 3.7	Tennessee River	6040006	McCracken	5-PS	5-NS	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Blood River 10.7 to 18.7	Tennessee River	6040005	Calloway	2-FS	3	3	3	3	7/5/2001	WAH, FC, PCR, SCR
Camp Creek 0.0 to 5.4	Tennessee River	6040006	McCracken	5-PS	5-PS	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Champion Creek 0.0 to 1.5	Tennessee River	6040006	McCracken	5-NS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Chestnut Creek 0.0 to 3.0	Tennessee River	6040006	Marshall	5-PS	5-PS	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Clarks River 13.2 to 20.6	Tennessee River	6040006	McCracken	5-NS	5-PS	3	3	3	3/25/2002 - 2/26/2007	WAH, FC, PCR, SCR
Clarks River 28.7 to 30.7	Tennessee River	6040006	Marshall	2-FS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Clarks River 31.7 to 34.8	Tennessee River	6040006	Marshall	2-FS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Clarks River 42.6 to 48.6	Tennessee	6040006	Marshall	2-FS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
	River									
Clarks River 5.0 to 13.2	Tennessee River	6040006	McCracken	5-PS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Clarks River 50.9 to 55.6	Tennessee River	6040006	Calloway	5-PS	5-NS	3	2-FS	3	5/2/2002	WAH, FC, PCR, SCR
Clarks River 55.6 to 64.7	Tennessee River	6040006	Calloway	2-FS	5-NS	3	2-FS	3	5/2/2002 - 10/2/2007	WAH, FC, PCR, SCR
Clarks River 34.8 to 42.6	Tennessee River	6040006	Marshall	5-PS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Clarks River 64.7 to 66.8	Tennessee River	6040006	Calloway	5-PS	5-PS	3	3	3	1/1/2007	WAH, FC, PCR, SCR
Clayton Creek 0.75 to 3.3	Tennessee River	6040006	Calloway	5-PS	3	3	3	3	1/1/2007	WAH, FC, PCR, SCR
Clayton Creek 3.3 to 7.7	Tennessee River	6040006	Calloway	5-PS	5-NS	3	3	3	5/2/2002 - 10/10/2006	WAH, FC, PCR, SCR
Clear Creek 0.7 to 3.1	Tennessee River	6040005	Marshall	5-PS	3	3	3	3		WAH, FC, PCR, SCR
Cypress Creek 0.1 to 6.3	Tennessee River	6040006	Marshall	5-NS	2-FS	3	3	3	2/27/2007	WAH, FC, PCR, SCR
Cypress Creek 6.3 to 7.7	Tennessee River	6040006	Marshall	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Cypress Creek 7.7 to 9.7	Tennessee River	6040006	Marshall	5-NS	3	3	3	3	2/27/2002	WAH, FC, PCR, SCR
Damon Creek 0.0 to 1.8	Tennessee River	6040006	Calloway	2-FS	5-NS	3	3	3	5/2/2002 - 10/10/2006	WAH, FC, PCR, SCR
Duncan Creek 0.0 to 2.5	Tennessee River	6040006	Marshall	2-FS	5-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
East Fork of Clarks River 0.0 to 2.7	Tennessee River	6040006	Calloway	2-FS	3	3	3	3	1/1/2007	WAH, FC, PCR, SCR
East Fork of Clarks River 6.1 to 7.1	Tennessee River	6040006	Calloway	3	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Farley Branch 0.0 to 2.2	Tennessee River	6040006	Calloway	5-PS	3	3	3	3	2/28/2006	WAH, FC, PCR, SCR
Grindstone Creek 0.2 to 2.3	Tennessee River	6040005	Calloway	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Guess Creek 0.0 to 2.6	Tennessee River	6040006	Livingston	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Haskell Branch 1.2 to 4.5	Tennessee River	6040006	Graves	5-PS	3	3	3	3	1/1/2007	WAH, FC, PCR, SCR
Hominy Branch 2.3 to 3.8	Tennessee River	8010201	Graves	2-FS	3	3	3	3	2/28/2007	WAH, FC, PCR, SCR
Island Creek 0.0 to 5.6	Tennessee River	6040006	McCracken	5-PS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Island Creek 5.6 to 10.3	Tennessee River	6040006	McCracken	5-PS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Jonathan Creek 10.9 to 19.3	Tennessee	6040005	Calloway	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
	River									
Jonathan Creek 7.4 to 10.9	Tennessee River	6040005	Calloway	5-PS	3	3	3	3	2/28/2007	WAH, FC, PCR, SCR
Kentucky Lake	Tennessee River	6040005	Calloway	1-FS	1-FS	1-FS	1-FS	1-FS	11/28/2006	WAH, FC, PCR, SCR, DWS
Ledbetter Creek 2.9 to 5.5	Tennessee River	6040005	Marshall	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Cypress Creek 3.4 to 6.0	Tennessee River	6040006	Marshall	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Cypress Creek 0.0 to 3.4	Tennessee River	6040006	Marshall	5-NS	5-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Jonathan Creek 0.0 to 3.0	Tennessee River	6040005	Calloway	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little White Oak Creek 0.0 to 2.4	Tennessee River	6040006	Marshall	5B-PS	5B-PS	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Martin Creek 0.0 to 0.8	Tennessee River	6040006	Marshall	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Middle Fork Creek 0.2 to 6.0	Tennessee River	6040006	Marshall	5-PS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Middle Fork of Clarks River 2.7 to 4.8	Tennessee River	6040006	Calloway	5-PS	3	3	3	3	3/2/2007	WAH, FC, PCR, SCR
Middle Fork of Clarks River 0.0 to 2.7	Tennessee River	6040006	Calloway	5-PS	5-NS	3	3	3	5/2/2002 - 1/1/2007	WAH, FC, PCR, SCR
Panther Creek 0.0 to 3.0	Tennessee River	6040005	Graves	2-FS	5-NS	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Panther Creek 0.0 to 5.2	Tennessee River	6040005	Calloway	2-FS	3	3	3	3	3/12/2007	WAH, FC, PCR, SCR
Panther Creek 3.0 to 4.2	Tennessee River	6040006	Graves	2-FS	3	3	3	3	6/28/2001	WAH, FC, PCR, SCR
Pryor Branch 0.0 to 2.9	Tennessee River	6040006	Graves	2-FS	3	3	3	3	6/28/2000	WAH, FC, PCR, SCR
Reeves Branch 0.0 to 0.3	Tennessee River	6040006	Marshall	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Rockhouse Creek 0.0 to 4.8	Tennessee River	6040006	Calloway	2-FS	3	3	3	3	3/21/2006	WAH, FC, PCR, SCR
Soldier Creek 0.0 to 5.7	Tennessee River	6040006	Marshall	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Spring Creek 0.0 to 2.0	Tennessee River	6040006	Graves	5-PS	3	3	3	3	3/15/2007	WAH, FC, PCR, SCR
Spring Creek 3.6 to 5.4	Tennessee River	6040006	Graves	5-NS	3	3	3	3	3/15/2007	WAH, FC, PCR, SCR
Sugar Creek 0.0 to 3.9	Tennessee River	6040006	Graves	2-FS	3	3	3	3	6/28/2000	WAH, FC, PCR, SCR
Sugar Creek 2.0 to 5.5	Tennessee River	6040005	Calloway	2-FS	3	3	3	3	3/15/2007	WAH, FC, PCR, SCR
Tennessee River 12.0 to 21.8	Tennessee	6040006	Marshall	2-FS	3	3	3	3	12/3/2001	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
	River									
Tennessee River 21.8 to 23.1	Tennessee River	6040006	Marshall	4C-PS	3	3	2-FS	3	3/20/2006	WAH, FC, PCR, SCR
Tennessee River 4.6 to 10.5	Tennessee River	6040006	McCracken	2-FS	3	3	3	3	3/20/2007	WAH, FC, PCR, SCR
Tennessee River 1.5 to 4.1	Tennessee River	6040006	McCracken	3	5B-NS	3	3	3	3/16/2007	WAH, FC, PCR, SCR
Trace Creek 1.1 to 5.9	Tennessee River	6040006	Graves	2-FS	3	3	3	3	3/16/2007	WAH, FC, PCR, SCR
Turkey Creek 1.8 to 3.9	Tennessee River	6040005	Trigg	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Turkey Creek 0.0 to 3.4	Tennessee River	6040006	Graves	5-PS	3	3	3	3	1/1/2007	WAH, FC, PCR, SCR
UT to Chestnut Creek 0.0 to 0.7	Tennessee River	6040006	Marshall	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Clarks River 0.0 to 3.3	Tennessee River	6040006	Calloway	5-NS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
UT to Old Beaver Dam Slough 0.0 to 0.5	Tennessee River	6040006	Marshall	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Stice Creek 0.0 to 0.4	Tennessee River	6040006	Marshall	3	5B-NS	3	3	3	3/15/2007	WAH, FC, PCR, SCR
UT to Sugar Creek 0.0 to 3.0	Tennessee River	6040005	Calloway	2-FS	3	3	3	3		WAH, FC, PCR, SCR
UT to UT to Panther Creek 0.0 to 1.7	Tennessee River	6040006	Graves	2-FS	3	3	3	3		WAH, FC, PCR, SCR
UT to UT to Tennessee River (KY Lake) 0.15 to 0.8	Tennessee River	6040005	Calloway	5-NS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Wades Creek 0.0 to 4.0	Tennessee River	6040006	Marshall	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
West Fork of Clarks River 0.0 to 10.4	Tennessee River	6040006	McCracken	5-NS	5-NS	3	3	3	3/16/2007	WAH, FC, PCR, SCR
West Fork of Clarks River 13.1 to 17.2	Tennessee River	6040006	Graves	2-FS	5-NS	3	3	3	5/4/2002	WAH, FC, PCR, SCR
West Fork of Clarks River 17.2 to 20.0	Tennessee River	6040006	Marshall	2-FS	3	3	3	3	3/21/2006	WAH, FC, PCR, SCR
West Fork of Clarks River 20.1 to 28.4	Tennessee River	6040006	Marshall	2-FS	5-PS	3	5-PS	3	10/10/2006	WAH, FC, PCR, SCR
W. Fork of Clarks River 34.2 to 38.2	Tennessee River	6040006	Calloway	2B(5)	3	3	3	3	3/16/2007	WAH, FC, PCR, SCR
W. Fork of Clarks River (Relict Channel) 0.0 to 13.8	Tennessee River	6040006	Graves	2-FS	3	3	3	3	7/11/2000	WAH, FC, PCR, SCR
W. Fork of Clarks River (Relict Channel) 19.7 to 22.7	Tennessee River	6040006	Marshall	2-FS	3	3	5-PS	3	1/3/2002	WAH, FC, PCR, SCR
Wildcat Creek 1.3 to 6.8	Tennessee River	6040005	Calloway	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Bishop Ditch 0.0 to 2.7	Tradewater	5140205	Webster	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Brooks Creek 0.0 to 4.9	Tradewater	5140205	Hopkins	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Buffalo Creek 0.0 to 6.8	Tradewater	5140205	Hopkins	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Bull Creek 0.0 to 1.0	Tradewater	5140205	Webster	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Cane Run 0.0 to 4.0	Tradewater	5140205	Hopkins	4A-NS	4A-NS	4A-NS	3	3	4/1/1998	WAH, FC, PCR, SCR
Caney Creek 0.0 to 3.3	Tradewater	5140205	Caldwell	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Caney Creek 0.0 to 8.2	Tradewater	5140205	Hopkins	5-NS	5-NS	5-NS	3	3	10/1/2007	WAH, FC, PCR, SCR
Caney Fork 3.4 to 7.9	Tradewater	5140205	Webster	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Castleberry Creek 0.0 to 2.1	Tradewater	5140205	Christian	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Clear Creek 0.0 to 7.5	Tradewater	5140205	Hopkins	5-NS	2-FS	2-FS	3	3	1/18/2008	WAH, FC, PCR, SCR
Clear Creek 19.4 to 26.2	Tradewater	5140205	Hopkins	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Clear Creek 26.2 to 26.5	Tradewater	5140205	Hopkins	3	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Copper Creek 0.0 to 2.7	Tradewater	5140205	Hopkins	5-NS	5-NS	5-NS	3	3	10/1/2007	WAH, FC, PCR, SCR
Copperas Creek 0.0 to 3.6	Tradewater	5140205	Hopkins	5-NS	4A-NS	4A-NS	3	3	10/1/2007	WAH, FC, PCR, SCR
Craborchard Creek (including Vaughn Ditch) 0.0 to 14.7	Tradewater	5140205	Webster	2-FS	5-NS	2-FS	3	3	1/7/2008 - 1/17/2008	WAH, FC, PCR, SCR
Craborchard Creek 19.2 to 21.5	Tradewater	5140205	Webster	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Donaldson Creek 0.0 to 14.2	Tradewater	5140205	Hopkins	2-FS	5-NS	5-PS	3	3	1/18/2008	WAH, FC, PCR, SCR
East Fork of Flynn Fork 2.1 to 4.6	Tradewater	5140205	Caldwell	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
East Fork of Hurricane Creek 0.0 to 2.2	Tradewater	5140205	Hopkins	5-NS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
Fox Run 0.0 to 1.1	Tradewater	5140205	Hopkins	5-NS	5-NS	5-NS	3	3	10/1/2007	WAH, FC, PCR, SCR
Hoods Creek 0.0 to 7.2	Tradewater	5140205	Crittenden	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Hurricane Creek 0.0 to 1.8	Tradewater	5140205	Hopkins	5-NS	5-NS	5-NS	3	3	1/11/2008	WAH, FC, PCR, SCR
Lake Beshear	Tradewater	5140205	Caldwell	2-FS	3	2-FS	2-FS	2-FS	11/14/2006 - 1/28/2008	WAH, FC, PCR, SCR, DWS
Lake Peewee	Tradewater	5140205	Hopkins	2-FS	3	2-FS	3	2-FS	11/14/2006	WAH, FC, PCR, SCR, DWS
Lambs Creek 0.0 to 3.3	Tradewater	5140205	Hopkins	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Lick Creek 0.0 to 11.9	Tradewater	5140205	Hopkins	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Loch Mary	Tradewater	5140205	Hopkins	2-FS	3	2-FS	3	2-FS	11/14/2006	WAH, FC, PCR, SCR, DWS
Lynn Fork 0.0 to 2.4	Tradewater	5140205	Webster	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Moffit Lake	Tradewater	5140205	Union	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
Montgomery Creek 0.0 to 7.3	Tradewater	5140205	Caldwell	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Owens Creek 1.7 to 2.3	Tradewater	5140205	Webster	5B-NS	3	3	3	3	1/11/2008	WAH, FC, PCR, SCR
Pennyrile Lake	Tradewater	5140205	Christian	2-FS	3	2-FS	3	3	11/14/2006	WAH, FC, PCR, SCR
Pigeonroost Creek 0.0 to 3.9	Tradewater	5140205	Crittenden	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Piney Creek 17.1 to 25.4	Tradewater	5140205	Crittenden	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Piney Creek 4.5 to 10.2	Tradewater	5140205	Caldwell	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
Pogue Creek 0.0 to 4.9	Tradewater	5140205	Hopkins	2-FS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Pond Creek 0.0 to 5.5	Tradewater	5140205	Hopkins	5-PS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Providence City Reservoir	Tradewater	5140205	Webster	2-FS	3	2-FS	3	2-FS	1/1/2002 - 1/28/2008	WAH, FC, PCR, SCR, DWS

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Relict Channel of Cypress Creek 0.5 to 3.3	Tradewater	5140205	Union	2-FS	5-NS	5-PS	3	3	1/18/2008	WAH, FC, PCR, SCR
Richland Creek 0.0 to 4.5	Tradewater	5140205	Hopkins	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Sandlick Creek 4.5 to 8.6	Tradewater	5140205	Christian	2-FS	3	3	3	3	1/16/2008	WAH, FC, PCR, SCR
Sugar Creek 0.0 to 5.3	Tradewater	5140205	Hopkins	4A-NS	4A-NS	4A-NS	3	3	3/1/2003	WAH, FC, PCR, SCR
Trace Branch 2.4 to 2.8	Tradewater	5140205	Hopkins	5B-NS	3	3	3	3	1/16/2008	WAH, FC, PCR, SCR
Tradewater River 0.0 to 16.8	Tradewater	5140205	Union	2-FS	5-NS	3	3	3	3/27/2003	WAH, FC, PCR, SCR
Tradewater River 122.9 to 133.9	Tradewater	5140205	Christian	2-FS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Tradewater River 20.6 to 46.4	Tradewater	5140205	Webster	5-NS	5-NS	5-NS	3	2-FS	1/16/2008	WAH, FC, PCR, SCR, DWS
Tradewater River 63.1 to 79.4	Tradewater	5140205	Hopkins	5-PS	2-FS	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Tradewater River 96.7 to 98.5	Tradewater	5140205	Hopkins	2-FS	3	3	3	3	1/16/2008	WAH, FC, PCR, SCR
Tradewater River 98.5 to 111.1	Tradewater	5140205	Christian	5-PS	2-FS	2-FS	3	3	1/16/2008	WAH, FC, PCR, SCR
Tyson Branch 0.0 to 2.5	Tradewater	5140205	Caldwell	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to Clear Creek 0.0 to 2.2	Tradewater	5140205	Hopkins	5B-NS	5B-NS	3	3	3	1/11/2008	WAH, FC, PCR, SCR
UT to Copper Creek 0.0 to 1.1	Tradewater	5140205	Hopkins	5-NS	3	3	3	3	10/1/2007	WAH, FC, PCR, SCR
UT to Copperas Creek 0.0 to 0.9	Tradewater	5140205	Hopkins	5-NS	5-NS	5-NS	3	3	1/11/2008	WAH, FC, PCR, SCR
UT to Craborchard Creek 0.0 to 1.7	Tradewater	5140205	Webster	5B-NS	5B-NS	3	3	3	1/11/2008	WAH, FC, PCR, SCR
UT to Donaldson Creek 0.0 to 1.8	Tradewater	5140205	Caldwell	5-PS	3	3	3	3	1/11/2008	WAH, FC, PCR, SCR
UT to Hurricane Creek 0.0 to 0.2	Tradewater	5140205	Hopkins	5-NS	5-NS	5-NS	3	3	1/11/2008	WAH, FC, PCR, SCR
UT to Lynn Fork 1.2 to 2.6	Tradewater	5140205	Webster	5B-NS	5B-NS	3	3	3	1/11/2008	WAH, FC, PCR, SCR
UT to Piney Creek 0.0 to 2.9	Tradewater	5140205	Caldwell	2-FS	3	3	3	3	1/16/2008	WAH, FC, PCR, SCR
UT to Sandlick Creek 0.0 to 1.4	Tradewater	5140205	Christian	2-FS	3	3	3	3	11/12/2002	WAH, FC, PCR, SCR
UT to Slover Creek 0.0 to 1.5	Tradewater	5140205	Webster	5-PS	3	3	3	3	1/16/2008	WAH, FC, PCR, SCR
UT to UT to Cypress Creek 0.0 to 0.1	Tradewater	5140205	Union	3	5B-NS	3	3	3	1/11/2008	WAH, FC, PCR, SCR
UT to UT to Slover Creek 0.0 to 1.2	Tradewater	5140205	Webster	5-PS	3	3	3	3	1/16/2008	WAH, FC, PCR, SCR
UT to UT to Slover Creek 0.2 to 1.5	Tradewater	5140205	Webster	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
UT to UT to Slover Creek 0.0 to 1.1	Tradewater	5140205	Webster	5B-NS	5B-NS	3	3	3	1/11/2008	WAH, FC, PCR, SCR
UT to UT to Tradewater River 0.0 to 0.55	Tradewater	5140205	Hopkins	5B-NS	5B-NS	3	3	3	1/16/2008	WAH, FC, PCR, SCR
Ward Creek 5.1 to 10.3	Tradewater	5140205	Caldwell	5-NS	3	3	3	3	3/19/2009	WAH, FC, PCR, SCR
Weirs Creek 0.0 to 4.9	Tradewater	5140205	Hopkins	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Whiteside Creek 1.9 to 2.85	Tradewater	5140205	Hopkins	5B-NS	3	3	3	3	1/17/2008	WAH, FC, PCR, SCR
Wolf Creek 0.0 to 1.0	Tradewater	5140205	Crittenden	5-NS	3	3	3	3	3/1/2003	WAH, FC, PCR, SCR
Backs Branch 0.0 to 0.9	Tygarts Creek	5090103	Greenup	5-PS	3	3	3	3	11/12/2003	WAH, FC, PCR, SCR
Brushy Creek 0.0 to 3.9	Tygarts Creek	5090103	Greenup	2-FS	3	3	3	3	1/2/2004	WAH, FC, PCR, SCR
Buffalo Creek 0.0 to 6.7	Tygarts Creek	5090103	Carter	2-FS	2-FS	3	3	3	3/1/2008 - 1/14/2009	WAH, FC, PCR, SCR
Buffalo Creek 6.7 to 9.9	Tygarts Creek	5090103	Carter	2-FS	3	3	3	3	1/14/2009	WAH, FC, PCR, SCR

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Jacobs Fork 3.6 to 5.7	Tygarts Creek	5090103	Carter	5-PS	3	3	3	3	11/12/2003	WAH, FC, PCR, SCR
Jacobs Fork 0.0 to 2.05	Tygarts Creek	5090103	Carter	5-PS	3	3	3	3	1/21/2009	WAH, CAH, FC, PCR, SCR
Leatherwood Branch 0.0 to 4.3	Tygarts Creek	5090103	Greenup	2-FS	3	3	3	3	1/21/2004	WAH, FC, PCR, SCR
McGlone Fork 0.0 to 4.9	Tygarts Creek	5090103	Carter	2-FS	3	3	3	3	1/14/2009	WAH, FC, PCR, SCR
Meade Run 0.2 to 1.2	Tygarts Creek	5090103	Greenup	3	3	3	3	2-FS	1/14/2009	WAH, FC, PCR, SCR, DWS
Schultz Creek 1.3 to 4.7	Tygarts Creek	5090103	Greenup	2-FS	3	3	3	3	1/19/2009	WAH, FC, PCR, SCR
Schultz Creek 4.7 to 7.5	Tygarts Creek	5090103	Greenup	5-PS	3	3	3	3	1/14/2009	WAH, FC, PCR, SCR
Slash Branch 0.0 to 0.6	Tygarts Creek	5090103	Greenup	5B-NS	3	3	3	3	1/14/2009	WAH, CAH, FC, PCR, SCR
Smith Creek 2.0 to 4.3	Tygarts Creek	5090103	Carter	5-PS	3	3	3	3	11/11/2003	WAH, FC, PCR, SCR
Smokey Valley Lake	Tygarts Creek	5090103	Carter	2-FS	3	2-FS	3	3	5/29/2008	WAH, FC, PCR, SCR
Smoky Creek 1.4 to 4.3	Tygarts Creek	5090103	Carter	2-FS	3	3	3	3	1/14/2009	WAH, FC, PCR, SCR
Soldier Fork 0.0 to 5.5	Tygarts Creek	5090103	Carter	5-PS	3	3	3	3	1/19/2009	WAH, FC, PCR, SCR
Three Prong Branch 0.0 to 5.8	Tygarts Creek	5090103	Carter	2-FS	3	3	3	3	1/21/2004	WAH, FC, PCR, SCR
Trough Camp 1.5 to 6.1	Tygarts Creek	5090103	Carter	5-PS	3	3	3	3	11/11/2003	WAH, FC, PCR, SCR
Tygarts Creek 0.2 to 25.0	Tygarts Creek	5090103	Greenup	2-FS	2-FS	3	5-NS	3	11/12/2008	WAH, FC, PCR, SCR
Tygarts Creek 25.0 to 36.3	Tygarts Creek	5090103	Greenup	5-PS	2-FS	3	5-NS	3	1/19/2009	WAH, FC, PCR, SCR
Tygarts Creek 36.3 to 45.5	Tygarts Creek	5090103	Greenup	2-FS	2-FS	3	5-NS	3	1/19/2009	WAH, FC, PCR, SCR
Tygarts Creek 65.0 to 68.5	Tygarts Creek	5090103	Carter	2-FS	2-FS	3	3	3	1/19/2009	WAH, FC, PCR, SCR, DWS
Tygarts Creek 80.8 to 81.8	Tygarts Creek	5090103	Carter	3	3	3	3	2-FS	1/19/2009	WAH, CAH, FC, PCR, SCR, DWS
Tygarts Creek 83.2 to 88.6	Tygarts Creek	5090103	Carter	5-PS	3	3	2-FS	3	1/19/2009	WAH, CAH, FC, PCR, SCR
UT of Little Hood Creek 0.0 to 0.2	Tygarts Creek	5090103	Boyd	5B-NS	3	3	3	3	1/19/2009	WAH, CAH, FC, PCR, SCR
UT of Tygarts Creek 0.0 to 0.8	Tygarts Creek	5090103	Carter	5B-NS	3	3	3	3	1/19/2009	WAH, CAH, FC, PCR, SCR
White Oak Creek 0.0 to 1.1	Tygarts Creek	5090103	Greenup	3	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Acorn Fork 0.0 to 1.9	Upper Cumberland	5130101	Knox	5-NS	3	3	3	3	9/18/2007	WAH, FC, PCR, SCR
Adams Branch 0.0 to 1.8	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Archers Creek 0.0 to 4.4	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Bad Branch 0.0 to 3.0	Upper Cumberland	5130101	Letcher	2-FS	3	3	3	3	7/31/2001	CAH, FC, PCR, SCR
Bailey Creek 0.0 to 2.6	Upper Cumberland	5130101	Harlan	3	4A-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Bark Camp Creek 0.1 to 3.8	Upper Cumberland	5130101	Whitley	5-PS	3	3	3	3	11/8/2006	CAH, FC, PCR, SCR
Bear Creek 0.0 to 2.8	Upper Cumberland	5130103	Cumberland	2-FS	3	3	3	3	1/26/2007	WAH, FC, PCR, SCR

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Bear Creek 0.0 to 3.3	Upper Cumberland	5130104	McCreary	5-NS	5-NS	5-NS	2-FS	3	4/1/1998	WAH, FC, PCR, SCR
Bear Creek 0.0 to 2.7	Upper Cumberland	6040005	Pulaski	3	3	3	3	3		WAH, FC, PCR, SCR
Beaver Creek 1.0 to 7.0	Upper Cumberland	5130103	McCreary	2-FS	3	3	3	3	7/31/2001	CAH, FC, PCR, SCR
Beaver Creek 16.6 to 34.5	Upper Cumberland	5130103	Wayne	5-PS	3	3	3	3	1/27/2007	WAH, FC, PCR, SCR
Beaver Creek 16.2 to 16.6	Upper Cumberland	5130103	Wayne	5-PS	3	3	3	3	11/8/2006	WAH, FC, PCR, SCR
Becks Creek 0.0 to 4.0	Upper Cumberland	5130101	Whitley	5-PS	5-PS	5-PS	3	3	4/1/1998	WAH, FC, PCR, SCR
Bee Lick Creek 0.0 to 5.7	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	9/19/2000	WAH, FC, PCR, SCR
BeeLick Creek 7.5 to 10.9	Upper Cumberland	5130103	Lincoln	5-PS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Bennetts Fork of Yellow Creek Bypass 0.0 to 3.2	Upper Cumberland	5130101	Bell	5-PS	3	3	3	3	1/26/2007	WAH, FC, PCR, SCR
Bens Fork 0.0 to 2.2	Upper Cumberland	5130101	Bell	5-PS	3	3	3	3	1/31/2007	WAH, FC, PCR, SCR
Big Branch 0.4 to 2.0	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Big Clifty Creek 1.1 to 4.8	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	1/26/2007	WAH, FC, PCR, SCR
Big Clifty Creek 0.0 to 1.1	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	1/26/2007	WAH, FC, PCR, SCR
Big Indian Creek 0.0 to 5.6	Upper Cumberland	5130101	Knox	5-NS	3	3	3	3	9/21/2000	WAH, FC, PCR, SCR
Big Lick Branch 1.1 to 2.6	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Big Lily Creek 0.0 to 5.0	Upper Cumberland	5130103	Russell	2-FS	3	3	2-FS	3	1/3/2002	WAH, FC, PCR, SCR
Big Renox Creek 0.0 to 5.8	Upper Cumberland	5130103	Cumberland	5-PS	3	3	3	3	7/10/2000	WAH, FC, PCR, SCR
Big Willis Creek 0.0 to 4.0	Upper Cumberland	5130103	Cumberland	3	3	3	3	3		WAH, FC, PCR, SCR
Bills Branch 2.4 to 3.7	Upper Cumberland	5130102	Jackson	3	3	3	3	2-FS		WAH, FC, PCR, SCR, DWS
Blacksnake Branch 0.0 to 2.1	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	12/7/2001	WAH, FC, PCR, SCR
Blake Fork 0.0 to 4.6	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	1/26/2007	WAH, FC, PCR, SCR
Board Branch 0.5 to 1.8	Upper Cumberland	5130101	Harlan	5-NS	5-NS	5-NS	3	3	11/30/2006	WAH, FC, PCR, SCR
Breedens Creek 0.0 to 2.8	Upper Cumberland	5130101	Harlan	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Briary Creek 0.0 to 4.4	Upper Cumberland	5130103	Pulaski	5-PS	3	3	3	3	9/19/2000	WAH, FC, PCR, SCR
Brices Creek 0.0 to 3.2	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Brownies Creek 9.9 to 16.7	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	1/26/2007	WAH, FC, PCR, SCR
Brush Creek 0.0 to 3.5	Upper Cumberland	5130101	Knox	5-NS	3	3	3	3	12/6/2000	WAH, FC, PCR, SCR
Brush Creek 1.1 to 7.5	Upper Cumberland	5130102	Rockcastle	3	4A-NS	3	3	3	1/1/2001	WAH, FC, PCR, SCR
Brushy Creek 0.0 to 8.0	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Buck Creek 11.7 to 32.4	Upper Cumberland	5130103	Pulaski	2-FS	2-FS	2-FS	3	3	10/10/2006	WAH, FC, PCR, SCR
Buck Creek 32.4 to 40.8	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	2/26/2009	WAH, FC, PCR, SCR
Buck Creek 40.8 to 45.2	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Buck Creek 45.2 to 45.6	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Buck Creek 45.6 to 53.0	Upper Cumberland	5130103	Pulaski	2-FS	3	3	5-PS	3	3/22/2006	WAH, FC, PCR, SCR
Buck Creek 53.0 to 58.9	Upper Cumberland	5130103	Lincoln	2-FS	3	3	3	3	3/25/2002	WAH, FC, PCR, SCR
Buck Creek 0.4 to 2.8	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Bucks Branch 0.0 to 2.5	Upper Cumberland	5130101	Whitley	2-FS	2-FS	2-FS	3	3	4/1/1998	WAH, FC, PCR, SCR
Buffalo Creek 2.6 to 3.9	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	1/1/2001	WAH, FC, PCR, SCR
Bull Run 0.0 to 3.7	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3	3/23/2006	WAH, FC, PCR, SCR
Bunches Creek 0.0 to 3.3	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	10/10/2006	CAH, FC, PCR, SCR
Calf Pen Fork 0.0 to 3.8	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	10/10/2006	WAH, CAH, FC, PCR, SCR
Campbell Branch 0.0 to 2.1	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Cane Branch 0.0 to 2.0	Upper Cumberland	5130103	McCreary	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
Cane Creek 0.0 to 1.5	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	11/17/2001	WAH, FC, PCR, SCR
Cane Creek 0.0 to 11.9	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	6/10/2005	WAH, FC, PCR, SCR
Cane Creek 0.0 to 4.4	Upper Cumberland	5130101	Whitley	5-NS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Caney Creek 0.0 to 0.6	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Cannon Creek 0.0 to 1.8	Upper Cumberland	5130101	Bell	5-PS	3	3	3	3	1/26/2007	WAH, FC, PCR, SCR
Cannon Creek 4.9 to 6.6	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	11/10/2001	WAH, FC, PCR, SCR
Cannon Creek Lake	Upper Cumberland	5130101	Bell	2-FS	3	2-FS	3	2-FS	1/18/2006	WAH, CAH, FC, PCR, SCR, DWS
Capuchin Creek 0.0 to 1.3	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	1/26/2007	WAH, FC, PCR, SCR
Casey Fork of Marrowbone Creek 0.0 to 2.0	Upper Cumberland	5130103	Cumberland	2-FS	3	3	3	3	6/20/2000	WAH, FC, PCR, SCR
Catron Creek 0.0 to 8.9	Upper Cumberland	5130101	Harlan	2-FS	4A-NS	3	3	3	12/6/2000	WAH, FC, PCR, SCR
Chenoa Lake	Upper Cumberland	5130101	Bell	2-FS	3	4C-PS	3	2-FS	1/23/2006	WAH, FC, PCR, SCR, DWS
Clear Creek 0.8 to 3.2	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	1/3/2002	WAH, FC, PCR, SCR
Clear Creek 3.45 to 7.8	Upper Cumberland	5130102	Rockcastle	2-FS	3	3	3	3	1/29/2007	WAH, FC, PCR, SCR
Clear Fork 0.0 to 9.1	Upper Cumberland	5130101	Whitley	2-FS	2-FS	3	3	3	1/31/2007	WAH, FC, PCR, SCR
Clear Fork 17.0 to 19.4	Upper Cumberland	5130101	Whitley	5-PS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Clifty Creek 0.0 to 2.7	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Clover Fork 28.2 to 28.9	Upper Cumberland	5130101	Harlan	5-PS	4A-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Clover Fork 28.9 to 33.8	Upper Cumberland	5130101	Harlan	5-NS	4A-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Clover Fork 9.2 to 15.5	Upper Cumberland	5130101	Harlan	5-NS	4A-NS	3	3	3	9/3/2002	WAH, FC, PCR, SCR
Clover Fork 0.0 to 9.2	Upper Cumberland	5130101	Harlan	2-FS	4A-NS	3	3	3	5/2/2002 - 1/31/2007	WAH, FC, PCR, SCR
Clover Fork 15.5 to 18.2	Upper Cumberland	5130101	Harlan	5-PS	4A-NS	3	3	3	8/8/2007	WAH, FC, PCR, SCR
Clover Fork 18.2 to 28.2	Upper Cumberland	5130101	Harlan	5-NS	4A-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Cloverlick Creek 0.0 to 5.0	Upper Cumberland	5130101	Harlan	5-PS	4A-NS	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Coffey Branch 0.1 to 2.0	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR
Cogur Fork 0.0 to 7.9	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	10/10/2006	CAH, FC, PCR, SCR
Coles Branch 0.0 to 2.1	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR

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Colliers Creek 0 .0 to 4.1	Upper Cumberland	5130101	Letcher	5-PS	3	3	3	3	1/31/2007	WAH, FC, PCR, SCR
Copperas Fork 0.0 to 4.23	Upper Cumberland	5130104	McCreary	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
Corbin City Reservoir	Upper Cumberland	5130101	Laurel	5-PS	3	3	3	5-NS	1/1/2000	WAH, FC, PCR, SCR, DWS
Crab Orchard Creek 0.0 to 1.6	Upper Cumberland	5130103	Lincoln	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Craig Creek 5.8 to 6.8	Upper Cumberland	5130101	Laurel	5-PS	3	3	3	3	1/29/2007	WAH, FC, PCR, SCR
Craigs Creek 6.8 to 9.0	Upper Cumberland	5130101	Laurel	2-FS	3	3	3	3	11/7/2006	WAH, FC, PCR, SCR
Crane Creek 1.4 to 2.0	Upper Cumberland	5130101	Harlan	5-PS	3	3	3	3	11/30/2006	WAH, FC, PCR, SCR
Cranks Creek 1.6 to 2.4	Upper Cumberland	5130101	Harlan	5-PS	3	3	3	3	11/30/2006	WAH, FC, PCR, SCR
Cranks Creek Lake	Upper Cumberland	5130101	Harlan	2-FS	2-FS	2-FS	3	3	1/18/2006	WAH, FC, PCR, SCR
Criscillis Branch 0.0 to 1.9	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Crocus Creek 0.0 to 4.8	Upper Cumberland	5130103	Cumberland	2-FS	2-FS	2-FS	3	3	2/7/2007	WAH, FC, PCR, SCR
Crocus Creek 14.0 to 17.15	Upper Cumberland	5130103	Adair	5-PS	3	3	3	3	7/10/2000	WAH, FC, PCR, SCR
Crocus Creek 4.9 to 14.0	Upper Cumberland	5130103	Cumberland	5-PS	5-NS	5-NS	3	3	5/2/2002	WAH, FC, PCR, SCR
Crooked Creek 5.7 to 12.2	Upper Cumberland	5130102	Rockcastle	2-FS	4A-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Crooked Creek 0.1 to 5.7	Upper Cumberland	5130102	Rockcastle	3	4A-PS	3	3	3	3/29/2007	WAH, FC, PCR, SCR
Cumberland River 460.2 to 460.9	Upper Cumberland	5130103	Russell	2-FS	3	3	3	3	5/2/2002	CAH, FC, PCR, SCR, DWS
Cumberland River 650.6 to 654.5	Upper Cumberland	5130101	Bell	3	4A-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR, DWS
Cumberland River 671.9 to 682.3	Upper Cumberland	5130101	Harlan	5-PS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Cumberland River 385.5 to 434.4	Upper Cumberland	5130103	Russell	2-FS	2-FS	2-FS	3	2-FS	2/7/2007	CAH, FC, PCR, SCR, DWS
Cumberland River 458.8 to 460.2	Upper Cumberland	5130103	Russell	3	5B-PS	3	3	3	2/2/2007	CAH, FC, PCR, SCR, DWS
Cumberland River 554.65 to 569.4	Upper Cumberland	5130101	Whitley	2-FS	5-PS	3	2-FS	2-FS	12/14/2006	WAH, FC, PCR, SCR, DWS
Cumberland River 569.4 to 575.1	Upper Cumberland	5130101	Whitley	5-PS	3	3	3	3	9/8/2007	WAH, FC, PCR, SCR
Cumberland River 584.1 to 585.1	Upper Cumberland	5130101	Whitley	3	3	3	3	2-FS	2/2/2007	WAH, FC, PCR, SCR, DWS

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Cumberland River 660.1 to 666.8	Upper Cumberland	5130101	Harlan	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Cumberland River 682.3 to 683.6	Upper Cumberland	5130101	Harlan	3	3	3	3	3		WAH, FC, PCR, SCR
Cumberland River 683.6 to 694.2	Upper Cumberland	5130101	Harlan	3	4A-NS	3	3	3	1/1/2007	WAH, FC, PCR, SCR
Dale Hollow Reservoir	Upper Cumberland	5130105	Clinton	2-FS	3	2-FS	2-FS	2-FS	12/18/2006	WAH, FC, PCR, SCR, DWS
Davis Branch 0.0 to 2.8	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Difficulty Creek 0.0 to 3.5	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Dog Slaughter Creek 0.0 to 1.2	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	1/29/2007	CAH, FC, PCR, SCR
Dry Branch 0.0 to 0.4	Upper Cumberland	5130103	Pulaski	5B-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Dry Fork 0.0 to 3.0	Upper Cumberland	5130102	Rockcastle	2-FS	3	3	3	3	8/10/2000	WAH, FC, PCR, SCR
Eagle Creek 0.0 to 6.7	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
East Fork of Lynn Camp Creek 0.0 to 4.5	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3	9/21/2000	WAH, FC, PCR, SCR
Elk Spring Creek 0.0 to 7.8	Upper Cumberland	5130103	Wayne	5-NS	3	3	3	3	8/16/2000	WAH, FC, PCR, SCR
Ewing Creek 0.1 to 2.9	Upper Cumberland	5130101	Harlan	5-NS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR
Ferris Fork Creek 0.0 to 1.2	Upper Cumberland	5130103	Cumberland	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Ferris Fork Creek 3.0 to 6.0	Upper Cumberland	5130103	Metcalfe	2-FS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Fishing Creek 16.0 to 26.4	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	1/3/2002	WAH, FC, PCR, SCR
Foresters Creek 0.0 to 5.1	Upper Cumberland	5130101	Harlan	2-FS	3	3	3	3	1/29/2007	WAH, FC, PCR, SCR
Four Mile Run 0.7 to 2.7	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Fourmile Creek 1.7 to 4.8	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
Franks Creek 3.2 to 4.9	Upper Cumberland	5130101	Letcher	2-FS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR
Fugitt Creek 0.0 to 4.7	Upper Cumberland	5130101	Harlan	2-FS	3	3	3	3	2/9/2007	CAH, FC, PCR, SCR
Gilmore Creek 0.0 to 5.9	Upper Cumberland	5130103	Lincoln	5-PS	3	3	3	3	8/24/2007	WAH, FC, PCR, SCR
Goodin Creek 2.1 to 2.6	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Greasy Creek 0.0 to 3.7	Upper Cumberland	5130101	Bell	3	4A-PS	3	3	3	12/6/2000	WAH, FC, PCR, SCR
Hale Fork 0.0 to 2.9	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Harris Branch 0.25 to 0.6	Upper Cumberland	5130101	Harlan	5-PS	3	3	3	3	11/30/2006	WAH, FC, PCR, SCR
Harrods Fork 0.0 to 5.3	Upper Cumberland	5130103	Cumberland	3	3	3	3	3		WAH, FC, PCR, SCR
Hatchell Branch 0.0 to 1.0	Upper Cumberland	5130101	McCreary	5-PS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR
Hawk Creek 0.0 to 6.6	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	2/6/2007	CAH, FC, PCR, SCR
Hays Creek 1.3 to 2.3	Upper Cumberland	5130105	Clinton	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Hazel Patch Creek 0.0 to 1.8	Upper Cumberland	5130102	Laurel	5-PS	3	3	3	3	2/6/2007	WAH, FC, PCR, SCR
Helton Branch 0.0 to 1.0	Upper Cumberland	5130103	McCreary	3	3	3	3	3		WAH, FC, PCR, SCR
Hinkle Branch 0.0 to 1.8	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Honeycut Branch 0.0 to 1.8	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Horse Lick Creek 0.0 to 15.2	Upper Cumberland	5130102	Jackson	2-FS	2-FS	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Howards Creek 0.6 to 4.6	Upper Cumberland	5130105	Clinton	2-FS	3	3	3	3	7/31/2001	WAH, FC, PCR, SCR
Hunting Shirt Branch 0.0 to 2.8	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR
Illwill Creek 8.8 to 12.2	Upper Cumberland	5130105	Clinton	2-FS	3	3	3	3	2/7/2007	WAH, FC, PCR, SCR
Indian Creek 0.0 to 4.2	Upper Cumberland	5130103	Pulaski	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Indian Creek 0.0 to 4.5	Upper Cumberland	5130102	Jackson	5-PS	3	3	3	3	2/7/2007	WAH, FC, PCR, SCR
Indian Creek 2.3 to 6.7	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Jackie Branch 0.0 to 1.7	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR
Jellico Creek 0.0 to 6.1	Upper Cumberland	5130101	Whitley	2-FS	2-FS	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Jellico Creek 22.5 to 25.3	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	2/7/2007	WAH, FC, PCR, SCR
Jennys Branch 0.0 to 6.0	Upper Cumberland	5130101	McCreary	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Kennedy Creek 0.0 to 3.0	Upper Cumberland	5130104	Wayne	2-FS	3	3	3	3	12/10/2001	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Kettle Creek 1.75 to 6.1	Upper Cumberland	5130103	Monroe	2-FS	3	3	3	3	2/16/2007	WAH, FC, PCR, SCR
Kilburn Fork 0.0 to 0.9	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	2/20/2007	WAH, FC, PCR, SCR
Kilburn Fork 0.9 to 6.2	Upper Cumberland	5130101	McCreary	5-PS	3	3	3	3	2/7/2007	WAH, FC, PCR, SCR
Lake Cumberland	Upper Cumberland	5130103	Russell	2-FS	3	2-FS	5-PS	2-FS	12/12/2006	WAH, FC, PCR, SCR, DWS
Lake Linville	Upper Cumberland	5130102	Rockcastle	2-FS	3	2-FS	3	2-FS	1/24/2006	WAH, FC, PCR, SCR, DWS
Laurel Branch 0.0 to 2.2	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	2/7/2007	WAH, FC, PCR, SCR
Laurel Creek 0.8 to 3.65	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	2/8/2007	CAH, FC, PCR, SCR
Laurel Creek 3.65 to 5.1	Upper Cumberland	5130101	McCreary	5-PS	3	3	3	3		CAH, FC, PCR, SCR
Laurel Creek Lake	Upper Cumberland	5130101	McCreary	2-FS	3	2-FS	3	2-FS	3/6/2006	WAH, CAH, FC, PCR, SCR, DWS
Laurel Fork 7.4 to 9.1	Upper Cumberland	5130101	McCreary	5B-PS	3	3	3	3	2/8/2007	CAH, FC, PCR, SCR
Laurel Fork of Clear Fork 10.3 to 13.8	Upper Cumberland	5130101	Whitley	5-NS	3	3	3	3	8/31/2000	WAH, FC, PCR, SCR
Laurel Fork of Clear Fork 16.9 to 18.9	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Laurel Fork of Clear Fork 4.25 to 10.3	Upper Cumberland	5130101	Whitley	5-PS	3	3	3	3	2/26/2009	WAH, FC, PCR, SCR
Laurel Fork of Kilburn Fork 0.0 to 2.3	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	8/14/2000	WAH, FC, PCR, SCR
Laurel Fork of Middle Fork 0.0 to 5.0	Upper Cumberland	5130102	Jackson	2-FS	3	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Laurel River 33.7 to 39.8	Upper Cumberland	5130101	Laurel	5-PS	3	3	3	3	2/8/2007	WAH, FC, PCR, SCR
Laurel River 0.9 to 2.2	Upper Cumberland	5130101	Laurel	5-NS	3	3	3	3	11/7/2006	CAH, FC, PCR, SCR
Laurel River 23.7 to 24.9	Upper Cumberland	5130101	Laurel	5-PS	3	3	3	3	11/7/2005	WAH, FC, PCR, SCR
Laurel River 26.3 to 33.7	Upper Cumberland	5130101	Laurel	5-NS	2-FS	3	3	3	2/8/2007	WAH, FC, PCR, SCR
Laurel River Reservoir	Upper Cumberland	5130101	Whitley	2-FS	3	2-FS	2-FS	2-FS	1/1/2001 - 12/4/2006	WAH, FC, PCR, SCR, DWS
Left Fork of Fugitt Creek 0.0 to 1.5	Upper Cumberland	5130101	Harlan	2-FS	3	3	3	3	2/9/2007	CAH, FC, PCR, SCR
Left Fork of Straight Creek 0.0 to 13.1	Upper Cumberland	5130101	Bell	5-NS	4A-NS	5-NS	3	3	2/20/2007	WAH, FC, PCR, SCR
Lewis Creek 0.0 to 3.5	Upper Cumberland	5130103	Cumberland	5-PS	3	3	3	3	2/9/2007	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Lick Fork 0.0 to 1.3	Upper Cumberland	5130101	Harlan	5-PS	3	3	3	3	2/9/2007	CAH, FC, PCR, SCR
Lick Fork of Yellow Creek 0.0 to 2.9	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Line Creek 2.3 to 5.5	Upper Cumberland	5130102	Pulaski	5-PS	3	3	3	3	3/23/2006	WAH, FC, PCR, SCR
Little Clear Creek 0.0 to 10.9	Upper Cumberland	5130101	Bell	5-NS	2-FS	2-FS	3	3	1/31/2007	WAH, FC, PCR, SCR
Little Hurricane Fork of Beaver Creek 0.0 to 3.9	Upper Cumberland	5130103	McCreary	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Laurel River 12.7 to 14.8	Upper Cumberland	5130101	Laurel	5-NS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Laurel River 14.8 to 23.0	Upper Cumberland	5130101	Laurel	3	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Little Laurel River 0.0 to 8.4	Upper Cumberland	5130101	Laurel	5-PS	5-PS	3	3	3	5/2/2002 - 3/22/2006	WAH, FC, PCR, SCR
Little Laurel River 8.4 to 12.7	Upper Cumberland	5130101	Laurel	5-NS	5-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Little Poplar Creek 0.0 to 2.8	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3	8/23/2000	WAH, FC, PCR, SCR
Little Poplar Creek 3.1 to 4.4	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3		WAH, FC, PCR, SCR
Little Raccoon Creek 0.0 to 7.7	Upper Cumberland	5130102	Laurel	5-NS	5-NS	5-NS	3	3	11/4/2007	WAH, FC, PCR, SCR
Little Rockcastle River 0.0 to 2.3	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	1/3/2002	WAH, FC, PCR, SCR
Little South Fork 4.4 to 35.7	Upper Cumberland	5130104	Wayne	2-FS	3	3	2-FS	3	10/10/2006	WAH, FC, PCR, SCR
Little South Fork 0.0 to 4.4	Upper Cumberland	5130104	Wayne	5-PS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Little White Oak Creek 0.0 to 2.6	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	2/27/2009	WAH, FC, PCR, SCR
Long Branch 0.0 to 2.9	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	12/11/2001	WAH, FC, PCR, SCR
Looney Creek 0.0 to 5.9	Upper Cumberland	5130101	Harlan	3	4A-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Looney Creek 5.9 to 9.6	Upper Cumberland	5130101	Letcher	2-FS	3	3	3	3		CAH, FC, PCR, SCR
Lynn Camp Creek 0.04 to 3.45	Upper Cumberland	5130101	Laurel	5-NS	5-NS	3	3	3	5/2/2002 - 11/7/2006	WAH, FC, PCR, SCR
Lynn Camp Creek 4.5 to 10.5	Upper Cumberland	5130101	Whitley	5-PS	3	3	3	3	9/8/2000	WAH, FC, PCR, SCR
Marrowbone Creek 0.0 to 2.8	Upper Cumberland	5130103	Cumberland	5-PS	2-FS	3	3	3	2/12/2007	WAH, FC, PCR, SCR
Marrowbone Creek 13.5 to 15.2	Upper Cumberland	5130103	Cumberland	2-FS	3	3	3	3	6/20/2000	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Marrowbone Creek 3.8 to 8.7	Upper Cumberland	5130103	Cumberland	2-FS	3	3	3	3	2/12/2006	WAH, FC, PCR, SCR
Marsh Creek 0.0 to 13.5	Upper Cumberland	5130101	McCreary	2-FS	2-FS	3	3	3	2/13/2007	WAH, FC, PCR, SCR
Marsh Creek 13.5 to 16.5	Upper Cumberland	5130101	McCreary	5-NS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Marsh Creek 19.0 to 24.1	Upper Cumberland	5130101	McCreary	5-NS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Martin Creek 0.0 to 1.2	Upper Cumberland	5130102	Clay	2-FS	3	3	3	3	8/16/2000	WAH, FC, PCR, SCR
Martins Fork 11.8 to 17.45	Upper Cumberland	5130101	Harlan	5-NS	3	3	3	2-FS	11/30/2006	WAH, FC, PCR, SCR, DWS
Martins Fork 0.0 to 11.8	Upper Cumberland	5130101	Harlan	2-FS	2-FS	2-FS	3	3	2/2/2007	WAH, FC, PCR, SCR
Martins Fork 19.4 to 28.85	Upper Cumberland	5130101	Harlan	2-FS	5-NS	2-FS	3	3	11/30/2006	WAH, FC, PCR, SCR
Martins Fork 28.85 to 38.8	Upper Cumberland	5130101	Harlan	2-FS	3	3	3	3	10/10/2006	CAH, FC, PCR, SCR
Martin's Fork Reservoir	Upper Cumberland	5130101	Harlan	2-FS	3	2-FS	2-FS	3	1/1/2001 - 11/27/2006	WAH, FC, PCR, SCR, DWS
McCammon Branch 0.0 to 2.8	Upper Cumberland	5130102	Jackson	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
McFarland Creek 0.8 to 3.9	Upper Cumberland	5130103	Monroe	2-FS	3	3	3	3	2/26/2009	WAH, FC, PCR, SCR
McFarland Creek 5.65 to 6.2	Upper Cumberland	5130103	Monroe	2-FS	3	3	3	3	2/26/2009	WAH, FC, PCR, SCR
Meadow Creek 0.0 to 7.4	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3	9/6/2000	WAH, FC, PCR, SCR
Meadow Fork 0.0 to 1.8	Upper Cumberland	5130101	Letcher	2-FS	3	3	3	3	12/3/2001	WAH, FC, PCR, SCR
Meshack Creek 0.0 to 2.8	Upper Cumberland	5130103	Monroe	2-FS	3	3	3	3	7/6/2000	WAH, FC, PCR, SCR
Middle Fork of Rockcastle River 0.0 to 7.9	Upper Cumberland	5130102	Jackson	2-FS	2-FS	3	3	3	2/13/2007	WAH, FC, PCR, SCR
Middle Fork of Beaver Creek 0.0 to 2.3	Upper Cumberland	5130103	McCreary	5-PS	5-NS	5-NS	3	3	2/12/2007	CAH, FC, PCR, SCR
Middle Fork of Richland Creek 0.0 to 1.2	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3	9/21/2000	WAH, FC, PCR, SCR
Mill Branch of Stinking Creek 0.0 to 2.2	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	8/14/2007	WAH, FC, PCR, SCR
Mill Creek of Cumberland River 0.8 to 5.6	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
Mill Creek of Straight Creek 0.0 to 3.4	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
Mitchell Creek 0.0 to 3.8	Upper Cumberland	5130102	Laurel	5-NS	3	3	3	3	2/26/2009	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Moore Branch 0.0 to 0.7	Upper Cumberland	5130101	Bell	5B-PS	5B-NS	5B-NS	3	3	5/2/2002 - 2/13/2007	WAH, FC, PCR, SCR
Moore Creek 0.0 to 4.4	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	12/11/2001	WAH, FC, PCR, SCR
Mud Camp Creek 0.0 to 8.8	Upper Cumberland	5130103	Cumberland	2-FS	3	3	3	3		WAH, FC, PCR, SCR
Mud Creek of Clear Fork 0.0 to 5.2	Upper Cumberland	5130101	Whitley	5-PS	3	3	3	3	8/30/2000	WAH, FC, PCR, SCR
Mud Lick of Stinking Creek 0.0 to 2.3	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
Ned Branch 0.5 to 1.9	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
North Fork of Dogslaughter Creek 0.0 to 0.7	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	7/31/2001	WAH, FC, PCR, SCR
Otter Creek 14.0 to 22.1	Upper Cumberland	5130103	Wayne	2-FS	3	3	3	3	2/13/2007	WAH, FC, PCR, SCR
Patterson Creek 0.0 to 5.3	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	9/6/2000	WAH, FC, PCR, SCR
Patterson Creek 5.3 to 9.3	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	12/11/2001	WAH, FC, PCR, SCR
Peter Branch 0.0 to 1.8	Upper Cumberland	5130102	Jackson	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Pilot Creek 0.7 to 2.5	Upper Cumberland	5130103	Lincoln	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Pine Creek 2.5 to 5.3	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	2/13/2007	WAH, FC, PCR, SCR
Pitman Creek 6.15 to 23.4	Upper Cumberland	5130103	Pulaski	2-FS	2-FS	3	3	3	2/14/2007	WAH, FC, PCR, SCR
Pitman Creek 23.4 to 24.4	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Pitman Creek 4.8 to 5.95	Upper Cumberland	5130103	Pulaski	2-FS	5-PS	3	3	3	11/7/2006	WAH, FC, PCR, SCR
Pointer Creek 0.2 to 3.9	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	9/20/2000	WAH, FC, PCR, SCR
Pond Creek 0.0 to 6.3	Upper Cumberland	5130102	Jackson	5-PS	3	3	3	3	2/14/2007	WAH, FC, PCR, SCR
Poor Fork of Cumberland River 14.9 to 16.3	Upper Cumberland	5130101	Harlan	5-PS	4A-NS	3	2-FS	3	2/14/2007	WAH, FC, PCR, SCR
Poor Fork of Cumberland River 41.4 to 51.7	Upper Cumberland	5130101	Letcher	2-FS	3	3	3	3	10/10/2006	CAH, FC, PCR, SCR
Poor Fork of Cumberland River 0.0 to 14.9	Upper Cumberland	5130101	Harlan	2-FS	2-FS	3	2-FS	2-FS	2/14/2007	WAH, FC, PCR, SCR, DWS
Poor Fork of Cumberland River 16.3 to 31.8	Upper Cumberland	5130101	Harlan	3	4A-NS	3	2-FS	3	2/14/2007	WAH, FC, PCR, SCR
Powder Mill Creek 0.0 to 4.9	Upper Cumberland	5130102	Laurel	5-PS	3	3	3	3	2/26/2009	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Presley House Branch 0.0 to 1.5	Upper Cumberland	5130101	Letcher	2-FS	3	3	3	3	10/10/2007	WAH, FC, PCR, SCR
Puckett Creek 0.0 to 9.9	Upper Cumberland	5130101	Bell	2-FS	4A-NS	3	3	3	8/15/2006	WAH, FC, PCR, SCR
Puncheoncamp Branch 0.0 to 1.8	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR
Raccoon Creek 0.0 to 2.7	Upper Cumberland	5130102	Laurel	5-PS	3	3	3	3	8/15/2000	WAH, FC, PCR, SCR
Raleigh Fork 0.0 to 1.1	Upper Cumberland	5130101	Letcher	5-PS	3	3	3	3		WAH, FC, PCR, SCR
Renfro Creek 0.0 to 3.1	Upper Cumberland	5130102	Rockcastle	5-PS	3	3	3	3	3/2/2009	WAH, FC, PCR, SCR
Richland Creek 11.6 to 21.5	Upper Cumberland	5130101	Knox	2-FS	4A-NS	3	3	3	8/15/2007	WAH, FC, PCR, SCR
Richland Creek 0.0 to 6.3	Upper Cumberland	5130101	Knox	5-NS	2-FS	3	3	3	2/15/2007	WAH, FC, PCR, SCR
Roaring Fork 0.0 to 3.6	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Roaring Paunch Creek 0.0 to 7.8	Upper Cumberland	5130104	McCreary	2-FS	2-FS	2-FS	3	3	2/14/2007	WAH, FC, PCR, SCR
Roaring Paunch Creek 7.8 to 15.6	Upper Cumberland	5130101	McCreary	5-NS	5-NS	5-NS	3	3	2/14/2007	WAH, FC, PCR, SCR
Robinson Creek 6.7 to 9.6	Upper Cumberland	5130101	Laurel	2-FS	3	3	3	3	1/3/2002	WAH, FC, PCR, SCR
Rock Creek 0.0 to 4.3	Upper Cumberland	5130104	McCreary	5-NS	2-FS	2-FS	3	3	2/14/2006	WAH, FC, PCR, SCR
Rock Creek 0.0 to 5.8	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Rock Creek 4.3 to 15.5	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	2/15/2007	CAH, FC, PCR, SCR
Rock Creek 16.5 to 21.5	Upper Cumberland	5130104	McCreary	2-FS	3	3	5-PS	3	1/1/2007	CAH, FC, PCR, SCR
Rock Lick Creek 0.0 to 8.8	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	9/20/2000	WAH, FC, PCR, SCR
Rockcastle River 40.4 to 48.1	Upper Cumberland	5130102	Rockcastle	2-FS	3	3	3	3	1/3/2002	WAH, FC, PCR, SCR
Rockcastle River 12.3 to 27.2	Upper Cumberland	5130102	Laurel	2-FS	2-FS	3	3	3	12/8/2000 - 12/18/2006	WAH, FC, PCR, SCR
Ross Branch 0.0 to 1.5	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	12/12/2001	WAH, FC, PCR, SCR
Roundstone Creek 0.0 to 10.9	Upper Cumberland	5130102	Rockcastle	2-FS	5-PS	3	3	3	2/15/2007	WAH, FC, PCR, SCR
Roundstone Creek 17.1 to 23.9	Upper Cumberland	5130102	Rockcastle	5-NS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Ryans Creek 0.0 to 5.3	Upper Cumberland	5130101	McCreary	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Salt Lick Creek 1.1 to 3.6	Upper Cumberland	5130103	Russell	2-FS	3	3	3	3	3/22/2007	WAH, FC, PCR, SCR
Sam Branch 0.0 to 0.5	Upper Cumberland	5130103	Pulaski	5-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Sanders Creek 0.0 to 5.3	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
Shillalah Creek 0.0 to 5.5	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	7/5/2001	CAH, FC, PCR, SCR
Shut-in Branch 0.0 to 1.1	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
Sims Fork 0.0 to 5.2	Upper Cumberland	5130101	Bell	5-NS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
Sinking Creek 0.0 to 1.9	Upper Cumberland	5130103	Pulaski	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Sinking Creek 0.0 to 9.95	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	3/2/2009	WAH, FC, PCR, SCR
Sinking Creek 9.95 to 13.35	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Sinking Creek 13.35 to 17.65	Upper Cumberland	5130102	Laurel	5-NS	3	3	3	3	3/2/2009	WAH, FC, PCR, SCR
Skegg Creek 0.0 to 3.3	Upper Cumberland	5130102	Rockcastle	5-PS	3	3	3	3	2/15/2001	WAH, FC, PCR, SCR
Skegg Creek 3.3 to 11.1	Upper Cumberland	5130102	Rockcastle	2-FS	3	3	3	3	8/21/2007	WAH, FC, PCR, SCR
Smith Creek 0.0 to 2.2	Upper Cumberland	5130105	Clinton	2-FS	3	3	3	3	3/2/2009	WAH, FC, PCR, SCR
Smith Creek 0.0 to 3.3	Upper Cumberland	5130101	Letcher	2-FS	3	3	3	3	12/6/2001	WAH, FC, PCR, SCR
South Fork Cumberland River 43.0 to 48.7	Upper Cumberland	5130104	McCreary	2-FS	2-FS	3	2-FS	3	10/10/2006	WAH, FC, PCR, SCR
South Fork Cumberland River 48.7 to 54.0	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	1/3/2002	WAH, FC, PCR, SCR
South Fork of Colliers Creek 0.0 to 1.9	Upper Cumberland	5130101	Letcher	5-PS	3	3	3	3	1/3/2007	WAH, FC, PCR, SCR
South Fork of Dog Slaughter Creek 0.0 to 4.6	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	7/5/2001	WAH, FC, PCR, SCR
South Fork of Rockcastle River 21.2 to 29.1	Upper Cumberland	5130102	Laurel	5-NS	3	3	3	3	8/21/2007	WAH, FC, PCR, SCR
South Fork of Rockcastle River 4.3 to 5.8	Upper Cumberland	5130102	Jackson	2-FS	2-FS	3	3	3	10/10/2006	WAH, FC, PCR, SCR
Spring Creek 1.3 to 3.8	Upper Cumberland	5130105	Clinton	2-FS	3	3	3	3	2/16/2007	WAH, FC, PCR, SCR
Spring Creek 3.8 to 7.4	Upper Cumberland	5130105	Clinton	2-FS	3	3	3	3	7/5/2001	WAH, FC, PCR, SCR
Stevenson Branch 0.0 to 1.9	Upper Cumberland	5130101	Bell	5-NS	3	3	3	3	12/4/2007	WAH, FC, PCR, SCR

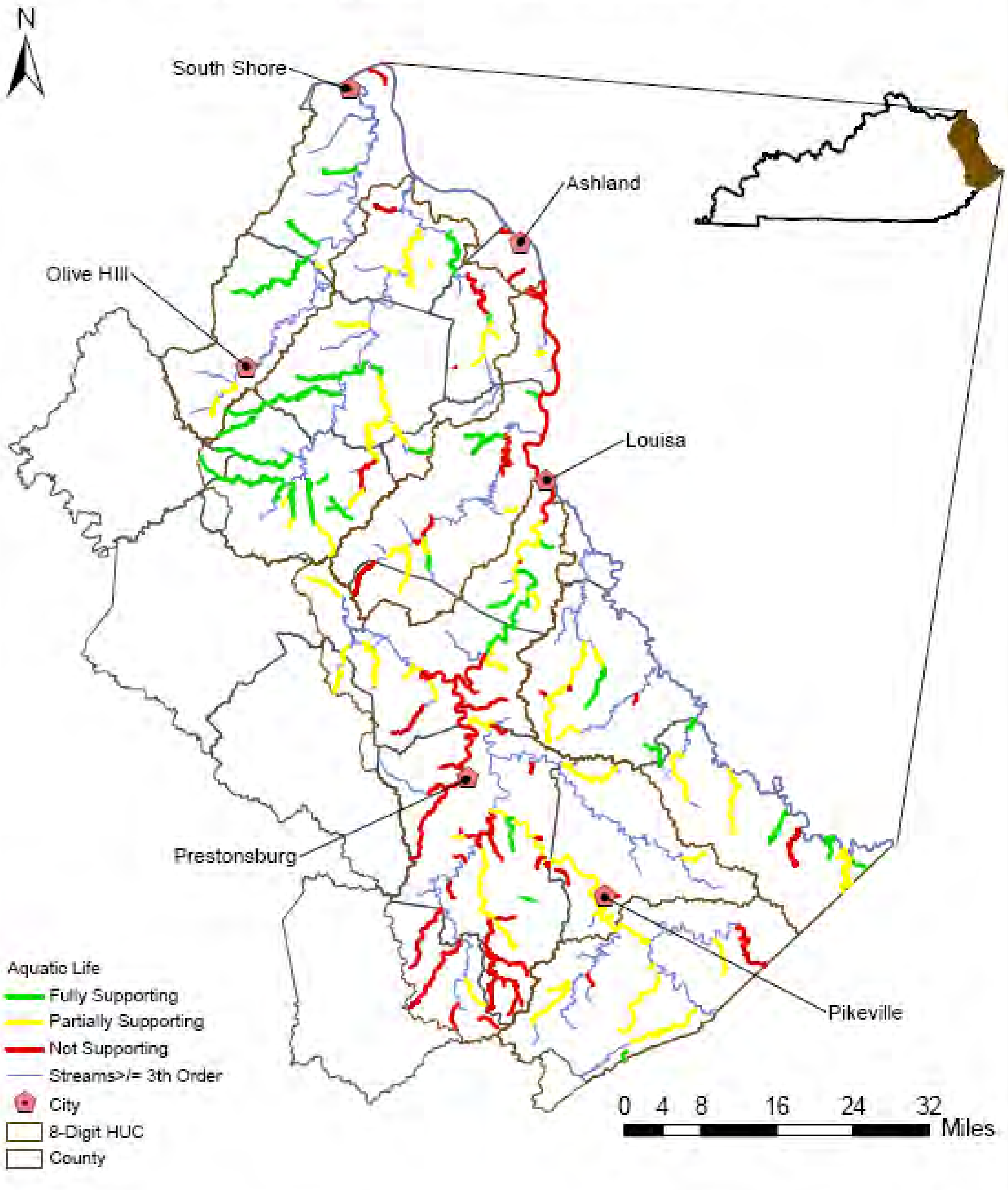
Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Stinking Creek 0.0 to 2.1	Upper Cumberland	5130101	Knox	5-NS	5-NS	5-NS	3	3	1/3/2001	WAH, FC, PCR, SCR
Stinking Creek 11.3 to 17.6	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3	6/14/2005	WAH, FC, PCR, SCR
Stinking Creek 17.6 to 18.8	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	9/18/2007	WAH, FC, PCR, SCR
Stoney Fork 0.0 to 2.3	Upper Cumberland	5130101	Bell	5-NS	3	3	3	3	12/6/2000	WAH, FC, PCR, SCR
Stony Fork 0.0 to 5.3	Upper Cumberland	5130101	Bell	5-NS	3	3	3	3	12/6/2000	WAH, FC, PCR, SCR
Straight Creek 0.0 to 1.7	Upper Cumberland	5130101	Bell	2-FS	4A-NS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Straight Creek 1.7 to 23.3	Upper Cumberland	5130101	Bell	5-PS	2-FS	3	3	3	2/16/2007	WAH, FC, PCR, SCR
Sugar Camp Branch 0.0 to 1.4	Upper Cumberland	5130102	Pulaski	5-NS	5-NS	5-NS	3	3	3/22/2006	WAH, FC, PCR, SCR
Sulphur Creek 1.7 to 5.1	Upper Cumberland	5130105	Clinton	2-FS	3	3	3	3	7/5/2001	WAH, FC, PCR, SCR
Sulphur Creek 0.5 to 2.8	Upper Cumberland	5130103	Monroe	2-FS	3	3	3	3		WAH, FC, PCR, SCR
Sulphur Creek 5.2 to 8.1	Upper Cumberland	5130105	Cumberland	2-FS	3	3	3	3	3/22/2006	WAH, FC, PCR, SCR
Trace Branch 0.0 to 3.0	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Trammel Fork of Marsh Creek 0.0 to 1.9	Upper Cumberland	5130101	McCreary	2-FS	3	3	3	3	12/12/2001	WAH, FC, PCR, SCR
Turkey Creek 0.0 to 1.2	Upper Cumberland	5130101	Knox	2-FS	3	3	3	3	12/7/2001	WAH, FC, PCR, SCR
Tyner Lake	Upper Cumberland	5130102	Jackson	2-FS	3	2-FS	3	2-FS	1/24/2006	WAH, CAH, FC, PCR, SCR, DWS
UT of UT to Acorn Fork 0.0 to 0.2	Upper Cumberland	5130101	Knox	5-NS	3	3	3	3	9/18/2007	WAH, FC, PCR, SCR
UT to Acorn Fork 0.0 to 0.25	Upper Cumberland	5130101	Knox	5-NS	3	3	3	3	9/18/2007	WAH, FC, PCR, SCR
UT to Big Clifty Creek 0.0 to 0.5	Upper Cumberland	5130103	Pulaski	3	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Big Creek 0.0 to 1.8	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	3/26/2006	WAH, FC, PCR, SCR
UT to Bridge Fork 0.0 to 0.1	Upper Cumberland	5130101	McCreary	5B-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Caney Fork 0.0 to 0.6	Upper Cumberland	5130103	Russell	3	3	3	3	3		WAH, FC, PCR, SCR
UT to Helton Branch 0.0 to 0.4	Upper Cumberland	5130101	Knox	5-PS	3	3	3	3	3/23/2006	WAH, FC, PCR, SCR
UT to Jennys Branch 0.0 to 1.3	Upper Cumberland	5130101	McCreary	5-NS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
UT to Little Laurel River 0.0 to 1.4	Upper Cumberland	5130101	Laurel	5-NS	3	3	3	3	8/14/2007	WAH, FC, PCR, SCR
UT to Pond Creek 0.0 to 0.2	Upper Cumberland	5130102	Jackson	5B-PS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Pond Creek 0.0 to 0.2	Upper Cumberland	5130102	Jackson	5B-PS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Rock Creek 0.0 to 1.2	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
UT to Rock Creek 0.0 to 1.3	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR
UT to Rock Creek 0.0 to 1.9	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	11/17/2001	WAH, FC, PCR, SCR
UT to UT to Acorn Fork 0.0 to 0.55	Upper Cumberland	5130101	Knox	5-NS	3	3	3	3	9/18/2007	WAH, FC, PCR, SCR
Wallins Creek 0.0 to 4.2	Upper Cumberland	5130101	Harlan	5-NS	3	3	3	3	2/19/2007	WAH, FC, PCR, SCR
Watts Branch 0.0 to 2.6	Upper Cumberland	5130104	McCreary	2-FS	3	3	3	3	11/19/2001	WAH, FC, PCR, SCR
Watts Creek 0.0 to 1.3	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	2/15/2002	WAH, FC, PCR, SCR
Watts Creek 2.0 to 4.4	Upper Cumberland	5130101	Harlan	2-FS	3	3	3	3	12/4/2001	WAH, FC, PCR, SCR
White Oak Creek 0.0 to 1.0	Upper Cumberland	5130102	Laurel	5-NS	3	3	3	3	6/1/2002	WAH, FC, PCR, SCR
White Oak Creek 1.0 to 5.7	Upper Cumberland	5130102	Laurel	2-FS	3	3	3	3	3/2/2009	CAH, FC, PCR, SCR
White Oak Creek 1.1 to 2.2	Upper Cumberland	5130102	Rockcastle	2-FS	3	3	3	3	5/2/2002	WAH, FC, PCR, SCR
White Oak Creek 0.0 to 4.2	Upper Cumberland	5130104	McCreary	5-NS	2-FS	2-FS	3	3	2/9/2006	WAH, FC, PCR, SCR
White Oak Creek 7.1 to 11.2	Upper Cumberland	5130103	Pulaski	5-PS	3	3	3	3	2/19/2007	WAH, FC, PCR, SCR
Whitley Branch 0.0 to 1.0	Upper Cumberland	5130101	Laurel	5B-NS	5B-PS	3	3	3	5/2/2002	WAH, FC, PCR, SCR
Whitley Branch 1.1 to 2.6	Upper Cumberland	5130101	Laurel	3	5-NS	3	3	3	4/1/1998	WAH, FC, PCR, SCR
Wildcat Branch 0.0 to 2.1	Upper Cumberland	5130103	Pulaski	4A-NS	4A-NS	4A-NS	3	3	2/14/2006	WAH, FC, PCR, SCR
Wolf Creek 0.0 to 1.8	Upper Cumberland	5130101	Whitley	5-NS	3	3	3	3	8/22/2000	WAH, FC, PCR, SCR
Wood Creek 0.0 to 1.95	Upper Cumberland	5130102	Laurel	5-NS	3	3	3	3	2/19/2007	CAH, FC, PCR, SCR
Wood Creek Lake	Upper Cumberland	5130102	Laurel	2-FS	3	2-FS	3	2-FS	1/24/2006	WAH, CAH, FC, PCR, SCR, DWS
Yellow Creek 0.0 to 6.7	Upper Cumberland	5130101	Bell	5-PS	2-FS	3	3	3	8/16/2007	WAH, FC, PCR, SCR

Water Body & Segment	Basin	8-Digit HUC	County	WAH/ CAH	PCR	SCR	Fish Consumption	DWS	Assessment Date	Designated Uses
Yellow Creek 6.7 to 15.9	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	8/16/2007	WAH, FC, PCR, SCR
Yellow Creek ByPass 0.0 to 3.2	Upper Cumberland	5130101	Bell	2-FS	3	3	3	3	3/29/2007	WAH, FC, PCR, SCR
Yocum Creek 0.0 to 6.5	Upper Cumberland	5130101	Harlan	3	4A-NS	3	3	3	8/16/2007	WAH, FC, PCR, SCR
Youngs Creek 0.0 to 5.4	Upper Cumberland	5130101	Whitley	2-FS	3	3	3	3	8/21/2000	WAH, FC, PCR, SCR

Appendix B. Reach Index Maps of Assessed Streams in the Big Sandy-Little Sandy-Tygarts and the Kentucky River Basin Management Unit by Designated Use

Figure B-1. Reach indexing results of streams assessed in the Big Sandy-Little Sandy River-Tygarts Creek basins for Aquatic Life Use.



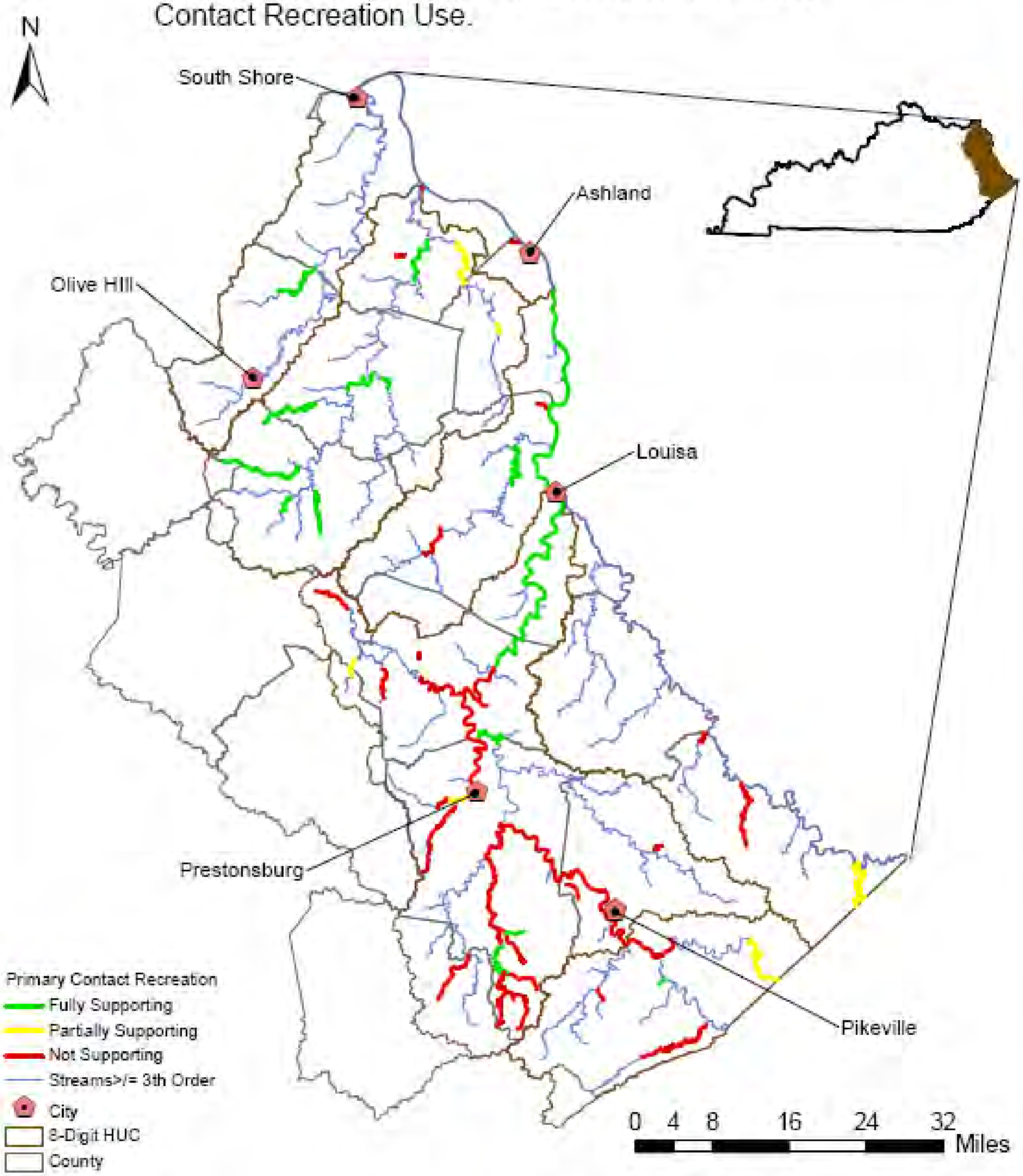
Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress.

This data is distributed by the Commonwealth of Kentucky, Division of Geographic Information (DGI), located in Frankfort, KY. These data are available at http://kygeonet.ky.gov.

Kentucky UNBRIDLED SPIRIT

Figure B-2. Reach indexing results of streams assessed in the Big Sandy-Little Sandy River-Tygarts Creek basins for Primary Contact Recreation Use.



Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress.

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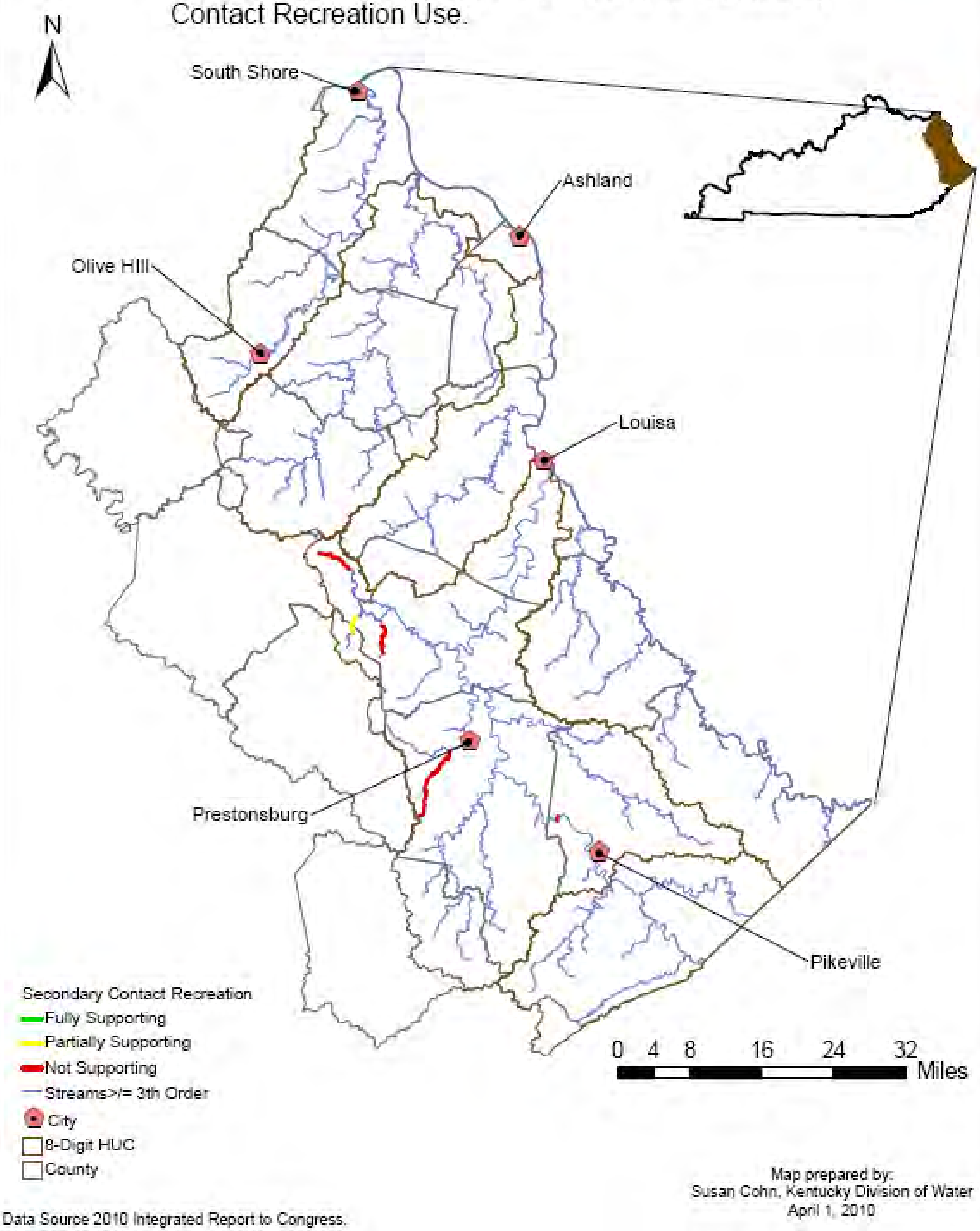
Kentucky

Figure B-3. Reach indexing results of streams assessed in the Big Sandy-Little Sandy River-Tygarts Creek basins for Secondary Contact Recreation Use.



Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress.

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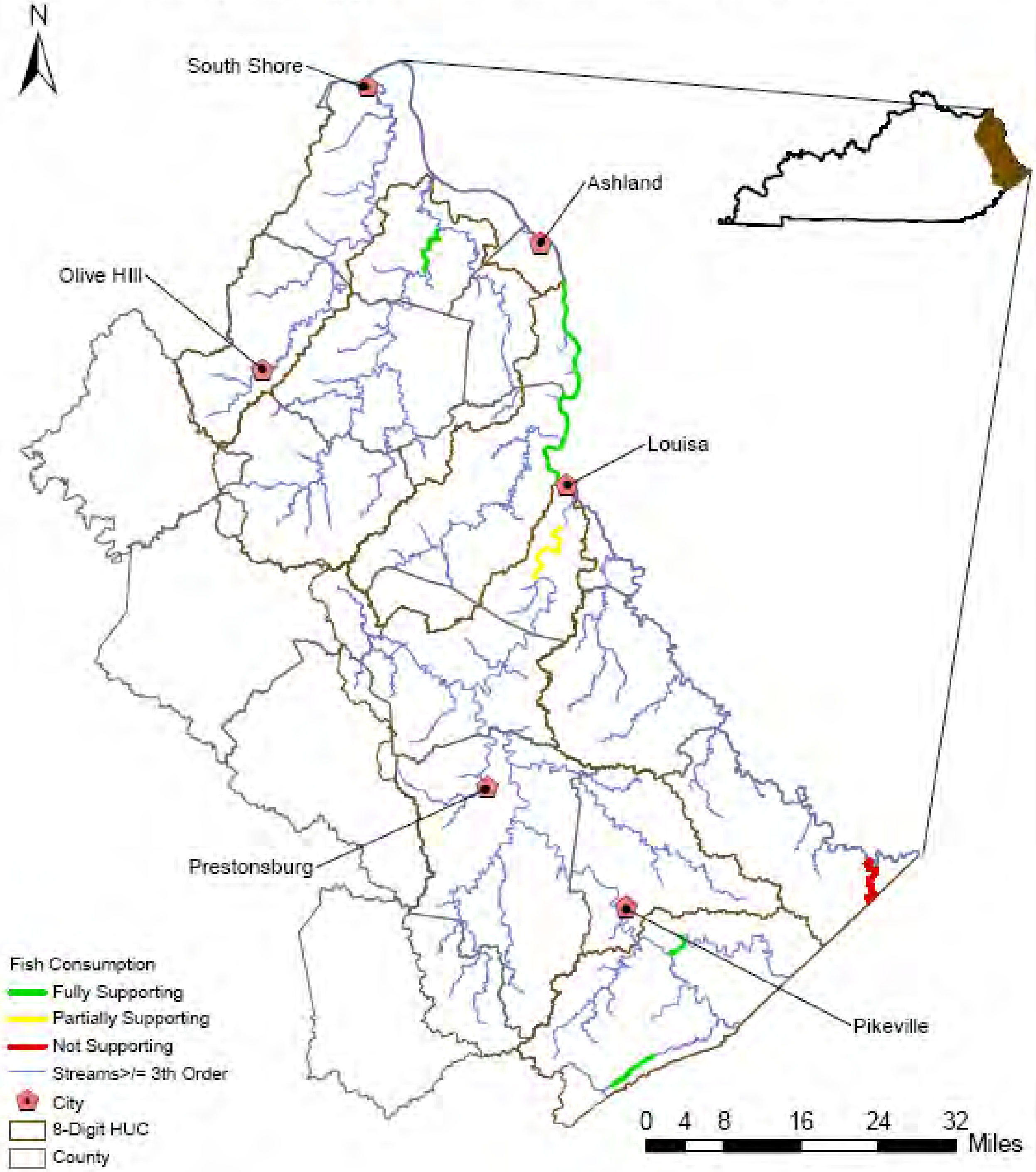
Figure B-4. Reach indexing results of streams assessed in the Big Sandy-Little Sandy River-Tygarts Creek basins for Fish Consumption Use.



Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress.

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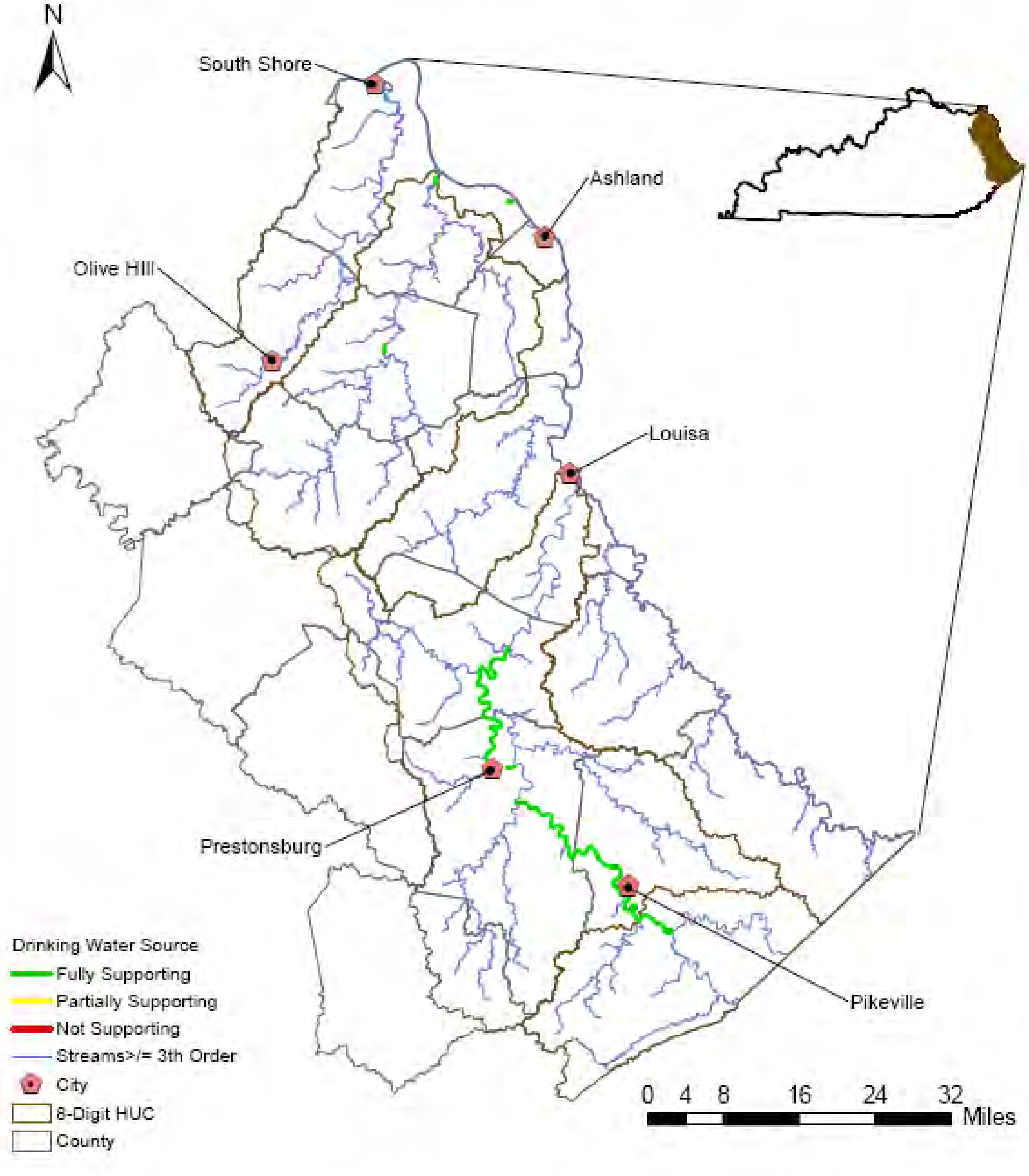
Figure B-5. Reach indexing results of streams assessed in the Big Sandy-Little Sandy River-Tygarts Creek basins for Drinking Water Source Use.



Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress.

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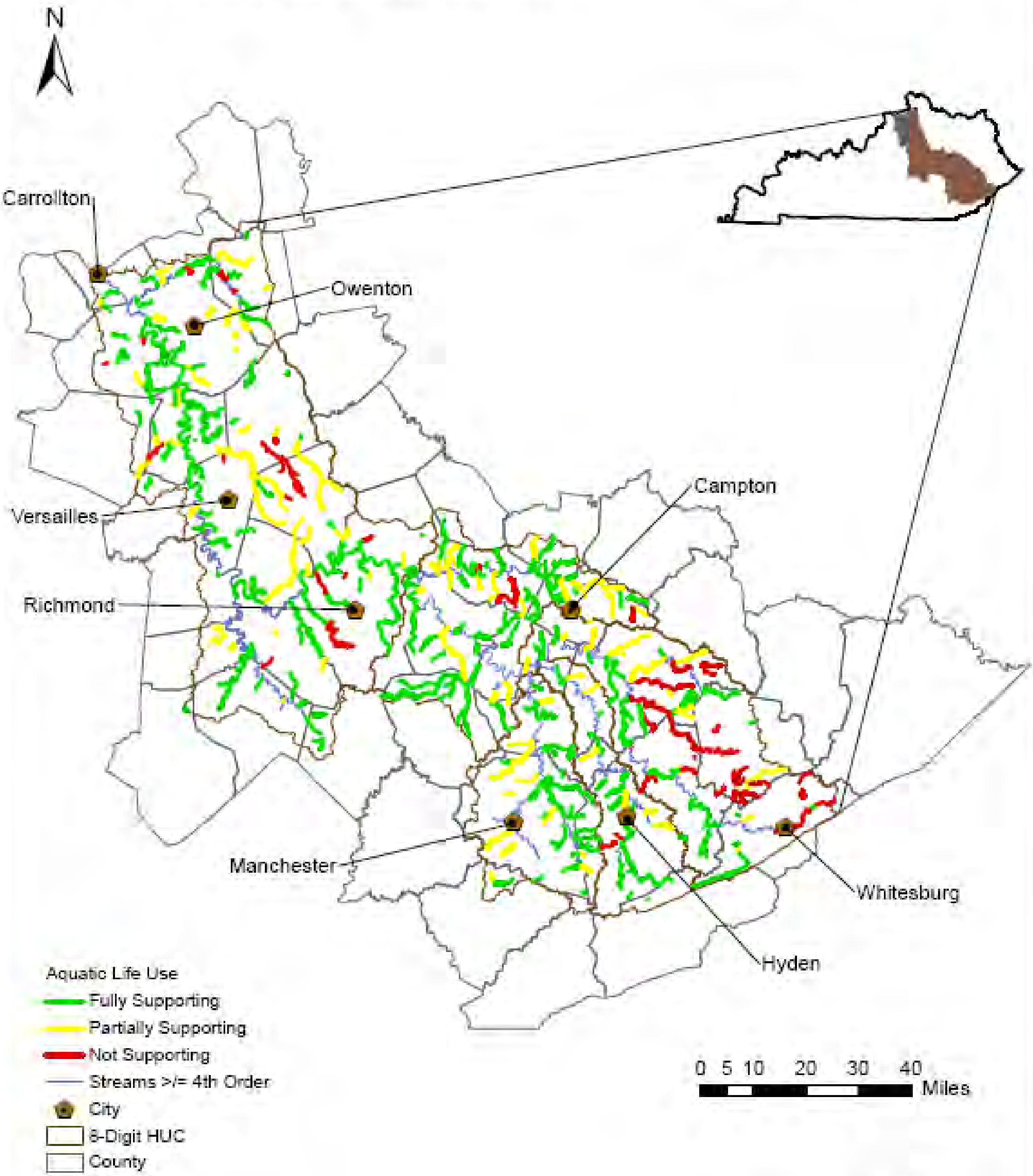
Figure B-6. Reach indexing results of streams assessed in the Kentucky River basin for Aquatic Life Use.



Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress

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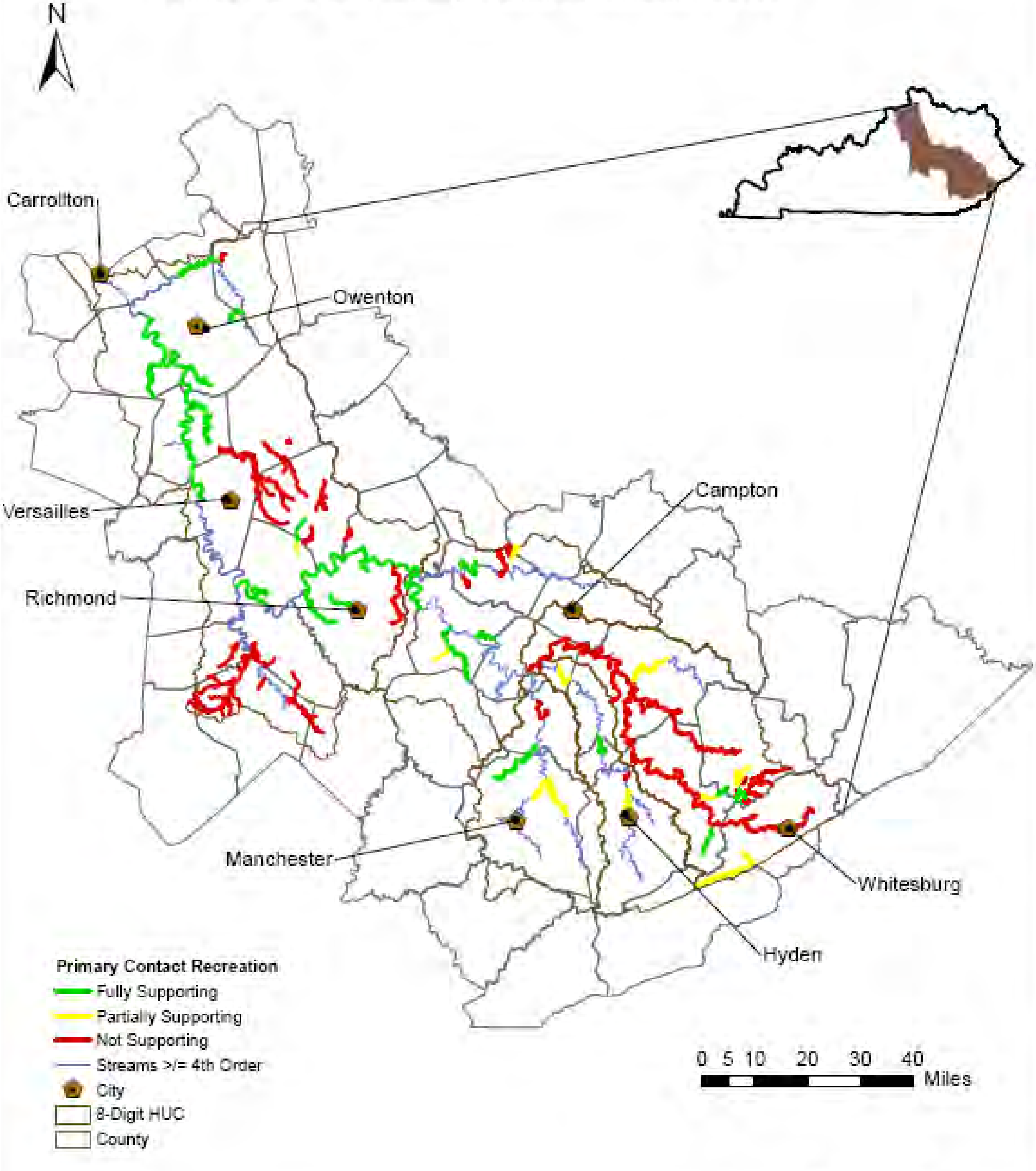
Figure B-7. Reach indexing results of streams assessed in the Kentucky River basin for Primary Contact Recreation Use.



Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress

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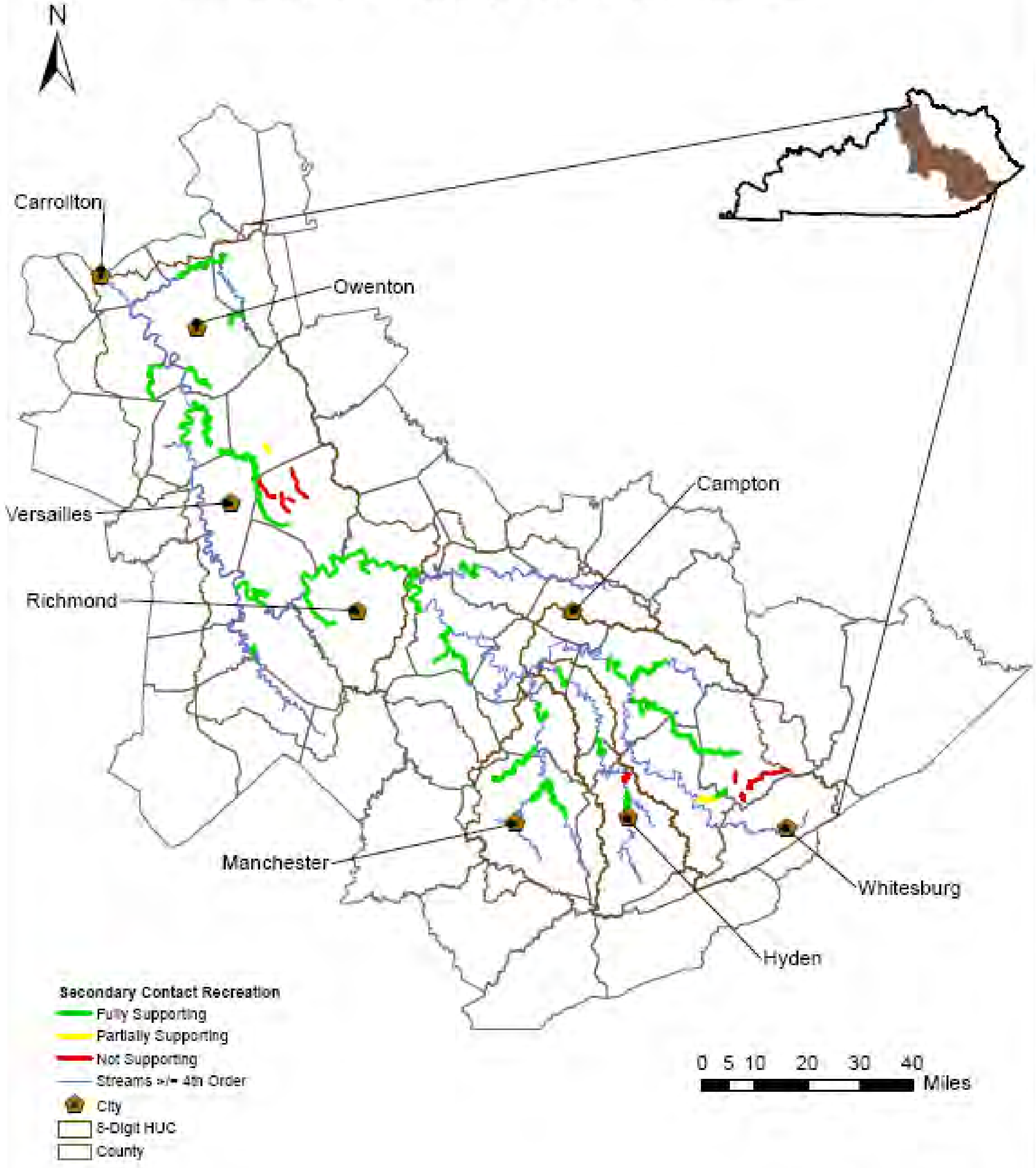
Figure B-8. Reach indexing results of streams assessed in the Kentucky River basin for Secondary Contact Recreation Use.



Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress

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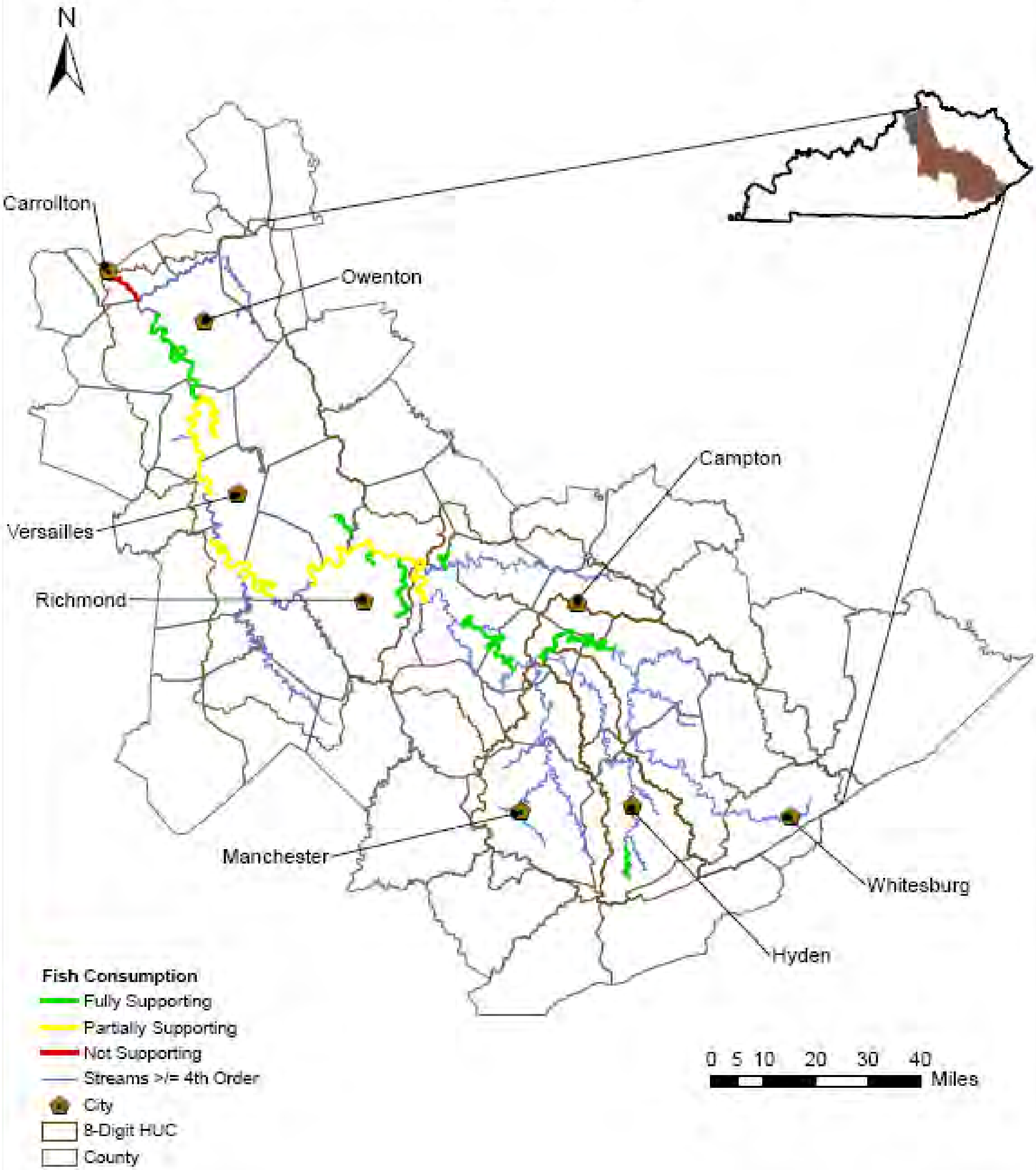
Figure B-9. Reach indexing results of streams assessed in the Kentucky River basin for Fish Consumption Use.



Data Source 2010 Integrated Report to Congress

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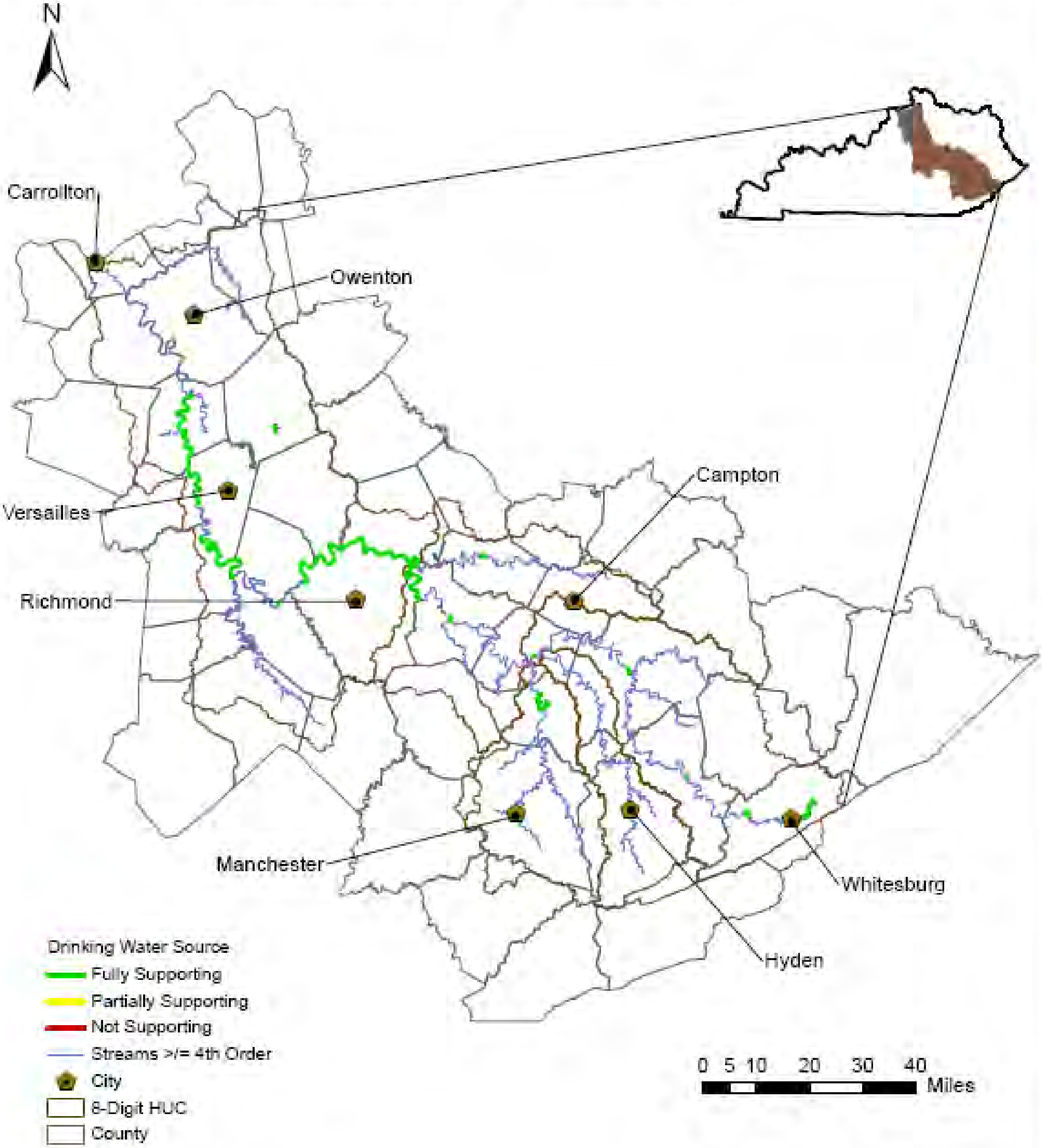
Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Figure B-10. Reach indexing results of streams assessed in the Kentucky River basin for Drinking Water Source Use.



Map prepared by:
Susan Cohn, Kentucky Division of Water
April 1, 2010

Data Source 2010 Integrated Report to Congress

This data is distributed by the Commonwealth of Kentucky, Division of Geographic Information (DGI), located in Frankfort, KY. These data are available at http://kygeonet.ky.gov.

Appendix C. Designated Use Assessment Maps of Reservoirs Monitored in the Big Sandy-Little Sandy-Tygarts and the Kentucky River Basin Management Unit

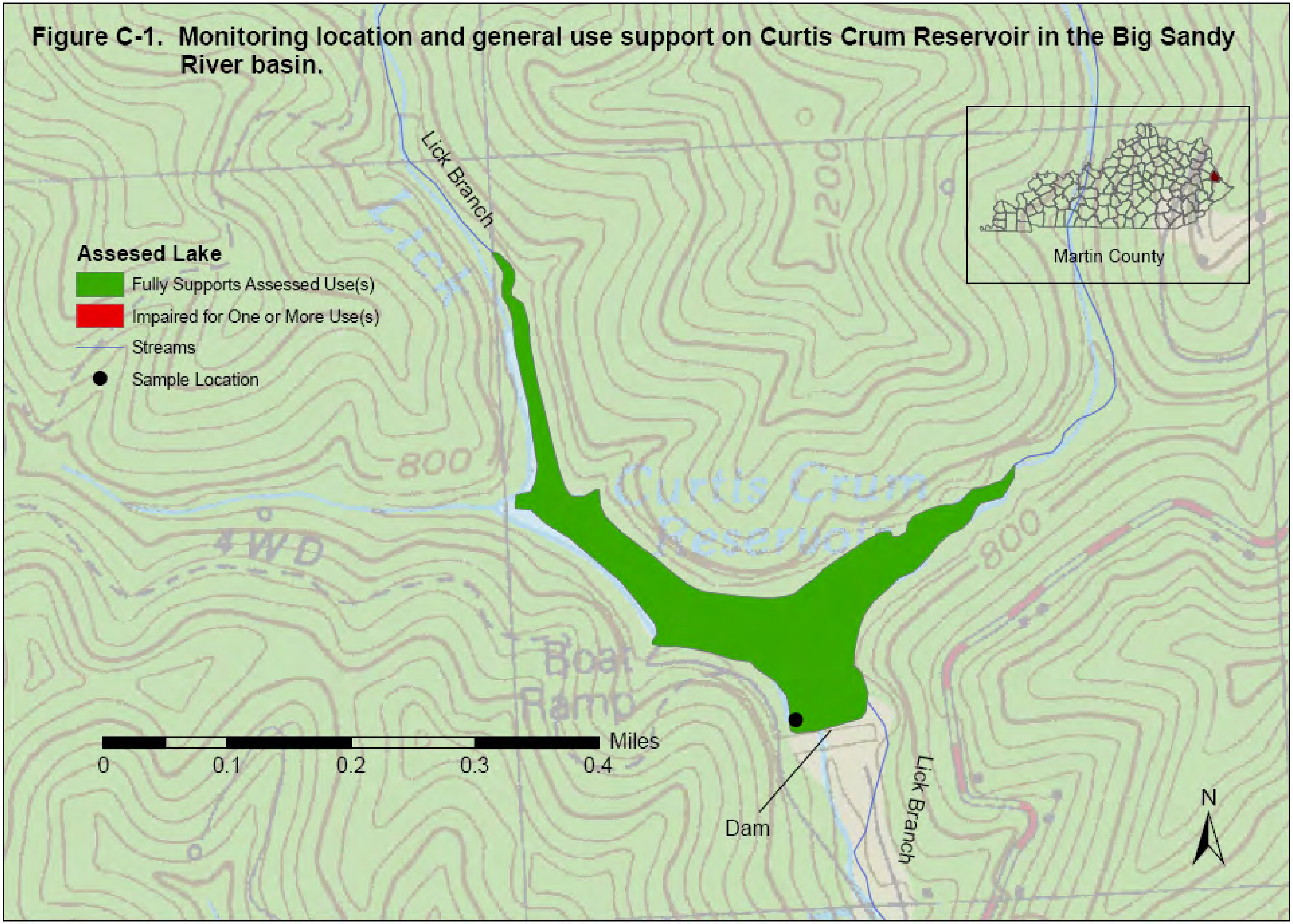


Figure C-1. Monitoring location and general use support on Curtis Crum Reservoir in the Big Sandy River basin.

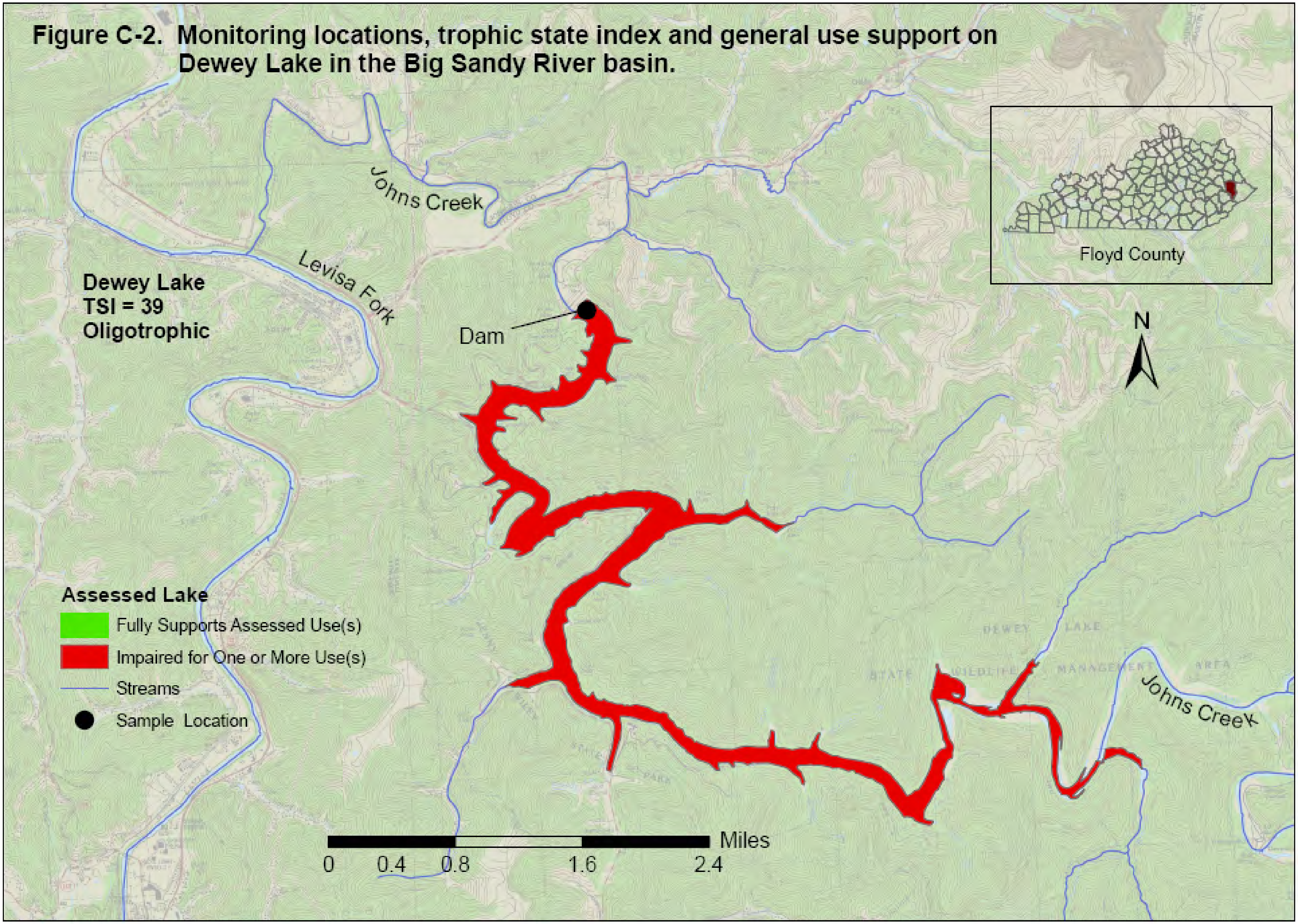


Figure C-2. Monitoring locations, trophic state index and general use support on Dewey Lake in the Big Sandy River basin.

Figure C-3. Monitoring location and general use support on Elkhorn Lake in the Big Sandy River basin.

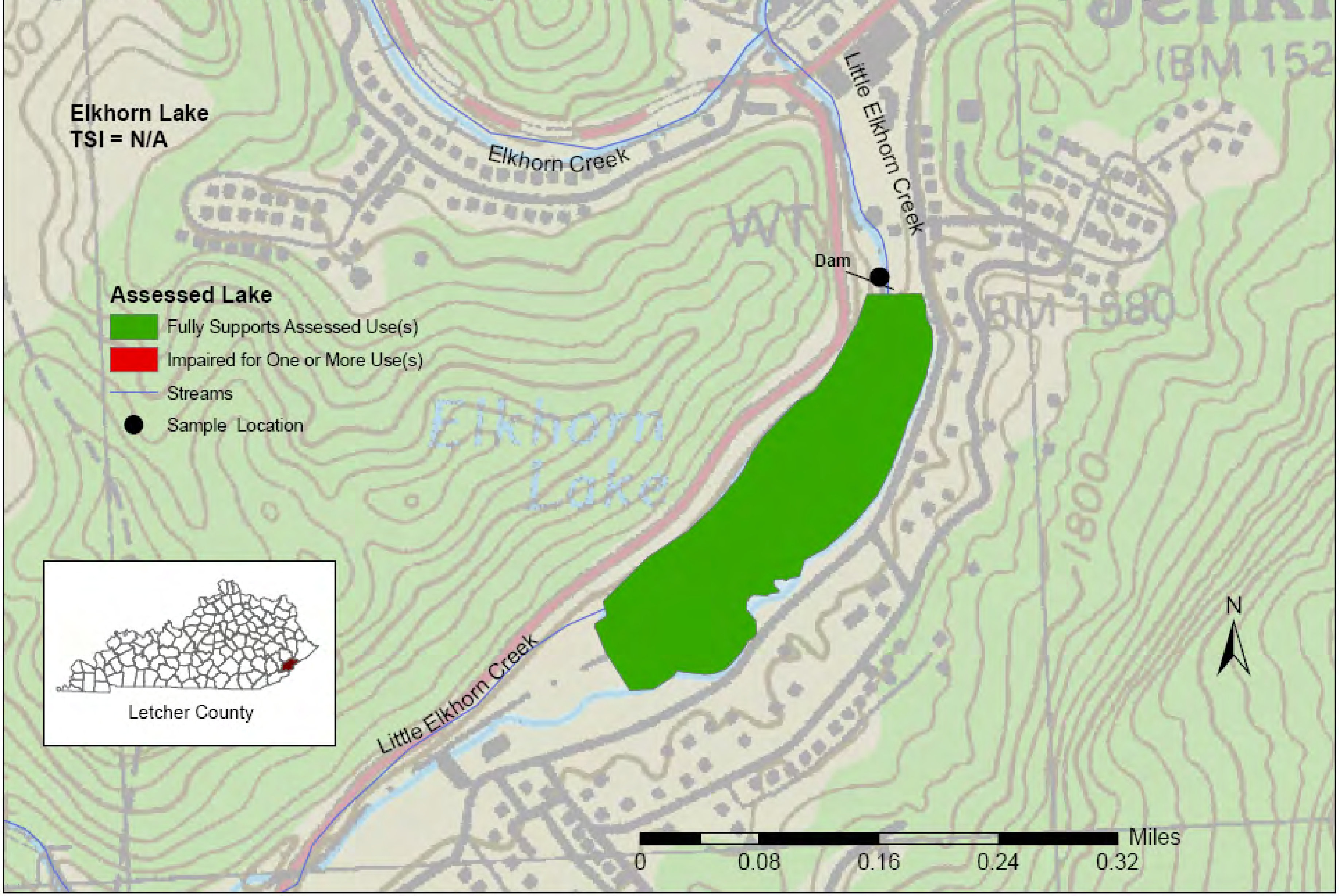


Figure C-4. Monitoring locations, trophic state index and general use support on Fishtrap Lake in the Big Sandy River basin.

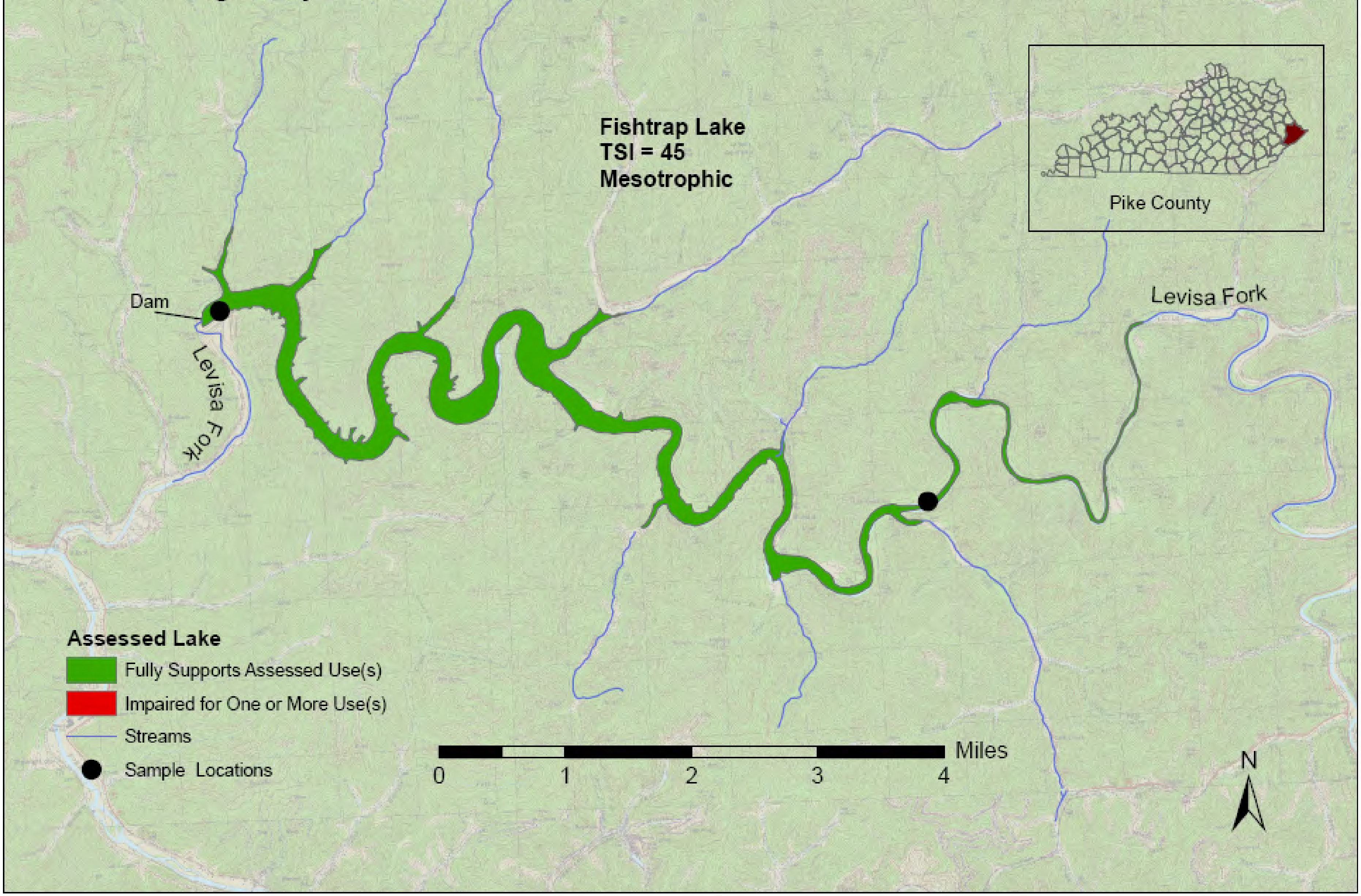


Figure C-5. Monitoring locations, trophic state index and general use support on Grayson Lake in the Little Sandy River basin.

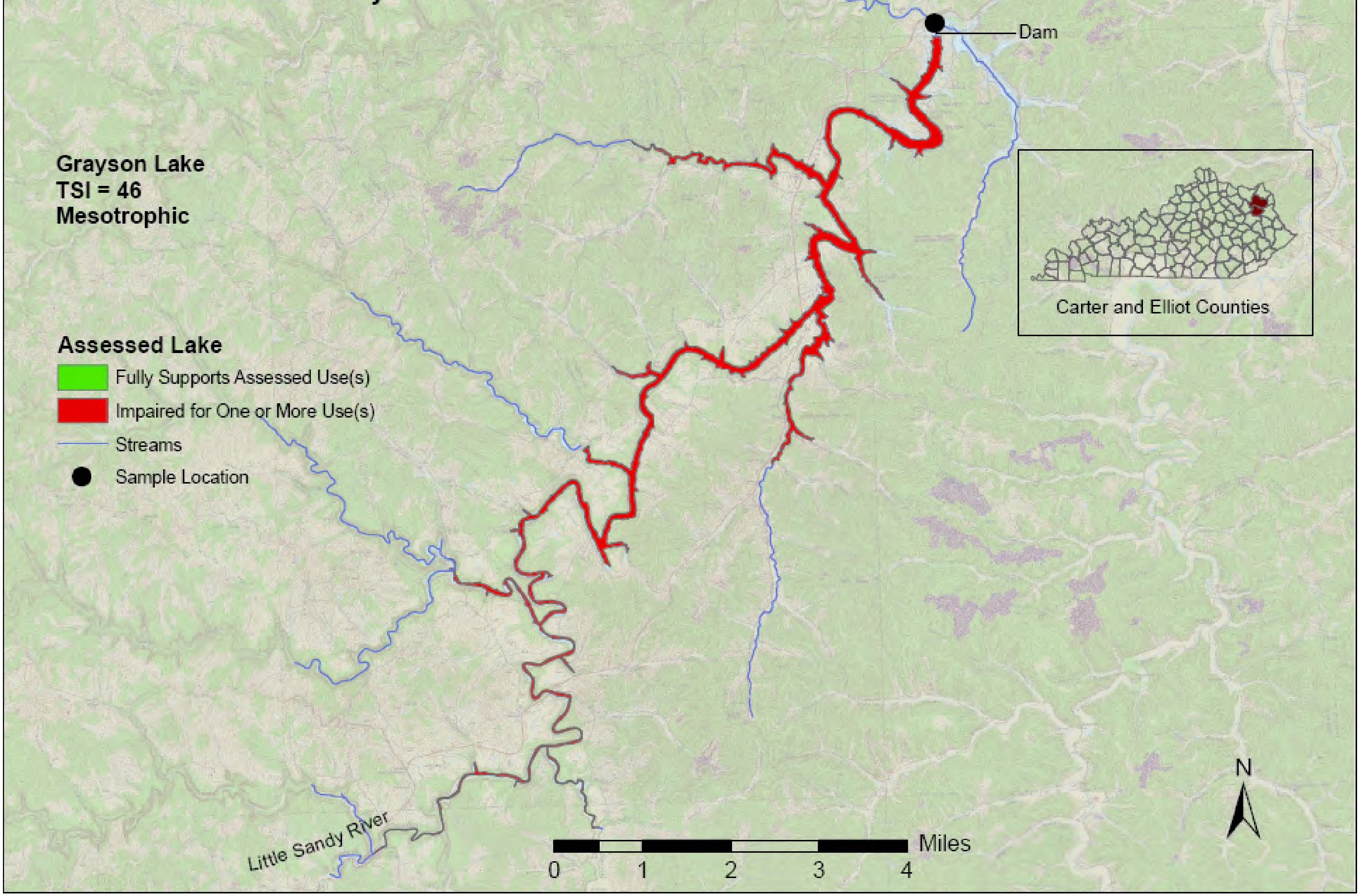
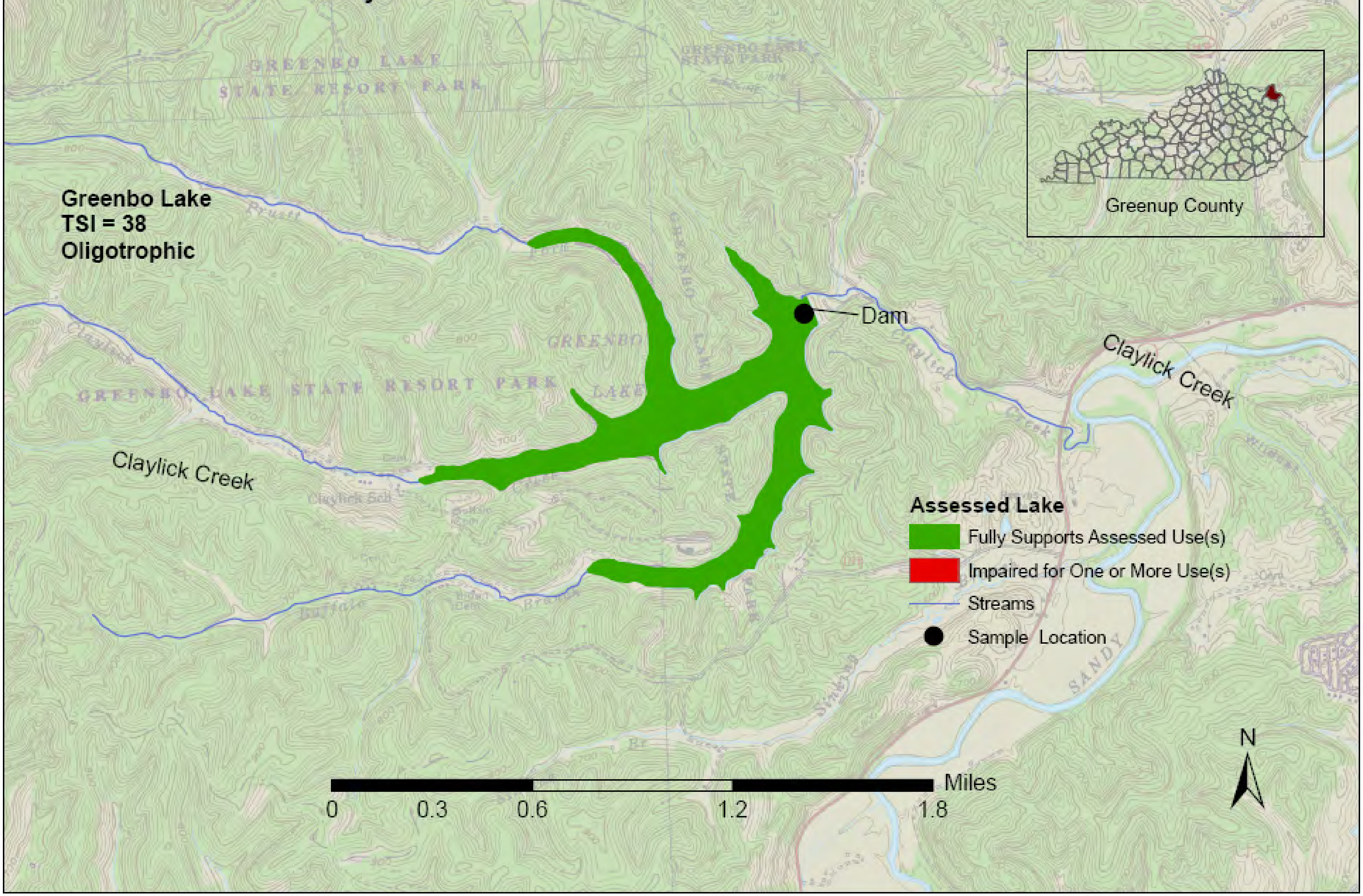


Figure C-6. Monitoring locations, trophic state index and general use support on Greenbo Lake in the Little Sandy River basin.



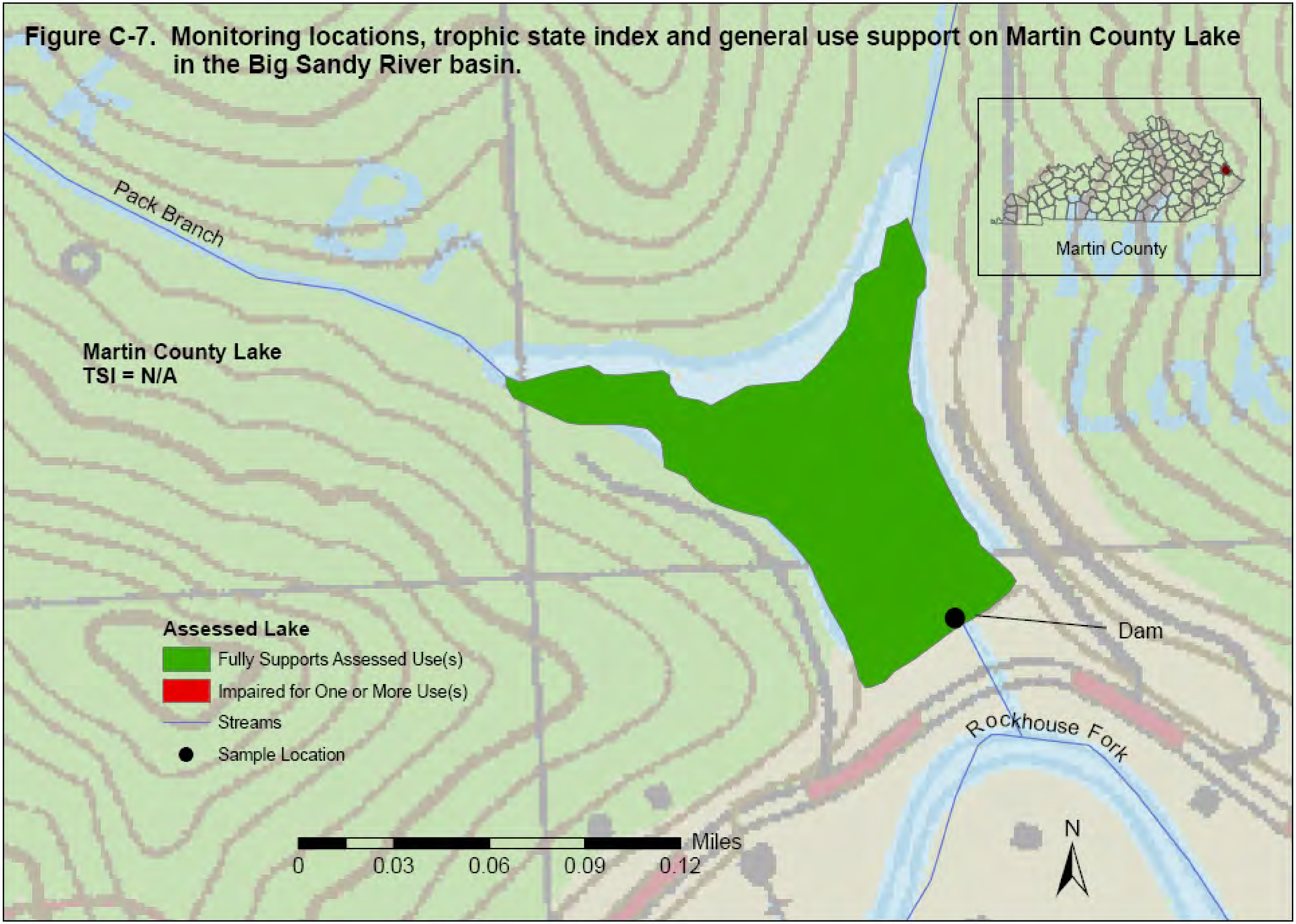


Figure C-7. Monitoring locations, trophic state index and general use support on Martin County Lake in the Big Sandy River basin.

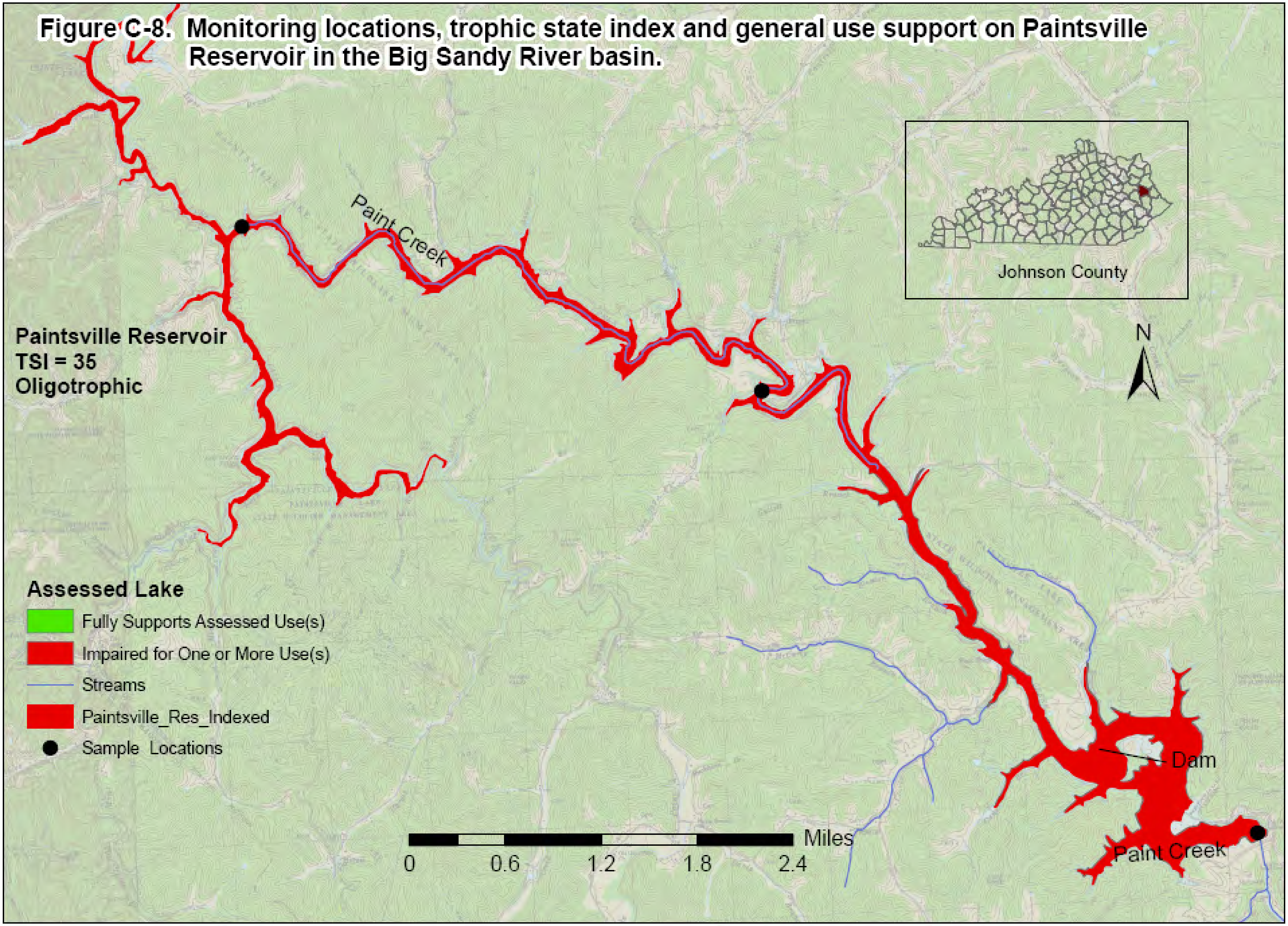


Figure C-8. Monitoring locations, trophic state index and general use support on Paintsville Reservoir in the Big Sandy River basin.

Figure C-9. Monitoring locations, trophic state index and general use support on Smokey Valley Lake in the Tygarts Creek basin.

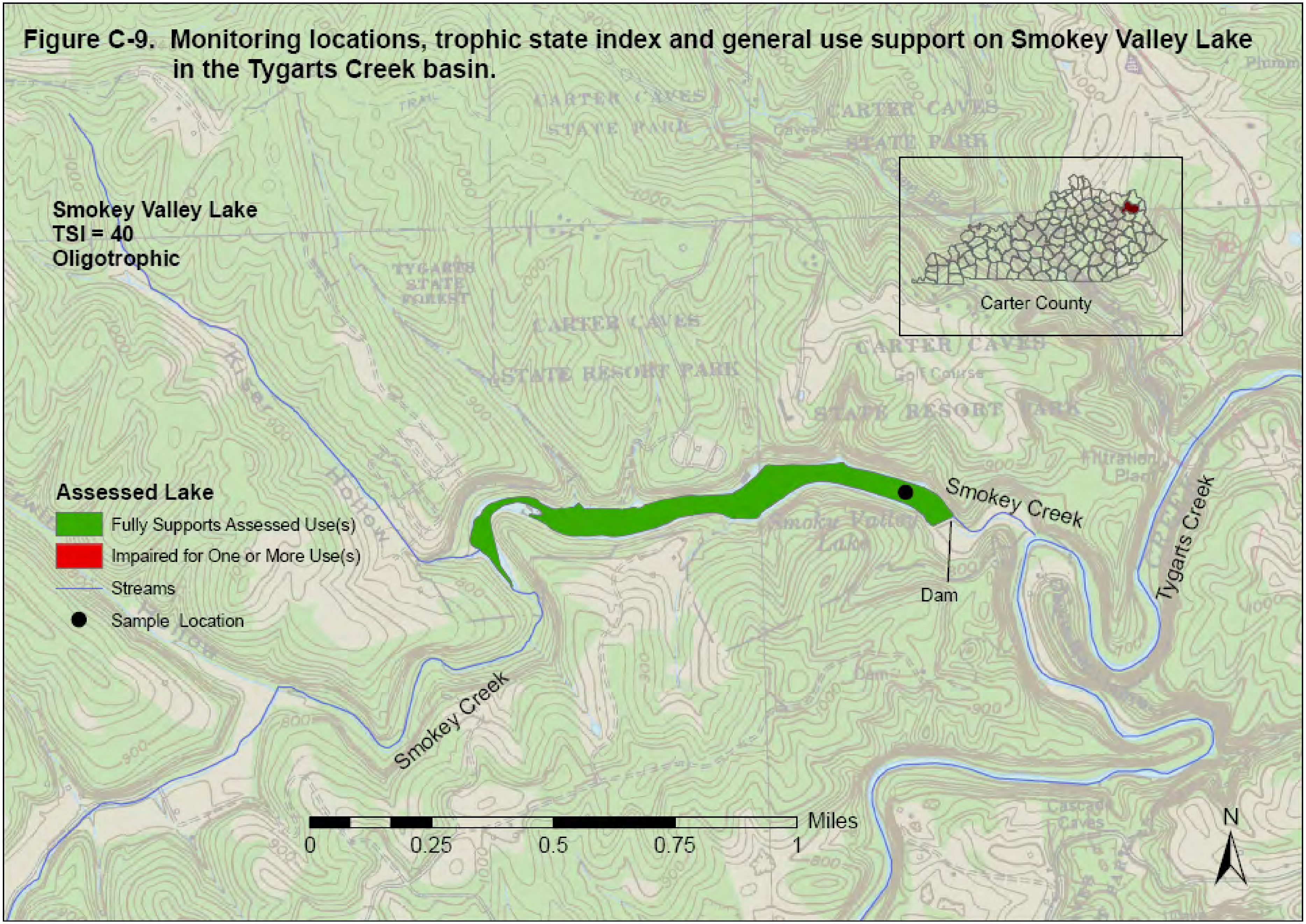


Figure C-10. Monitoring locations, trophic state index and general use support on Yatesville Reservoir in the Big Sandy River basin.

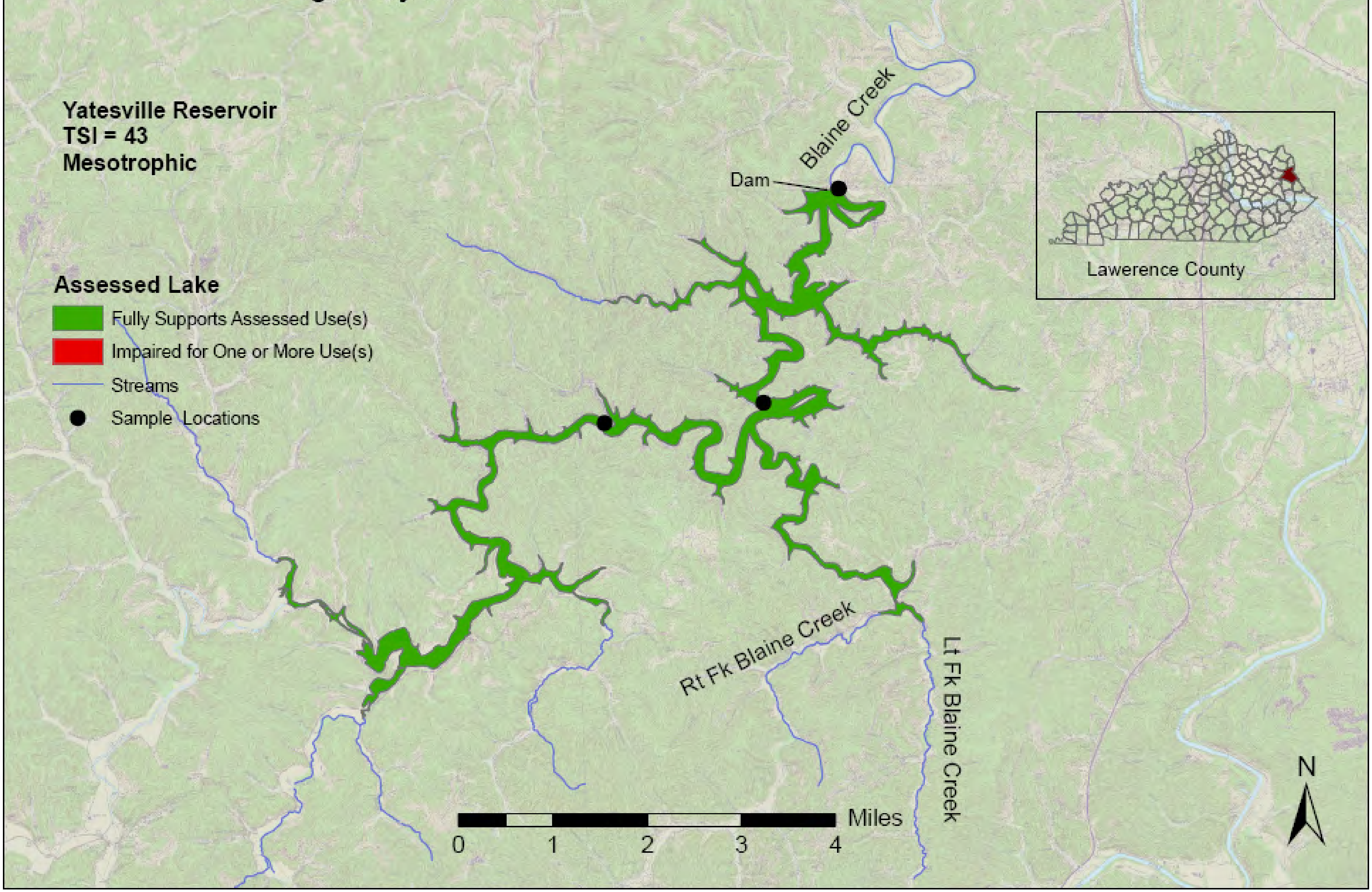


Figure C-11. Monitoring locations and general use support on Beech Fork Reservoir in the Kentucky River basin.

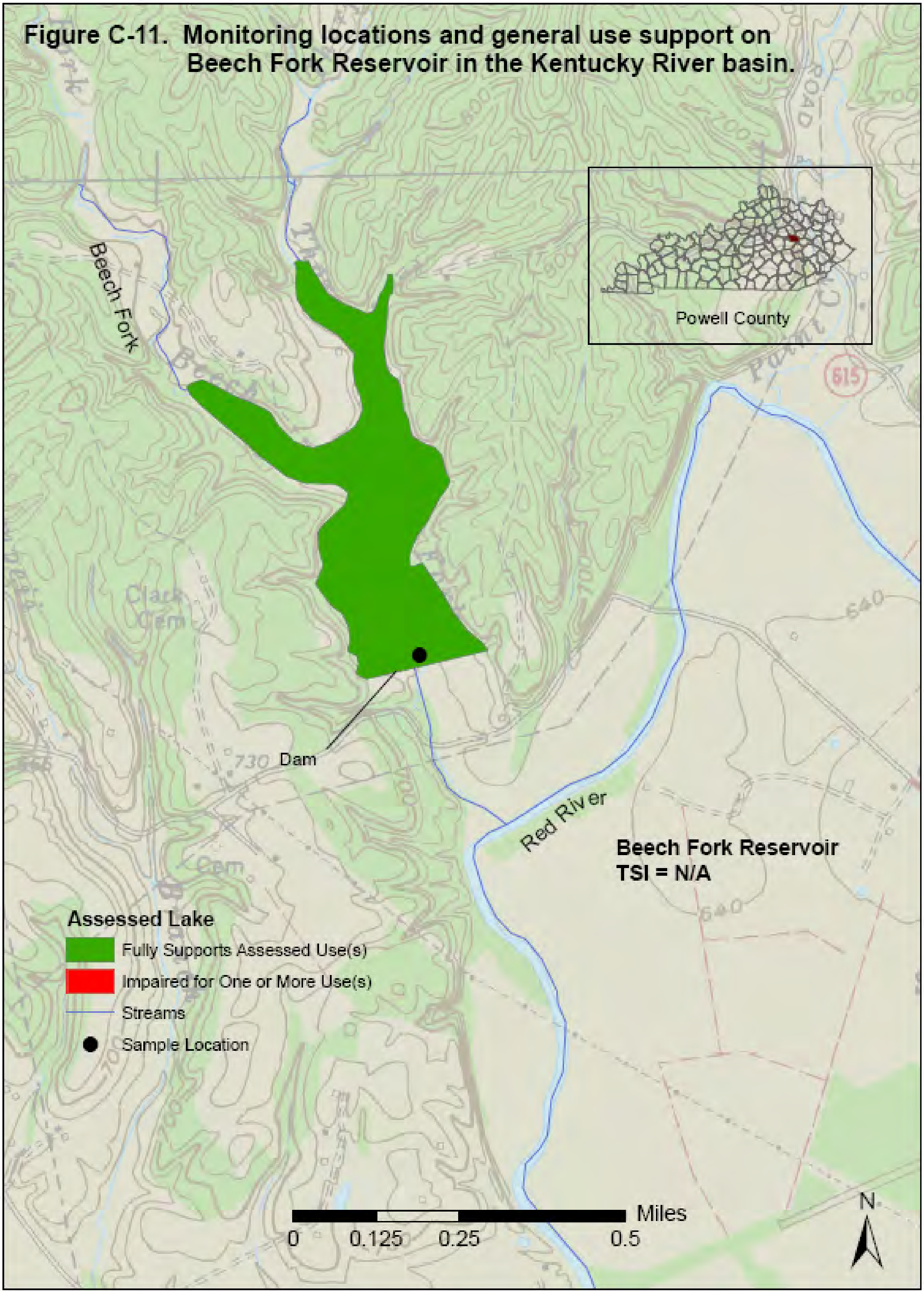
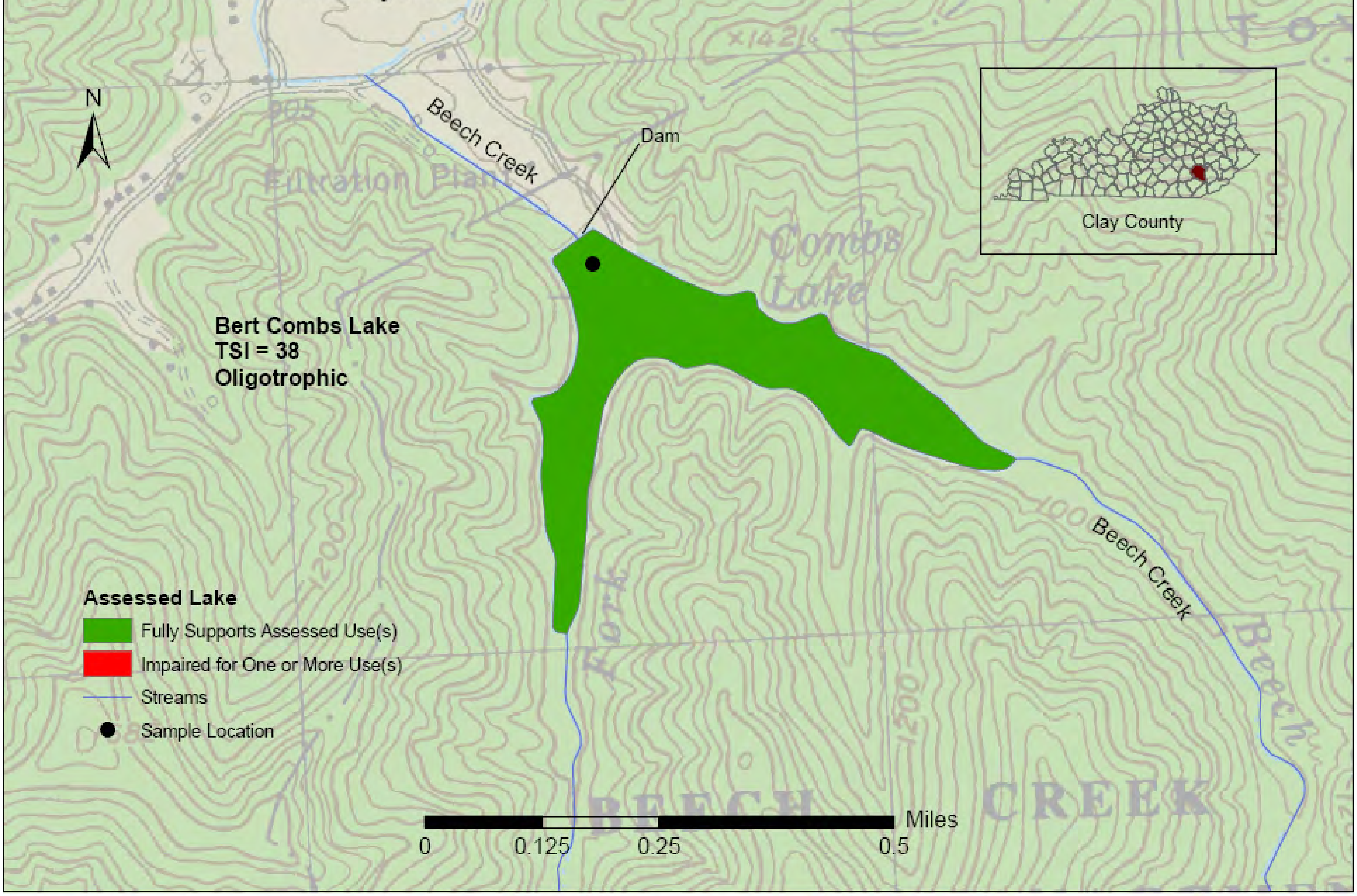


Figure C-12. Monitoring locations, trophic state index and general use support on Bert Combs Lake in the Kentucky River basin.



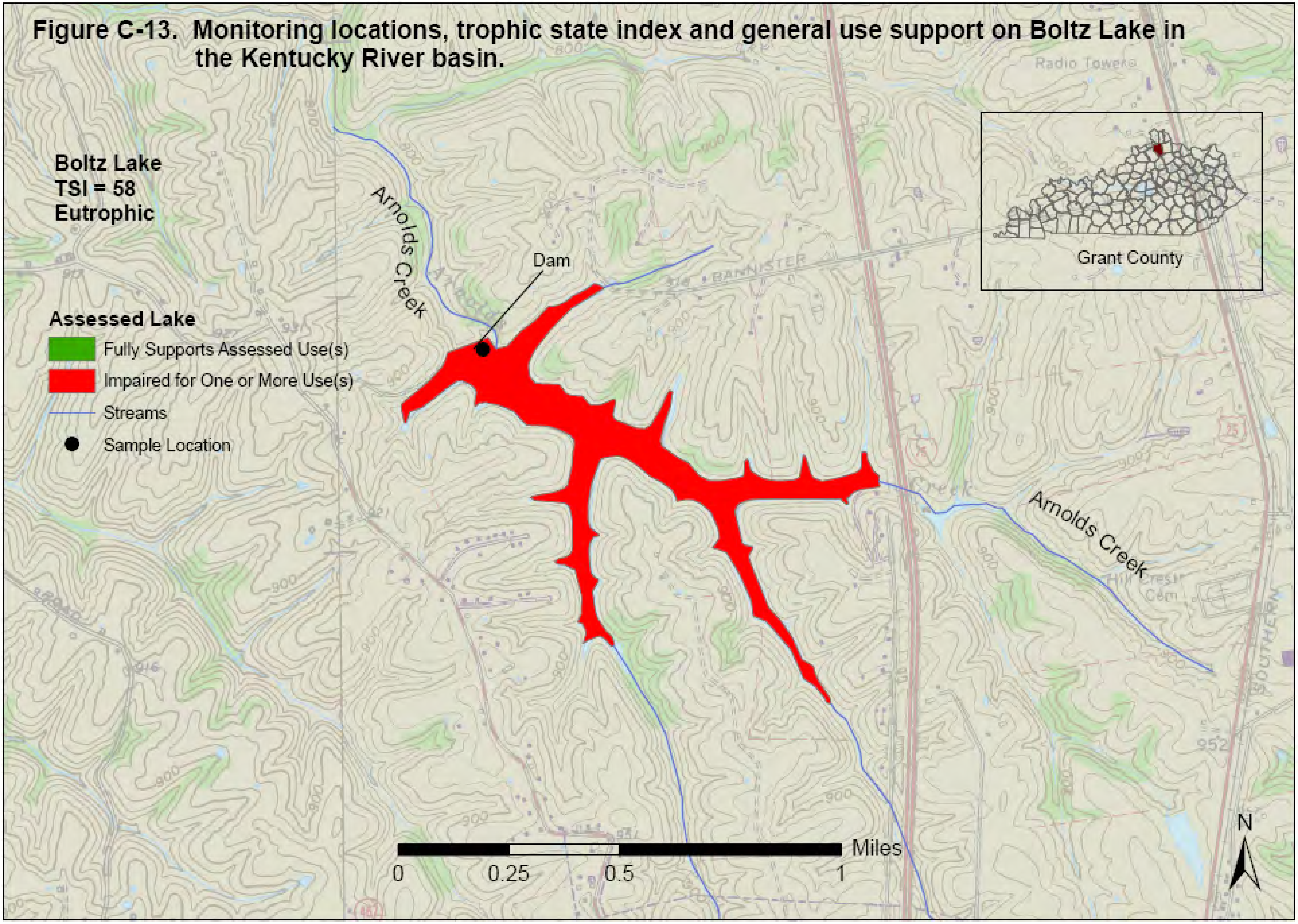


Figure C-13. Monitoring locations, trophic state index and general use support on Boltz Lake in the Kentucky River basin.

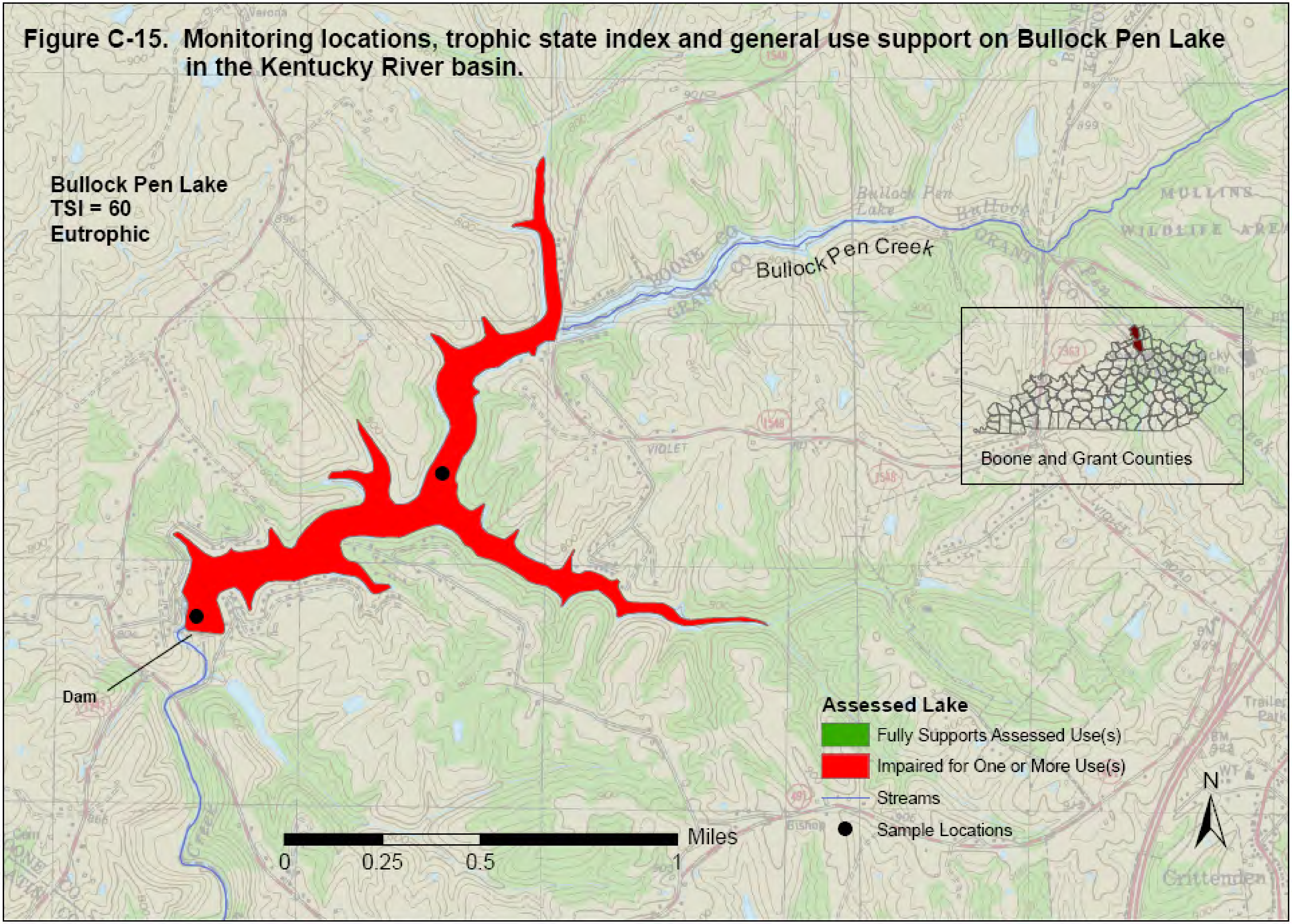


Figure C-15. Monitoring locations, trophic state index and general use support on Bullock Pen Lake in the Kentucky River basin.

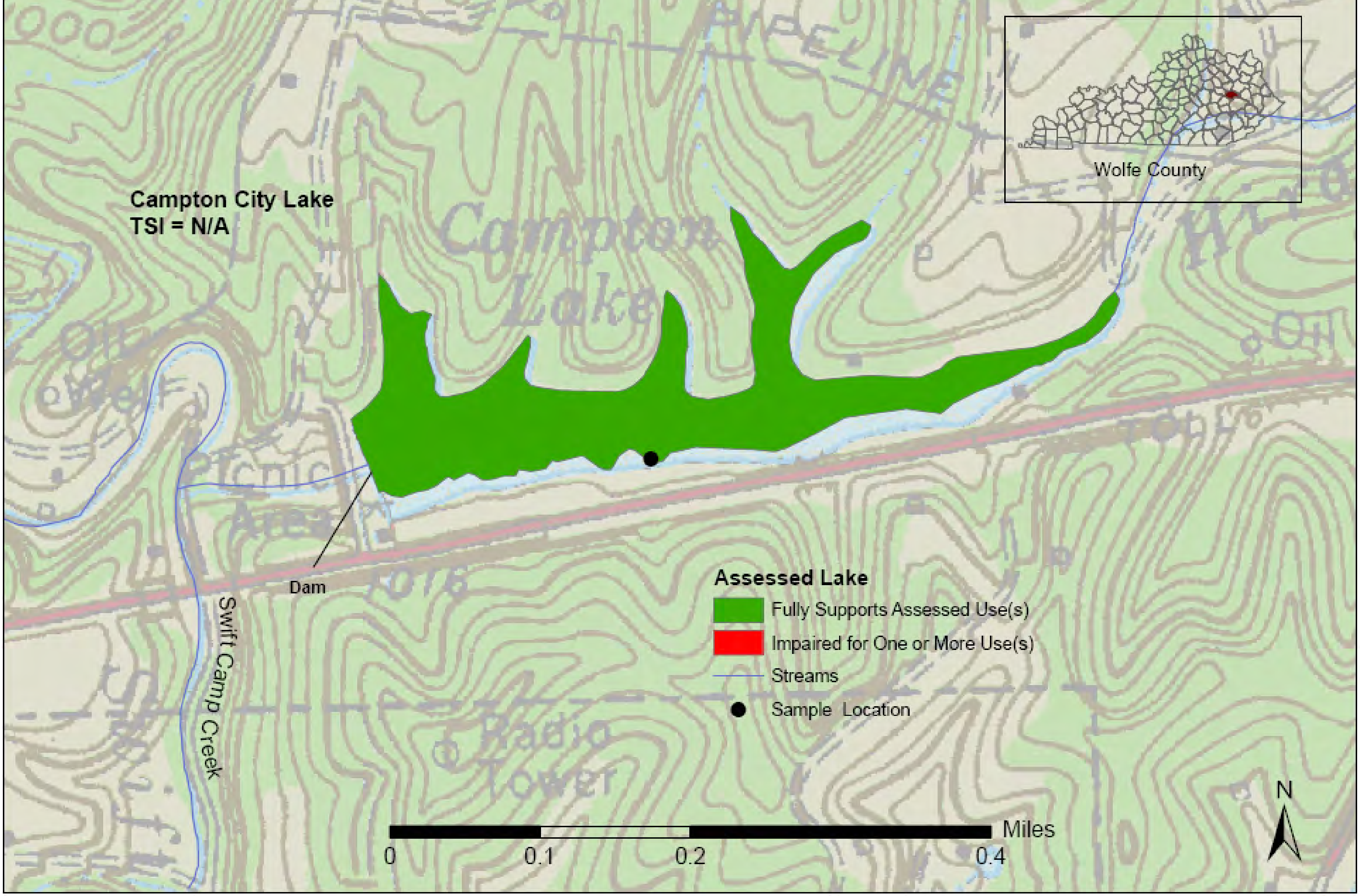
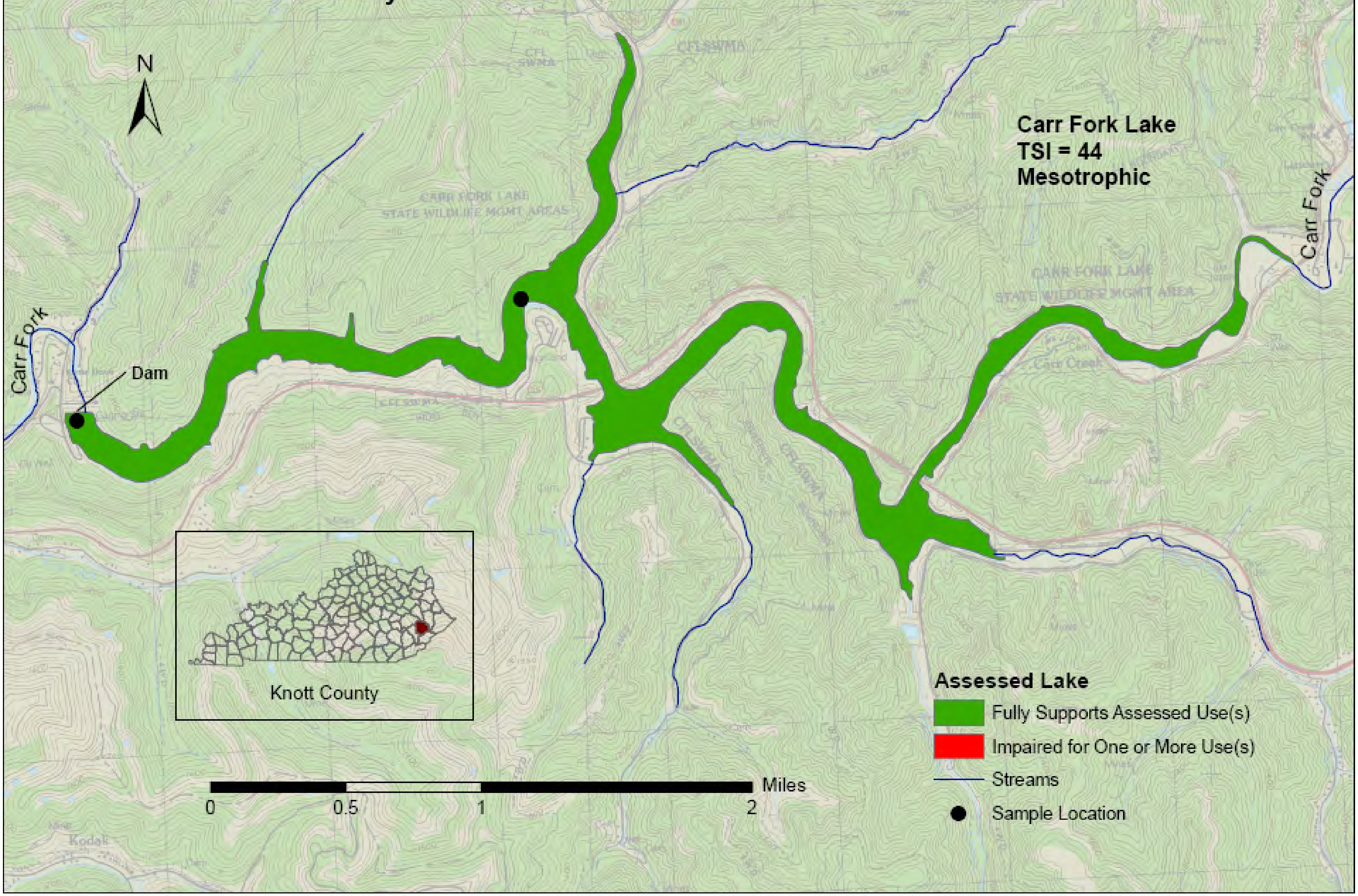


Figure C-16. Monitoring location and general use support on Campton City Lake in the Kentucky River basin.

Figure C-17. Monitoring locations, trophic state index and general use support on Carr Fork Lake in the Kentucky River basin.



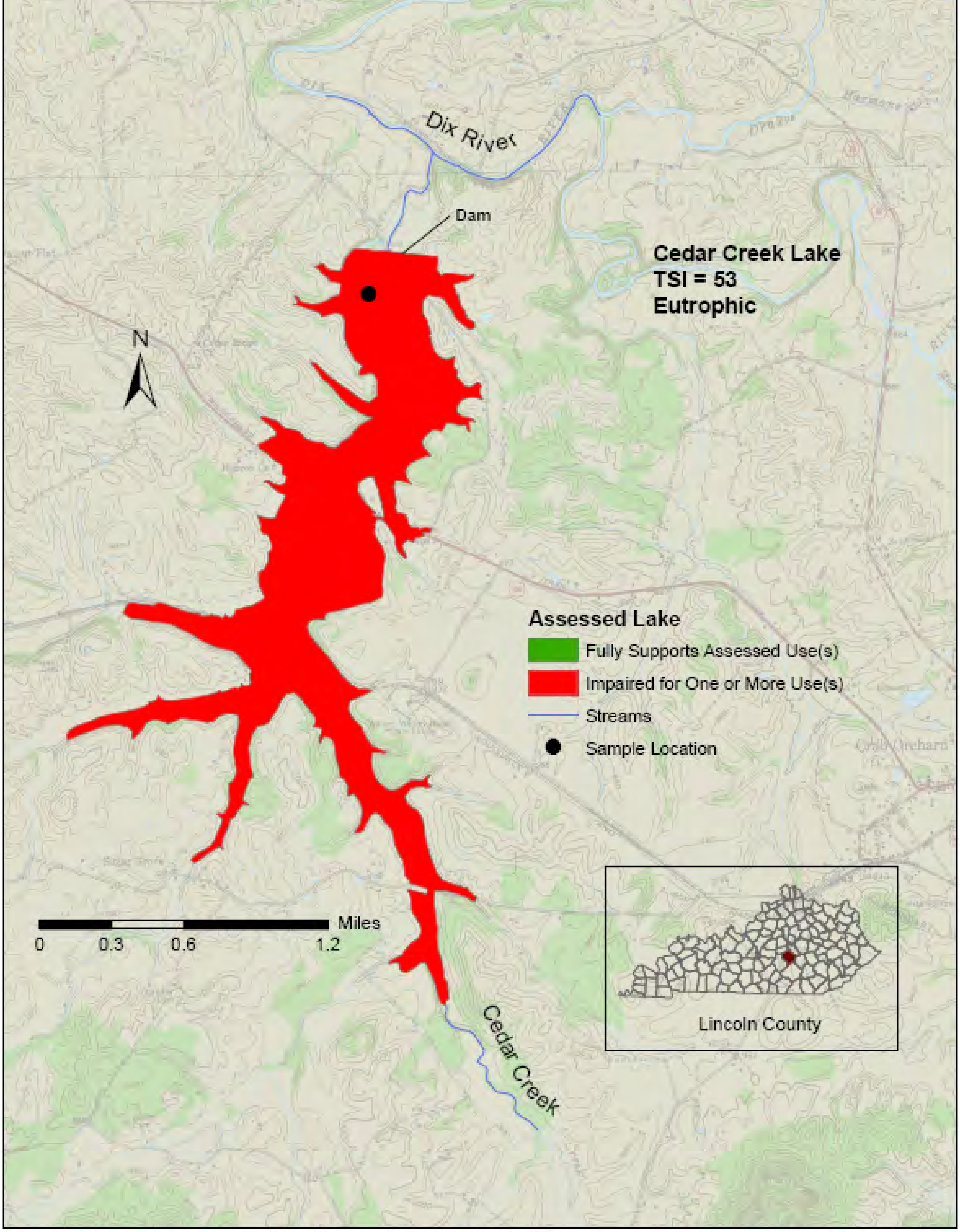
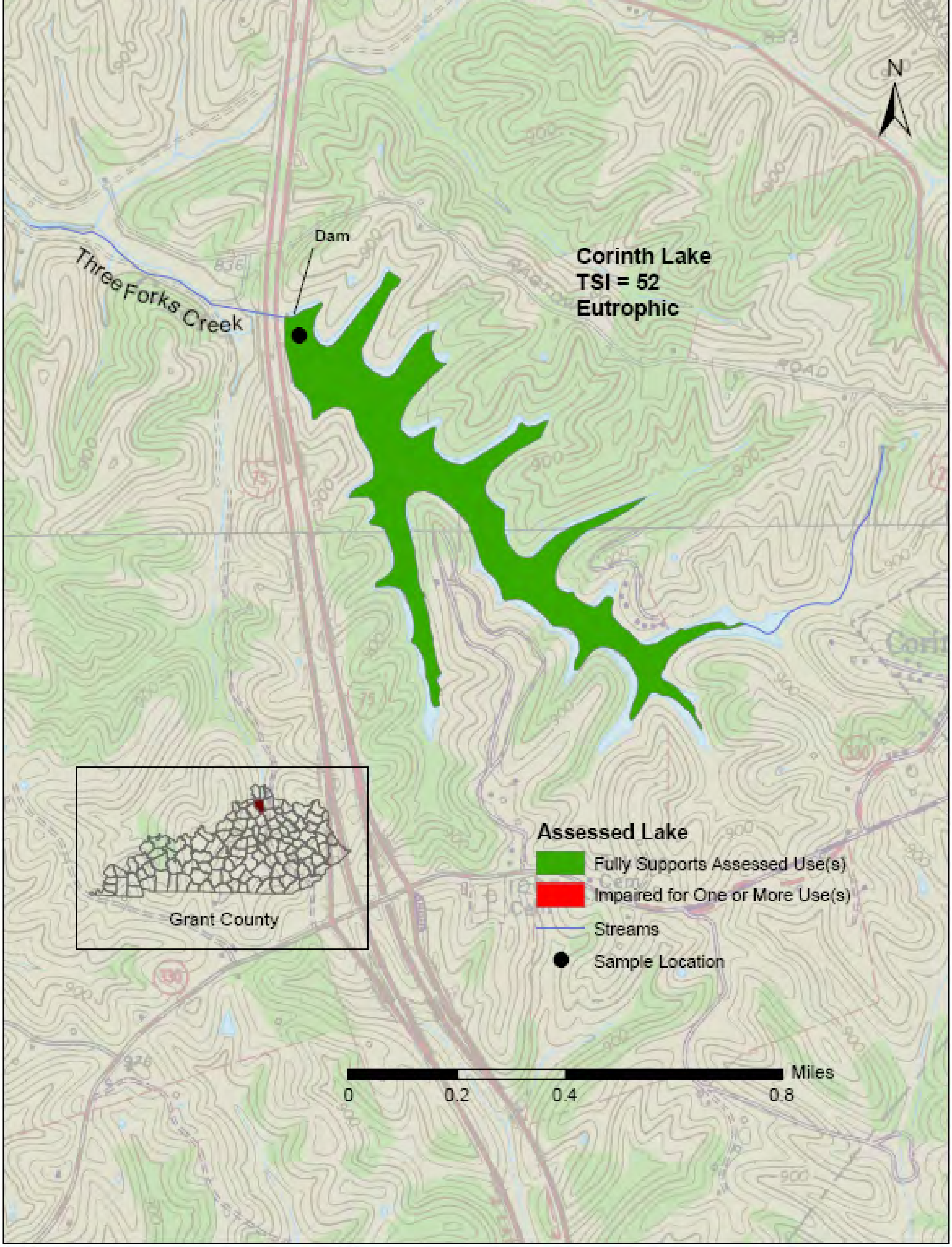


Figure C-18. Monitoring locations, trophic state index and general use support on Cedar Creek Lake in the Kentucky River basin.

Figure C-19. Monitoring locations, trophic state index and general use support on Corinth Lake in the Kentucky River basin.



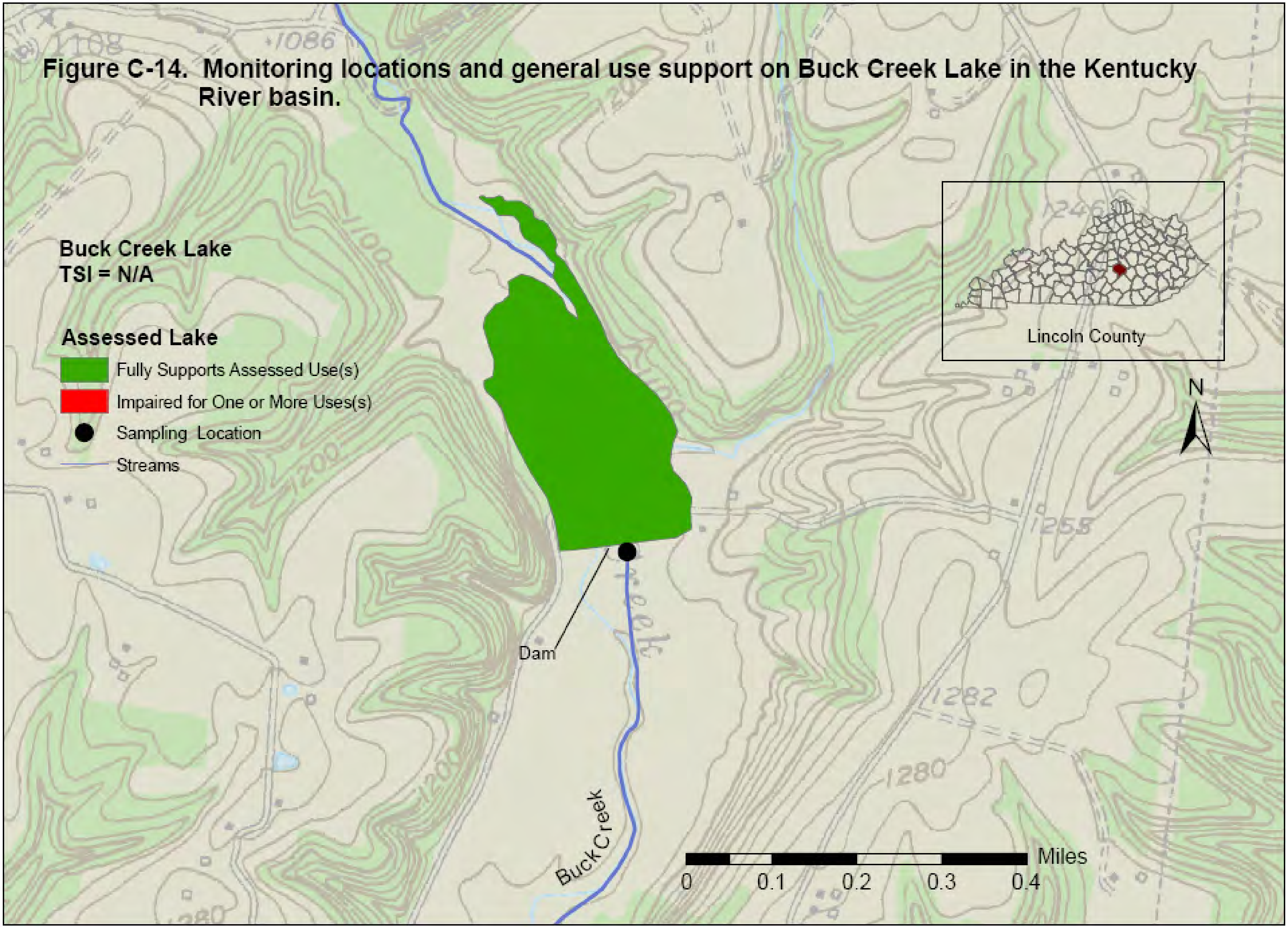


Figure C-14. Monitoring locations and general use support on Buck Creek Lake in the Kentucky River basin.

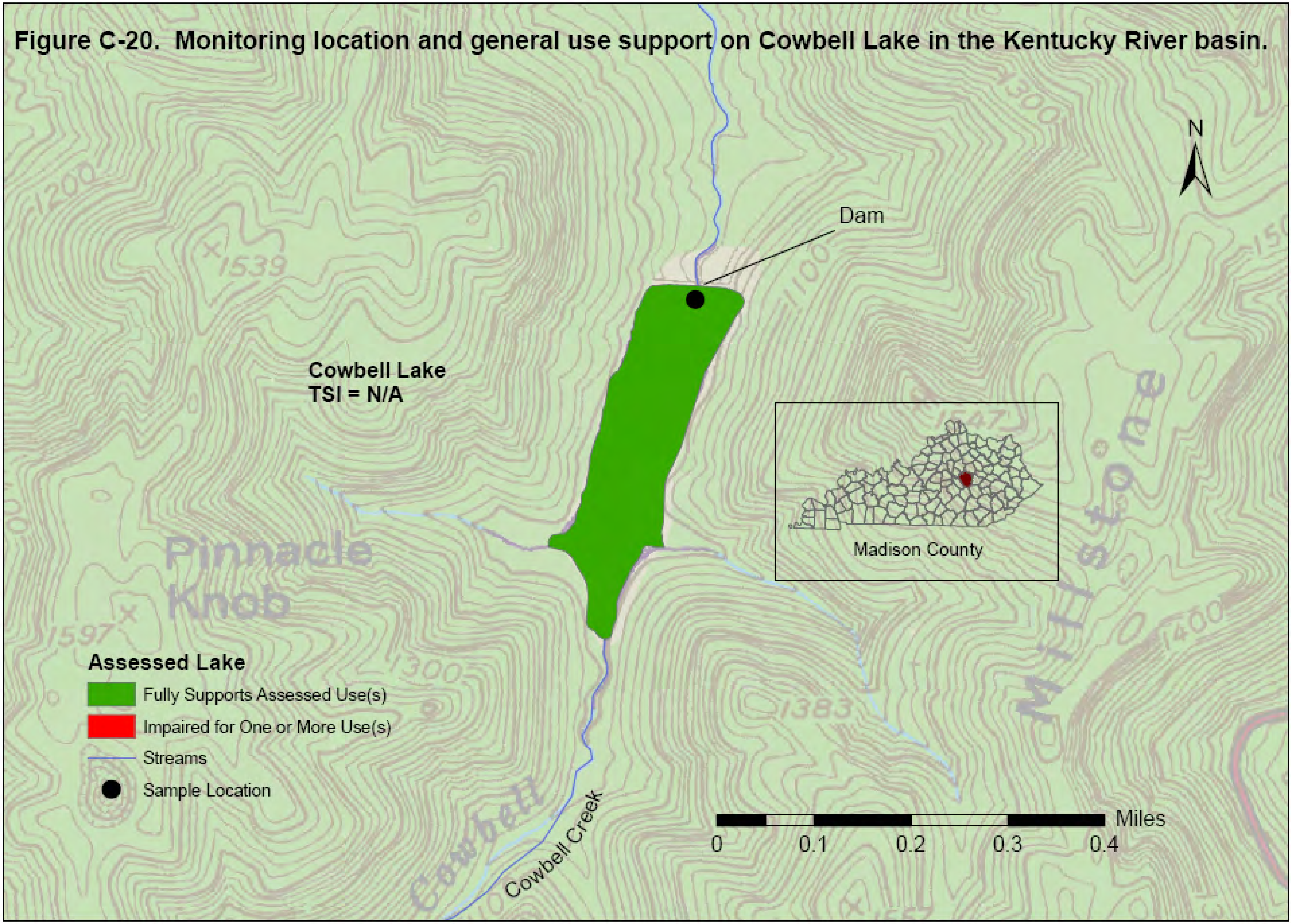


Figure C-20. Monitoring location and general use support on Cowbell Lake in the Kentucky River basin.

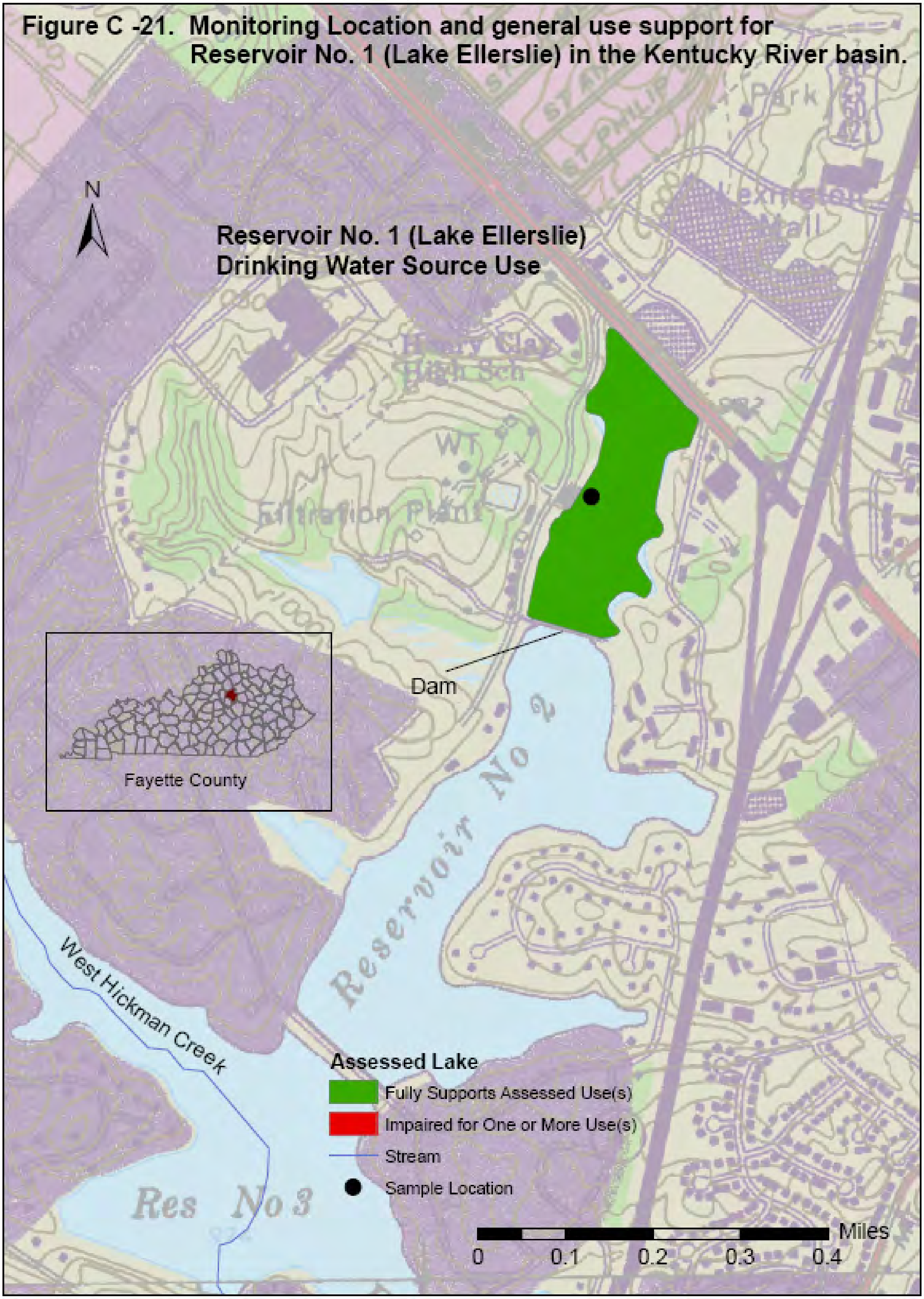


Figure C -21. Monitoring Location and general use support for Reservoir No. 1 (Lake Ellerslie) in the Kentucky River basin.

Figure C-22. Monitoring locations, trophic state index and general use support on Elmer Davis Lake in the Kentucky River basin.

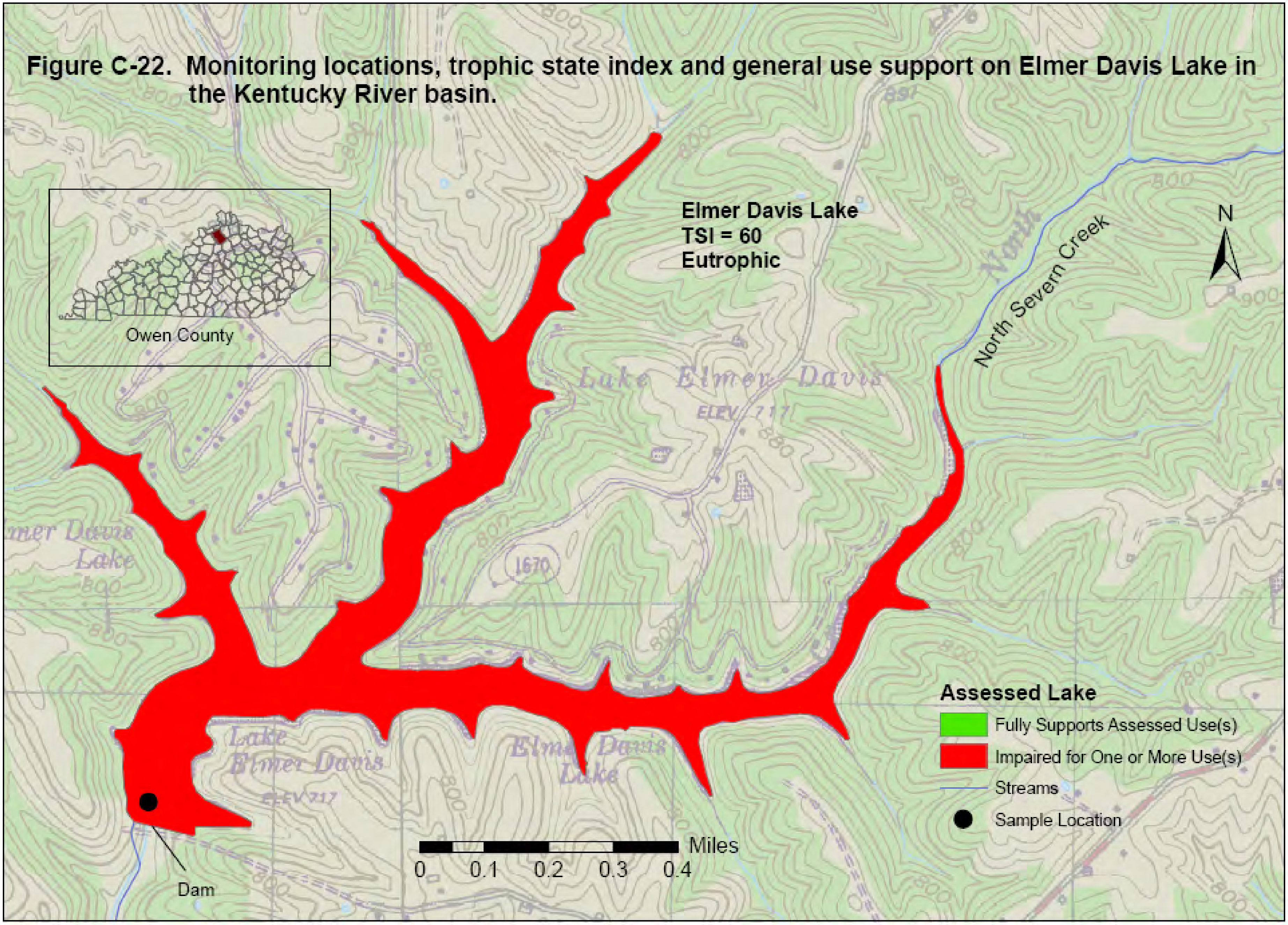


Figure C-23. Monitoring locations, trophic state index and general use support on Fishpond Lake in the Kentucky River basin.

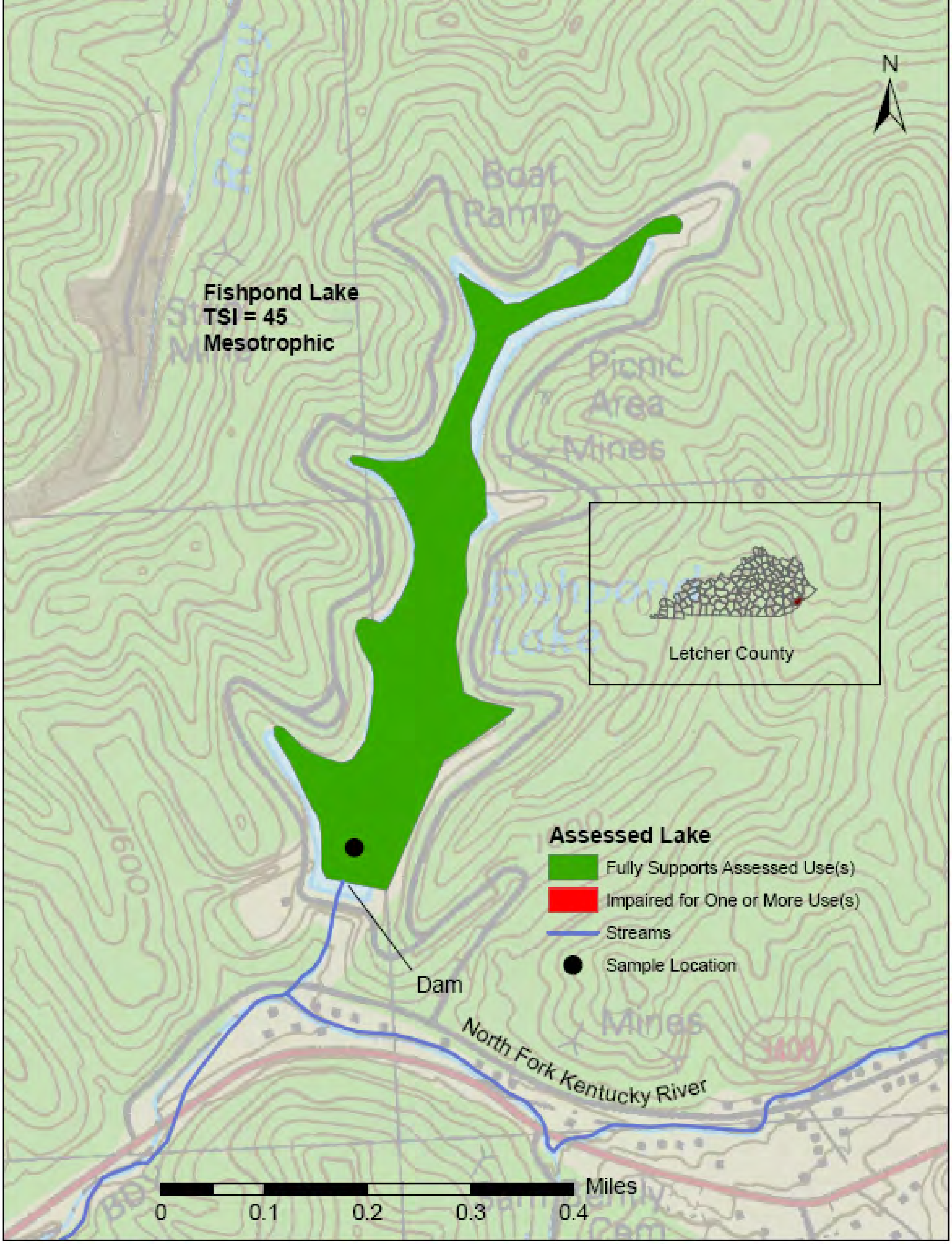


Figure C-24. Monitoring locations, trophic state index and general use support on Game Farm Lake in the Kentucky River basin.

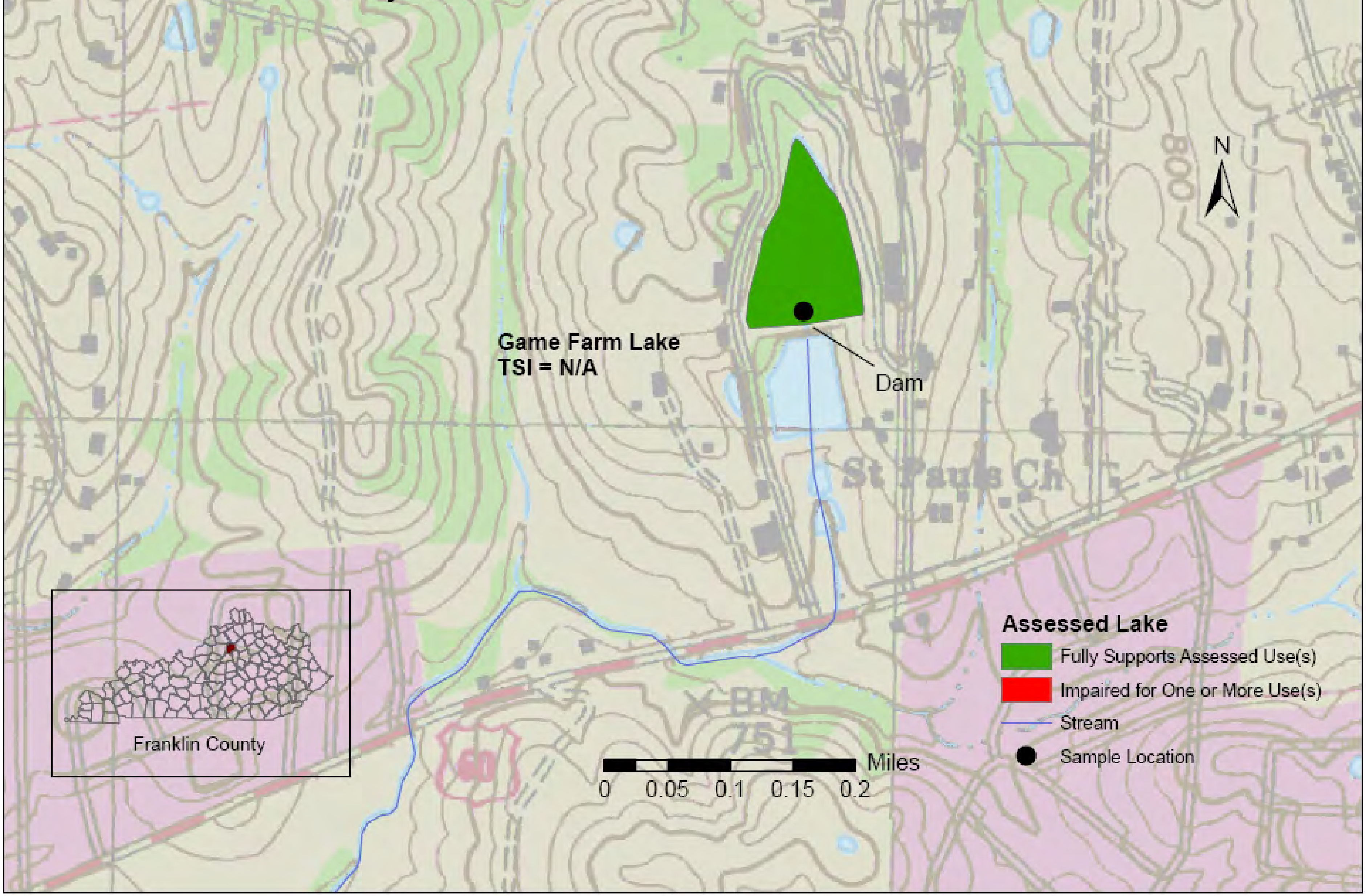


Figure C-25. Monitoring locations, trophic state index and general use support on General Butler State Park Lake in the Kentucky River basin.

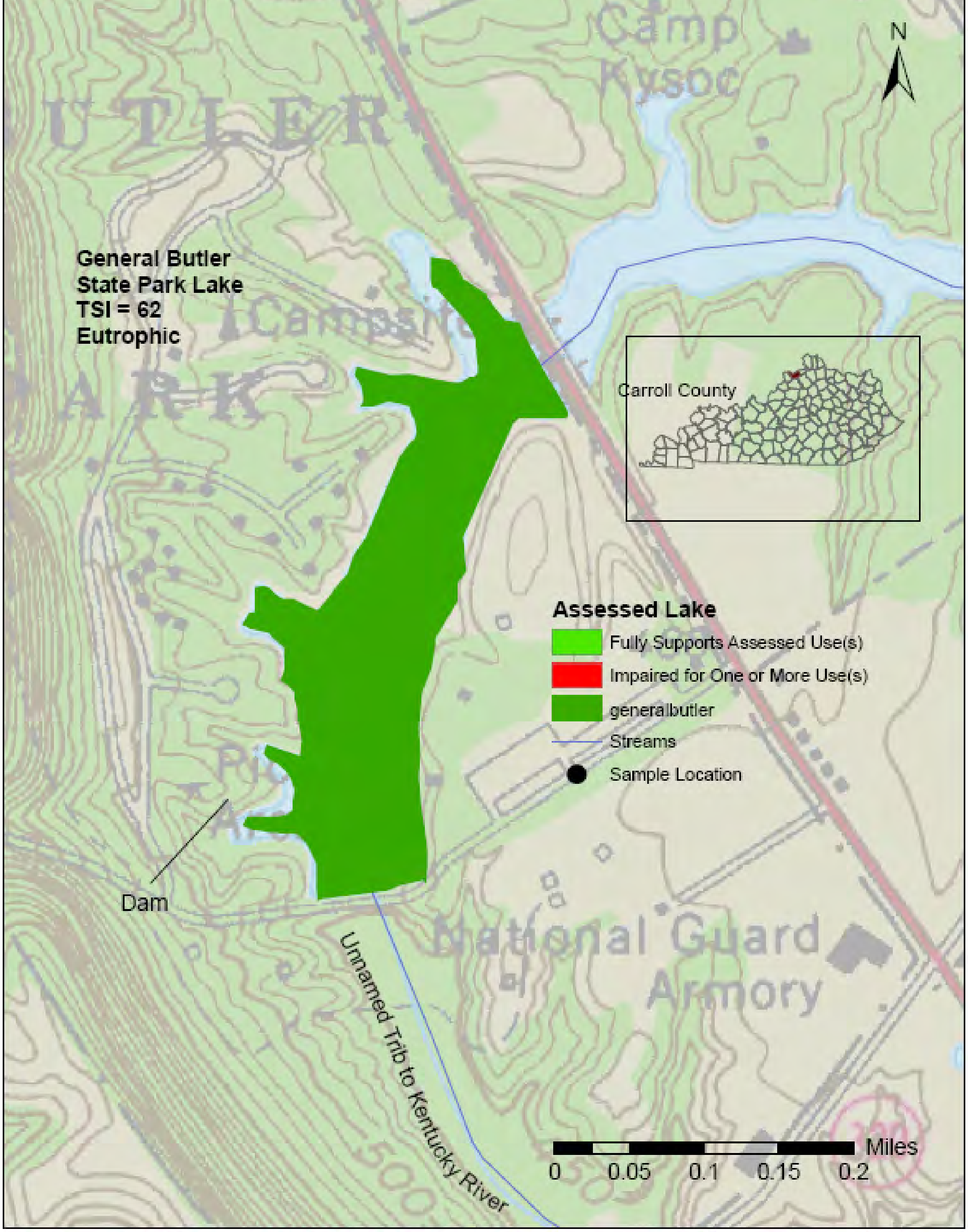


Figure C-26. Monitoring locations, trophic state index and general use support on Herrington Lake in the Kentucky River basin.

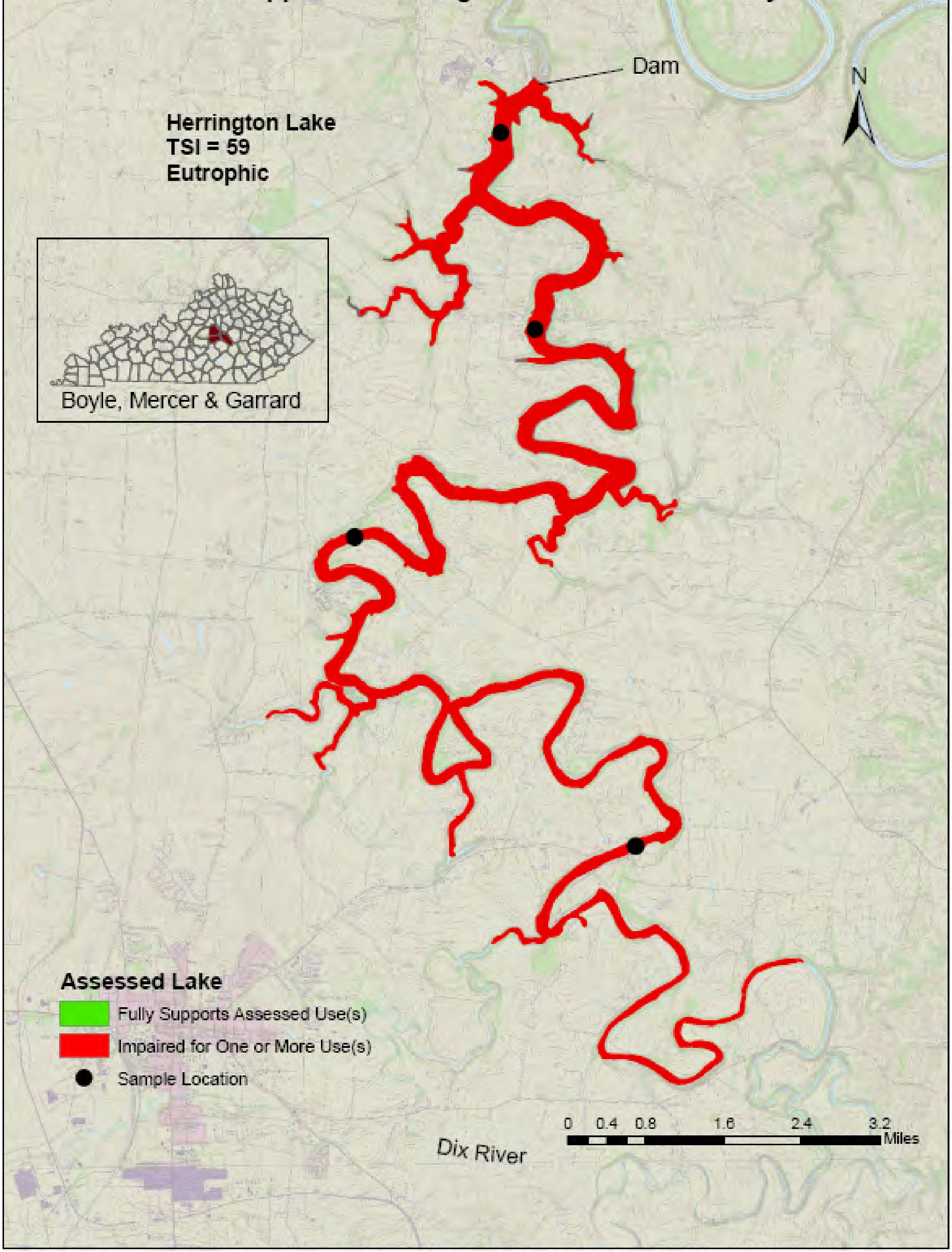


Figure C-29. Monitoring locations and general use support on Lexington Reservoir No. 4 (Jacobson Reservoir) in the Kentucky River basin.

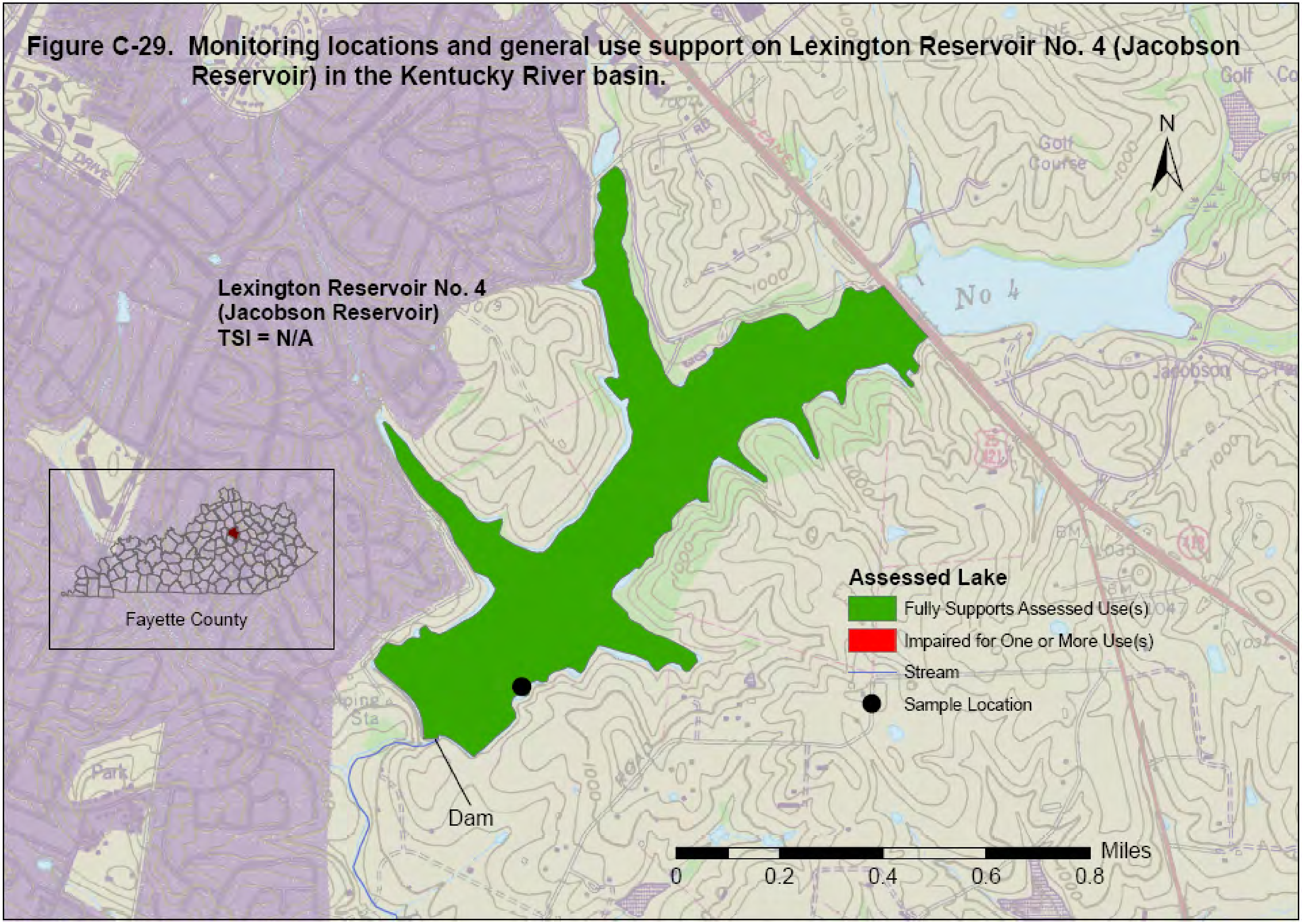
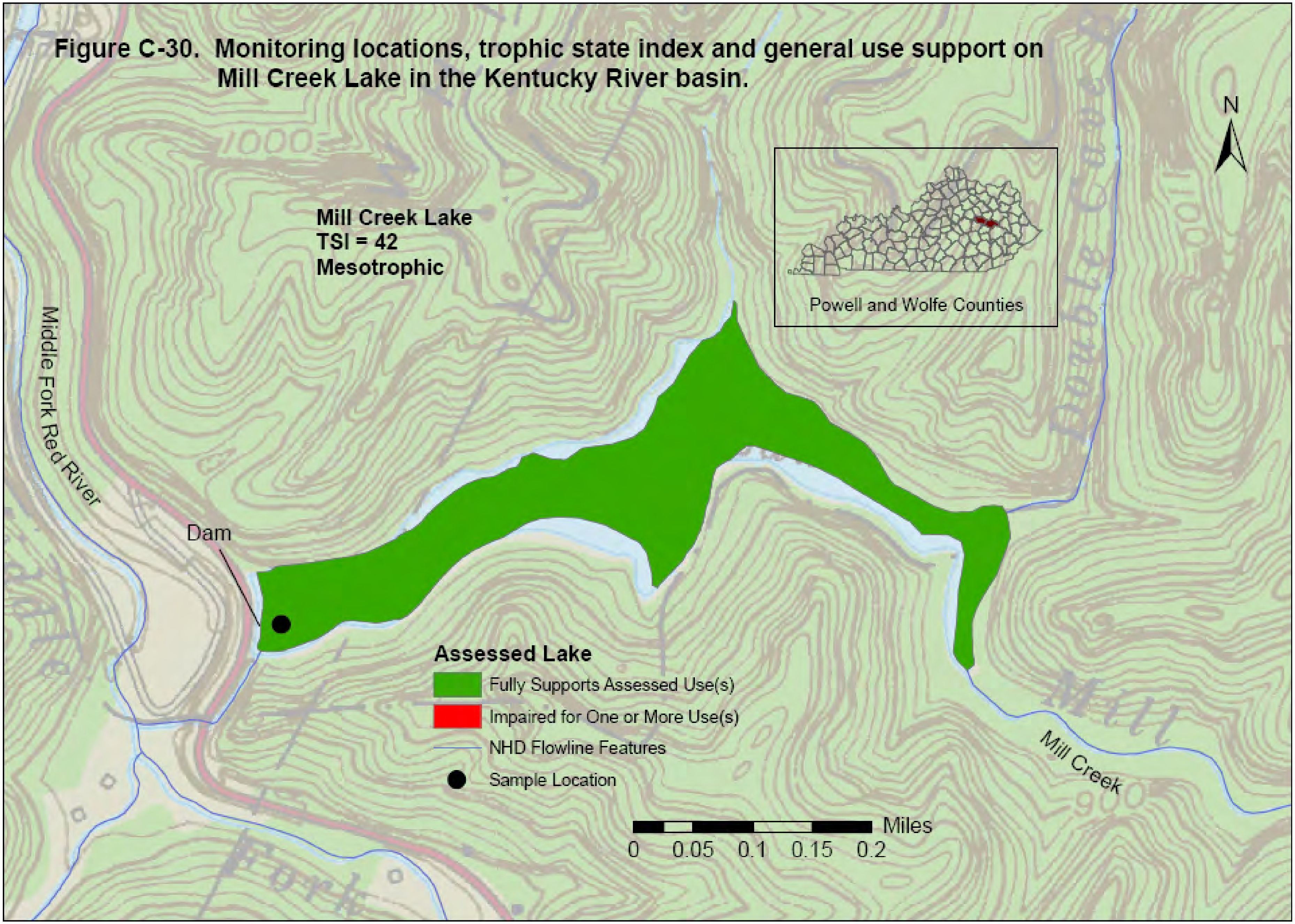


Figure C-30. Monitoring locations, trophic state index and general use support on Mill Creek Lake in the Kentucky River basin.



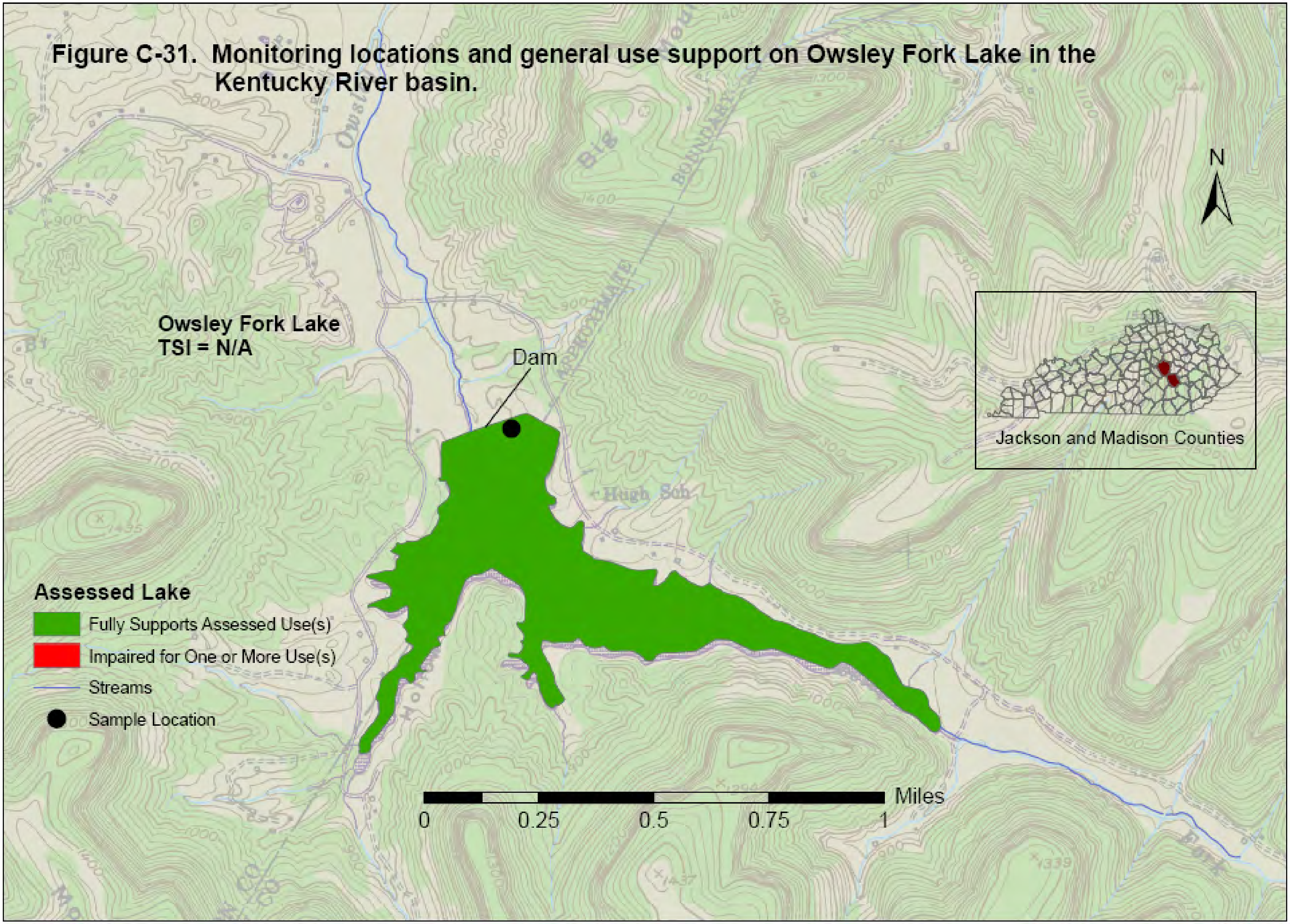


Figure C-31. Monitoring locations and general use support on Owsley Fork Lake in the Kentucky River basin.

Figure C-32. Monitoring locations, trophic state index and general use support on Panbowl Lake in the Kentucky River basin.

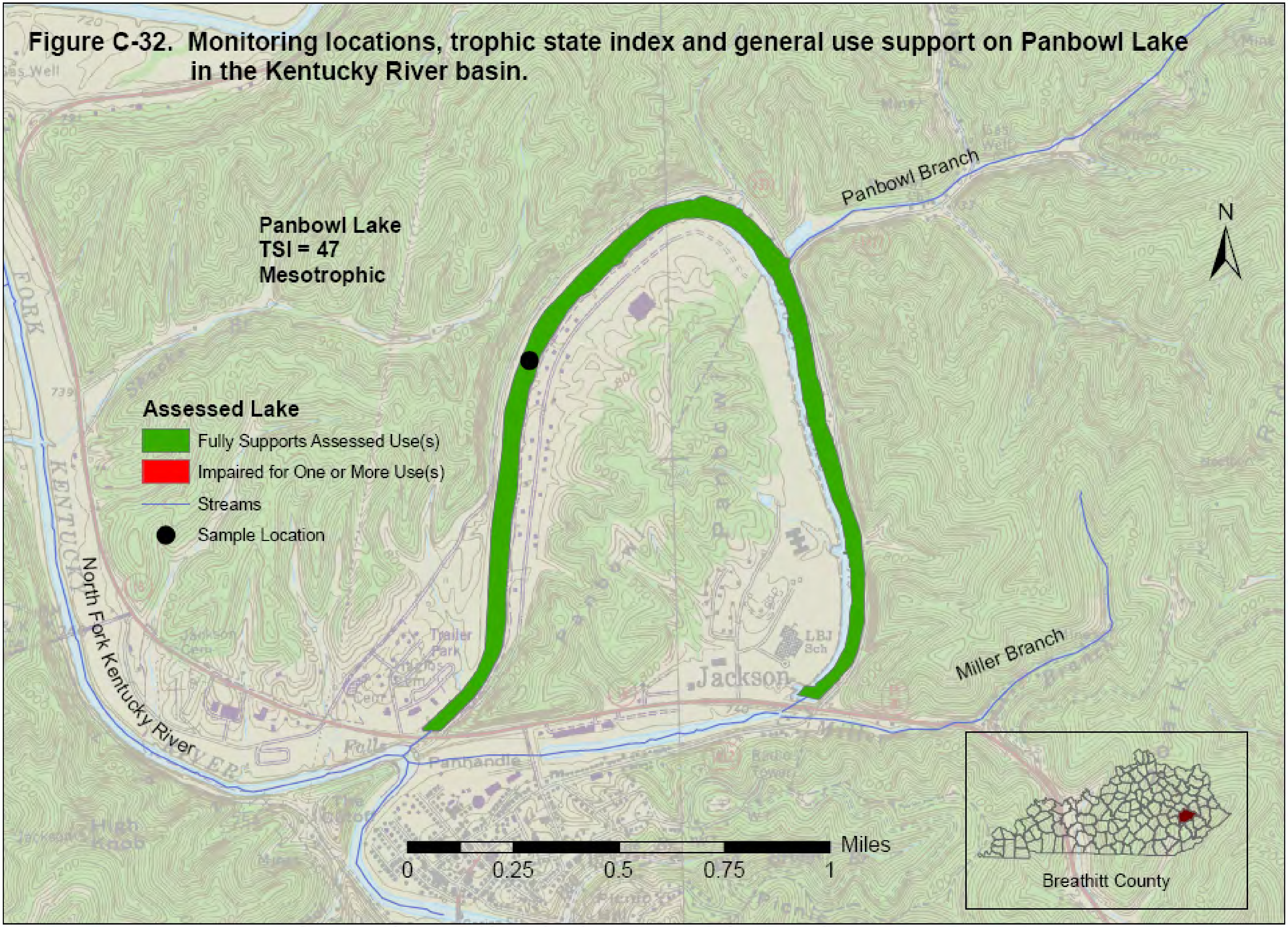


Figure C-33. Monitoring locations and general use support on Silver Creek Lake, Upper and Lower, in the Kentucky River basin.

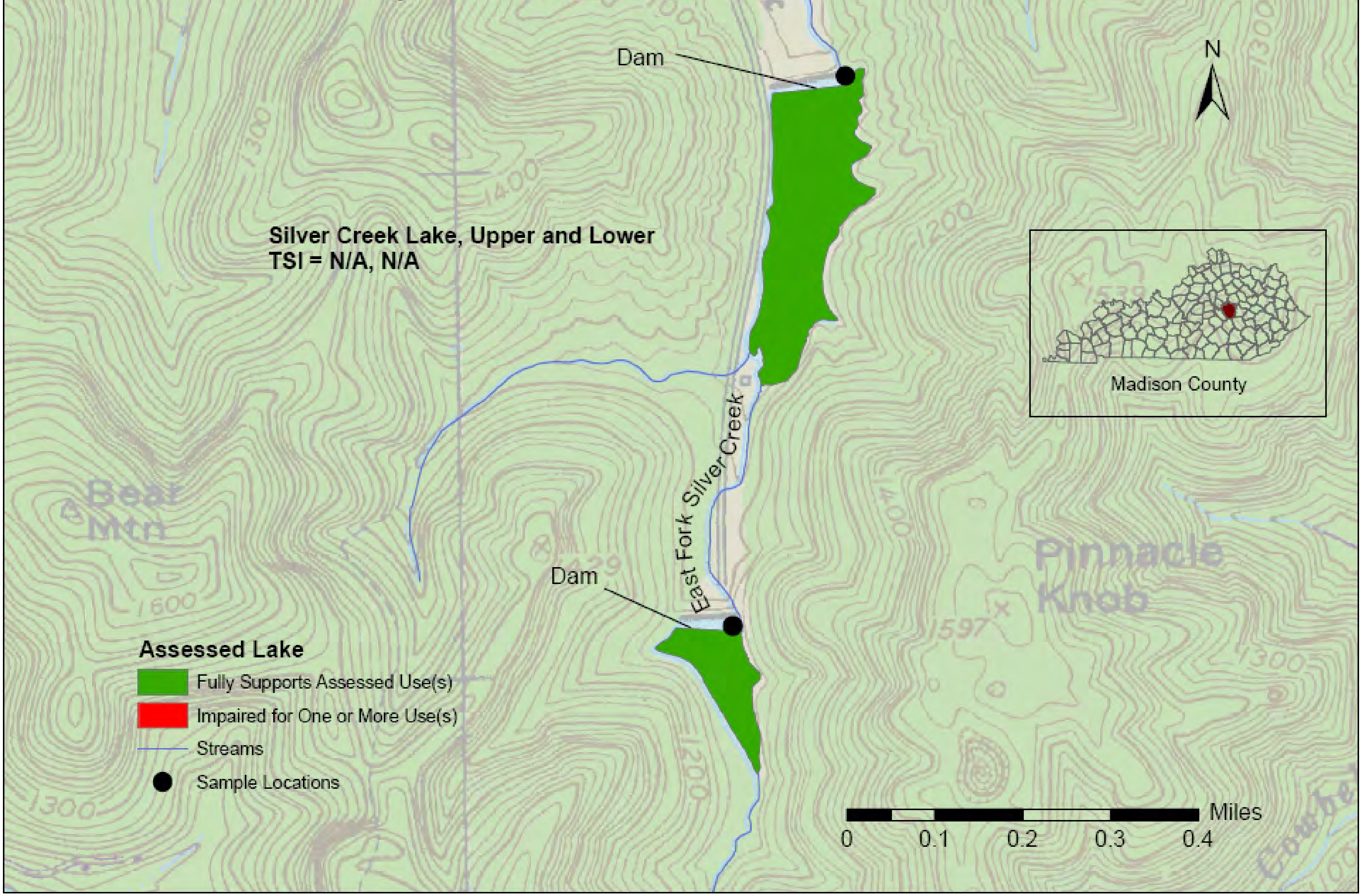


Figure C-34. Monitoring locations, trophic state index and general use support on Stanford Reservoir in the Kentucky River basin.

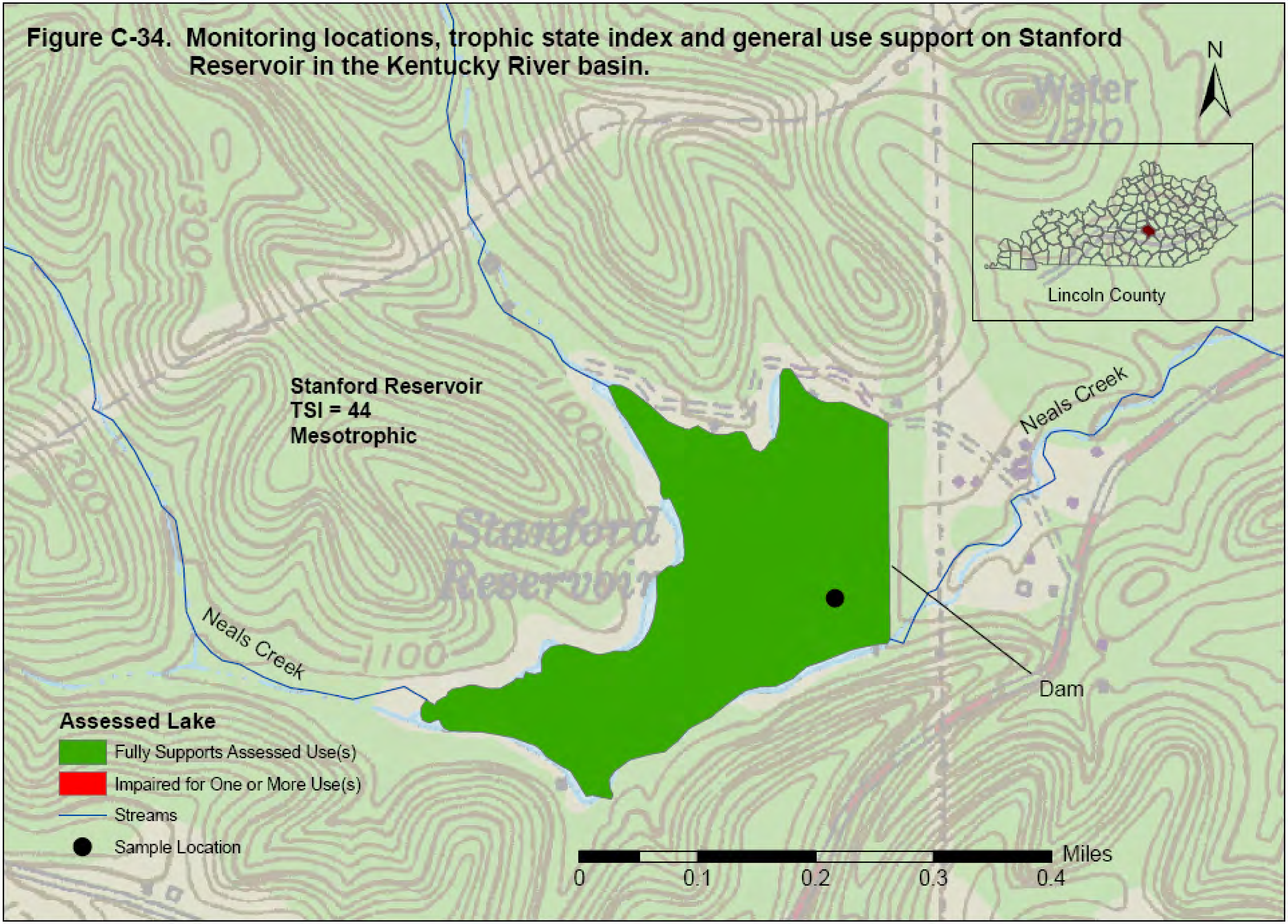


Figure C-27. Monitoring locations, trophic state index and general use support on Lake Reba in the Kentucky River basin.

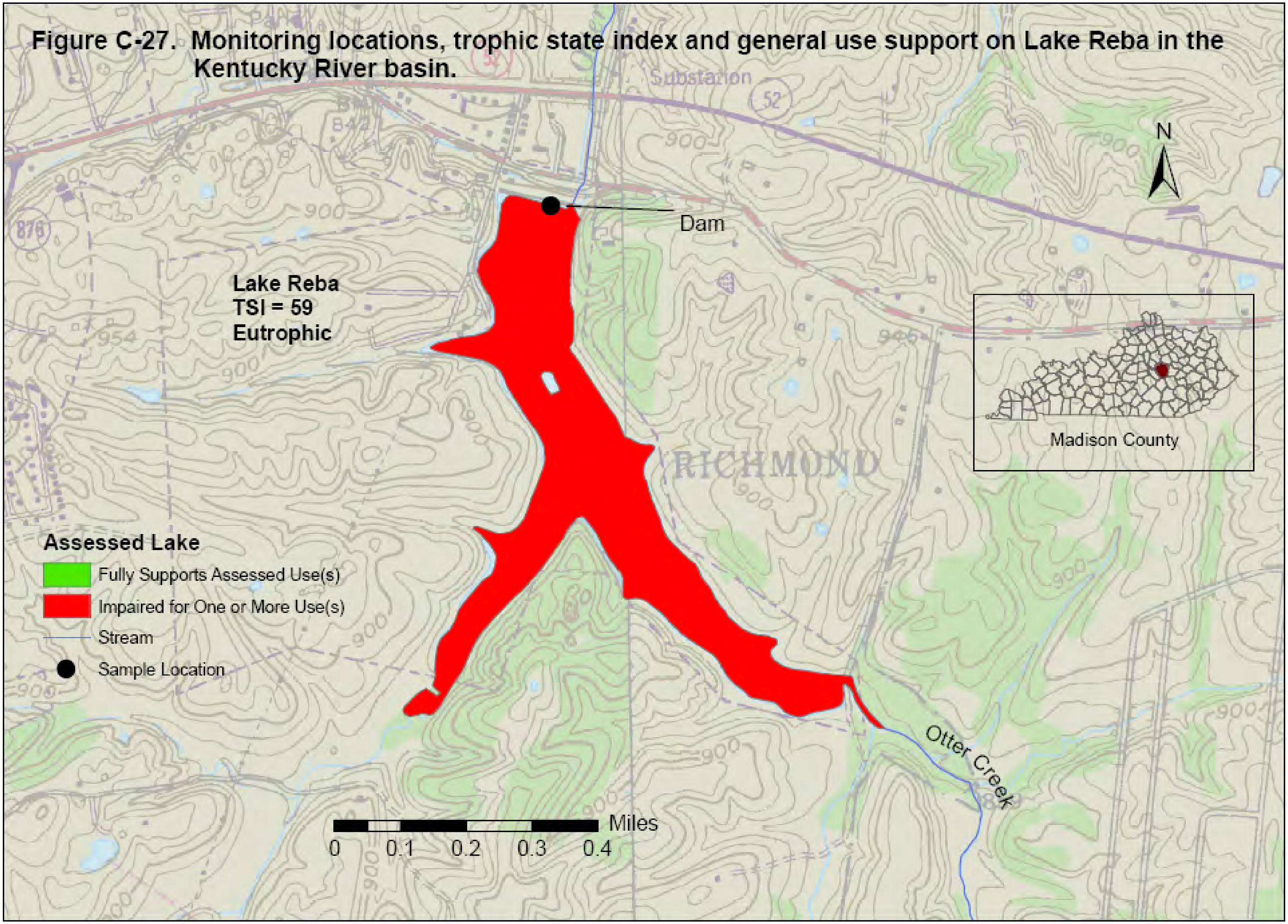


Figure C-28. Monitoring locations and general use support on Lake Vega in the Kentucky River basin.

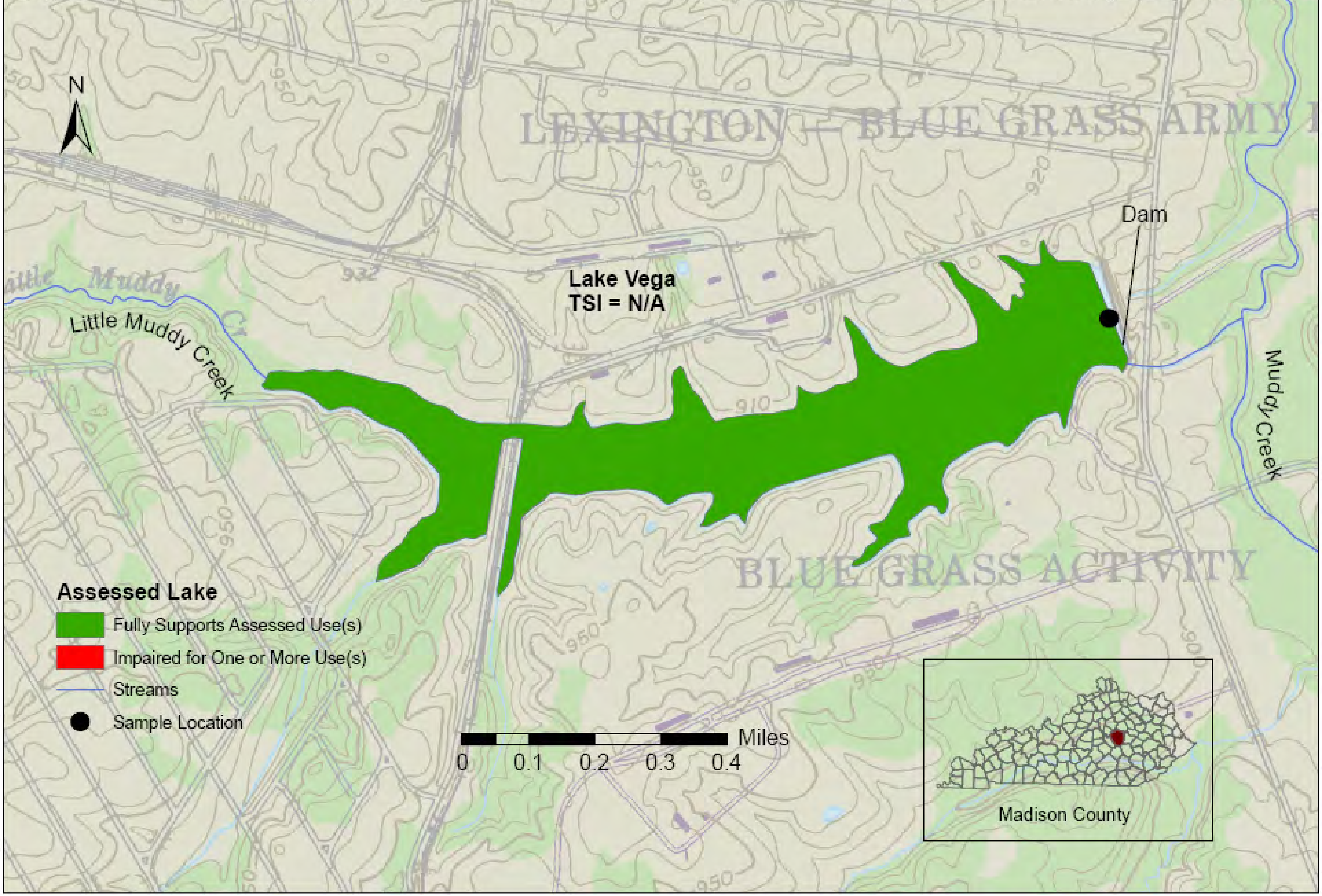
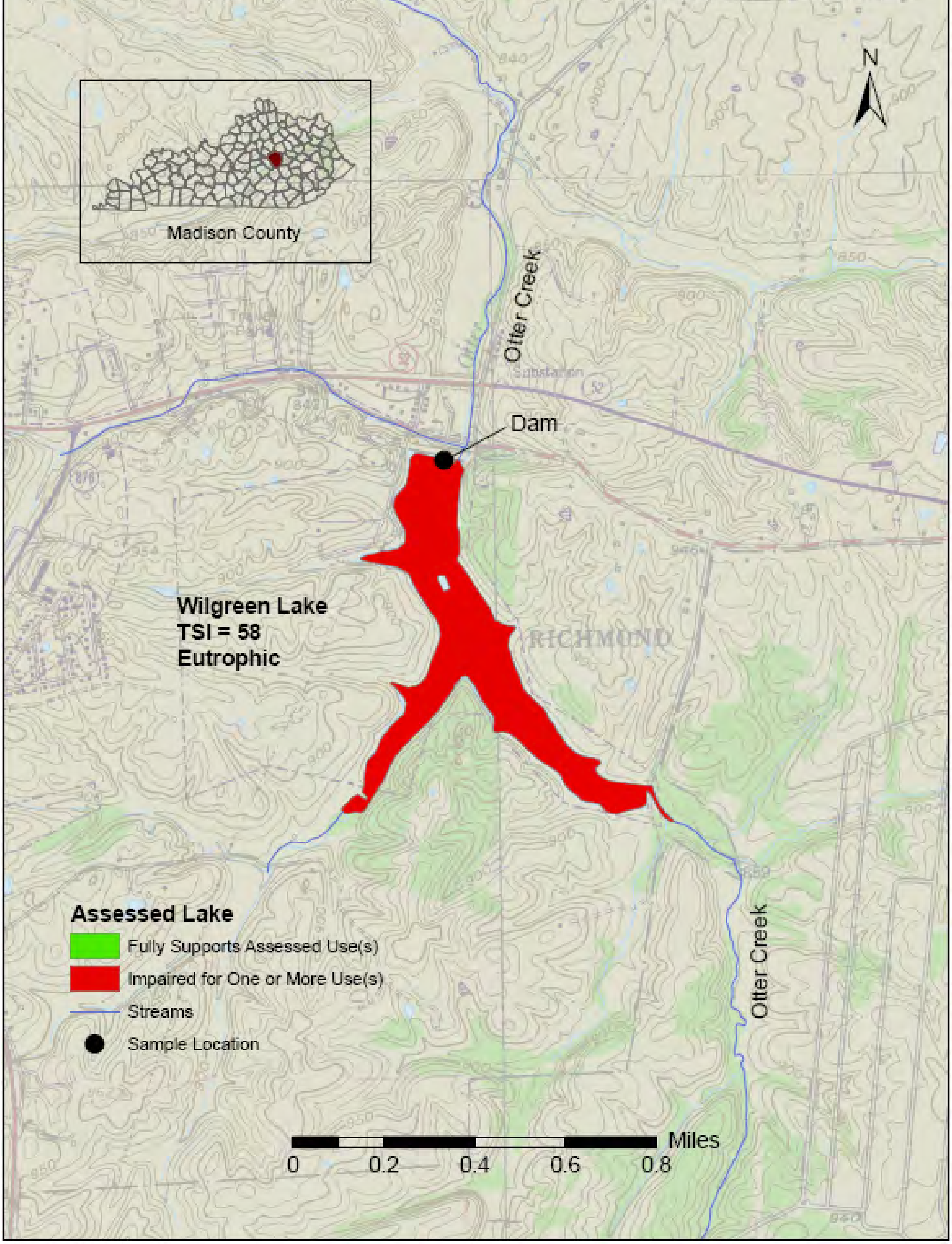


Figure C-35. Monitoring locations, trophic state index and general use support on Wilgreen Lake in the Kentucky River basin.



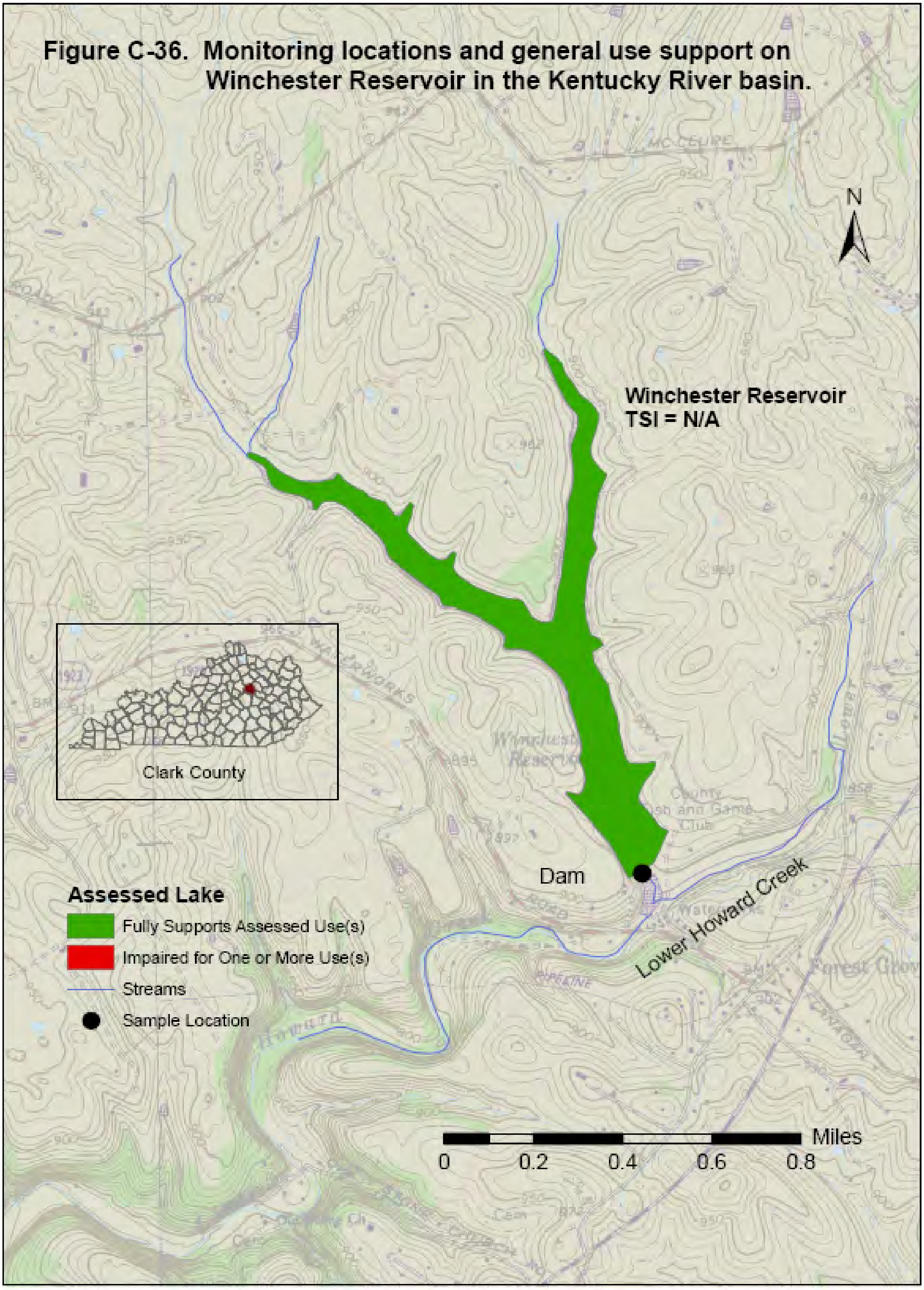


Figure C-36. Monitoring locations and general use support on Winchester Reservoir in the Kentucky River basin.
Winchester Reservoir
TSI = N/A
Clark County
Dam
Lower Howard Creek
Assessed Lake
Fully Supports Assessed Use(s)
Impaired for One or More Use(s)
Streams
Sample Location
0
0.2
0.4
0.6
0.8
Miles
N

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