

## **South Fork Region**

## Red Bird River watershed (051002-03-010)

**Geography.** The Red Bird River watershed covers eastern Clay County, western Leslie County, and the northeast corner of Bell County. The land is in the Eastern Kentucky Coal Field physiographic region, characterized by mountainous terrain, rapid surface runoff, and moderate rates of groundwater drainage. The watershed is underlain by coals, sandstones, and shales: this geology is generally conducive to productive wells, although water quality may be low for wells that draw from coal layers.

**Waterways.** The Red Bird River joins Bullskin Creek and Goose Creek close to Oneida to form the South Fork Kentucky River. Among the creeks that feed it are Red Bird Creek, Phillips Fork, Upper Jacks Creek, Bowen Creek, Flat Creek, Big Creek, Elk Creek, Ulysses Creek, Hector Branch, Jacks Creek, and Bear Creek.

**Land and water use.** Land in the watershed is mainly rural and wooded. Five businesses and organizations hold permits for discharges into the creeks. See the 2000 Assessment Report for full details.

**Agency data assessment.** The assessed creek segments in this watershed include a segment of the Red Bird River that does not support some or all of its designated uses, based on biological and/or water-quality data. See the 2000 Assessment Report or 2000 305(b) list and the 2002 303(d) list of impaired streams for full details.

**Kentucky River Basin Management Plan, 2002.** Information is from the first basin cycle (1997-2002), including the 1998-1999 monitoring effort and the 2000 Assessment Report. See [kywatersheds.org](http://kywatersheds.org) or [www.uky.edu/WaterResources/Watersheds](http://www.uky.edu/WaterResources/Watersheds) for the complete Assessment Report and Management Plan.

Watershed Restoration Ranking			Watershed Protection Rank	Overall Watershed Rank	Framework Mobilization Category
<i>Observed Impacts</i>	<i>Potential Impacts</i>	<i>Combined Rank</i>			
High	Medium	High	High	High	III

## Watershed Highlights

Watershed covers 196 square miles.

Pathogens make contact recreation unsafe in the Redbird River between Goose Creek and Big Creek (1st priority TMDL 2002).

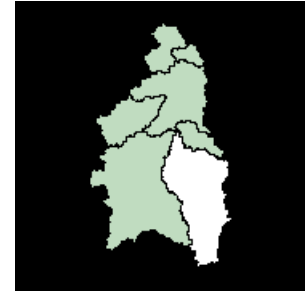
The potential for agricultural erosion is substantially higher than the basin average.

USFS has targeted this watershed for closure of illegal trails to off-road vehicles and for improvement of off-road vehicle routes that are eroding.

Watershed is in PRIDE service region. PRIDE identified 302 straight pipes or failing septic systems in the watershed.



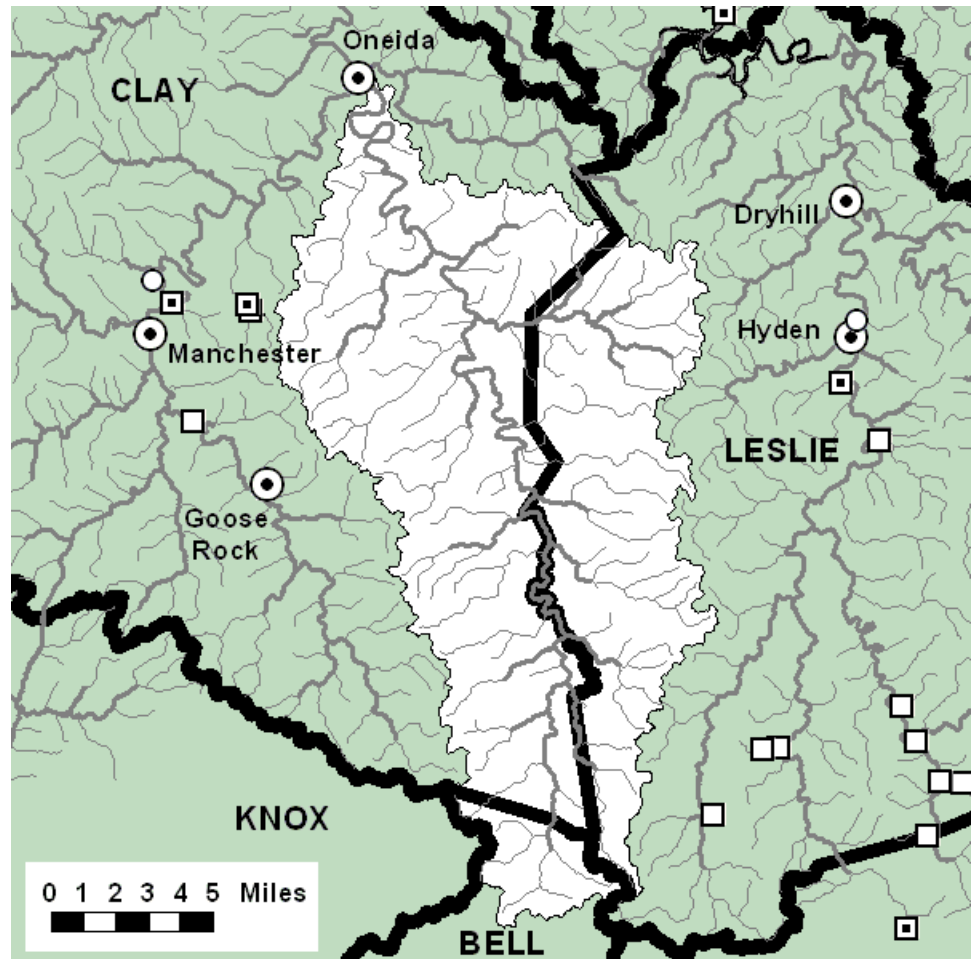
South Fork Region



See the color map of this region on p. 125.

### LEGEND

- Area of this watershed
- Sewage plants
- Public water supplies
- Other water withdrawals
- Locks & dams
- Cities and towns
- Rivers and larger streams
- Smaller streams
- County borders



## South Fork Kentucky River watershed in Boone Forest (051002-03-020)

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**Geography.** The South Fork Kentucky River watershed in Boone Forest occupies northeast Clay County, and southern Owsley County. The land is in the Eastern Kentucky Coal Field physiographic region, characterized by mountainous terrain, rapid surface runoff, and moderate rates of groundwater drainage. The watershed is underlain by coals, sandstones, and shales: this geology is generally conducive to productive wells, although water quality may be low for wells that draw from coal layers. Unconsolidated silts, sands, and gravels occur along the flood plain of the river.

**Waterways.** The South Fork Kentucky River upper watershed includes the section from Oneida to just south of Booneville (approximately that portion of the river that flows through the Daniel Boone National Forest). Among the creeks that feed it are Crane Creek, Right Fork Buffalo Creek, Left Fork Island Creek, Lower Island Creek, Indian Creek, White Oak Creek, and Cow Creek. Water from the Goose Creek, Red Bird River, Bullskin Creek, and Sexton Creek watersheds also flows into this watershed.

**Land and water use.** Land in the watershed is mainly rural and wooded; about 5% is agricultural. One school holds a permit for discharges into the creeks. See the 2000 Assessment Report for full details.

**Agency data assessment.** The assessed creek segments in this watershed include one that only partially supports its designated uses, based on biological and/or water-quality data. Siltation and exotic species contribute to the impairment of the stream. See the 2000 Assessment Report or 2000 305(b) list and the 2002 303(d) list of impaired streams for full details.

**Kentucky River Basin Management Plan, 2002.** Information is from the first basin cycle (1997-2002), including the 1998-1999 monitoring effort and the 2000 Assessment Report. See [kywatersheds.org](http://kywatersheds.org) or [www.uky.edu/WaterResources/Watersheds](http://www.uky.edu/WaterResources/Watersheds) for the complete Assessment Report and Management Plan.

Watershed Restoration Ranking			Watershed Protection Rank	Overall Watershed Rank	Framework Mobilization Category
<i>Observed Impacts</i>	<i>Potential Impacts</i>	<i>Combined Rank</i>			
Medium	Low	Medium	High	Medium	IV

## Watershed Highlights

Watershed covers 130 square miles.

Part of source water protection zones 1, 2, and 3 for the Booneville water system.

Aquatic life partially impaired by sedimentation in Left Fork Island Creek from its mouth to Holly Fork (2nd priority TMDL 2002).

Watershed is in PRIDE service region. PRIDE identified 103 straight pipes or failing septic systems in the watershed.



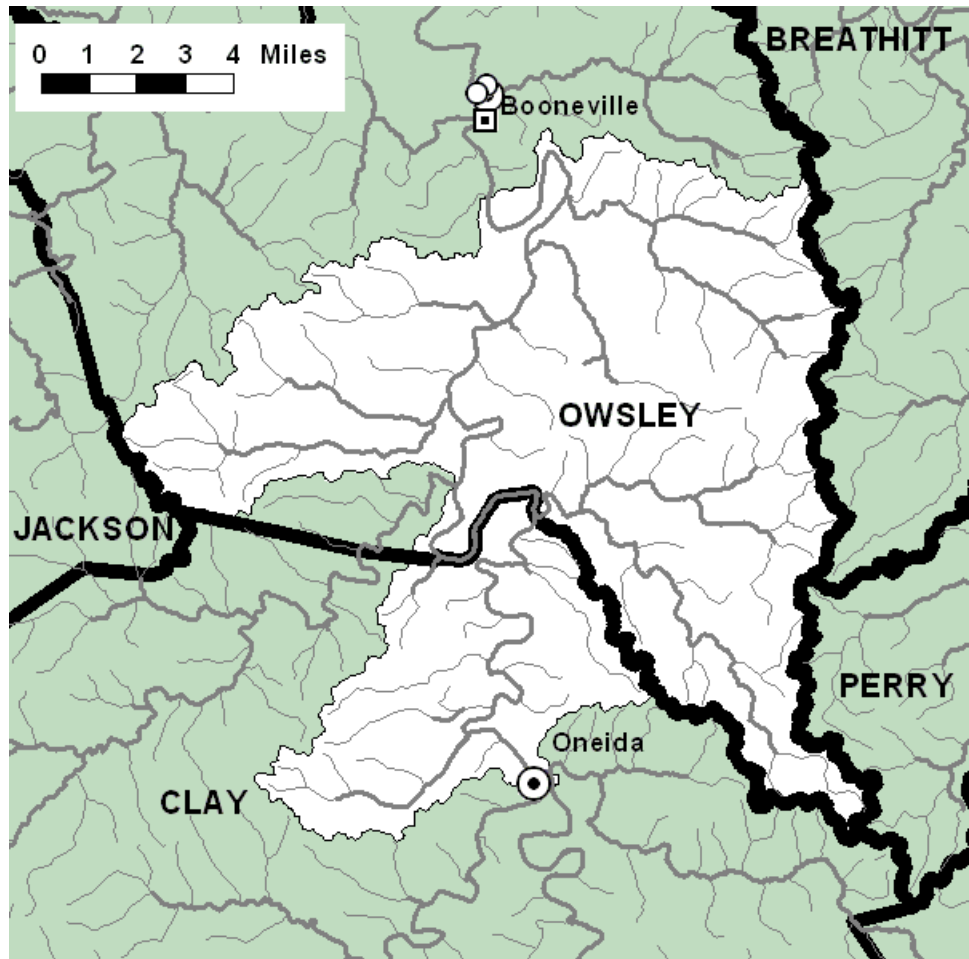
South Fork Region



See the color map of this region on p. 125.

### LEGEND

- Area of this watershed
- Sewage plants
- Public water supplies
- Other water withdrawals
- Locks & dams
- Cities and towns
- Rivers and larger streams
- Smaller streams
- County borders



## Bullskin Creek watershed (051002-03-030)

**Geography.** The Bullskin Creek watershed lies in northeast Clay County and a corner of Leslie County. The land is in the Eastern Kentucky Coal Field physiographic region, characterized by mountainous terrain, rapid surface runoff, and moderate rates of groundwater drainage. The watershed is underlain by coals, sandstones, and shales: this geology is generally conducive to productive wells, although water quality may be low for wells that draw from coal layers.

**Waterways.** Bullskin Creek empties into the South Fork Kentucky River close to Oneida. Among the creeks that feed it are Little Bullskin Creek, Meadow Branch, Barger Branch, Wiles Branch, and Long Branch.

**Land and water use.** Land in the watershed is rural and wooded. No businesses or organizations hold permits for discharges into the creeks. See the 2000 Assessment Report for full details.

**Agency data assessment.** The assessed creek segments in this watershed fully support their designated uses, based on biological and/or water-quality data. See the 2000 Assessment Report or 2000 305(b) list and the 2002 303(d) list of impaired streams for full details.

**Kentucky River Basin Management Plan, 2002.** Information is from the first basin cycle (1997-2002), including the 1998-1999 monitoring effort and the 2000 Assessment Report. See [kywatersheds.org](http://kywatersheds.org) or [www.uky.edu/WaterResources/Watersheds](http://www.uky.edu/WaterResources/Watersheds) for the complete Assessment Report and Management Plan.

Watershed Restoration Ranking			Watershed Protection Rank	Overall Watershed Rank	Framework Mobilization Category
<i>Observed Impacts</i>	<i>Potential Impacts</i>	<i>Combined Rank</i>			
Medium	Low	Medium	Medium	Medium	IV

## Watershed Highlights

Watershed covers 29 square miles.

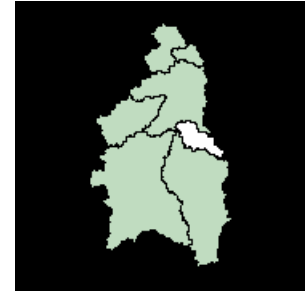
The potential for agricultural erosion is substantially higher than the basin average.

USFS has targeted this watershed for closure of illegal trails to off-road vehicles and for improvement of off-road vehicle routes that are eroding.

Watershed is in PRIDE service region. PRIDE identified 60 straight pipes or failing septic systems in the watershed.





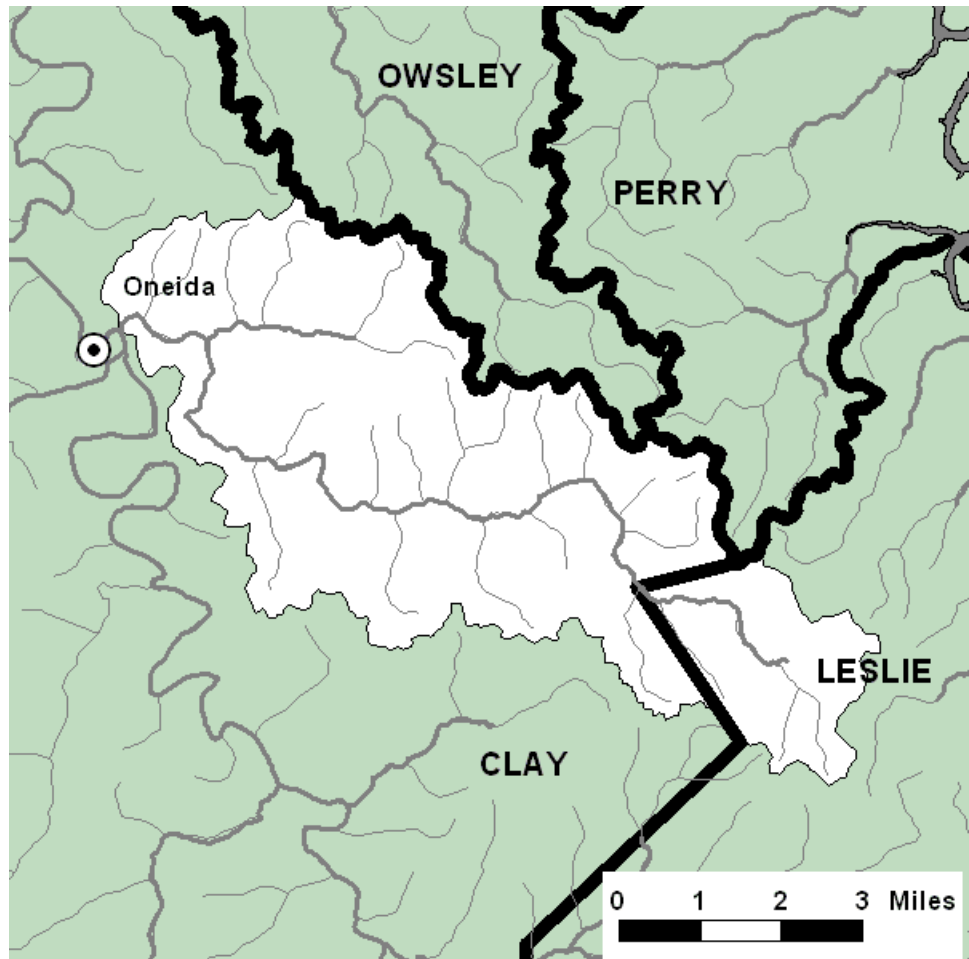
South Fork Region



See the color map of this region on p. 125.

### LEGEND

- Area of this watershed 
- Sewage plants 
- Public water supplies 
- Other water withdrawals 
- Locks & dams 
- Cities and towns 
- Rivers and larger streams 
- Smaller streams 
- County borders 



## Goose Creek watershed (051002-03-040)

**Geography.** The Goose Creek watershed covers southwest Clay County, northern Knox County, and slivers of Laurel County. The land is in the Eastern Kentucky Coal Field physiographic region, characterized by mountainous terrain, rapid surface runoff, and moderate rates of groundwater drainage. The watershed is underlain by coals, sandstones, and shales: this geology is generally conducive to productive wells, although water quality may be low for wells that draw from coal layers.

**Waterways.** Goose Creek empties into the South Fork Kentucky River close to Oneida. Among the creeks that feed it are Bull Creek, Collins Fork, Hammons Fork, Horse Creek, Laurel Creek, Paces Creek, and Little Goose Creek.

**Land and water use.** Land in the watershed is mainly rural and wooded; less than 10% is agricultural. The surface waters of the watershed supply the drinking water for the municipal system in Manchester. Eleven businesses and organizations hold permits for discharges into the creeks. See the 2000 Assessment Report for full details.

**Agency data assessment.** The assessed creek segments in this watershed include several that only partially support their designated uses, based on biological and/or water-quality data. Siltation and pathogens contribute to the impairment of these streams. See the 2000 Assessment Report or 2000 305(b) list and the 2002 303(d) list of impaired streams for full details.

**Kentucky River Basin Management Plan, 2002.** Information is from the first basin cycle (1997-2002), including the 1998-1999 monitoring effort and the 2000 Assessment Report. See [kywatersheds.org](http://kywatersheds.org) or [www.uky.edu/WaterResources/Watersheds](http://www.uky.edu/WaterResources/Watersheds) for the complete Assessment Report and Management Plan.

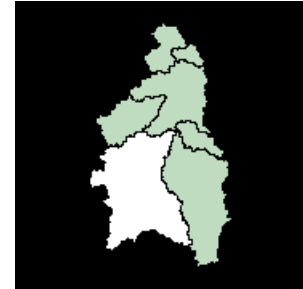
Watershed Restoration Ranking			Watershed Protection Rank	Overall Watershed Rank	Framework Mobilization Category
<i>Observed Impacts</i>	<i>Potential Impacts</i>	<i>Combined Rank</i>			
Medium	High	Medium	High	Medium	IV

## Watershed Highlights

- Watershed covers 260 square miles.
- Provides drinking water for Manchester.
- Manchester discharges treated sewage into the watershed.
- Pathogens partially impair contact recreation in Goose Creek between Red Bird River and Laurel Creek (2nd priority TMDL 2002).
- Aquatic life partially impaired by sedimentation in Bull Creek, Collins Fork, Hammons Fork, and Horse Creek (2nd priority TMDL 2002).
- Hammons Fork and Laurel Creek are partially impaired by overenrichment (2nd priority TMDL 2002).
- DOW plans to delist a stretch of Laurel Creek that was listed as impaired in 1996 and 1998, because sewage plants there have made important improvements.
- Water supply is an issue.
- Watershed is in the PRIDE region. PRIDE identified 1,001 straight pipes or failing septic systems in the watershed.



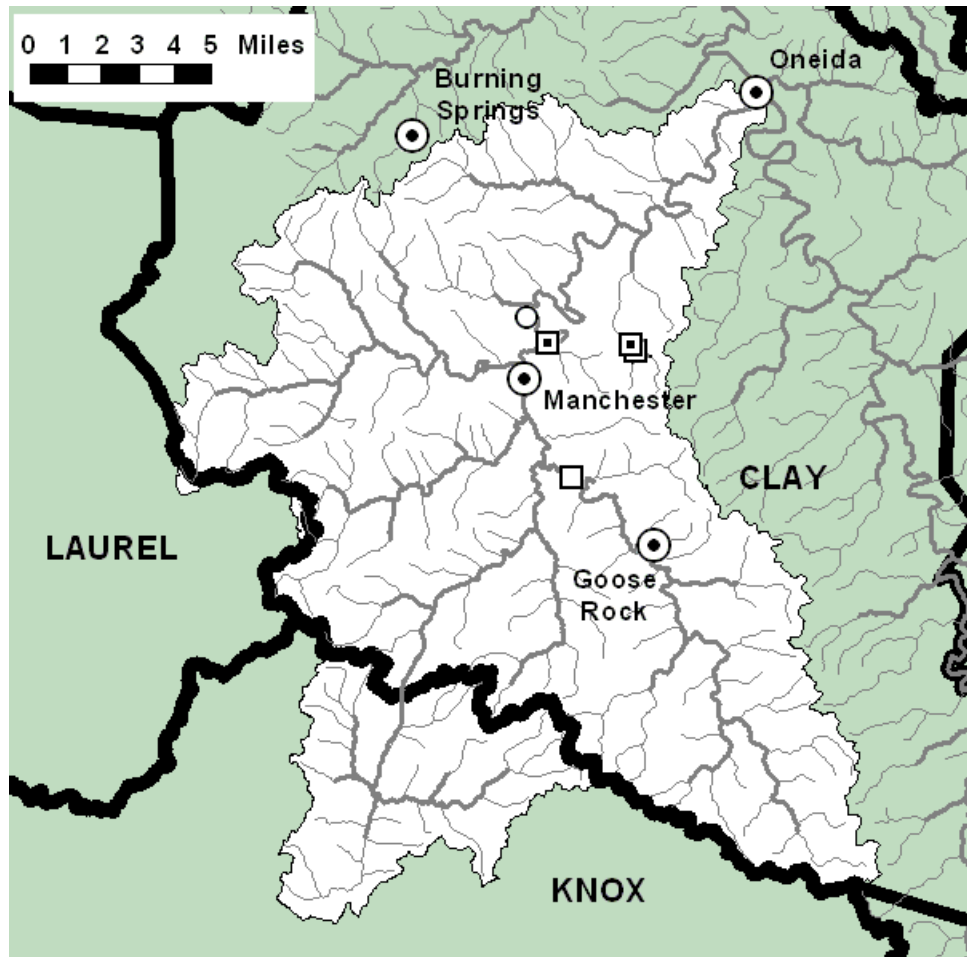
South Fork Region



See the color map of this region on p. 125.

### LEGEND

- Area of this watershed
- Sewage plants
- Public water supplies
- Other water withdrawals
- Locks & dams
- Cities and towns
- Rivers and larger streams
- Smaller streams
- County borders



## Sexton Creek watershed (051002-03-050)

**Geography.** The Sexton Creek watershed occupies northwest Clay County, and extends into Jackson and Owsley Counties. The land is in the Eastern Kentucky Coal Field physiographic region, characterized by mountainous terrain, rapid surface runoff, and moderate rates of groundwater drainage. The watershed is underlain by coals, sandstones, and shales: this geology is generally conducive to productive wells, although water quality may be low for wells that draw from coal layers.

**Waterways.** Sexton Creek empties into the South Fork Kentucky River at Taft. Among the creeks that feed it are Robinson Creek, Bray Creek, Ellis Branch, Cradlebow Branch, and Little Sexton Creek.

**Land and water use.** Land in the watershed is mainly rural and wooded; about 10% is agricultural. One business holds permits for discharges into the creeks. See the 2000 Assessment Report for full details.

**Agency data assessment.** The assessed creek segments in this watershed include a segment of Sexton Creek that only partially supports its designated uses, based on biological and/or water-quality data. Acidity (pH) contributes to the impairment of the stream. See the 2000 Assessment Report or 2000 305(b) list and the 2002 303(d) list of impaired streams for full details.

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Watershed Restoration Ranking			Watershed Protection Rank	Overall Watershed Rank	Framework Mobilization Category
<i>Observed Impacts</i>	<i>Potential Impacts</i>	<i>Combined Rank</i>			
High	Low	High	Medium	High	IV

## Watershed Highlights

Watershed covers 71 square miles.

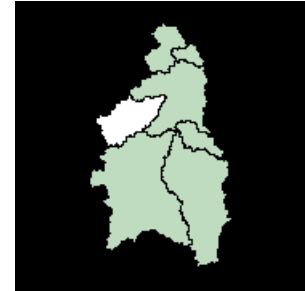
Part of source water protection zone 3 for the Booneville water system.

Aquatic life partially impaired by sedimentation and low pH in Sexton Creek between Little Sexton Creek and Bray Creek (2nd priority TMDL 2002).

Watershed is in PRIDE service region. PRIDE identified 180 straight pipes or failing septic systems in the watershed.



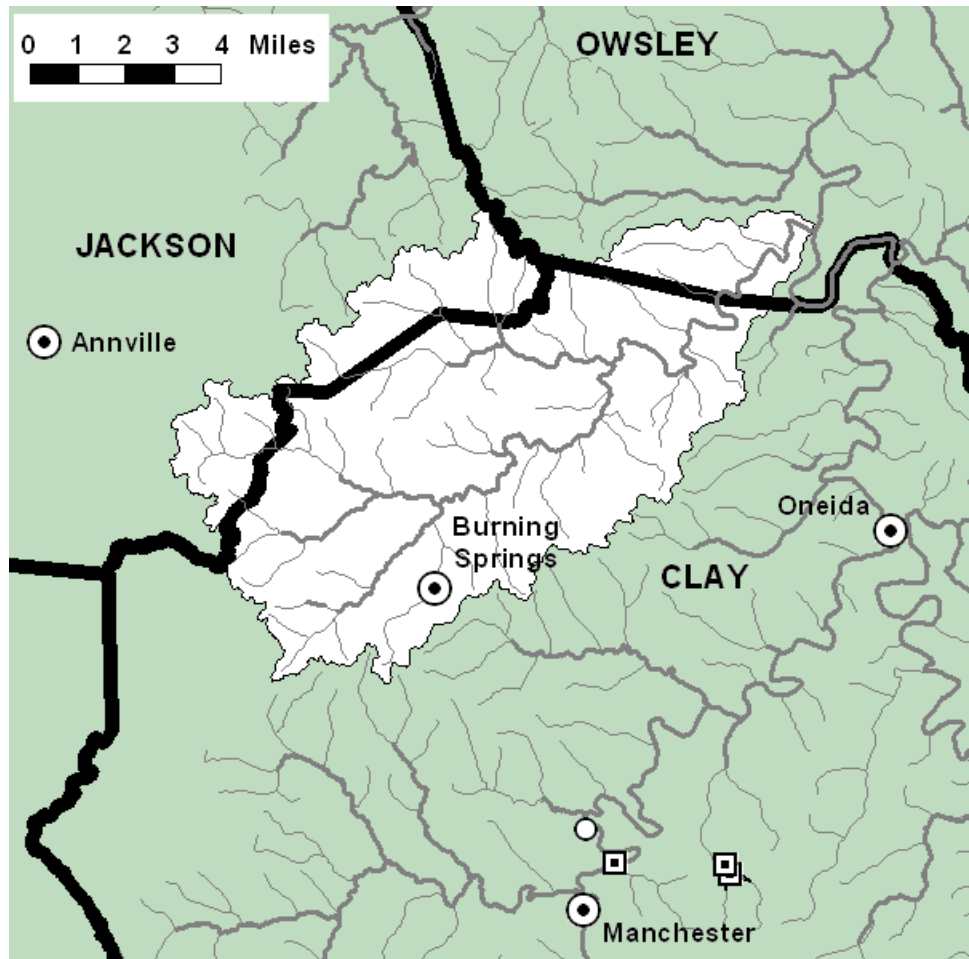
South Fork Region



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### LEGEND

- Area of this watershed
- Sewage plants
- Public water supplies
- Other water withdrawals
- Locks & dams
- Cities and towns
- Rivers and larger streams
- Smaller streams
- County borders



## South Fork Kentucky River mouth watershed (051002-03-060)

**Geography.** The South Fork Kentucky River mouth watershed covers north-central Owsley County and south-central Lee County. The land is in the plateau area of the Eastern Kentucky Coal Field physiographic region, which is characterized by rolling terrain, medium to rapid surface runoff, and slow to moderate groundwater drainage. The watershed is underlain by coals, sandstones, and shales: this geology is generally conducive to productive wells, although water quality may be low for wells that draw from coal layers. Unconsolidated silts, sands, and gravels occur along the flood plain of the river.

**Waterways.** This watershed includes the section of the South Fork between the National Forest and Beattyville, where the South Fork empties into the Kentucky River. Among the creeks that feed it are Betty Bowman Creek, Buck Creek, Fish Creek, Jerushia Branch, Caney Fork, Straight Fork, and Pawpaw Creek. Water from the Meadow Creek and South Fork Kentucky River in Boone Forest watersheds also flows into this watershed.

**Land and water use.** Land in the watershed is about one-fourth agricultural and three-fourths rural and wooded. The surface waters of the watershed supply the drinking water for the municipal system in Booneville. Ten businesses and organizations hold permits for discharges into the creeks. See the 2000 Assessment Report for full details.

**Agency data assessment.** The assessed creek segments in this watershed include one segment of Lower Buffalo Creek that only partially supports its designated uses, based on biological and/or water-quality data. Siltation contributes to the impairment of the stream. See the 2000 Assessment Report or 2000 305(b) list and the 2002 303(d) list of impaired streams for full details.

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Watershed Restoration Ranking			Watershed Protection Rank	Overall Watershed Rank	Framework Mobilization Category
<i>Observed Impacts</i>	<i>Potential Impacts</i>	<i>Combined Rank</i>			
Medium	Low	Medium	Medium	Medium	IV

## Watershed Highlights

- Watershed covers 45 square miles.
- Provides drinking water for Booneville.
- Booneville discharges treated sewage into the watershed.
- Aquatic life partially impaired by sedimentation in Lower Buffalo Creek from its mouth to Caney Fork and Straight Fork (2nd priority TMDL 2002).
- Water supply is an issue.
- The potential for agricultural erosion is substantially higher than the basin average.
- Watershed is in PRIDE service region. PRIDE identified 3 straight pipes or failing septic systems in the watershed.



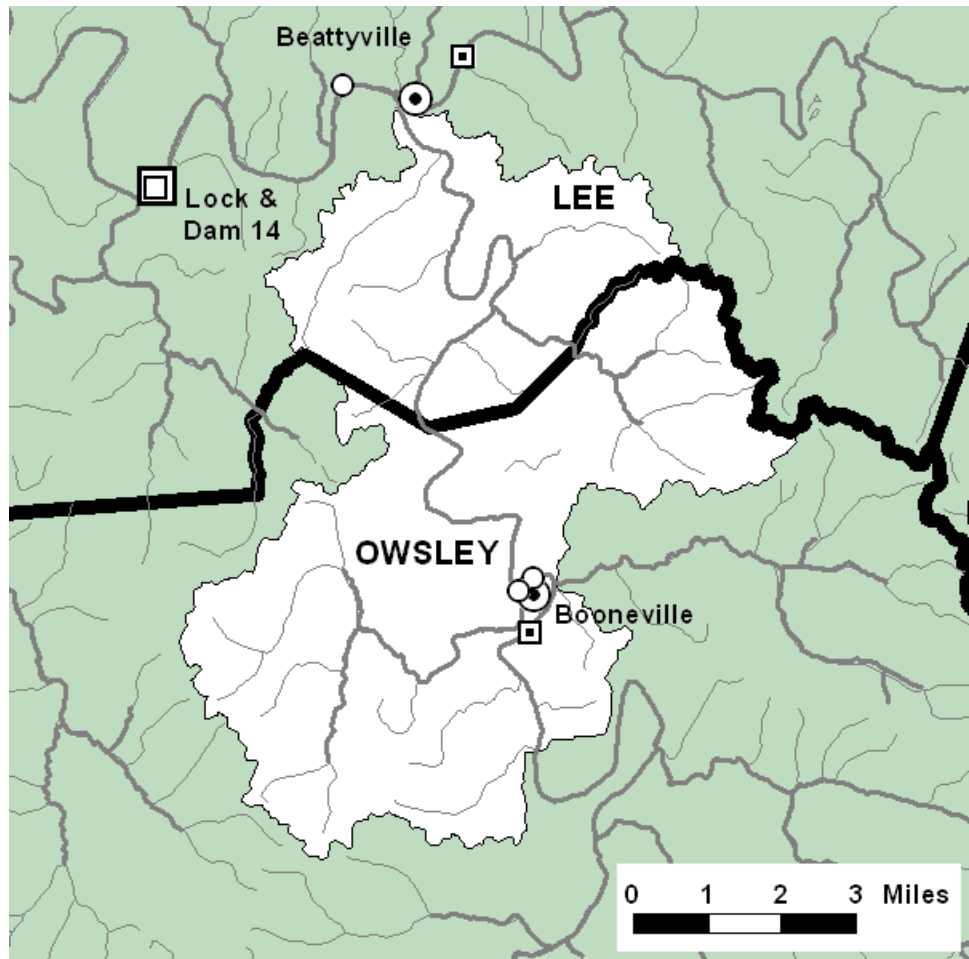
South Fork Region



See the color map of this region on p. 125.

### LEGEND

- Area of this watershed
- Sewage plants
- Public water supplies
- Other water withdrawals
- Locks & dams
- Cities and towns
- Rivers and larger streams
- Smaller streams
- County borders



## Meadow Creek watershed (051002-03-070)

**Geography.** The Meadow Creek watershed is in Owsley County. The higher part of the watershed is in the Eastern Kentucky Coal Field physiographic region, characterized by mountainous terrain, rapid rates of surface runoff, and moderate rates of groundwater drainage. The lower part of the watershed is in the plateau area of the coal field region, characterized by rolling terrain, medium to rapid rates of surface runoff, and slow to medium groundwater drainage. The watershed is underlain by coals, sandstones, and shales: this geology is generally conducive to productive wells, although water quality may be low for wells that draw from coal layers.

**Waterways.** Meadow Creek empties into the South Fork Kentucky River in Booneville. Among the creeks that feed it are Split Poplar Fork, Poletown Fork, Rose Fork, Spencer Fork, Moore Fork, Wilson Fork, Sugar Camp Creek, and Zeke Branch.

**Land and water use.** Land in the watershed is mainly rural and wooded; less than 10% is agricultural. No businesses or organizations hold permits for discharges into the creeks. See the 2000 Assessment Report for full details.

**Agency data assessment.** The assessed segment of Meadow Creek only partially supports its designated uses, based on biological and/or water-quality data. Sedimentation contributes to the impairment of the stream. See the 2000 Assessment Report or 2000 305(b) list and the 2002 303(d) list of impaired streams for full details.

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Watershed Restoration Ranking			Watershed Protection Rank	Overall Watershed Rank	Framework Mobilization Category
<i>Observed Impacts</i>	<i>Potential Impacts</i>	<i>Combined Rank</i>			
High	Low	High	Low	High	III

## Watershed Highlights

Watershed covers 17 square miles.

Sedimentation partially impairs aquatic life in Meadow Creek between South Fork Kentucky River and Poletown and Spencer Forks (2nd priority TMDL 2002).

Watershed is in PRIDE service region. PRIDE identified 113 straight pipes or failing septic systems in the watershed.











South Fork Region



See the color map of this region on p. 125.

### LEGEND

- Area of this watershed  

- Sewage plants  

- Public water supplies  

- Other water withdrawals  

- Locks & dams  

- Cities and towns  

- Rivers and larger streams  

- Smaller streams  

- County borders  
