

03060103-02

(*Rocky River/Lake Russell*)

General Description

Watershed 03060103-02 (formerly 03060103-070, -080, and a portion of -030) is located in Anderson and Abbeville Counties and consists primarily of the **Rocky River** and its tributaries as it flows through **Lake Secession** and forms an arm of **Lake Richard B. Russell**. The watershed occupies 178,235 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 46.1% forested land, 34.1% agricultural land, 13.5% urban land, 4.0% water, 1.6% forested wetland (swamp), and 0.7% barren land. A map depicting this watershed is found in Appendix B, page B-22.

Beaverdam Creek (Anderson Reservoir) and Little Beaverdam Creek join to form the Rocky River. Downstream from the confluence, the river accepts drainage from Cox Creek (Bailey Creek) and Broadway Creek. Watermelon Creek (Rock Creek) and Browns Creek join to form Broadway Creek, which accepts drainage from Cupboard Creek, Pea Creek, Neals Creek, and Broadway Lake before discharging into the Rocky River. Beaver Creek (Betsy Creek, Nesbit Creek, Tugaloo Creek) enters the river next, followed by Hencoop Creek (Cherokee Creek, Long Branch), Bear Creek, and Governors Creek. The Rocky River then impounds into Lake Secession and accepts drainage from First Creek. Downstream of the Lake Secession Dam, the Rocky River arm of Lake Russell accepts drainage from Wilson Creek (Jordan Creek, Deep Step Creek, East Beards Creek), Long Branch, and Charlies Creek. There are a total of 639.0 stream miles and 8,443.8 acres of lake waters in this watershed, all classified FW. Calhoun Falls State Park resides at the base of the watershed.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
SV-031	W	FW	ROCKY RIVER AT S-04-263, 2.7 MI SE ANDERSON AT STP
SV-041	W	FW	ROCKY RIVER AT S-04-152 BELOW ROCKY RIVER STP
SV-139	W	FW	CUPBOARD CK AT S-04-733 ABOVE BREAZEALE ST PLT & BELOW BLAIR HILL
SV-140	W	FW	CUPBOARD CK AT S-04-209 BELOW EFFLUENT FROM BELTON 2 PLANT
SV-141	W	FW	BROADWAY CREEK AT US 76 BETWEEN ANDERSON & BELTON
SV-319	W	FW	BROADWAY LAKE, BROADWAY CREEK ARM UPSTREAM OF PUBLIC ACCESS
RL-06421	RL06	FW	BROADWAY LAKE, 1 MI SW OF JUNCTION OF US 178 AND US 76
RL-02455	RL02	FW	BROADWAY LAKE, 0.2 MI NW OF ALLEN PARK
RL-03355	RL03	FW	BROADWAY LAKE, 0.5 MI NW OF SPILLWAY NEARSHORE OPP. END OF S-04-152
SV-258	W	FW	BROADWAY LAKE, NEALS CREEK ARM ½ BETWEEN BANKS AT GOLF COURSE
SV-321	W	FW	BROADWAY LAKE, FOREBAY, ½ BETWEEN SPILLWAY AND OPPOSITE LAND
SV-346	INT	FW	ROCKY RIVER AT S-04-244
SV-037	W	FW	BETSY CREEK AT S-04-259 BELOW FIBERGLAS OUTFALL
SV-331	INT	FW	LAKE SECESSION, ¼ MI BELOW SC 28
SV-332	INT	FW	LAKE SECESSION APPROX. 400 YDS ABOVE DAM
SV-185	BIO	FW	WILSON CREEK AT SC 413
SV-347	INT	FW	WILSON CREEK AT S-04-294
RL-06439	RL06	FW	LAKE RUSSELL, ROCKY RIVER ARM , 0.2 MI S OF BRIDGE AT SC 71
SV-357	W	FW	LAKE RUSSELL, ROCKY RIVER ARM BETWEEN MARKERS 48 & 49

Rocky River – There are three SCDHEC monitoring stations along the Rocky River. At the furthest upstream site (*SV-031*), aquatic life uses are not supported due to turbidity excursions. There is also a significant increasing trend in five-day biochemical oxygen demand. There is a significant increasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions, which are compounded by a significant increasing trend in fecal coliform bacteria concentration. At the midstream site (*SV-041*), aquatic life uses are not supported due to turbidity excursions. There is a significant increasing trend in pH. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. At the furthest downstream site (*SV-346*), aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. A significant decreasing trend in total nitrogen concentration suggests improving conditions for this parameter. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions.

Cupboard Creek – There are two SCDHEC monitoring stations along Cupboard Creek. At the upstream site (*SV-139*), aquatic life uses are partially supported due to dissolved oxygen concentration excursions. Although pH excursions occurred, they were considered natural, not standards violations. There is a significant decreasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter. At the downstream site (*SV-140*), aquatic life uses are fully supported. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration and increasing trends in dissolved oxygen concentration suggest improving conditions for these parameters. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions.

Broadway Creek (*SV-141*) – Aquatic life uses are not supported due to turbidity excursions; however, a significant decreasing trend in turbidity suggests improving conditions for this parameter. There is a significant increasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions.

Broadway Lake – There are six SCDHEC monitoring stations along Broadway Lake (*SV-319, RL-06421, RL-02455, RL-03355, SV-258, and SV-321*). Aquatic life and recreational uses are fully supported at all sites; however there is a significant increasing trend in five-day biochemical oxygen demand at *SV-321*. *Fish tissue analyses on species caught within Broadway Lake indicate no advisories or restrictions on consumption of fish from these waters.*

Betsy Creek (*SV-037*) – Aquatic life uses are fully supported, but recreational uses are not supported due to fecal coliform bacteria excursions.

Lake Seccession – There are two SCDHEC monitoring stations along Lake Seccession and recreational uses are fully supported at both sites. At the upstream site (*SV-331*), aquatic life uses are partially supported due to pH excursions. There is a significant increasing trend in pH. Significant decreasing trends in turbidity, total phosphorus concentration, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters. At the downstream site (*SV-332*), aquatic life uses are partially supported due to pH excursions. There is also a significant increasing trend in five-day biochemical oxygen demand. There is a significant increasing trend in pH. Significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters. *Fish tissue analyses on species caught within Lake Seccession indicate no advisories or restrictions on consumption of fish from these waters.*

Wilson Creek – There are two SCDHEC monitoring stations along Wilson Creek. At the upstream site (*SV-185*), aquatic life uses are fully supported based on macroinvertebrate community data. At the downstream site (*SV-347*), aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. Recreational uses are not supported at this site due to fecal coliform bacteria excursions.

Rocky River Arm of Lake Russell – There are two SCDHEC monitoring stations (*RL-06439, SV-357*) along this section of Lake Russell and aquatic life and recreational uses are fully supported at both sites.

A fish consumption advisory has been issued by the Department for mercury and includes the portions of Lake Russell within this watershed (see advisory p.84).

Natural Swimming Areas

<i>FACILITY NAME</i>	<i>PERMIT #</i>
<i>RECEIVING STREAM</i>	<i>STATUS</i>
CALHOUN FALLS STATE PARK	01-N04
LAKE RUSSELL	ACTIVE

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM</i>	<i>NPDES#</i>
<i>FACILITY NAME</i>	<i>TYPE</i>
BEAVER CREEK	SC0047210
FMR ELISKIM, INC. RCRA POSTCLOSURE	MINOR INDUSTRIAL
BEAVER CREEK	SCG670006
TRANSCONTINENTAL GAS PIPELINE	MINOR INDUSTRIAL

BETSY CREEK OWENS-CORNING/ANDERSON PLT	SC0000400 MAJOR INDUSTRIAL
NESBIT CREEK HANSON AGGREGATES SE/ANDERSON	SCG730222 MINOR INDUSTRIAL
PEA CREEK VULCAN MATERIALS CO./ANDERSON QUARRY	SCG730112 MINOR INDUSTRIAL
ROCKY RIVER CITY OF ANDERSON/ROCKY RIVER	SC0023744 MAJOR DOMESTIC
LAKE RUSSELL MOHAWK INDUSTRIES/ROCKY RIVER PLT	SC0000299 MAJOR INDUSTRIAL
LITTLE BEAVERDAM CREEK JACOB UTIL./ROCKY FORD SD	SC0048372 MINOR DOMESTIC

Municipal Separate Storm Sewer Systems (MS4)

<i>RECEIVING STREAM</i>	<i>NPDES#</i>
<i>MUNICIPALITY</i>	<i>MS4 PHASE</i>
<i>RESPONSIBLE PARTY</i>	<i>MS4 SIZE</i>
<i>IMPLEMENTING PARTY</i>	
ROCKY RIVER UNINCORPORATED AREAS ANDERSON COUNTY ANDERSON COUNTY	SCR030701 PHASE II SMALL MS4
ROCKY RIVER CITY OF BELTON CITY OF BELTON ANDERSON COUNTY	SCR030703 PHASE II SMALL MS4
ROCKY RIVER UNINCORPORATED AREAS ANDERSON COUNTY ANDERSON COUNTY	SCR030702 PHASE II SMALL MS4

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME</i>	<i>PERMIT #</i>
<i>FACILITY TYPE</i>	<i>STATUS</i>
ANDERSON TIRE RECYCLING TIRE RECYCLING	042417-5201 ACTIVE
ANDERSON TIRE WASTE TIRE DISPOSAL FAC. WASTE TIRE DISPOSAL	042417-5301 ACTIVE
OWENS-CORNING FIBERGLAS INDUSTRIAL	043334-1601 ACTIVE

OWENS-CORNING FIBERGLAS INDUSTRIAL	----- INACTIVE
SHAW LCD & YARD TRASH LANDFILL LC & D	042637-1701 INACTIVE
MILLER CONSTRUCTION SITE #5 C & D	042689-1702 ACTIVE
ENTERPRISE MATERIAL HANDLING C & D	042733-1201 ACTIVE
BROADWAY LCD & LANDFILL C & D	042722-1701 ACTIVE
BOBBY & DANNY C&D LANDFILL C & D	----- PROPOSED
WHITE ST. SW TRANSFER FACILITY MUNICIPAL	041001-6001 INACTIVE
ANDERSON CO. MATERIAL RECOVERY FAC. RECYLING CENTER	041001-2003 INACTIVE
ANDERSON CO. WOOD CHIP FAC. COMPOSTING	041001-3001 INACTIVE
CITY OF ANDERSON COMPOSTING FAC. COMPOSTING	041003-3001 ACTIVE
ACE RECYCLING CENTER RECYLING CENTER	042663-2001 ACTIVE

Mining Activities

MINING COMPANY MINE NAME	PERMIT # MINERAL
COOPER SAND & GRAVEL CO. ROCKY RIVER PLANT	0859-07 RIVER SAND
THOMAS SAND COMPANY RIVER ROAD PLANT	0908-07 RIVER SAND
HANSON AGGREGATES SOUTHEAST INC. ANDERSON QUARRY	0424-07 GRANITE

Water Quantity

<i>WATER USER STREAM</i>	<i>TOTAL PUMP. CAP (MGD) RATED PUMP CAP (MGD)</i>
CITY OF ABBEVILLE LAKE RUSSELL	10.60 4.50
MOHAWK INDUSTRIES LAKE RUSSELL	5.19 1.44

Growth Potential

There is a moderate to high potential for growth in this watershed, which contains the communities of Antreville, Lake Secession, and Homeland Park; the Town of Lowndesville; portions of the Towns of Calhoun Falls, Starr, and Iva; and portions of the Cities of Anderson and Belton. Anderson is currently one of the largest manufacturing areas in the upstate region. Growth of the manufacturing industry is dependent on infrastructural expansion, which is dependent on the capacity of existing facilities. Many wastewater treatment facilities have expanded and are able to support future growth.

Projected industrial development in this watershed runs along the SC 81 corridor from Anderson to Starr, along the western side of Anderson on SC 28, and around the I-85 and SC 81 intersection. Also a rail line runs between Iva and Starr to Anderson, a criterion for siting new industry. Overall development trends are predicted to occur between Belton and Anderson along US 76, and between Honea Path and Williamston (including Belton) along SC 20. Anderson County is in the process of developing long-range plans for growth in this area. A residential growth area lies between Lowndesville and Antreville and will be impacted along SC 81 by any future lakefront development in Calhoun Falls, located near the Lake Russell Dam. Calhoun Falls has upgraded their treatment system, replacing the lagoon treatment system, and are better able to support future growth.

Watershed Protection and Restoration Strategies

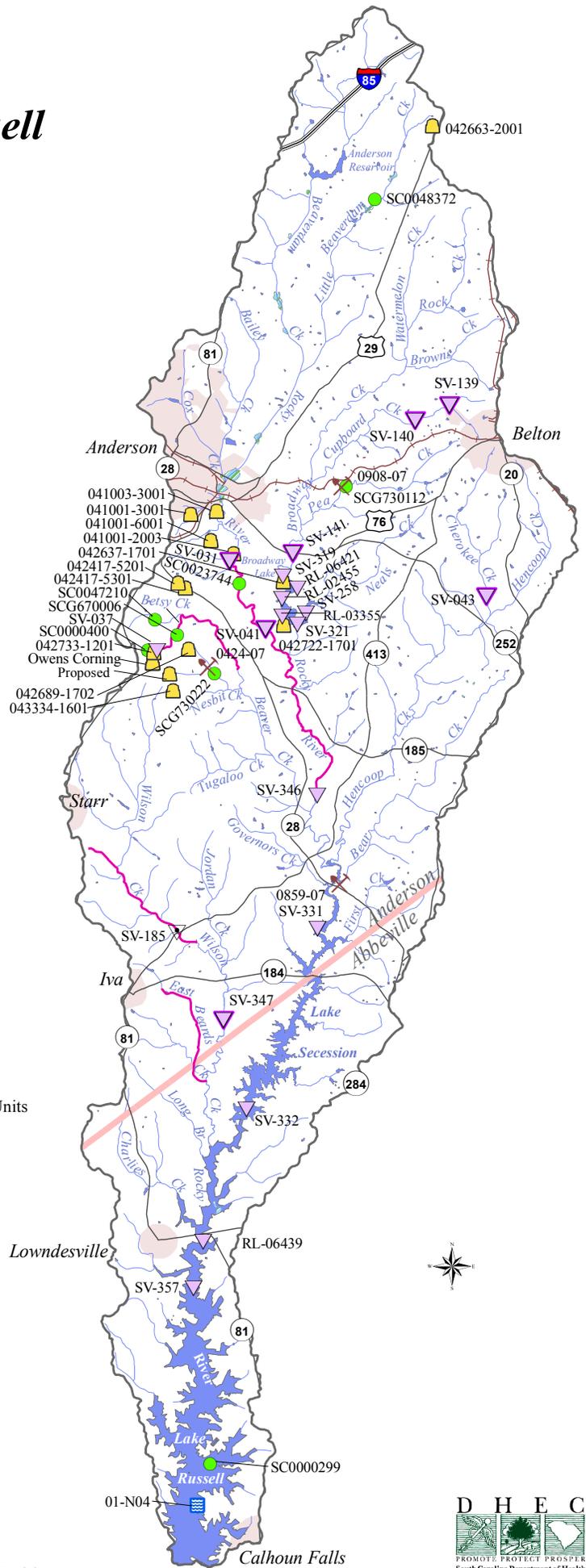
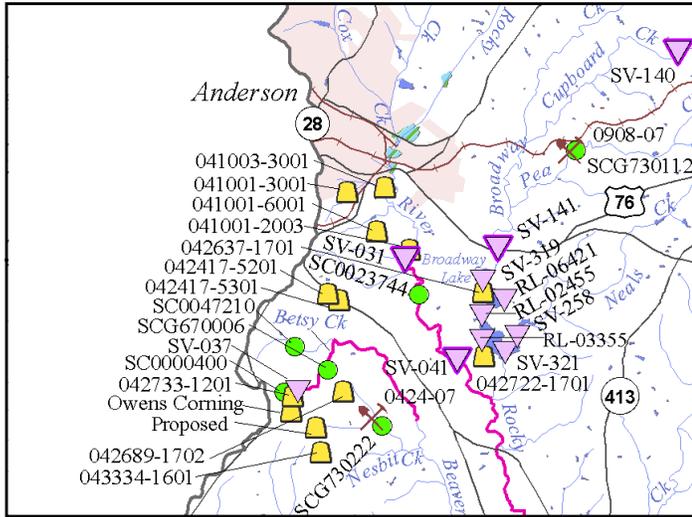
Total Maximum Daily Loads (TMDLs)

TMDLs were developed for SCDHEC and approved by EPA for the water quality monitoring sites at the **Rocky River** (SV-031, SV-041), **Cupboard Creek** (SV-139, SV-140), **Broadway Creek** (SV-141), and **Cherokee Creek** (SV-043). The TMDLs determine the maximum amount of fecal coliform bacteria the streams can receive and still meet water quality standards. Rocky River has a major wastewater treatment facility located on it. Parts of the watersheds of the Rocky River and its tributaries are within areas designated as MS4s. Probable sources of fecal coliform bacteria that were identified in the watershed are grazing livestock, especially cattle with access to creeks, failing septic systems, illicit discharges, and urban runoff. The TMDLs state that reductions of 50% to 93% in fecal coliform loading are necessary for these streams to meet the recreational use standard.

A TMDL was developed for SCDHEC and approved by EPA for **Wilson Creek** at water quality monitoring site SV-347. Wilson Creek has no wastewater treatment facilities located on it. Part of the Wilson Creek watershed is within an area designated as a MS4. Probable sources of fecal coliform bacteria that were identified in the watershed are grazing livestock, especially cattle with access to creeks, failing septic systems, and urban runoff. The TMDL states that a reduction of 22% in fecal coliform loading is necessary for this stream to meet the recreational use standard.

Rocky River/Lake Russell Watershed

(03060103-02)



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| | Macroinvertebrate Stations | | Interstates |
| | Water Quality Monitoring Stations | | Railroad Lines |
| | Approved TMDL | | Highways |
| | Groundwater Monitoring Stations | | County Lines |
| | Special Study Stations | | Modeled Stream |
| | Mines | | Stream |
| | Landfills | | Lake |
| | NPDES Permits | | Wetland |
| | Land Application Permits | | 10-Digit Hydrologic Units |
| | Natural Swimming Areas | | Cities/Towns |
| | | | Public Lands |

