

03050105-15

(Pacolet River)

General Description

The South Carolina portion of 03050105-15 (formerly 03050105-170, -190) is located in Spartanburg, Cherokee, and Union Counties and consists primarily of the *Pacolet River* and its tributaries. The watershed occupies 141,876 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 51.6% forested land, 32.6% agricultural land, 11.0% urban land, 1.9% forested wetland, 1.1% water, 1.0% scrub/shrub land, 0.8% barren land.

The Pacolet River is formed by the confluence of the North Pacolet River Watershed and the South Pacolet River Watershed. Downstream from the confluence, the Pacolet River accepts drainage from Thompson Creek and forms Lake Blalock. Streams draining into Lake Blalock include Buck Creek, Little Buck Creek (Ezell Branch, Cudds Creek, Greenes Lake), and Casey Creek (Carlisle Branch). Downstream from the lake, the Pacolet River accepts drainage from Cherokee Creek (Little Cherokee Creek), Island Creek (Zekial Creek, Double Branch), Pole Bridge Branch, Peters Creek, Cinder Branch, Turkey Hen Branch, Quinn Branch, and Mill Branch. Further downstream, the river accepts drainage from Richland Creek, Harvey Branch, Browns Branch, Plum Branch, and another Mill Branch. Mill Creek (Jumping Run Creek, Eison Branch) enters the river next, followed by Sandy Run Creek, Peter Hawks Creek, Gault Creek, another Mill Creek, another Gault Creek, Big Creek, Kendrick Branch, and Reedy Branch. The Pacolet River drains into the Broad River. Cowpens National Battlefield Site is located between Island Creek and Zekial Creek. There are a total of 230.1 stream miles and 1,069.7 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
B-028	S/W	FW	PACOLET R. AT S-42-55, BELOW CONFL. OF N. & S. PACOLET RIVERS
RL-02323	RL02	FW	LAKE BLALOCK AT S-42-43
B-783	BIO	FW	BUCK CREEK AT PEACH SHED RD
B-259	S/W	FW	LITTLE BUCK CREEK AT COUNTY ROAD, 2.3 MI SW OF CHESNEE
RL-01019	RL01	FW	LAKE BLALOCK, 4 MI SSW OF CHESNEE & 0.3 MI NE OF BUCK CK CHURCH
RL-03345	RL03	FW	LAKE BLALOCK , 0.1 MI SE OF BUCK CK CHURCH/ S-42-189
RL-04367	RL04	FW	LAKE BLALOCK , 0.9 MI UPLAKE OF US 221
RL-04389	RL04	FW	LAKE BLALOCK, 0.6 MI UPLAKE OF US 221
RL-04363	RL04	FW	LAKE BLALOCK , 0.3 MI UPLAKE OF US 221
RL-04461	RL04	FW	LAKE BLALOCK AT US 221
B-347	W	FW	LAKE BLALOCK IN FOREBAY NEAR DAM
B-163A	S/W	FW	PACOLET RIVER AT BRIDGE ON S-42-737, 2.9 MI NW OF COWPENS
B-191	S/W	FW	POTTER BRANCH ON ROAD 30, BELOW OUTFALL FROM HOUSING PROJECT
B-331	W/INT	FW	PACOLET RIVER AT S-42-59, BEACON LIGHT ROAD IN CLIFTON
BP-001	S/W	FW	PACOLET RIVER ABOVE DAM AT PACOLET MILLS
B-048	P/INT	FW	PACOLET RIVER AT SC 105, 6 MI ABOVE CONFLUENCE WITH BROAD RIVER

Pacolet River - There are five SCDHEC monitoring stations along the Pacolet River. At the furthest upstream site (*B-028*), aquatic life uses are fully supported. Significant decreasing trends in five-day biochemical oxygen demand, turbidity, total phosphorus concentration, and total suspended solids suggest improving conditions for these parameters. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria

concentration suggests improving conditions for this parameter. Further downstream (**B-163A**), aquatic life and recreational uses are fully supported; however, there is a significant increasing trend in total phosphorus concentration. There is a significant increasing trend in pH. Significant decreasing trends in five-day biochemical oxygen demand and turbidity, and increasing trends in dissolved oxygen concentration suggest improving conditions for these parameters.

At the next site downstream (**B-331**), aquatic life and recreational uses are fully supported. Significant decreasing trends in total phosphorus concentration and increasing trends in dissolved oxygen concentration suggest improving conditions for these parameters. Further downstream (**BP-001**), aquatic life uses are fully supported. A significant decreasing trend in turbidity suggests improving conditions for this parameter. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter. At the furthest downstream site (**B-048**), aquatic life uses are fully supported; however, there is a significant increasing trend in total nitrogen concentration and a significant decreasing trend in dissolved oxygen concentration. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

Lake Blalock – There are eight SCDHEC monitoring stations along Lake Blalock. Aquatic life and recreational uses are fully supported at **RL-02323**, **RL-01019**, **RL-04367**, **RL-04389**, **RL-04363**, and **B-347**. A very high concentration of cadmium and high concentrations of chromium, nickel, and zinc were measured in the 2004 sediment sample at station **RL-04367**. Endosulfan sulfate, DDD, DDE (metabolites of DDT), and DDT were also detected in the sediment sample. Although the use of DDT was banned in 1973, it is very persistent in the environment. Very high concentrations of cadmium, chromium, and nickel, and high concentrations of copper and zinc were measured in the 2004 sediment sample at station **RL-04389**. Dieldrin and DDT were also detected in the sediment sample. A very high concentration of cadmium and high concentrations of chromium, nickel, and zinc were measured in the 2004 sediment sample at station **RL-04363**. Endosulfan sulfate, dieldrin, DDD, DDE (metabolites of DDT), and DDT were also detected in the sediment sample at this site.

Aquatic life uses are fully supported at **RL-03345**. A very high concentration of cadmium was measured in the 2003 sediment sample. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions. Aquatic life uses are not supported at **RL-04461** due to occurrences of copper in excess of the aquatic life chronic criterion. A very high concentration of cadmium and high concentrations of chromium and zinc were measured in the 2004 sediment sample. Endosulfan sulfate was also detected in the sediment sample. Recreational uses are fully supported at this site. *Fish tissue samples from Lake Blalock indicate no advisories are needed at this time.*

Buck Creek (B-783) – Aquatic life uses are fully supported based on macroinvertebrate community data.

Little Buck Creek (B-259) – Aquatic life uses are fully supported, and a significant decreasing trend in turbidity suggests improving conditions for this parameter. Recreational uses are not supported due to fecal coliform bacteria excursions.

Potter Branch (B-191) – Aquatic life uses are partially supported due dissolved oxygen and pH excursions. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions.

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
PACOLET RIVER SSSD/CLIFTON WWTP PIPE #: 001 FLOW: 0.29	SC0042668 MINOR DOMESTIC
PACOLET RIVER INVISTA SARL/SPARTANBURG PIPE #: 001, 002 FLOW: M/R	SC0002798 MAJOR INDUSTRIAL
PACOLET RIVER SSSD/TOWN OF COWPENS/PACOLET RIVER PIPE #: 001 FLOW: 1.5	SC0045624 MAJOR DOMESTIC
PACOLET RIVER SSSD/FAIRFOREST REGIONAL WWTF PIPE #: 001 FLOW: 19.0 (25.0, 30.0)	SC0020435 MAJOR DOMESTIC
PACOLET RIVER SSSD/PACOLET MILLS WWTP PIPE #: 001 FLOW: 0.3	SC0044717 MINOR DOMESTIC
PACOLET RIVER CHAPMAN GRADING/CONVERSE MINE PIPE #: 001 FLOW: M/R	SCG730548 MINOR INDUSTRIAL
LITTLE CHEROKEE CREEK CITY OF SPARTANBURG/LAKE BLALOCK WTP PIPE #: 001 FLOW: M/R	SCG645010 MINOR DOMESTIC
LITTLE BUCK CREEK CITY OF CHESNEE/MAIN PLANT WWTP PIPE #: 001 FLOW: 0.500	SC0025763 MINOR DOMESTIC
LITTLE BUCK CREEK T GLENN EASLER GRADING & LANDSCAPING PIPE #: 001 FLOW: M/R	SCG730719 MINOR INDUSTRIAL
PETERS CREEK	SC0030554

SSSD IDLEWOOD SD PIPE #: 001 FLOW: 0.08	MINOR DOMESTIC
PETERS CREEK T GLENN EASLER GRADING & LANDSCAPING PIPE #: 001 FLOW: M/R	SCG730720 MINOR INDUSTRIAL
PETERS CREEK TRIBUTARY AIR LIQUIDE INDUSTRIES PIPE #: 001 FLOW: M/R	SCG250046 MINOR INDUSTRIAL
ISLAND CREEK TALL TALES FISH CAMP PIPE #: 001 FLOW: 0.0136	SC0031577 MINOR DOMESTIC
PACOLET RIVER TRIBUTARY VULCAN MATERIALS CO./PACOLET QUARRY PIPE #: 001 FLOW: M/R	SCG730293 MINOR INDUSTRIAL
MILL CREEK WEAVETEX, INC. PIPE #: 001 FLOW: 0.006	SC0037371 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
IRENE BISHOP SHORT TERM C&D LANDFILL	422904-1301 INACTIVE
INVISTA S.A.R.L. SHORT TERM C&D LANDFILL	423312-1901 ACTIVE
BUD ARTHUR BRIDGE ROAD LF SHORT TERM C&D LANDFILL	422484-1301 -----
KOHLER CO. INDUSTRIAL LF INDUSTRIAL	422442-1601 ACTIVE
J. DAVID MOORE INERT IND. LANDFILL INDUSTRIAL	----- INACTIVE
J DAVID MOORE INERT IND. LANDFILL CONSTRUCTION	----- INACTIVE
ROBERT CHAPMAN SHORT TERM C&D LANDFILL	422908-1304 INACTIVE
RON HUGHS SHORT TERM C&D LANDFILL	012780-1301 ACTIVE
CONVERSE SHORT TERM SHORT TERM C&D LANDFILLS	422908-1301, -1302, -1303 INACTIVE
CLIFFDALE ROAD C&D C&D & YARD TRASH	422683-1701 ACTIVE
LANCASTER C&D & YT LANDFILL	422460-1701 INACTIVE

PACOLET RIVER PROPERTIES C&D LANDFILL	422677-1701, 422677-1301 INACTIVE
ARMSTRONG TEXTILES LAND APPLICATION	112723-8001 ACTIVE
TOWN OF JONESVILLE C&D LANDFILL	441002-1701 INACTIVE

Land Application Sites

***LAND APPLICATION SYSTEM
FACILITY NAME***

***ND#
TYPE***

SPRAYFIELD SPARTANBURG WATER SYSTEM/SIMMS WTP	ND0074101 DOMESTIC
SPRAYFIELD SPARTANBURG WATER SYSTEM/LAKE BLALOCK WTP	ND0077135 DOMESTIC

Mining Activities

***MINING COMPANY
MINE NAME***

***PERMIT #
MINERAL***

CHAPMAN GRADING & CONCRETE CO., INC. CHAPMAN SAND PLANT #6	1081-83 SAND
DEATON SAND COMPANY DEATON SAND PIT	1016-83 SAND
T. GLEN EASLER GRADING & LANDSCAPING BLALOCK COVES MINE	1335-83 SAND; SAND/CLAY
T. GLEN EASLER GRADING & LANDSCAPING SHA LANE MINE	1438-83 SAND
VULCAN MATERIALS CO. PACOLET QUARRY	0062-83 GRANITE

Growth Potential

There is a low to moderate potential for growth in this watershed, which contains the City of Chesnee, the Town of Mayo, and portions of the City of Spartanburg and the Towns of Cowpens, Jonesville, and Pacolet. In addition to the Spartanburg area, growth is associated primarily with Chesnee, Cowpens, and Jonesville, which have sewer infrastructure. Industrial growth in particular is expected along the I-85 corridor and major roads with I-85 interchanges.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

TMDLs were developed for SCDHEC and approved by EPA for fecal coliform bacteria in the **Pacolet River** at water quality monitoring sites **B-028**, **B-163A**, and **B-331**. Currently there are several NPDES dischargers with fecal coliform bacteria limits in their permits on the Pacolet River, Peters Creek, and Island Creek. The Pacolet River watershed is within Municipal Separate Storm Sewer System (MS4) designated area for the Town of Cowpens and Spartanburg

County. Possible sources of fecal coliform bacteria into the Pacolet River include upstream sources, MS4 runoff, failing onsite wastewater disposal systems, cattle in the creeks, pets, and wildlife. The TMDL specifies reductions in the load of fecal coliform bacteria into the Pacolet River of 74% (B-028) and of 73% (B-331) in order for the river to meet the recreational use standard. The TMDL does not specify a reduction for B-163A.

TMDLs were developed for SCDHEC and approved by EPA for fecal coliform bacteria in the **Pacolet River** at water quality monitoring sites **BP-001** and **B-048**. The Spartanburg Sanitary Sewer District currently operates two WWTPs (SC0020435 and SC0044717) on the river. An industrial facility has operated on Mill Creek, a tributary. A small area of the watershed is within a MS4 designated area for Spartanburg County. Possible sources of fecal coliform bacteria in the Pacolet River include failing onsite wastewater disposal systems, cattle in the creeks, urban residential runoff, leaking sewers, pets, and wildlife. The TMDL specifies a reduction in the load of fecal coliform bacteria into the Pacolet River of 77% (BP-001) and 49% (B-048) in order for the river to meet the recreational use standard.

A TMDL was developed for SCDHEC and approved by EPA for fecal coliform bacteria in **Potter Branch** at water quality monitoring site **B-191**. The Spartanburg Sanitary Sewer District currently operates a WWTP on the creek. The watershed is within two Municipal Separate Storm Sewer System (MS4) designated areas: Town of Cowpens and Spartanburg County. Possible sources of fecal coliform bacteria in Potter Branch include MS4 runoff, failing onsite wastewater disposal systems, urban residential runoff, leaking sewers, pets, and wildlife. The TMDL specifies a reduction in the load of fecal coliform bacteria into Potter Branch of 69% in order for the creek to meet the recreational use standard. Funding for TMDL implementation activities is currently available. For more information, see the Bureau of Water web page www.scdhec.gov/water or call the Watershed Program at (803) 898-4300.

Pacolet River Watershed

(03050105-15)

