

03050106-05

(*Little River*)

General Description

Watershed 03050106-05 (formerly 03050106-070, -080) is located in Chester, Fairfield, and Richland Counties and consists primarily of the *Little River* and its tributaries. The watershed occupies 155,269 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 72.3% forested land, 17.4% agricultural land, 4.0% urban land, 2.8% forested wetland, 2.1% barren land, 1.0% scrub/shrub land, and 0.4% water.

Big Creek and Little Creek join to form the headwaters of the Little River near the Town of Blackstock. Downstream of the confluence, the Little River accepts drainage from Hill Creek, Camp Branch, Brushy Fork Creek (Dumpers Creek), the West Fork Little River (Weir Creek, Spring Branch, Williams Creek, Opossum Branch), Lick Branch, and Harden Branch. Jackson Creek is created by the confluence of Winnsboro Branch and Moore Creek near the Town of Winnsboro. Jackson Creek accepts drainage from Jordan Branch, Kennedy Creek, Sand Creek, Stitt Branch, and Gladney Branch before flowing into the Little River. Downstream of Jackson Creek, the river accepts drainage from Crumpton Creek, Mill Creek, Morris Creek, Gibson Branch (Manns Branch, Russell Creek), and Home Branch. The Little River drains into the Broad River. There are a total of 287.4 stream miles and 493.3 acres of lake waters, all classified FW.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
B-123	S/W	FW	WINNSBORO BRANCH AT US 321, ABOVE WINNSBORO MILLS OUTFALL
B-077	S/W	FW	WINNSBORO BRANCH BELOW PLANT OUTFALL
B-102	W/BIO/INT	FW	JACKSON CREEK AT S-20-54, 5 MI W OF WINNSBORO
B-338	W/INT	FW	MILL CREEK AT S-20-48, 10 MI SW OF WINNSBORO
B-145	S/BIO/W	FW	LITTLE RIVER AT S-20-60, 3.1 MI SW OF JENKINSVILLE
B-350	INT	FW	LITTLE RIVER AT SC 215, 1.5 MI NE OF CONFLUENCE WITH BROAD RIVER

Winnsboro Branch - There are two SCDHEC monitoring stations along Winnsboro Branch and recreational uses are not supported at either site due to fecal coliform bacteria excursions. At the upstream site (**B-123**), aquatic life uses are fully supported. There is a significant increasing trend in pH. At the downstream site (**B-077**), aquatic life uses are not supported due to occurrences of copper in excess of the aquatic life chronic criterion. There is also a significant increasing trend in total phosphorus concentration. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter.

Jackson Creek (B-102) - Aquatic life uses are not supported based on macroinvertebrate community data and due to occurrences of copper in excess of the aquatic life chronic criterion. There is a significant increasing trend in pH. A significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Mill Creek (B-338) – 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 phosphorus concentration suggests improving conditions for this parameter. Recreational uses are not supported due to fecal coliform bacteria excursions.

Little River – There are two SCDHEC monitoring stations along Little River. At the upstream site (**B-145**), aquatic life uses are fully supported. There is a significant increasing trend in pH. Recreational uses are not 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 downstream site (**B-350**), aquatic life uses are fully supported; however, there are significant increasing trends in five-day biochemical oxygen demand, turbidity, and total nitrogen concentration. There is a significant increasing trend in pH. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-057	GB	PIEDMONT BEDROCK	JENKINSVILLE #11

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD) COMMENT</i>	<i>NPDES# TYPE LIMITATION</i>
MORRIS CREEK TRIBUTARY MARTIN MARIETTA/RION QUARRY PIPE #: 001 FLOW: M/R	SCG730060 MINOR INDUSTRIAL
JACKSON CREEK TOWN OF WINNSBORO/JACKSON CREEK PLANT PIPE #: 001 FLOW: 1.6	SC0020125 MAJOR DOMESTIC
WINNSBORRO BRANCH INVISTA SARL/WINNSBORO PIPE #: 001 FLOW: M/R	SCG250215 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Activities

<i>SOLID WASTE LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
FAIRFIELD COUNTY SW TRANSFER STA. DOMESTIC	202401-6001 ACTIVE
FAIRFIELD COUNTY LANDFILL DOMESTIC	DWP-090; DWP-024 CLOSED
TOWN OF WINNSBORO SANITARY LANDFILL DOMESTIC	----- CLOSED

Mining Activities

<i>MINING COMPANY MINE NAME</i>	<i>PERMIT # MINERAL</i>
VULCAN CONSTRUCTION MATERIALS LP BLAIR QUARRY	0130-39 GRANITE
FAIRFIELD COUNTY CATHCART PIT	1523-39 SAND
MARTIN MARIETTA MATERIALS RION QUARRY	0100-39 GRANITE

Water Quantity

<i>WATER USER STREAM</i>	<i>REGULATED CAP.(MGD) PUMPING CAP.(MGD)</i>
TOWN OF WINNSBORO SAND CREEK	0.5 0.7
TOWN OF WINNSBORO MILL CREEK - 192 ACRE LAKE	3.1 8.0

Growth Potential

There is a moderate potential for growth in this watershed except for in and around the City of Winnsboro, where water and sewer services exist. The recent opening of a new industrial operation in the former Mack Truck plant shows the intention of civic leaders in Winnsboro to regain employment lost by plant closures over the past ten years.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

A TMDL was developed for SCDHEC and approved by EPA for fecal coliform bacteria in **Jackson Creek (B-102)**. There are no facilities that have fecal coliform limits in their NPDES permits that discharge into Jackson Creek. Nor is any of Jackson Creek watershed within a Municipal Separate Storm Sewer System (MS4) designated area. Possible sources of fecal coliform bacteria in Jackson Creek, identified in the TMDL, include sources in Winnsboro Branch, failing onsite wastewater disposal systems, land application of manure, cattle watering in the creek, and wildlife. The TMDL specifies a reduction in the load of fecal coliform bacteria into Jackson Creek of 86% in order for the creek to meet the recreational use standard.

A TMDL was developed for SCDHEC and approved by EPA for fecal coliform bacteria in **Mill Creek** at water quality monitoring site **B-338**. No facilities that have fecal coliform limits in their NPDES permits discharge into the creek. None of the Mill Creek watershed is in a Municipal Separate Storm Sewer System (MS4) designated area. Possible sources of fecal coliform bacteria in Mill Creek identified in the TMDL include failing onsite wastewater disposal systems, land application of manure, cattle watering in the creek, and wildlife. The TMDL specifies a reduction in the load of fecal coliform bacteria into Mill Creek of 71% in order for the creek to meet the recreational use standard.





















TMDLs were also developed for SCDHEC and approved by EPA for fecal coliform bacteria in the **Little River** at water quality monitoring sites **B-145** and **B-350**. There are no facilities that have fecal coliform limits in their NPDES permits that discharge into Little River. None of the Little River watershed is within a Municipal Separate Storm Sewer System (MS4) designated area. Possible sources of fecal coliform bacteria in the Little River, identified in the TMDL, include failing onsite wastewater disposal systems, land application of manure, cattle watering in the creek, pets, and wildlife. The TMDLs specify reductions in the load of fecal coliform bacteria into Little River of 60% (B-145) and 88% (B-350) in order for the creek to meet the recreational use standard.

TMDLs were developed for SCDHEC and approved by EPA for fecal coliform bacteria in **Winnsboro Branch** at water quality monitoring sites **B-123** and **B-077**. The Winnsboro/Jackson Creek WWTP (SC0020125) discharges into Winnsboro Branch downstream of B-123. Though the upper part of Winnsboro Branch is an urbanized area - Winnsboro, the town is not a designated Municipal Separate Storm Sewer System (MS4). Possible sources of fecal coliform bacteria in Winnsboro Branch, identified in the TMDL, include leaking sewers, SSOs, failing onsite wastewater disposal systems, pets, and wildlife. The TMDLs specify reductions in the load of fecal coliform bacteria into Winnsboro Branch of 99% (B-123) and 93% (B-077) 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.

Little River Watershed

(03050106-05)

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

