

03060103-06
(Long Cane Creek)

General Description

Watershed 03060103-06 (formerly 03060103-150 minus the impounded Lake Thurmond arm) is located in Abbeville, Greenwood, and McCormick Counties and consists primarily of *Long Cane Creek* and its tributaries to Lake Thurmond. The watershed occupies 128,358 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 66.9% forested land, 22.6% agricultural land, 8.0% urban land, 1.7% forested wetland (swamp), 0.4% barren land, and 0.4% water. A map depicting this watershed is found in Appendix B, page B-24.

Long Cane Creek originates near the Town of Donalds, and accepts drainage from Miller Branch, Grays Creek, Pickens Creek, Bailey Creek (Bowie Branch, Morrison Branch, Job Creek), McCord Creek, Bagg Creek, and Johns Creek (Little Johns Creek, Long Branch, Dry Creek). Another McCord Creek (Keller Branch) enters Long Cane Creek next, followed by Norris Creek (Parker Creek, Adams Branch, Blue Hill Creek, Double Branch), and McGill Branch. Further downstream, Big Curltail Creek (Watts Branch, Little Curltail Creek, Grays Creek, Little Muckaway Creek, George Devlin Branch, Wharton Branch, Fell Branch) enters followed by Stillhouse Branch, Church Branch, Mountain Creek (Parsons Mountain Lake), Candy Branch, Big Branch (Richie Branch, Sawmill Creek), and Chapel Branch. Reedy Branch accepts drainage from South Fork (Hareb Branch) and Rocky Branch (Edwards Branch, Puckett Branch) before flowing into Long Cane Creek, followed by Flat Branch and Cow Branch. There are a total of 478.6 stream miles and 349.8 acres of lake waters in this watershed, all classified FW. The lower half of the watershed is contained within the Sumter National Forest.

Surface Water Quality

| <u>Station #</u> | <u>Type</u> | <u>Class</u> | <u>Description</u> |
|------------------|-------------|--------------|---|
| RS-06190 | RS06/BIO | FW | BAILEY CREEK TRIB AT S-01-171, 4.8 MI NNE OF |
| ABBEVILLE | | | |
| SV-349 | W/BIO | FW | LONG CANE CREEK AT S-01-159 |
| SV-734 | BIO | FW | JOHNS CREEK AT S-01-159 |
| SV-053B | S | FW | BLUE HILL CREEK ON S MAIN ST ABBEVILLE |
| SV-732 | BIO | FW | BIG CURLY TAIL CREEK AT US FOREST RD 509 |
| RS-04542 | RS04 | FW | REEDY BR, ABOUT 1 MI E OF S-24-112, 5 MI SW OF |
| PROMISED LAND | | | |
| RS-05574 | RS05/BIO | FW | ROCKY BRANCH AT S-24-177, 14.6 MI SW OF GREENWOOD |
| SV-318 | INT/BIO | FW | LONG CANE CREEK AT S-33-117, 7 MI NW MCCORMICK |

Bailey Creek Tributary (RS-06190) – Aquatic life uses are partially supported based on macroinvertebrate community data. Recreational uses are not supported due to fecal coliform bacteria excursions.

Long Cane Creek – There are two SCDHEC monitoring stations along Long Cane Creek. At the upstream site (*SV-349*), aquatic life uses are fully supported based on macroinvertebrate community data; however, there is a significant increasing trend in five-day biochemical oxygen demand. A significant decreasing trend in turbidity suggests improving conditions for this parameter. Recreational uses are not supported due to fecal coliform bacteria excursions. At the downstream site (*SV-318*), aquatic life uses are fully supported based on macroinvertebrate community data; however, there is 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. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Johns Creek (SV-734) – Aquatic life uses are partially supported based on macroinvertebrate community data.

Blue Hill Creek (SV-053B) - Aquatic life uses are fully supported; however, there are significant increasing trends in five-day biochemical oxygen demand, turbidity, and total phosphorus concentration. A significant increasing trend in dissolved oxygen concentration suggests improving conditions for this parameter. Recreational uses are not supported due to fecal coliform bacteria excursions.

Big Curly Tail Creek (SV-732) - Aquatic life uses are fully supported based on macroinvertebrate community data.

Reedy Branch (RS-04542) – Aquatic life uses are fully supported, but recreational uses are not supported due to fecal coliform bacteria excursions.

Rocky Branch (RS-05574) - Aquatic life uses are fully supported based on macroinvertebrate community data and recreational uses are also fully supported.

Natural Swimming Areas

| <i>FACILITY NAME</i> | <i>PERMIT #</i> |
|--------------------------------|------------------------|
| <i>RECEIVING STREAM</i> | <i>STATUS</i> |
| PARSONS MOUNTAIN | 01-1002N |
| PARSONS MOUNTAIN LAKE | ACTIVE |

NPDES Program

Active NPDES Facilities

| <i>RECEIVING STREAM FACILITY NAME</i> | <i>NPDES# TYPE</i> |
|--|-------------------------------|
| BLUE HILL CREEK MILLIKEN & CO./ABBEVILLE PLANT | SC0000353 MAJOR INDUSTRIAL |
| LONG CANE CREEK CITY OF ABBEVILLE/LONG CANE CK WWTP | SC0040614 MAJOR DOMESTIC |
| BLUE HILL CREEK CITY OF ABBEVILLE WTP | SCG645030 MINOR DOMESTIC |

Municipal Separate Storm Sewer Systems (MS4)

| <i>RECEIVING STREAM MUNICIPALITY RESPONSIBLE PARTY IMPLEMENTING PARTY</i> | <i>NPDES# MS4 PHASE MS4 SIZE</i> |
|---|--|
| LONG CANE CREEK CITY OF GREENWOOD CITY OF GREENWOOD CITY OF GREENWOOD | ----- PHASE II SMALL MS4 |

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

| <i>LANDFILL NAME FACILITY TYPE</i> | <i>PERMIT # STATUS</i> |
|--|----------------------------|
| CITY OF ABBEVILLE LANDFILL INDUSTRIAL | 011002-1201 INACTIVE |
| CITY OF ABBEVILLE LANDFILL INDUSTRIAL | ----- INACTIVE |
| CITY OF ABBEVILLE C&D LANDFILL C&D | 011002-1703 ACTIVE |

Mining Activities

| <i>MINING COMPANY MINE NAME</i> | <i>PERMIT # MINERAL</i> |
|--|-----------------------------|
| CONFEDERATE MINING CO., INC. CANDY BRANCH | 1252-01 GOLD |

Growth Potential

There is a moderate potential for growth in this watershed, which contains the City of Abbeville, and portions of the Towns of Donalds, Hodges, Troy, a portion of the City of Greenwood, and the communities of Promised Land and Bradley. Industrial development in the Saluda River Basin may impact this watershed with a shared boundary. In particular, development around the Town of Hodges and the SC 25 Industrial Park, together with the

associated infrastructural and residential growth that runs along the US 178 corridor to the City of Greenwood. The Abbeville County Industrial Park and the supporting rail line are sources of potential industrial growth in the watershed. The Greenwood County Industrial Site is also located within this watershed, and with support from another rail line, has potential for industrial growth. The Sumter National Forest extends across the lower half of the watershed and would limit growth in that area.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

TMDLs were developed for SCDHEC and approved by EPA at water quality monitoring sites for **Long Cane Creek** (SV-318, SV-349) and its tributary **Blue Hill Creek** (SV-053B). The TMDLs determine the maximum amount of fecal coliform bacteria these streams can receive and still meet water quality standards. There was one major permitted wastewater treatment facility located on Long Cane Creek. At this time, there are not designated MS4s in the Long Cane Creek watershed. Probable sources of fecal coliform bacteria that were identified in the watershed are leaking sewers, domestic animals, failing septic systems, and wildlife. The TMDLs state that reductions of 22% to 99% in fecal coliform loading are necessary for these streams to meet the recreational use standard. The nonpoint source component of the Long Cane Creek and Blue Hill Creek TMDLs has been implemented using §319 grant funds. Implementation was completed in October 2009. For more information on §319 grants, visit <http://www.scdhec.gov/water> and click on Nonpoint Source Program.

Long Cane Creek Watershed (03060103-06)

-  Macroinvertebrate Stations
-  Water Quality Monitoring Stations
-  Approved TMDL
-  Groundwater Monitoring Stations
-  Special Study 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

