

03050108-03

(*Duncan Creek*)

General Description

Watershed 03050108-03 (formerly 03050108-040) is located in Laurens and Newberry Counties and consists primarily of *Duncan Creek* and its tributaries. The watershed occupies 76,741 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 66.2% forested land, 18.5% agricultural land, 9.5% urban land, 3.4% forested wetland, 1.3% barren land, 0.7% scrub/shrub land, and 0.4% water.

Duncan Creek originates near the Town of Ora and accepts drainage from Duncan Creek Reservoir 6B, Long Branch, Saxton Branch, Beards Fork Creek, Millers Fork (Sand Creek), and Allison's Branch. Beards Fork Creek and Millers Fork enter Duncan Creek near the City of Clinton. Further downstream near the Town of Whitmire, South Fork Duncan Creek (Ned Wesson Branch) enters Duncan Creek followed by Mulberry Branch and Sandy Branch. The lower portion of the watershed resides within the Sumter National Forest. There are a total of 142.3 stream miles and 231.4 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-735	W	FW	DUNCAN CREEK RESERVOIR 6B
B-231	S/W	FW	BEARDS FORK CREEK AT US 276 (I-385), 3.7 MI NNE OF CLINTON
RS-01057	RS01/BIO	FW	DUNCAN CREEK AT COUNTY RD 26, 4.5 MI NE OF CLINTON
B-072	P/BIO/INT	FW	DUNCAN CREEK AT US 176, 1.5 MI SE OF WHITMIRE

Duncan Creek Reservoir 6B (B-735) – Aquatic life and recreational uses are fully supported.

Beards Fork Creek (B-231) - Aquatic life uses are partially supported due to dissolved oxygen excursions. There is a significant decreasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions.

Duncan Creek – There are two SCDHEC monitoring stations along Duncan Creek. At the upstream site (*RS-01057*), aquatic life uses are fully supported based on macroinvertebrate community data. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. At the downstream site (*B-072*), aquatic life uses are fully supported based on macroinvertebrate community data. Significant increasing trends in dissolved oxygen concentration and decreasing trends in turbidity suggest improving conditions for these parameters. 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.

Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-067	GB	PIEDMONT BEDROCK	WHITMIRE

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
DUNCAN CREEK TOWN OF WHITMIRE PIPE #: 001 FLOW: 1.0	SC0022390 MINOR DOMESTIC
DUNCAN CREEK WR GRACE/BALL MINE PIPE #: 001 FLOW: M/R	SCG730029 MINOR INDUSTRIAL
DUNCAN CREEK WR GRACE/GOODWIN MINE PIPE #: 001 FLOW: M/R	SCG730110 MINOR INDUSTRIAL
DUNCAN CREEK TRIBUTARY WR GRACE/#1 #2A MINES PIPE #: 001 FLOW: M/R	SCG730094 MINOR INDUSTRIAL
BEARDS FORK CREEK WR GRACE/LEONARD MINE PIPE #: 001 FLOW: M/R	SCG730106 MINOR INDUSTRIAL
BEARDS FORK CREEK TRIBUTARY STANDARD PLYWOOD INC. PIPE #: 001 FLOW: M/R	SCG250192 MINOR INDUSTRIAL
LONG BRANCH WR GRACE/ROY #2 MINE PIPE #: 001 FLOW: M/R	SCG730441 MINOR INDUSTRIAL
LONG BRANCH TRIBUTARY CAROLINA VERMICULITE/WINGO MINE PIPE #: 001 FLOW: M/R	SCG730413 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
CLINTON MILLS - BAILEY PT DOMESTIC	DWP-019 (SCD0033415575) CLOSED
CITY OF CLINTON DOMESTIC	301002-1201 ACTIVE
CITY OF CLINTON DOMESTIC	----- CLOSED
CITY OF CLINTON COMPOSTING	301002-3001 INACTIVE
LAURENS COUNTY SW TRANSFER STA. DOMESTIC	302323-6001 ACTIVE

LAWNDALE MOBILE HOMES INDUSTRIAL	IWP-101 INACTIVE
TORRINGTON CO. INDUSTRIAL	----- INACTIVE
TORRINGTON CO. COMPOSTING FACILITY COMPOSTING	303300-3001 INACTIVE
SOUTHEASTERN SOIL RECOVERY INDUSTRIAL	302715-8001 INACTIVE
COUNTY FRESH LA PRODUCE	232736-8001 ACTIVE

Mining Activities

<i>MINING COMPANY MINE NAME</i>	<i>PERMIT # MINERAL</i>
CAROLINA VERMICULITE WINGO	1419-59 VERMICULITE
WR GRACE & CO. ROY #2 MINE	1312-59 VERMICULITE
WR GRACE & CO. GOODWIN MINE	0692-59 VERMICULITE
WR GRACE & CO. BALL MINE	0748-59 VERMICULITE
HANSON AGGREGATES SE, INC. CLINTON QUARRY	1414-59 GRANITE
WR GRACE & CO. COOPER #1 & #2	1064-59 VERMICULITE ORE

Water Quantity

<i>WATER USER STREAM</i>	<i>REGULATED CAP.(MGD) PUMPING CAP. (MGD)</i>
CITY OF CLINTON DUNCAN CREEK	3.5 1.7
TOWN OF WHITMIRE DUNCAN CREEK	1.0 1.0

Growth Potential

There is a high potential for industrial growth in this watershed, which contains the City of Clinton and portions of the Cities of Whitmire and Laurens. I-26 and I-385 intersect near Clinton and future industrial development will be prevalent along I-385 to the area south of Clinton. There is a potential for growth in the northern portion of Newberry County centering on Whitmire and environs.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

TMDLs were developed for SCDHEC and approved by EPA for fecal coliform bacteria in **Duncan Creek** and **Beards Fork Creek** at water quality monitoring sites **B-072** and **B-231**. The Town of Whitmire's WWTP is on Duncan Creek just upstream of B-072. The watershed is not within a Municipal Separate Storm Sewer System (MS4) designated area. Possible sources of fecal coliform bacteria in Duncan Creek include failing onsite wastewater disposal systems, cattle in the creeks, leaking sewers, urban residential runoff, pets, and wildlife. The TMDL specifies a reduction in the load of fecal coliform bacteria into Duncan Creek of 67 % and into Beards Fork of 47 % in order for the creeks to meet the recreational use standard.

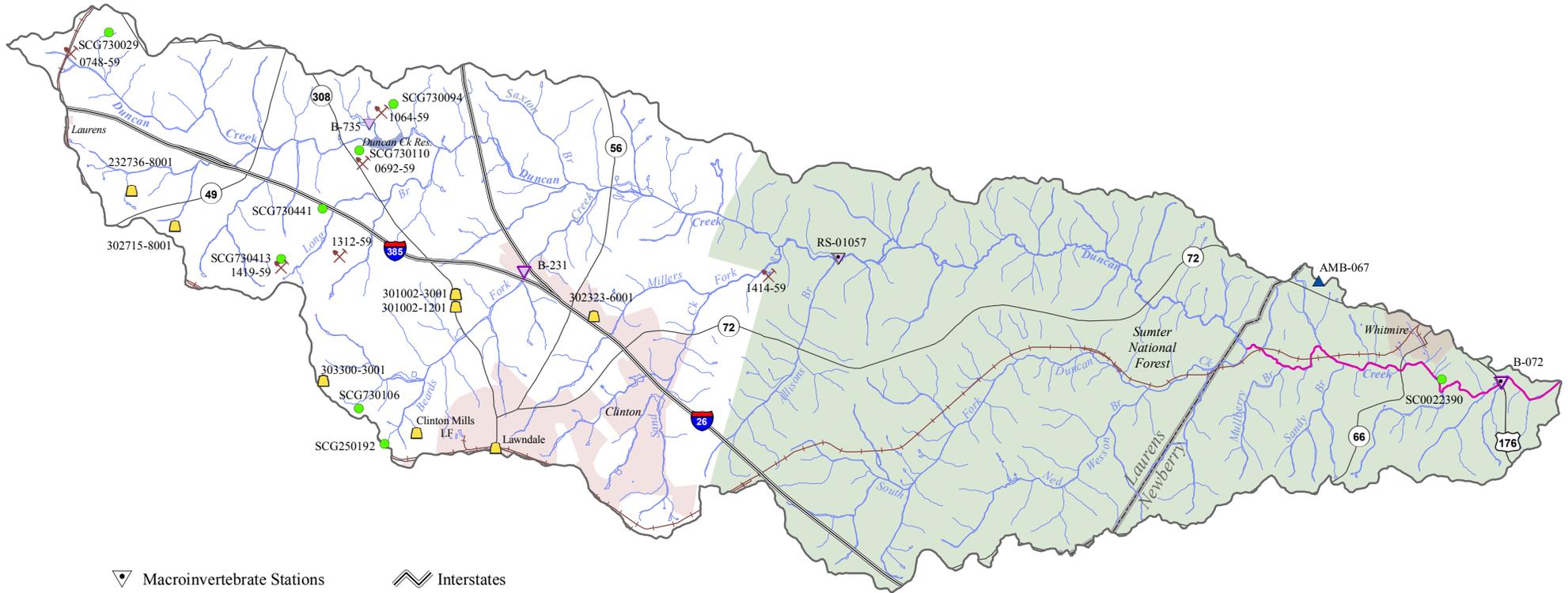
Special Projects

TMDL Implementation for the Enoree River Basin

Twenty-three water quality monitoring stations in the Enoree River basin have been placed on the South Carolina §303(d) list of impaired waters for violations of the fecal coliform bacteria standard. The 730 square mile basin is composed of mostly forest (70%) with some pastureland (10%) and cropland (10%). The basin has several municipalities that have or may receive Municipal Separate Storm Sewer System (MS4) permits. There are 10 active continuous point sources discharging fecal coliform bacteria in the Enoree River basin of South Carolina. The Project addresses several strategies for TMDL implementation through the development and promotion of measures focused at reducing fecal coliform contamination from non-point sources. Clemson University has partnered with the Natural Resource Conservation Service, the Soil and Water Conservation District and the Cattlemen's Association of five counties to implement a fecal coliform TMDL for the Enoree River. This three-year project seeks to reduce the amount of fecal coliform bacteria at ten DHEC water quality monitoring stations so that water quality standards will be met. Clemson is leading the effort by educating property owners on proper septic system maintenance as well as best management practices to reduce bacteria coming from agricultural areas. They have also hosted River Sweeps and educational programs. In addition, project staff are recruiting landowners to install BMPs on farms and to repair failing septic systems within the watershed. It is anticipated that the behavior changes resulting from this project's educational efforts, combined with the best management practices throughout the watershed will reduce the fecal coliform loading to the Enoree River as called for by the TMDL.

Duncan Creek Watershed

(03050108-03)



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

