

03050103-03

(Cane Creek)

General Description

The South Carolina portion of watershed 03050103-03 (formerly 03050103-040) is located in Lancaster County and consists primarily of *Cane Creek* and its tributaries. The watershed occupies 90,175 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 58.3% forested land, 24.1% agricultural land, 15.9% urban land, 0.8% water, 0.8% forested wetland (swamp), and 0.1% barren land.

Cane Creek originates in North Carolina and accepts drainage from Simpson Branch, Unity Branch, Flag Pond Branch, McAteer Branch, Sandy Branch, Cedar Pines Lake, and Camp Creek (North Prong, South Prong). Further downstream, the Bear Creek drainage enters Cane Creek. Bear Creek accepts drainage from Caney Branch and Dry Branch before flowing through the Lancaster Reservoir. Turkey Quarter Creek (Little Turkey Creek) flows into Bear Creek at the reservoir, and further downstream, Gills Creek (Hanna's Creek) enters near the Town of Lancaster. Rum Creek drains into Cane Creek near the Town of Fort Lawn. There are a total of 505.4 stream miles in the entire Cane Creek watershed (442.9 miles within South Carolina) and 1,177.0 acres of lake waters (835.3 acres within South Carolina), all classified FW.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
CW-185	S/W	FW	CANE CREEK AT SC 200 5 MI NNE OF LANCASTER
RS-07043	RS07	FW	GILLS CREEK AT S-29-36 4.5MI ENE OF LANCASTER
RS-05403	RS05	FW	HANNAHS CREEK AT AT S-29-376 3.4MI E OF LANCASTER
CW-047	S/W	FW	GILLS CREEK AT US 521 NNW OF LANCASTER
CW-151	S/W	FW	BEAR CREEK AT S-29-362 3.5 MI SE OF LANCASTER
CW-131	S/W	FW	BEAR CREEK AT S-29-292 1.6 MI W OF LANCASTER
CW-210	BIO	FW	CANE CREEK AT SC 9 BYPASS
CW-017	S/INT	FW	CANE CREEK AT S-29-50
CW-232	W	FW	RUM CREEK AT S-29-187

Cane Creek - There are three SCDHEC monitoring sites along Cane Creek. At the upstream site (*CW-185*), aquatic life use is partially supported due to dissolved oxygen excursions, which are compounded by a significant decreasing trend in dissolved oxygen concentration. There were also significant increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. Recreational uses are partially supported at this site due to fecal coliform excursions. At the midstream site (*CW-210*), aquatic life uses are partially supported based on pH excursions. At the downstream site (*CW-017*), aquatic life uses are not supported due to dissolved oxygen and copper excursions. In addition, there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant decreasing trend in pH. Recreational uses are partially supported at this site due to fecal coliform excursions; however, a significant decreasing trend in fecal coliform suggests improving conditions for this parameter.

Hannahs Creek (RS-05403) – Aquatic life uses are not supported due to dissolved oxygen excursions and recreational uses are not supported due to fecal coliform excursions.

Gills Creek - There are two SCDHEC monitoring sites along Gills Creek. At the upstream site (**RS-07043**), aquatic life uses are not supported due to dissolved oxygen excursions and recreational uses are not supported due to fecal coliform excursions. At the downstream site (**CW-047**), aquatic life uses are fully supported; however, there are significant increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. Recreational uses are not supported due to fecal coliform excursions.

Bear Creek – There are two SCDHEC monitoring sites along Bear Creek. At the upstream site (**CW-151**), aquatic life uses are fully supported; however, there is a significant decreasing trend in dissolved oxygen and significant increasing trends in five-day biochemical oxygen demand and total phosphorus concentration. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform suggests improving conditions for this parameter. At the downstream site (**CW-131**), aquatic life uses are fully supported. Recreational uses are not supported due to fecal coliform excursions; however, a significant decreasing trend in fecal coliform suggests improving conditions for this parameter.

Rum Creek (CW-232) - Aquatic life uses are not supported due to dissolved oxygen excursions and recreational uses are fully supported.

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
CAMP CREEK TRIBUTARY C&S CAR WASH	SCG750033 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
FRANKS TIRE PROCESSING WASTE TIRE PROCESSING	292414-5201 INACTIVE
SNIPES SHORT-TERM C&D LANDFILL C&D	292648-1301 INACTIVE
SPRINGS INDUSTRIES C&D	292657-1901 ACTIVE

SPRINGS INDUSTRIES C&D & LT	293314-1201 INACTIVE
SPRINGS INDUSTRIES (5) INDUSTRIAL	----- INACTIVE
PARNELL INERT LANDFILL INDUSTRIAL	----- INACTIVE
PIEDMONT COMPOSTING COMPOSTING	292642-3001 ACTIVE
BOWERS FIBERS LAND APPLICATION	292684-8001 ACTIVE

Growth Potential

This watershed has moderate potential for growth as the City of Lancaster is located here and has densely developed areas of residential, commercial, and industrial land uses. The City continues to expand its wastewater treatment plant to meet future growth demands. This will allow for increased industrial and municipal flows. A large area of residential development extends to the south of the city, and also along S.C. Hwy 9 and S.C. Hwy 903 to the east, and U.S. Hwy 521 and S.C. Hwy 200 to the north. Significant industrial and commercial growth has occurred on the north side of the city along the S.C. Hwy 9 Bypass. Rail service is available between Lancaster and the cities of Rock Hill and Chester. Water service is available along major roads throughout the watershed. Sewer service is available in the City of Lancaster in the residential areas to its south, and along S.C. Hwy 903 east of the city. Lancaster County continues to develop Catawba Ridge, a large mixed-use community along Fishing Creek Reservoir. The development would extend from S.C. Hwy 9 down to S.C. Hwy 200, within the County. The overall project could result in a densely populated residential area, which would include commercial and industrial uses. To date, some residential developer has purchased acreage in the development with some limited housing construction underway.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

A TMDL was developed by SCDHEC and approved by EPA for several water quality monitoring sites in the *Cane Creek* watershed including CW-151 and CW-131 along Bear Creek, CW-047 on Gills Creek, and CW-185 and CW-017 along Cane Creek to determine the maximum amount of fecal coliform bacteria they can receive from nonpoint sources and still meet water quality standards. The primary sources of fecal coliform to the sites were determined to be runoff from agricultural areas. The TMDL states that a 7% reduction in fecal coliform loading from these urban and agricultural sources at monitoring site CW-151, a 69% reduction at CW-131, a 63% reduction at CW-047, a 39% reduction at CW-185, and a 74% reduction at CW-017 are necessary for the streams to meet the recreational standard. For more detailed information on TMDLs, please visit www.scdhec.gov/tmdl.

Special Projects

NPS Assessment and TMDL Development for Nutrients in the Catawba River Basin

SCDHEC continues to address nutrient loading concerns in the impaired reservoirs (Fishing Creek, Great Falls, and Cedar Creek Reservoirs and Lake Wateree) of the lower Catawba-Wateree Basin using the WARMF (Watershed Analysis Risk Management Framework) water quality model. This watershed model was updated previously through 2005, but changes in phosphorus loading, land use, and population made the model out dated in terms of the model time period. Significant changes in the watershed since 2005 include new phosphorus limits on the three Charlotte-Mecklenburg WWTPs in the Sugar Creek watershed, closing of two major industrial dischargers in the South Carolina portion of the basin, and a significant increase in population and developed land use in the Charlotte – Rock Hill area. In late 2012, SCDHEC began an update of the model that will incorporate these changes in the watershed and make the model as current as feasible. SCDHEC intends to use the updated model for nutrients and pH TMDLs by determining new Wasteload Allocations for point source dischargers and Municipal Separate Storm Sewer Systems (MS4s) and Load Allocations for the nonpoint sources within the Basin.

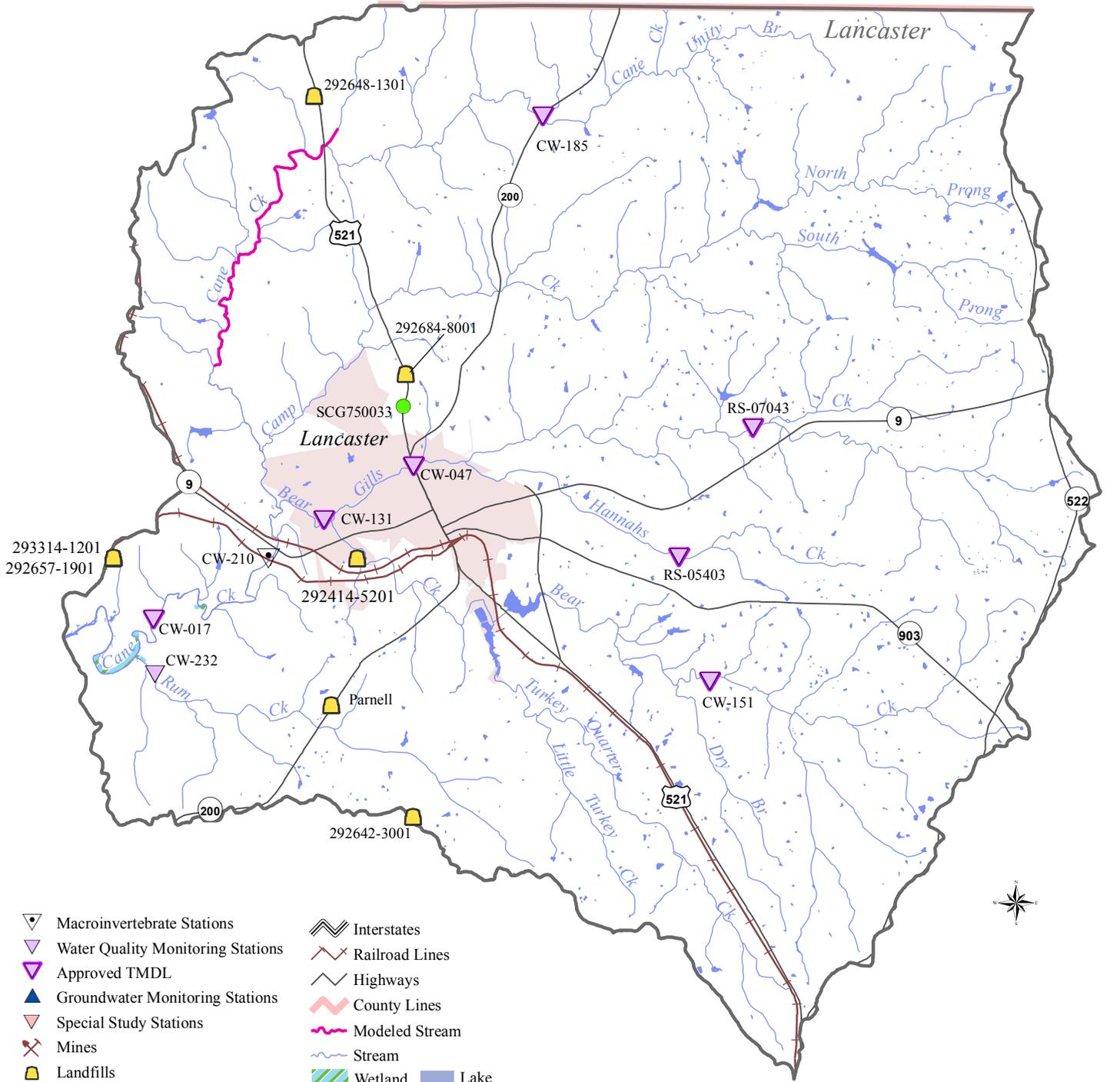
Catawba River Water Supply Project Expansion

The Catawba River Water Supply Project (CRWSP) is a joint venture between Lancaster County in South Carolina and Union County in North Carolina, which provides drinking water to the majority of both counties. To better manage water supplies during drought conditions, the CRWSP plans to expand its off-river reservoir to provide additional storage and less reliance on Catawba River flows.

Great Falls Heritage Tract

The Katawba Valley Land Trust has purchased and preserved 2,000 acres on the Catawba River at Great Falls along Great Falls Reservoir and Cedar Creek Reservoir. The Crescent-Heritage Tract combines significant natural resources with cultural and historical value close to a large urban area that is Charlotte/Rock Hill. <http://sccbanc.sc.gov/properties/crescent.html>.

Cane Creek Watershed (03050103-03)



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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 | | Wetland |
| | NPDES Permits | | Lake |
| | Land Application Permits | | 10-Digit Hydrologic Units |
| | Natural Swimming Areas | | Cities/Towns |
| | | | Public Lands |

