

03040202-01

(*Lynches River*)

General Description

The South Carolina portion of 03040202-01 is located in Lancaster and Chesterfield Counties and consists primarily of the *Lynches River* and its tributaries from where it enters South Carolina to Flat Creek. The watershed occupies 93,845 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 72.0% forested land, 21.1% agricultural land, 5.2% urban land, 1.4% forested wetland, 0.2% water, and 0.1% barren land.

The Lynches River originates in North Carolina and accepts drainage also originating in North Carolina including Polecat Creek (Otter Creek, Silver Run), Buffalo Creek (Raccoon Branch Creek), and Dead Pine Creek. Hills Creek originates near the Town of Pageland and accepts the drainage of Mangum Branch, Cow Head Branch, and Conway Branch before flowing into the Lynches River. Mill Creek originates near the headwaters of Mangum Creek and flows into North Carolina. North Branch Wildcat Creek (South Branch, Sutton Branch, Long Branch) enters the river next, followed by Turkey Creek, Arant Branch, Shop Branch, Belk Branch (Horton Spring Branch), Cedar Falls Branch, and Rocky Branch. Flat Creek accepts drainage from Baker Creek (Ellis Creek), Childers Creek (Mine Branch), Big Double Branch (Little Double Branch), Lick Creek, Lick Run (Mill Branch), and Dry Creek before draining into the river at the bottom of the watershed. An additional natural resource in the watershed is the Forty Acre Rock Heritage Preserve adjacent to Flat Creek. There are a total of 288.3 stream miles and 105.1 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>
PD-333	W	FW	HILLS CREEK AT S-13-105
PD-366	INT	FW	HILLS CREEK AT S-13-545
PD-113	INT	FW	LYNCHES RIVER AT SC 9 WEST OF PAGELAND
RS-06185	RS06	FW	UNNAMED TRIB TO NORTH BRANCH WILDCAT CREEK
PD-679	BIO	FW	NORTH BRANCH WILDCAT CREEK AT SR 178
PD-179	W	FW	NORTH BRANCH WILDCAT CREEK AT S-29-39 1 MI S OF TRADESVILLE
PD-180	W	FW	SOUTH BRANCH AT S-29-39 2 MI S OF TRADESVILLE
RS-08233	RS08/BIO	FW	FLAT CREEK AT S-29-99
PD-342	INT	FW	FLAT CREEK AT S-29-123
(PD-001)	W/INT/BIO	FW	LYNCHES RIVER AT SC 265

Hills Creek - There are two SCDHEC monitoring sites along Hills Creek. At the upstream site (**PD-333**), aquatic life uses are fully supported. Recreational uses are not supported due to fecal coliform bacteria excursions, which are compounded by a significant increasing trend in fecal coliform bacteria concentration. At the downstream site (**PD-366**), aquatic life uses are fully supported; however, there are significant increasing trends in turbidity, total phosphorus concentration, and total nitrogen concentration. A significant increasing trend in dissolved oxygen suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions, which are compounded by a significant increasing trend in fecal coliform bacteria concentration.

Lynches River (PD-113) - Aquatic life uses are fully supported; however, there is a significant increasing trend in total phosphorus concentration. Recreational uses are partially supported due to fecal coliform

bacteria excursions. In addition, there is a significant increasing trend in fecal coliform bacteria. Station **PD-001** is physically located in 03040202-03, but also reflects the influence from this watershed drainage. Aquatic life and recreational uses are fully supported at PD-001; however, there is a significant increasing trend in total phosphorus. There is a significant increasing trend in pH.

Tributary to North Branch Wildcat Creek (RS-06185) - Aquatic life uses are fully supported. Recreational uses are not supported due to fecal coliform bacteria excursions.

North Branch Wildcat Creek- There are two SCDHEC monitoring sites along North Branch Wildcat Creek. At the upstream site (**PD-679**), aquatic life uses are partially supported based on macroinvertebrate community data. At the downstream site (**PD-179**), aquatic life and recreational uses are fully supported.

South Branch - (PD-180) - Aquatic life uses are fully supported. There is a significant decreasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions.

Flat Creek - There are two SCDHEC monitoring sites along Flat Creek. At the upstream site (**RS-08233**), aquatic life uses are partially supported based on macroinvertebrate community data. Recreational uses are partially supported due to fecal coliform bacteria excursions. At the downstream site (**PD-342**), aquatic life uses are fully supported; however, there is a significant increasing trend in 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.

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME</i>	<i>NPDES# TYPE</i>
HILLS CREEK TOWN OF PAGELAND/NORTHWEST WWTP	SC0021504 MINOR DOMESTIC
LYNCHES RIVER TRIBUTARY HANSON AGGREGATES SE/JEFFERSON	SCG730062 MINOR INDUSTRIAL
LYNCHES RIVER TRIBUTARY BUCKHORN MATERIALS, LLC	SC0048445 MINOR INDUSTRIAL
CEDAR FALLS BRANCH TRIBUTARY BUCKHORN MATERIALS, LLC	SC0048445 MINOR INDUSTRIAL
NORTH BRANCH WILDCAT CREEK LANCASTER CO. SCHOOL DIST./BUFORD H.S.	SC0030210 MINOR DOMESTIC
CHILDERS CREEK MINERAL MINING CORP.	SCG730049 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME</i> <i>FACILITY TYPE</i>	<i>PERMIT #</i> <i>STATUS</i>
MINING ROAD C&D LANDFILL CONSTRUCTION	292440-1201 INACTIVE
MINING ROAD INDUSTRIAL SW LANDFILL INDUSTRIAL	292440-1601 ACTIVE
KINLAW COMPOSTING SITE COMPOSTING	132442-3001 INACTIVE

Mining Activities

<i>MINING COMPANY</i> <i>MINE NAME</i>	<i>PERMIT #</i> <i>MINERAL</i>
HANSON AGGREGATES SE JEFFERSON PLANT	0093-25 GRANITE
BUCKHORN MATERIALS, LLC LYNCHES RIVER QUARRY	1619-25 GRANITE

Growth Potential

There is a low to moderate potential for growth in this watershed, which includes a portion of the Town of Pageland. The northeast corner of the watershed is the edge of the Charlotte Metroplex and future growth is expected. Pageland and the area immediately outside of the town have water and sewer service. Water service has also been extended to the Lynches River Industrial Park, located along the S.C. Hwy. 151/U.S. Hwy. 601 corridor. Wal-Mart has constructed a food distribution center in the park, and spillover development from the park is expected. The remainder of the watershed is predominately rural with forested land and rangeland.

Watershed Restoration and Protection

Total Maximum Daily Loads (TMDLs)

A TMDL was developed by SCDHEC and approved by EPA for *Hills Creek* water quality monitoring sites *PD-333* and *PD-366* to determine the maximum amount of fecal coliform bacteria it can receive from nonpoint sources and still meet water quality standards. The most likely sources of elevated fecal coliform concentrations include leaking sewers, sanitary sewer overflows (SSOs), wildlife, animal feeding operations (AFOs), cattle with direct access to creeks, and land application of manure. The TMDL states that a 93% reduction in fecal coliform loading is necessary for the stream to meet the water quality standard.

A TMDL was developed by SCDHEC and approved by EPA for the *Lynches River* water quality monitoring sites *PD-113* and *PD-001* 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 appear to be cattle with direct access to streams, pets, wildlife, AFO land application areas, and failing OSWD systems. The TMDL states that an 81% reduction in fecal coliform loading is necessary for the stream to meet the water quality standard.

A TMDL was developed by SCDHEC and approved by EPA for *North Branch Wildcat Creek* water quality monitoring sites **PD-179** and **RS-06185** to determine the maximum amount of fecal coliform bacteria they can receive and still meet water quality standards. Sources of fecal coliform are primarily nonpoint sources such as cattle, pets, wildlife, and AFO land application areas, with failing OSWD systems expected to be negligible. While only 1 percent of the watershed for PD-179 is urbanized land use, the town of Tradesville is very close to the WQM station. As a result, urban runoff from Tradesville may be contributing to fecal coliform exceedances. The TMDL states that an 85% reduction in fecal coliform loading is necessary for the stream to meet the water quality standard.

A TMDL was developed by SCDHEC and approved by EPA for *South Branch* water quality monitoring site **PD-180** to determine the maximum amount of fecal coliform bacteria it can receive and still meet water quality standards. The absence of point source discharges within the watershed indicates that nonpoint sources of fecal coliform appear to originate from turkeys and poultry as well as wildlife, while cattle, pets, land application of manure, and failing OSWD systems appear to be negligible. The TMDL states that a 51% reduction in fecal coliform loading is necessary for the stream to meet the water quality standard.

A TMDL was developed by SCDHEC and approved by EPA for *Flat Creek* water quality monitoring sites **PD-342** and **RS-08233** to determine the maximum amount of fecal coliform bacteria they can receive and still meet water quality standards. The absence of point sources indicates that nonpoint sources of fecal coliform that include turkey AFOs, land application of manure, and wildlife, with negligible contributions from cattle, pets, and failing OSWD systems. Fecal coliform concentrations in this watershed do not appear related to precipitation, which is substantiated by the designated hydrologic critical condition of “dry.” The TMDL states that a 57% reduction in fecal coliform loading is necessary for the stream to meet the water quality standard.

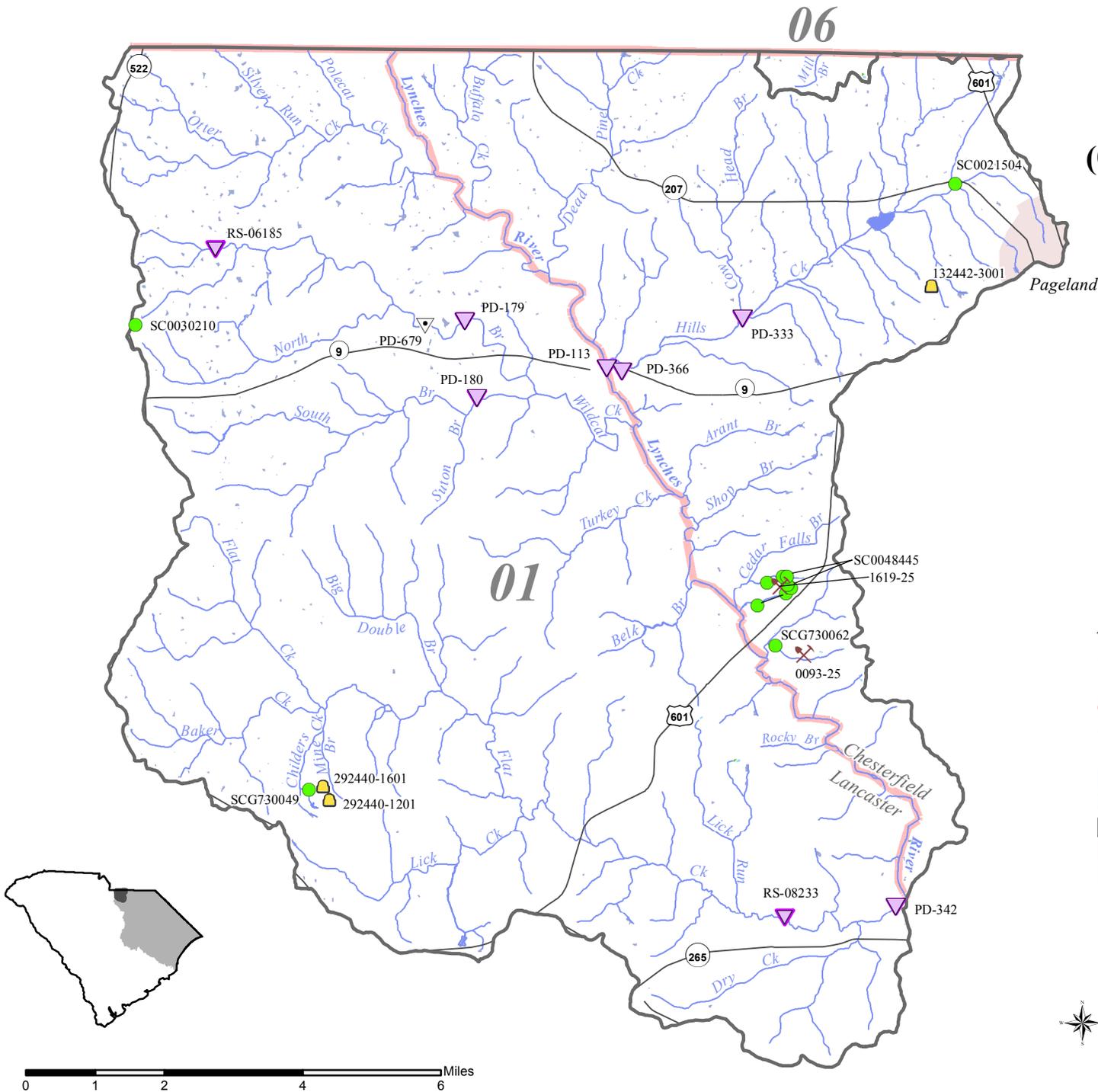
Special Projects

Hill Creek Watershed Water Quality Improvement Project

In 2008, the Pee Dee Resource Conservation and Development Council was awarded a 319 Grant to improve impaired waters in the Hills Creek Watershed. The grant was implemented by the Chesterfield Soil and Water Conservation District and the Natural Resources Conservation Service. Funds were utilized to assist homeowners with repairs to faulty septic systems. Livestock producers were assisted with funds for a variety of practices including: excluding cattle from streams and ponds by using fencing; providing alternative watering sources; and managing manure storage areas to reduce runoff. The project was completed in 2012.

Lynches River Watershed

(03040202-01, 03040105-06)



- Macroinvertebrate Stations
- Water Quality Monitoring Stations
- Approved TMDL
- Surface Water Intakes
- Shellfish 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

