03050107-01

(Middle Tyger River)

General Description

Watershed 03050107-01 (formerly 03050107-040) is located in Greenville and Spartanburg Counties and consists primarily of the ***Middle Tyger River*** and its tributaries. The watershed occupies 54,596 acres of the Piedmont region of South Carolina. Land use/land cover in the watershed includes: 47.2% forested land, 34.0% agricultural land, 13.8% urban land, 2.2% forested wetland, 1.3% water, 0.8% scrub/shrub land, and 0.7% barren land.

The Middle Tyger River accepts drainage from Campbell Creek, Beaverdam Creek (Barnes Creek), and Spencer Creek before flowing into Lyman Lake (Meadow Creek). Downstream of Lyman Lake, another Beaverdam Creek (Foyster Creek, Thompson Branch, Berrys Millpond, Silver Lake) flows into the river followed by Twin Lakes much further downstream. There are a total of 97.6 stream miles and 578.7 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
B-148	P/W	FW	MIDDLE TYGER RIVER AT SC 14, 2 MI SSW GOWANSVILLE
B-784	BIO	FW	BEAVERDAM CREEK AT SC 357
B-012	S/W	FW	MIDDLE TYGER RIVER AT S-42-63
B-014	W/INT	FW	MIDDLE TYGER RIVER AT S-42-64

Middle Tyger River - There are three SCDHEC monitoring stations along the Middle Tyger River. At the upstream site ***(B-148)***, aquatic life uses are fully supported. Significant increasing trends in dissolved oxygen concentration and decreasing trends in turbidity, total phosphorus concentration, and total nitrogen concentration 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. At the midstream site ***(B-012)***, aquatic life uses are fully supported; however, there is a significant increasing trend in five-day biochemical oxygen demand. There is a significant decreasing trend in pH. Significant decreasing trends in total phosphorus concentration and fecal coliform bacteria concentration suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. At the downstream site ***(B-014)***, 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 five-day biochemical oxygen demand. There is a significant decreasing trend in pH. Significant decreasing trends in total phosphorus concentration and fecal coliform bacteria concentration suggest improving conditions for these parameters. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions. *Fish tissue samples from the Middle Tyger River indicate no advisories are needed at this time.*

Beaverdam Creek (B-784) – Aquatic life uses are partially supported based on macroinvertebrate community data.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)*	*NPDES#* *TYPE* *COMMENT*
MIDDLE TYGER RIVER SPARTAN MILLS/STARTEX MILL PIPE #: 002 FLOW: 0.4	SC0002453 MIN0R INDUSTRIAL
MIDDLE TYGER RIVER SJWD/WTP PIPE #: 001 FLOW: M/R	SCG643003 MINOR DOMESTIC
MIDDLE TYGER RIVER TOWN OF LYMAN WWTP PIPE #: 001 FLOW: 4.5 PIPE #: 001 FLOW: 5.0 (PHASE II) PIPE #: 001 FLOW: 6.0 (PHASE III)	SC0021300 MAJOR DOMESTIC
MIDDLE TYGER RIVER CLARK CONSTRUCTION COMPANY PIPE #: 001 FLOW: M/R	SCG730214 MINOR INDUSTRIAL
BEAVERDAM CREEK TRIBUTARY PLUMLEY CONSTRUCTION/PLUMLEY MINE PIPE #: 001 FLOW: M/R	SCG730521 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Activities

SOLID WASTE LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
BROWN LCD&YT C&D	422474-1701 ACTIVE
VANPORT LCD RECYCLING FACILTY COMPOSTING	232777-3001 ACTIVE

Land Application Sites

LAND APPLICATION SYSTEM *FACILITY NAME*	*ND#* *TYPE*
TILEFIELD BLUE RIDGE HIGH SCHOOL	ND0064629 DOMESTIC

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
CLARK CONSTRUCTION CO. CLARK-TYGER SAND MINE	0886-45 SAND
PLUMLEY CONSTRUCTION CO., INC. PLUMLEY MINE	1340-45 SAND; SAND/CLAY

Water Quantity

WATER USER / *STREAM*	*REGULATED CAP. (MGD)* / *PUMPING CAP. (MGD)*
SJWD (STARTEX JACKSON WELLFORD DUNCAN)	16.0
MIDDLE TYGER RIVER	30.0

Growth Potential

There is a high potential for growth in this watershed, which contains a portion of the Town of Duncan. The Cities of Greer and Spartanburg are connected via the I-85 corridor, which bisects this watershed. There are also industrial developmental pressures along U.S. Hwy. 29.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

A total maximum daily load (TMDL) for fecal coliform was developed for the **Middle Tyger River** in 1999. Levels of fecal coliform bacteria can be elevated in water bodies as the result of both point and nonpoint sources of pollution. Between 1991 and 1995, 38% of the samples collected at station ***B-148*** exceeded the 400 colonies/100ml standard. Targeting agricultural land for reduction of bacteria is the most effective strategy for this watershed. A target level for fecal coliform bacteria of 175 colonies/100ml was established. This translates to an agricultural bacteria-loading reduction of 68%.

TMDLs were developed for SCDHEC and approved by EPA for fecal coliform bacteria in the **Middle Tyger River** at water quality monitoring sites ***B-012*** and ***B-014***. Currently The Town of Lyman operates a WWTP that discharges into the river. The Middle Tyger River watershed is within four Municipal Separate Storm Sewer System (MS4) designated areas: City of Duncan, Town of Lyman, Town of Wellford, and Spartanburg County. Possible sources of fecal coliform bacteria into the Middle Tyger River include MS4 runoff, leaking sewers, failing onsite wastewater disposal systems, pets, and wildlife. The TMDL specifies reductions in the load of fecal coliform bacteria into the Middle Tyger River of 40% (B-012) and of 63% (B-014) in order for the river 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.

Special Projects

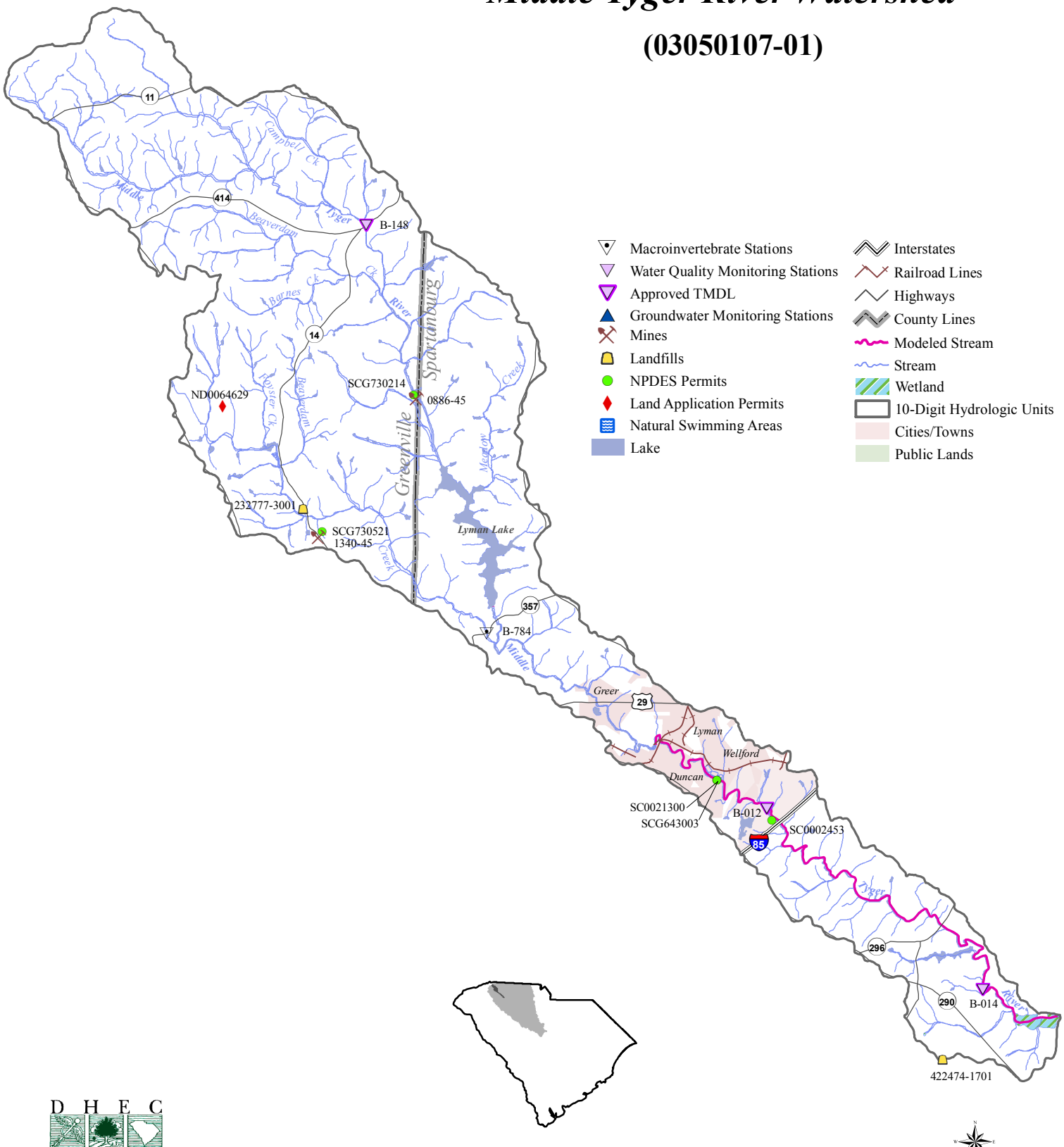
Tyger River Basin Fecal Coliform TMDL Implementation Project

The Tyger River Basin has been included in the South Carolina's Section 303(d) List for impaired waterbodies for violation of the fecal coliform water quality standard. A TMDL for fecal coliform bacteria was developed for the 25 sampling sites within the watershed. Eleven of these fall within the Municipal Separate Storm Sewer System (MS4) areas. TMDLs for the remaining 15 sites call for reductions ranging from 16% to 82%. The TMDL document indicates that nonpoint sources are the main contributors of fecal coliform bacteria contamination for these sites. Four upstate counties, Soil and Water Conservation Districts, the SJWD Water District,

USC Upstate have partnered with Clemson University and several other cooperators to implement the TMDL. Their project addresses several strategies for TMDL implementation through the development and promotion of measures focused at reducing fecal coliform contamination. The goal of the project is to reduce the fecal coliform bacteria load to the Tyger River Basin through agricultural practices, rural residential septic system repairs and urban storm water reductions. This will be done by offering cost share assistance to recruit livestock farmers to develop farm plans and implement BMPs to reduce animal waste from entering the watershed and to recruit homeowners to repair failing septic systems. The project will also educate the public about the potential sources of Fecal Coliform and means of reducing fecal coliform pollution of the watershed.

Middle Tyger River Watershed

(03050107-01)



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