

Water Quality Assessment Summary

Santee River Basin

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TERMS USED IN TABLES

AQUATIC LIFE USE SUPPORT (AL) - The degree to which aquatic life is protected is assessed by comparing important water quality characteristics and the concentrations of potentially toxic pollutants with standards. Aquatic life use support is based on the percentage of standards excursions at a sampling site.

For **dissolved oxygen** and **pH**:

If the percentage of standard excursions is 10% or less, then uses are *fully supported*.

If the percentage of standard excursions is greater than 10% and less than or equal to 25%, then uses are *partially supported*.

If the percentage of standard excursions is greater than 25%, uses are *not supported* (see p.12 for further information).

For **toxins** (heavy metals, priority pollutants, chlorine, ammonia):

If the chronic or acute aquatic life standard for any individual toxicant is not exceeded more than once, uses are *fully supported*.

If the appropriate acute or chronic aquatic life standard is exceeded more than once (i.e. ≥ 2), but is less than or equal to 10% of the samples, uses are *partially supported*.

If the appropriate acute or chronic aquatic life standard is exceeded more than once (i.e. ≥ 2), and is greater than 10% of the samples, aquatic life uses are *not supported* (see p.12 for further information).

For **turbidity** and waters with **numeric total phosphorus, total nitrogen, and chlorophyll-a**:

If the percentage of standard excursions is 25% or less, then uses are *fully supported*.

If the percentage of standard excursions is greater than 25%, then uses are *not supported* (see p.13 for further information).

RECREATIONAL USE SUPPORT (REC) - The degree to which the swimmable goal of the Clean Water Act is attained (recreational use support) is based on the frequency of fecal coliform bacteria excursions, defined as greater than 400/100 ml for all surface water classes.

If 10% or less of the samples are greater than 400/100 ml, then recreational uses are said to be *fully supported*.

If the percentage of standards excursions is greater than 10% and less than or equal to 25%, then recreational uses are said to be *partially supported*.

If the percentage of standards excursions is greater than 25%, then recreational uses are said to be *nonsupported* (see p.14 for further information).

Excursion - The term excursion is used to describe a measurement that does not comply with the appropriate water quality standard.

Table 1. Fully Supported Sites in the Santee River Basin 2004-2008

* = Station not evaluated for Recreational Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1994-2008

Watershed	Waterbody Name	Station #	Improving Trends	Other Trends
03050111-01	Santee River	SC-004		
	Lake Marion	RL-06426		
		RL-04382		
		RL-05464		
		RL-06424		
		RL-05406		
		RL-08054		
		RL-06428		
		SC-021		
		RL-04384		
		RL-05402		
	CL-042	Decreasing Total Nitrogen		
	Halfway Swamp Creek	CW-241 ^{TD}	Decreasing Total Phosphorus	Increasing pH
	Tavern Creek	ST-527*		
	Upper Lake Marion near Safety Kleen	ST-057*		
Jacks Creek	CW-244	Decreasing Turbidity	Increasing BOD ₅ , Total Phosphorus	
Chapel Branch	SC-045			
Eutaw Creek Arm of Lake Marion	RL-04386			

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Watershed	Waterbody Name	Station #	Improving Trends	Other Trends
03050112-01	Santee River	SC-024		
		ST-016	Decreasing Total Phosphorus, Total Suspended Solids	Increasing BOD ₅ , pH
	Rediversion Canal	SC-037		
		ST-031	Decreasing Total Nitrogen, Fecal Coliform	Increasing BOD ₅
03050112-02	Santee River	ST-001	Increasing Dissolved Oxygen; Decreasing Turbidity, Total Suspended Solids, Fecal Coliform	Increasing BOD ₅
03050112-03	Wambaw Creek	CSTL-112		Increasing BOD ₅ , Total Phosphorus; Decreasing Dissolved Oxygen
	South Santee River	ST-006 (FW)	Increasing Dissolved Oxygen	Increasing BOD ₅ , Turbidity, pH
	Sixmile Creek	RT-042062		
	Alligator Creek	RT-06001		
03050112-04	North Santee River	ST-005 (FW)	Decreasing Total Phosphorus	Increasing Turbidity
		RO-056098		
	Minim Creek	RT-07065		
		RT-042068		
	North Santee Bay	MD-263		Increasing BOD ₅ , Fecal Coliform; Decreasing Dissolved Oxygen
		RO-06301		

Table 2. Impaired Sites in the Santee River Basin 2004-2008

REC=Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards; *=Station not evaluated for Recreational Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1994-2008

Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03050111-01	Santee River	ST-034	AL	NS	Total Phosphorus		
	Warley Creek	RS-04389 TD	AL	PS	Macroinvertebrates		
			REC	NS	Fecal Coliform		
		SC-006 ^{TD}	AL	NS	Total Nitrogen		
	Lake Marion	SC-005	AL	NS	Total Phosphorus, Dissolved Oxygen		
		SC-039	AL	NS	Total Phosphorus		
		SC-038	AL	NS	Total Phosphorus		
		RL-04388	AL	NS	Total Phosphorus		
		SC-010	AL	NS	Total Phosphorus		
		SC-042	AL	NS	Total Phosphorus		
		ST-025	AL	PS	Zinc	Decreasing BOD ₅ , Total Nitrogen, Total Phosphorus, Fecal Coliform	Decreasing Dissolved Oxygen, pH
		SC-040	AL	NS	Total Phosphorus		
		SC-041	AL	NS	Total Phosphorus		
		RL-02308	AL	NS	Total Phosphorus		
		SC-036	AL	PS	pH		
RL-01011		AL	NS	Total Phosphorus, pH			

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Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03050111-01 (continued)	Lake Inspiration	C-058 ^{TD}	AL	NS	Turbidity, pH, Total Phosphorus, Chlorophyll	Increasing Dissolved Oxygen	
	Lyons Creek	ST-533 ^{TD}	AL	PS	Macroinvertebrates		
	Halfway Swamp Creek	C-063 ^{TD}	REC	NS	Fecal Coliform		Decreasing Dissolved Oxygen; Increasing pH
		C-015 ^{TD}	REC	PS	Fecal Coliform	Decreasing Total Nitrogen	
	Halfway Swamp Creek Arm of Lake Marion	RL-06422	AL	NS	Total Phosphorus		
	Upper Lake Marion near Safety Kleen	SC-058*	AL	NS	Nickel		
		SC-056*	AL	NS	pH, Total Nitrogen, Nickel		
	Spring Grove Creek	SC-009	AL	NS	Total Nitrogen		
			REC	PS	Fecal Coliform		
	Duckford Branch	RS-05585	REC	NS	Fecal Coliform		
	Big Poplar Creek	SC-011	AL	NS	Dissolved Oxygen, Total Nitrogen		
	Jacks Creek	ST-017*	AL	PS	Macroinvertebrates		
Jacks Creek Arm of Lake Marion	RL-02306	AL	NS	Total Phosphorus			

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Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03050111-01 (continued)	Big Branch	CW-243 TD	REC	NS	Fecal Coliform		Increasing BOD ₅ , pH, Fecal Coliform
	Chapel Branch	SC-014	AL	NS	Total Phosphorus, pH		
	Tawcaw Creek	ST-018	AL	NS	Total Nitrogen, Dissolved Oxygen		Increasing BOD ₅ , Total Phosphorus
			REC	NS	Fecal Coliform		
		SC-017	AL	NS	Total Phosphorus		
	Potato Creek	ST-035 ^{TD}	AL	PS	Dissolved Oxygen	Increasing Dissolved Oxygen; Decreasing Fecal Coliform	Increasing BOD ₅ , pH
			REC	PS	Fecal Coliform		
	Potato Creek Arm of Lake Marion	SC-019	AL	PS	pH		
Wyboo Swamp	ST-036	AL	PS	pH			
03050112-01	Bennetts Branch	RS-05399/ ST-536	AL	PS	Macroinvertebrates		
			REC	NS	Fecal Coliform		
	Doctors Branch	ST-537*	AL	PS	Macroinvertebrates		
03050112-03	South Santee River	ST-006 Saltwater	AL	NS	Turbidity	Increasing Dissolved Oxygen	Increasing BOD ₅ , Turbidity, pH
		RO-08344	AL	NS	Turbidity		
03050112-04	North Santee River	ST-005 Saltwater	AL	NS	Turbidity	Decreasing Total Phosphorus	Increasing Turbidity

Table 3. Changes in Use Support Status
Santee River Basin Sites that Improved from 2004 to 2008

REC= Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards;
 TD=TMDL Developed; TI=TMDL Implementation

Watershed	Waterbody Name	Station #	Use	Status		Water Quality Indicator	
				2004	2008	2004	2008
03050111-01	Warley Creek	SC-006 ^{TD}	REC	NS	FS	Fecal Coliform	
	Lake Marion	ST-025	AL	NS	PS	Total Phosphorus	Zinc
	Lake Inspiration	C-058 ^{TD}	REC	PS	FS	Fecal Coliform	
	Halfway Swamp Creek	C-015 ^{TD}	REC	NS	PS	Fecal Coliform	Fecal Coliform
		CW-241 ^{TD}	REC	NS	FS	Fecal Coliform	
	Spring Grove Creek	SC-009	REC	NS	PS	Fecal Coliform	Fecal Coliform
	Big Poplar Creek	SC-011	REC	NS	FS	Fecal Coliform	
	Big Branch	SC-243 ^{TD}	AL	NS	FS	Dissolved Oxygen	
Potato Creek	ST-035 ^{TD}	AL	NS	PS	Dissolved Oxygen, pH	Dissolved Oxygen	
03050112-03	Wambaw Creek	CSTL-112	REC	PS	FS	Fecal Coliform	
	South Santee River	ST-006	REC	PS	FS	Fecal Coliform	

Table 4. Changes in Use Support Status
Santee River Basin Sites that Degraded from 2004 to 2008

REC= Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Non-supported Standards;
 TD=TMDL Developed; TI=TMDL Implementation

Watershed	Waterbody Name	Station #	Use	Status		Water Quality Indicator	
				2004	2008	2004	2008
03050111-01	Warley Creek	SC-006 ^{TD}	AL	FS	NS		Total Nitrogen
	Lake Marion	SC-005	AL	FS	NS		Total Phosphorus, Dissolved Oxygen
		SC-039	AL	FS	NS		Total Phosphorus
		SC-042	AL	FS	NS		Total Phosphorus
		SC-040	AL	FS	NS		Total Phosphorus
		SC-041	AL	FS	NS		Total Phosphorus
		SC-036	AL	FS	PS		pH
	Spring Grove Creek	SC-009	AL	FS	NS		Total Nitrogen
	Big Poplar Creek	SC-011	AL	FS	NS		Dissolved Oxygen, Total Nitrogen
	Tawcaw Creek Arm of Lake Marion	SC-017	AL	FS	NS		Total Phosphorus
	Potato Creek Arm of Lake Marion	SC-019	AL	FS	PS		pH
Wyboo Swamp	ST-036	AL	FS	PS		pH	
03050112-04	North Santee River	ST-005 (Saltwater)	AL	FS	NS		Turbidity