

Water Quality Assessment Summary

Black 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 Black River Basin 2006-2010

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

Watershed	Waterbody Name	Station #	Improving Trends	Other Trends
03040205-01	Scape Ore Swamp	PD-355 TD, TI	Decreasing Total Nitrogen	Increasing Turbidity, pH
	Lake Ashwood	CL-077	Increasing Dissolved Oxygen; Decreasing Total Nitrogen	Increasing Fecal Coliform
	Mechanicsville Swamp	PD-356	Increasing Dissolved Oxygen; Decreasing Total Nitrogen	
	Rocky Bluff Swamp	PD-201		Increasing Turbidity; Decreasing Dissolved Oxygen
03040205-06	Black River	PD-227		Increasing BOD5, Fecal Coliform
03040205-07	Black River	PD-714*		
		PD-044	Decreasing Total Phosphorus	Increasing BOD5, Fecal Coliform
		PD-045		
	Kingstree Swamp Canal	PD-358	Decreasing Total Phosphorus	Decreasing pH
	Thorntree Swamp	RS-06018		
03040205-08	Black Mingo Creek	PD-361	Decreasing Total Phosphorus	Decreasing Dissolved Oxygen
	Campbell Swamp	RS-09317		
03040205-09	Black River	PD-359	Decreasing Total Phosphorus	Increasing BOD5
	Indian Hut Swamp	RS-07221		
	Lanes Creek	RS-10349		

Table 2. Impaired Sites in the Black River Basin 2006-2010

REC=Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards; *=Station not evaluated for Recreational Support; **=Station not evaluated for Aquatic Life Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1996-2010

Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03040205-01	Gum Spring Branch	RS-09095	AL	NS	Dissolved Oxygen		
	Rocky Bluff Swamp	PD-357	REC	PS	Fecal Coliform		Increasing Fecal Coliform
03040205-02	Unnamed Drainage Canal	PD-354	AL	NS	Dissolved Oxygen, pH		Increasing Total Nitrogen
	Black River	PD-353 ^{TD}	REC	PS	Fecal Coliform	Decreasing Turbidity	Increasing Fecal Coliform
03040205-03	Nasty Branch	PD-239 ^{TD}	AL	PS	Dissolved Oxygen	Increasing Dissolved Oxygen	Increasing pH
			REC	NS	Fecal Coliform		
	Green Swamp	PD-039	AL	NS	Dissolved Oxygen		Increasing Fecal Coliform, pH
03040205-04	Pocotaligo River	PD-091	AL	NS	Dissolved Oxygen	Decreasing Total Nitrogen	Increasing BOD5, Fecal Coliform; Decreasing Dissolved Oxygen
		PD-202 ^{TD}	REC	NS	Fecal Coliform	Increasing Dissolved Oxygen	Increasing Turbidity, pH, Fecal Coliform
		PD-115 ^{TD}	REC	PS	Fecal Coliform		Increasing Turbidity
		PD-043	AL	PS	Dissolved Oxygen	Decreasing Total Phosphorus	Increasing Fecal Coliform
	Turkey Creek	PD-098 ^{TD}	REC	NS	Fecal Coliform		Increasing Fecal Coliform; Decreasing Dissolved Oxygen
		PD-040 ^{TD}	AL	NS	Dissolved Oxygen, Ammonia		
	REC		NS	Fecal Coliform			
	Big Branch ^{TD}	RS-07192	REC	NS	Fecal Coliform		

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REC=Recreational; AL=Aquatic Life; FS=Fully Supported Standards; PS=Partially Supported Standards; NS=Nonsupported Standards; *=Station not evaluated for Recreational Support; **=Station not evaluated for Aquatic Life Support; TD=TMDL Developed; TI=TMDL Implementation; Trend Data 1996-2010

Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03040205-04 (continued)	Juneburn Branch ^{TD} Tributary	RS-08232	REC	NS	Fecal Coliform		
03040205-05	Pudding Swamp	PD-203	AL	NS	Copper	Increasing Dissolved Oxygen	Increasing BOD5, Fecal Coliform
			REC	PS	Fecal Coliform		
03040205-06	Black River	PD-116	AL	PS	Dissolved Oxygen		Increasing pH, Fecal Coliform
			REC	NS	Fecal Coliform		
03040205-07	Kingstree Swamp Canal	RS-10381	REC	NS	Fecal Coliform		
03040205-08	Black Mingo Creek	PD-360	AL	NS	Dissolved Oxygen		Increasing Turbidity, Total Phosphorus
			REC	PS	Fecal Coliform		
	Smith Swamp	RS-06189	AL	NS	Dissolved Oxygen		
03040205-09	Black River	PD-170	AL	NS	Dissolved Oxygen	Decreasing Total Nitrogen	Increasing BOD5, Fecal Coliform; Decreasing Dissolved Oxygen
		PD-325	AL	NS	Turbidity		Increasing BOD5, Turbidity, pH

Table 3. Changes in Use Support Status

Black River Basin Sites that Improved from 2004 to 2010

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	2010	2004	2010
03040205-01	Scape Ore Swamp	PD-355 ^{TD, TI}	REC	PS	FS	Fecal Coliform	
	Lake Ashwood	CL-077	AL	NS	FS	Total Nitrogen, Chlorophyll-a	
	Mechanicsville Swamp	PD-356	AL	NS	FS	Dissolved Oxygen	
03040205-03	Nasty Branch	PD-239	AL	NS	PS	Dissolved Oxygen	Dissolved Oxygen

Table 4. Changes in Use Support Status

Black River Basin Sites that Degraded from 2004 to 2010

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	2010	2004	2010
03040205-01	Rocky Bluff Swamp	PD-357	REC	FS	PS		Fecal Coliform
03040205-02	Black River	PD-353 ^{TD}	REC	FS	PS		Fecal Coliform
03040205-03	Nasty Branch	PD-239 ^{TD}	REC	PS	NS	Fecal Coliform	Fecal Coliform
03040205-04	Pocotaligo River	PD-202 ^{TD}	REC	FS	NS		Fecal Coliform
		PD-115 ^{TD}	REC	FS	PS		Fecal Coliform
		PD-043	AL	FS	PS		Dissolved Oxygen
	Turkey Creek	PD-040 ^{TD}	AL	FS	NS		Dissolved Oxygen Ammonia
			REC	PS	NS	Fecal Coliform	Fecal Coliform
03040205-05	Pudding Swamp	PD-203	AL	FS	NS		Copper
			REC	FS	PS		Fecal Coliform
03040205-06	Black River	PD-116	REC	FS	NS		Fecal Coliform
03040205-08	Black Mingo Creek	PD-360	AL	FS	NS		Dissolved Oxygen
			REC	FS	PS		Fecal Coliform
03040205-09	Black River	PD-325	AL	PS	NS	Dissolved Oxygen	Dissolved Oxygen