

# **Water Quality Assessment Summary**

## ***Lynches 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.  $\geq 2$ ), 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.  $\geq 2$ ), 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 Lynches 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
03040202-01	North Branch Wildcat Creek	PD-179 <sup>TD</sup>		
	Flat Creek	PD-342 <sup>TD</sup>	Decreasing Fecal Coliform Bacteria	Increasing Total Phosphorus
03040202-02	Little Lynches River	PD-109	Increasing Dissolved Oxygen	Decreasing pH
		PD-343	Increasing Dissolved Oxygen	Increasing BOD5, Turbidity, Total Phosphorus, Fecal Coliform; Decreasing pH
		PD-344	Increasing Dissolved Oxygen	Increasing BOD5, Turbidity, Total Phosphorus, Fecal Coliform; Decreasing pH
	Todds Branch	PD-005		
	Cow Branch	PD-704*		
	Beaverdam Creek	PD-678*		
03040202-03	Lynches River	PD-001 <sup>TD</sup>		Increasing Total Phosphorus, pH
		PD-009		Increasing BOD5, Total Phosphorus, Fecal Coliform; Decreasing pH
	Little Rocky Creek	RS-06169		
03040202-04	Long Branch	RS-08067		
03040202-05	Lynches River	PD-080		Decreasing pH
		PD-071		Increasing BOD5, Fecal Coliform; Decreasing Dissolved Oxygen
		PD-319		Increasing BOD5
		PD-093		Increasing BOD5, Total Phosphorus, Total Nitrogen, Fecal Coliform; Decreasing Dissolved Oxygen
03040202-06	Lake Swamp	PD-087	Decreasing Total Phosphorus	Decreasing Dissolved Oxygen

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<b>Watershed</b>	<b>Waterbody Name</b>	<b>Station #</b>	<b>Improving Trends</b>	<b>Other Trends</b>
<b>03040202-07</b>	Lynches River	PD-281		Increasing BOD5, Total Phosphorus, Fecal Coliform; Decreasing Dissolved Oxygen
	Big Swamp	PD-168		

**Table 2. Impaired Sites in the Lynches 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
03040202-01	Hills Creek	PD-333 <sup>TD, TI</sup>	REC	NS	Fecal Coliform		Increasing Fecal Coliform
		PD-366 <sup>TD, TI</sup>	REC	PS	Fecal Coliform	Increasing Dissolved Oxygen	Increasing Turbidity, Total Phosphorus, Total Nitrogen, Fecal Coliform
	Lynches River	PD-113 <sup>TD</sup>	REC	PS	Fecal Coliform		Increasing Total Phosphorus, Fecal Coliform
	North Br Wildcat Creek Tributary	RS-06185 <sup>TD</sup>	REC	NS	Fecal Coliform		
	North Branch Wildcat Creek	PD-679*	AL	PS	Macroinvertebrates		
	South Branch	PD-180 <sup>TD</sup>	REC	NS	Fecal Coliform		Decreasing pH
	Flat Creek	RS-08233 <sup>TD</sup>	AL	PS	Macroinvertebrates		
REC			PS	Fecal Coliform			
03040202-02	Little Lynches River	PD-640*	AL	PS	Macroinvertebrates		
		PD-006 <sup>TD</sup>	REC	NS	Fecal Coliform		Decreasing pH
		PD-632*	AL	PS	Macroinvertebrates		
	Horton Creek	PD-335 <sup>TD</sup>	REC	PS	Fecal Coliform		Increasing Fecal Coliform
	Lick Creek	PD-329 <sup>TD</sup>	REC	NS	Fecal Coliform		
	Hanging Rock Creek	PD-328 <sup>TD</sup>	REC	PS	Fecal Coliform		Increasing Fecal Coliform
PD-669*		AL	PS	Macroinvertebrates			

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Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03040202-03	Lynches River	PD-066 <sup>TD</sup>	REC	PS	Fecal Coliform		Increasing BOD5, Total Phosphorus, Fecal Coliform; Decreasing pH
	Fork Creek	PD-067 <sup>TD, TI</sup>	REC	PS	Fecal Coliform		Decreasing pH
		PD-068 <sup>TD, TI</sup>	REC	PS	Fecal Coliform	Decreasing Fecal Coliform	Decreasing pH
	Little Fork Creek	RS-10361	REC	NS	Fecal Coliform		
		PD647	AL	PS	Macroinvertebrates		
		PD-215 <sup>TD</sup>	REC	PS	Fecal Coliform		Increasing Fecal Coliform
03040202-04	Newman Swamp	PD-229	AL	NS	Dissolved Oxygen	Increasing Dissolved Oxygen	Increasing pH
	Sparrow Swamp	PD-072 <sup>TD</sup>	REC	NS	Fecal Coliform	Increasing Dissolved Oxygen	Increasing Fecal Coliform
		PD-332	REC	PS	Fecal Coliform	Decreasing Turbidity	Increasing Fecal Coliform; Decreasing Dissolved Oxygen
	Lake Swamp	PD-345	REC	PS	Fecal Coliform		Increasing Turbidity, pH
03040202-05	Lynches River	PD-364	REC	PS	Fecal Coliform		Increasing BOD5, Total Phosphorus, Fecal Coliform; Decreasing Dissolved Oxygen
	Cousar Branch	PD-112	REC	NS	Fecal Coliform		Increasing Turbidity; Decreasing Dissolved Oxygen, pH
03040202-06	Camp Branch	PD-346	AL	NS	Dissolved Oxygen	Decreasing Total Phosphorus	Increasing Fecal Coliform
			REC	PS	Fecal Coliform		

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Watershed	Waterbody Name	Station #	Use	Status	Water Quality Indicator	Improving Trends	Other Trends
03040202-06 (continued)	Lake Swamp	PD-085	AL	NS	Dissolved Oxygen		
		PD-086A	AL	NS	Dissolved Oxygen	Decreasing Total Phosphorus	Increasing Fecal Coliform
			REC	PS	Fecal Coliform		
	Long Branch	RS-10397	REC	NS	Fecal Coliform		
	Singleton Swamp	PD-314	AL	NS	Dissolved Oxygen		
03040202-07	Lynches River	PD-041 TD, TI	AL	PS	pH		Increasing BOD5, Fecal Coliform; Decreasing Dissolved Oxygen
			REC	PS	Fecal Coliform		
	Big Swamp	PD-169 TD, TI	AL	NS	Dissolved Oxygen		Decreasing Dissolved Oxygen
			REC	PS	Fecal Coliform		

**Table 3. Changes in Use Support Status**  
***Lynches 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
03040202-01	Hills Creek	PD-333 <sup>TD, TI</sup>	AL	PS	FS	Macroinvertebrate	
	Lynches River	PD-113 <sup>TD</sup>	AL	NS	FS	Copper	
	North Branch Wildcat Creek	PD-179 <sup>TD</sup>	REC	NS	FS	Fecal Coliform	
	South Branch	PD-180 <sup>TD</sup>	AL	PS	FS	Macroinvertebrates	
	Flat Creek	PD-342 <sup>TD</sup>	AL	NS	FS	Copper	
			REC	PS	FS	Fecal Coliform	
03040202-02	Little Lynches River	PD-006 <sup>TD</sup>	AL	NS	FS	Copper	
		PD-344	AL	NS	FS	pH	
	Todd Branch	PD-005	REC	NS	FS	Fecal Coliform	
03040202-03	Fork Creek	PD-067 <sup>TD, TI</sup>	REC	NS	PS	Fecal Coliform	Fecal Coliform
		PD-068 <sup>TD, TI</sup>	REC	NS	PS	Fecal Coliform	Fecal Coliform
	Little Fork Creek	PD-215 <sup>TD</sup>	AL	NS	FS	Copper	
03040202-04	Newman Swamp	PD-229	REC	PS	FS	Fecal Coliform	
03040202-05	Lynches River	PD-364	AL	NS	FS	pH	Macroinvertebrates
		PD-319	AL	PS	FS	pH	
		PD-093	AL	PS	FS	pH	
03040202-07	Lynches River	PD-281	AL	NS	FS	Copper	

**Table 4. Changes in Use Support Status**

***Lynches 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
03040202-01	Hills Creek	PD-336 <sup>TD,TI</sup>	REC	FS	PS		Fecal Coliform
	South Branch	PD-180 <sup>TD</sup>	REC	PS	NS	Fecal Coliform	Fecal Coliform
03040202-02	Lick Creek	PD-329 <sup>TD</sup>	REC	PS	NS	Fecal Coliform	Fecal Coliform
03040202-04	Newman Swamp	PD-229	AL	FS	NS		Dissolved Oxygen
	Sparrow Swamp	PD-072 <sup>TD</sup>	REC	PS	NS	Fecal Coliform	Fecal Coliform
		PD-332	REC	FS	PS		Fecal Coliform
	Lake Swamp	PD-345	REC	FS	PS		Fecal Coliform
03040202-05	Lynches River	PD-364	REC	FS	PS		Fecal Coliform
03040202-06	Camp Branch	PD-346	AL	FS	NS		Dissolved Oxygen
			REC	FS	PS		Fecal Coliform
	Lake Swamp	PD-085	AL	FS	NS		Dissolved Oxygen
		PD-086A	REC	FS	PS		Fecal Coliform
	Singleton Swamp	PD-314	AL	FS	NS		Dissolved Oxygen
03040202-07	Lynches River	PD-041 <sup>TD,TI</sup>	AL	FS	PS		pH
			REC	FS	PS		Fecal Coliform
	Big Swamp	PD-169 <sup>TD,TI</sup>	AL	FS	NS		Dissolved Oxygen