



**Impaired Waters Monitoring
and Implementation Plan**

Pond Fork and Walnut Creek

2018 Annual Report



Introduction

As part of the General NPDES Stormwater Permit No. GAG61000, Jackson County developed an Impaired Waters Monitoring and Implementation Plan. Using the Georgia Environmental Protection Division's (EPD) Draft 2016 305(b)/303(d) List of Waters, the County identified two stream segments within its MS4 that met the criteria for regular water quality monitoring. Those stream segments and their pollutants of concern are as follows:

Impaired Stream Segments

Reach Name	Reach Location	Use	Criterion Violated (POC) ¹	Potential Causes ²	Extent
Pond Fork	Headwaters to East Pond Fork	Fishing	FC	NP	5 miles
Walnut Creek	Caney Fork to Middle Oconee River	Fishing	FC, Bio(M)	NP	14 miles

The purpose of this annual report is to provide water quality data and trend analysis to determine if the trend is showing improvement or degradation relative to implementing BMPs. If the trend analysis indicates that water quality is worsening or not improving, then the necessity of additional sampling and/or BMPs will be evaluated.

Sample Sites

Jackson County identified two sampling sites for the collection of water quality samples. Where sites are not accessible via the public right-of-way, the property owner has given permission for the County to access the stream for sampling purposes. Sites were sampled mid-stream, mid-depth and in the case of Walnut Creek, on the up-stream side of the road crossing.

Sample Station	Stream	Location	Latitude	Longitude	Sample Parameter
1	Pond Fork	Pond Fork	34.231178	-83.682061	FC
2	Walnut Creek	Pocket Road	34.149817	-83.750833	FC, Bio (M)

¹FC – Fecal coliform; Bio(M) Biota Impacted (Macroinvertebrate Community)

²NP – Nonpoint Sources/Unknown Sources

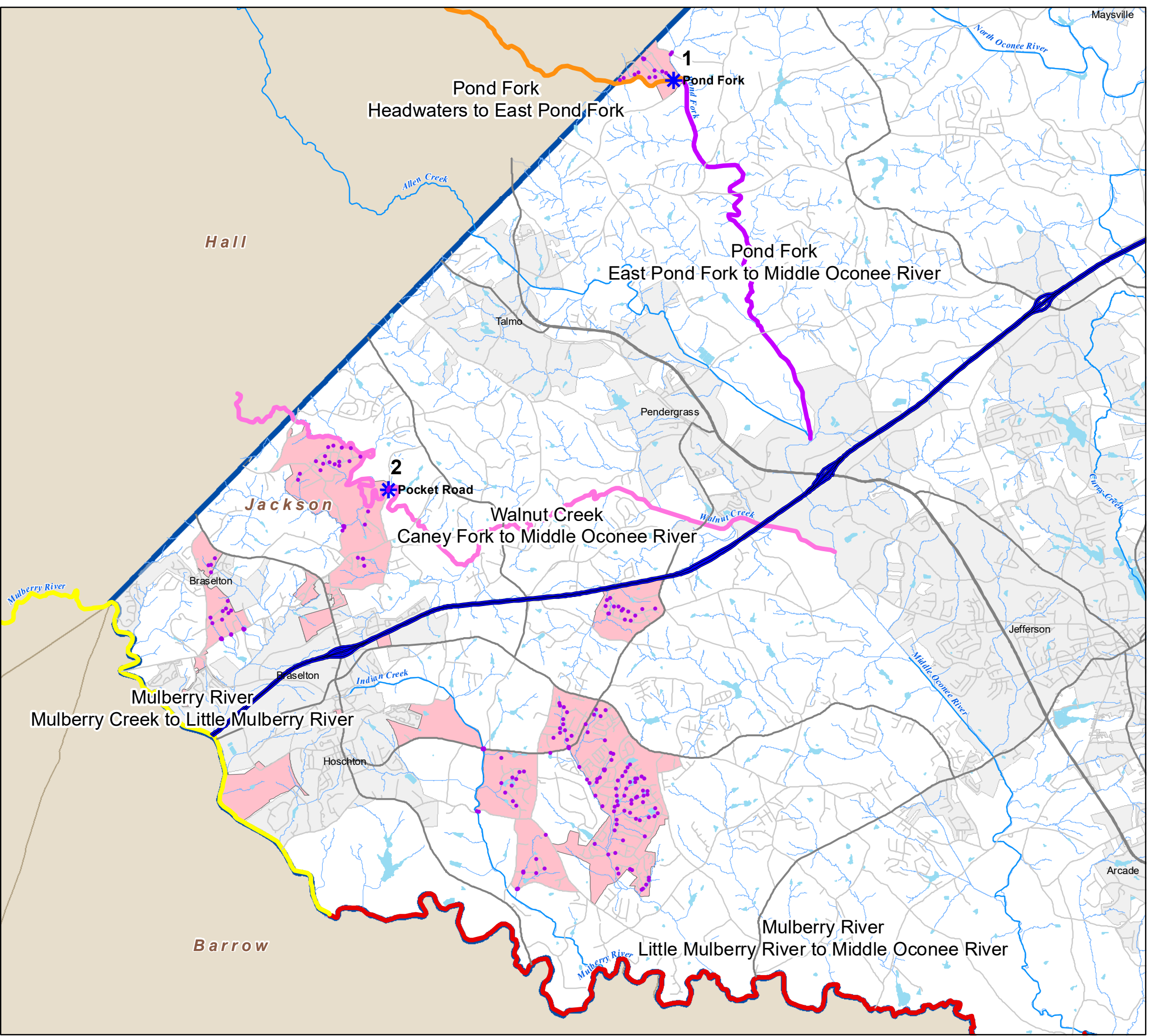
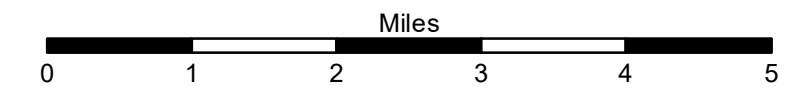
Jackson County, Georgia Impaired Waters Plan Monitoring Sites

305b303d Streams

Name, Location

- Mulberry River, Little Mulberry River to Middle Oconee River
- Mulberry River, Mulberry Creek to Little Mulberry River
- Pond Fork, East Pond Fork to Middle Oconee River
- Pond Fork, Headwaters to East Pond Fork
- Walnut Creek, Caney Fork to Middle Oconee River

- ✱ Monitoring Sites
- Outfalls
- + Urbanized Areas
- Streams & Rivers
- ☪ Lake/Pond
- ☪ Reservoir
- Local Roads
- State Route
- Interstate
- ▭ Incorporated Cities
- ▭ County Boundary



Sampling Schedule

The Georgia Department of Natural Resources *Watershed Assessment and Protection Plan Guidance: Watershed Monitoring Plans* requires four sampling events for each sampling station per year; three dry-weather and one wet-weather. Scheduled sampling months for each sampling station will be February, May, August, and November. However, since Ga EPD did not approve the Monitoring Plan until July 2018, monitoring for the year 2018 will only include August and November.

Water quality samples were collected by Resource Management Strategies and county staff and analysis was conducted by the University of Georgia Agricultural and Environmental Services Laboratory in Athens, GA.

Monitoring Results

Fecal coliform

Date	Fecal Coliform (mpn/100mL)			Rainfall (inches)		
	Pond Fork	Geometric Mean	Walnut Creek	Geometric Mean	previous 24 hrs	previous 48 hrs
8.20.18	270		1100		.05	.03
8.23.18	1300	506	500	472	0	0
8.27.18	1700		300		0	0
8.30.18	110		300		0	0
11.14.18	5000		1700		.77	1.17

Note: Values in red indicate violation of State bacteria water quality standard.

Georgia's water quality standards for fecal coliform are geometric mean not to exceed 200 mpn/100mL from May through October and no individual sample exceed 400 mpn/100mL. From November through April, geometric mean not to exceed 1,000 mpn/100mL and no individual sample to exceed 4,000 mpn/100 mL. Values in excess are in violation of the State bacteria water quality standard. The presence of fecal contamination is an indicator that a potential health risk exists for individuals exposed to this water.

The area upstream of the Pond Fork and Walnut Creek sampling sites is residential development served by individual septic systems. Outfalls serving the areas did not evidence any illicit discharge. There is no active development in the MS4 portion of the watershed upstream of the sampling sites. However, a majority of the watershed above each sampling site is located in Hall County and therefore is likely affected to some degree by activities in Hall County. A windshield survey did not yield any likely contributing contamination sites in the upstream portion of watershed.

Total Suspended Solids (TSS)

Date	Total Suspended Solids (mg/L)	Rain (inches)	
	Walnut Creek	24 hrs	48 hrs
8.20.18	5.7	0.05	0.03
8.23.18	--	0	0
8.27.18	--	0	0
8.30.18	--	0	0
11.14.18	83.3	0.77	1.17

Total suspended solids (TSS) are a total quantity measurement of solid material per volume of water. This means that TSS is a specific measurement of all suspended solids, organic and inorganic, by mass. TSS includes settleable solids, and is the direct measurement of the total solids present in a water body.

Georgia has no numerical standard for total suspended solids but instead requires "All watersheds shall be free from material related to municipal, industrial or other discharges which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses. However, in most situations, a total suspended solids concentration below 20 mg/L appears clear, while levels over 40 mg/L may begin to appear cloudy.

Trend Analysis

Due to the limited number of sampling events for 2018, it is impossible to identify water quality trends. However, as data is collected in 2019, trends may emerge and Jackson County will implement appropriate activities to address identified concerns. In the interim, Jackson County will continue to implement its Stormwater Management Plan (SWMP) under its current NPDES Phase II MS4 permit. A copy of the county's 2018 SWMP is available at <https://www.jacksoncountygov.com/355/Storm-Water-Management>.

Recommendations

There are no recommendations at this time due to limited water quality data.



Water Report

Client Information Jackson County Contact: Lee Carmon 465 Snapfinger Drive Athens, GA 30605 Loc.: Jackson County, GA	lcarmon@resource-management-strategies.org	Lab Information Sampled: 08/20/2018 Received: Aug 20, 2018 Completed: Aug 27, 2018 Printed: Aug 27, 2018	Contact Feed and Environmental Water Lab 2300 College Station Road Athens, GA 30602 ph: 706-542-7690 e-mail: fewlab@uga.edu
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Parameter	Lab	FEW19:2027	FEW19:2028	FEW19:2029
	Sample	PF1	WC1	WC1
Total Suspended Solids (mg/L) ^a	SM 2540 D ¹			5.7
Fecal Coliform (MPN/100mL) ^b	SM 9221 E ¹	270	1100	

Methods

1. Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1999, American Public Health Assoc., American Water Works Assoc., Water Environment Federation.

Dates Analyzed and Analysts

a. 08/24/2018 11:00 Alyssa Lamb
b. 8/20/2018 Nancy Adkins

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Water Report

Client Information		Lab Information		Contact	
tyler.pannell@co.waltonga.us		Sampled: 08/23/2018		Feed and Environmental Water Lab 2300 College Station Road Athens, GA 30602 ph: 706-542-7690 e-mail: fewlab@uga.edu	
Jackson County		Received: Aug 23, 2018			
Contact: Lee Carmon		Completed: Aug 27, 2018			
465 Snapfinger Drive		Printed: Aug 27, 2018			
Athens, GA 30605					
Loc.: Jackson County					

Parameter	Lab	FEW19:2306	FEW19:2307
	Sample	PF1	WC1
Fecal Coliform (MPN/100mL) ^a	SM 9221 E 1	1300	500

Methods

1. Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1999, American Public Health Assoc., American Water Works Assoc., Water Environment Federation.

Dates Analyzed and Analysts

a. 08/23/18 13:05 Nancy Adkins

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Water Report

Client Information Jackson County Contact: Lee Carmon 465 Snapfinger Drive Athens, GA 30605 Loc.: Jackson County, GA	lcarmon@resourcemanagementstrategies.org	Lab Information Sampled: 08/27/2018 Received: Aug 27, 2018 Completed: Aug 30, 2018 Printed: Aug 30, 2018	Contact Feed and Environmental Water Lab 2300 College Station Road Athens, GA 30602 ph: 706-542-7690 e-mail: fewlab@uga.edu
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Parameter	Lab	FEW19:2362	FEW19:2363
	Sample	PF1	WC1
Fecal Coliform (MPN/100mL) ^a	SM 9221 E ¹	1700	300

Methods

1. Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1999, American Public Health Assoc., American Water Works Assoc., Water Environment Federation.

Dates Analyzed and Analysts

a. 08/27/2018 13:15 Nancy Adkins/Yuagen Yang

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Water Report

Client Information Jackson County Contact: Lee Carmon 465 Snapfinger Drive Athens, GA 30605 Loc.: Jackson County, GA	lcarmon@resourcemanagementstrategies.org	Lab Information Sampled: 08/30/2018 Received: Aug 30, 2018 Completed: Aug 31, 2018 Printed: Aug 31, 2018	Contact Feed and Environmental Water Lab 2300 College Station Road Athens, GA 30602 ph: 706-542-7690 e-mail: fewlab@uga.edu
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Parameter	Lab	FEW19:2631	FEW19:2632
	Sample	PF1	WC1
Fecal Coliform (MPN/100mL) ^a	SM 9221 E 1	110	300

Methods

1. Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1999, American Public Health Assoc., American Water Works Assoc., Water Environment Federation.

Dates Analyzed and Analysts

a. 08/30/2018 13:19 Nancy Adkins

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Water Report

Client Information	Lab Information	Contact
Jackson County Contact: Lee Carmon 465 Snapfinger Drive Athens, GA 30605	Sampled: 11/14/2018 Received: Nov 14, 2018 Completed: Nov 20, 2018 Printed: Nov 20, 2018	Feed and Environmental Water Lab 2300 College Station Road Athens, GA 30602 ph: 706-542-7690 e-mail: fewlab@uga.edu

Parameter	Lab	FEW19:5516	FEW19:5517	FEW19:5518
	Sample	PF 1	WC 1	WC 1
Total Suspended Solids (mg/L) ^a	SM 2540 D ¹			83.3
Fecal Coliform (MPN/100mL) ^b	SM 9221 E ¹	5000	1700	

Methods

1. Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1999, American Public Health Assoc., American Water Works Assoc., Water Environment Federation.

Dates Analyzed and Analysts

a. 11/19/2018 10:00 Alyssa Lamb
 b. 11/14/2018 13:13 Nancy Adkins

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