

COLUMBIA COUNTY ADOPT-A-STREAM NEWSLETTER No. 18

For a Better Environment
February 12, 2005

Wow! Congratulations to all of you who have braved the cold weather to complete the monthly tasks!

Mt. Olive Baptist Church at Euchee Creek, Washington Road

EUCHEE CREEK SITE 2 TO BE ESTABLISHED; SITE ON MILL BRANCH UNDER CONSIDERATION

Presently, we rely on **Marina Stafford** and her **Grovetown Middle School** students to provide information at **Site 1** on **Euchee Creek**. That is located far upstream, close to the Grovetown-Harlem Road overpass. Now, we must consider new measures to aid the County and the State in its assessment of Euchee Creek, flowing into the **Savannah River**. Following discussions with colleagues and county authorities, we propose two new. One will be on the main channel of Euchee Creek; the other will be on Mill Branch, a tributary.

Euchee Creek Site 2

This first will be at the point where Euchee Creek flows under Washington Road. At this point, over 71 square miles of the basin is represented.

Principals in this have been **Garrison Weiss**, a newly-certified resident volunteer and professional environmental engineer for Richmond County, already mentioned in earlier issues; **John Graham**, the coordinator of Adopt-a-Stream activities in Columbia County; and **Zulakha K. Ahmad**, the Storm Water Utility Manager (and environmental engineer) for Columbia County.

Volunteers will be asked to assemble at 10:00 A.M. in the parking lot of the Mt. Olive Baptist Church, unless the church's schedule that day prevents. It is on the northeast side of Washington Road and just before the bridge over Euchee. If for any reason we lose access to the parking lot, you will be asked to assemble on the shoulder in front of the church, or on the low dirt road to the left of the church entrance, below the Washington Road shoulder. Approach to the stream is from the Northeast side of Washington. **Note: there is no safe parking on the southwest side of Washington.**

A full schedule, including chemical, physical, and biological measures, will be undertaken. Weiss and Graham may have accomplished the stream profile by that time. A scout of the full stream reach, defined as 12X the channel width, may also be undertaken. It is not expected that the whole event will last more than three hours. We hope to have some publicity, to call attention to this very important public activity.

As certified volunteers already know, the biological and some physical surveys are entertained only every three months. Certified volunteers are expected to serve for at least a year; however the more minimal monthly efforts in between can be managed by a very small group (two or three), so uncertified



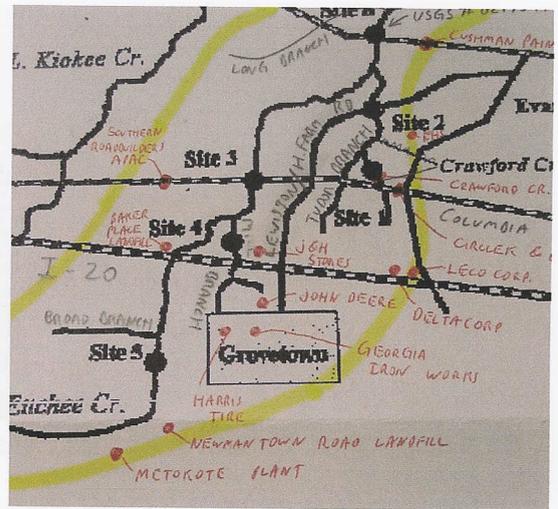
Euchee Creek from Southwest Side of Washington

volunteers, and sometimes the certified ones, would not have to come each month.

Mill Branch

Contaminating spills or leaks from upstream sites on Euche Creek could get diluted and not be apparent downstream at Washington Road. It is therefore very useful to attend to upstream sites that are most likely to have such accidents.

The County Landfill is obviously one such point. However, it has been closely monitored for some time. So far, there's been no leak of any significance to our knowledge. It is surrounded by many safeguarding detection wells. (More on this in a later article.)



Looking Downstream from Industrial Parkway on Mill Branch. Studies may be made at and just below the water pipe..

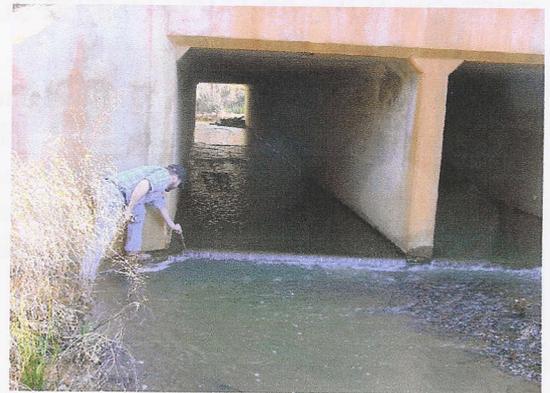
Let's take a look at the map of the stream for the secondary site we have now chosen. The map was prepared by Garrison Weiss. Near the headwaters are several Grovetown businesses, such as Georgia Iron Works, Morgantown Road Landfill, Harrison Tire, and the Metokote Corporation plant.

Mill Branch, like Crawford Creek, is a tributary of Euche Creek. It is at the point where Mill Branch goes under Industrial Parkway. This road, in sight of Grovetown itself, branches off of Lewiston Road, the extension of Hereford Farm Road below Columbia Road.

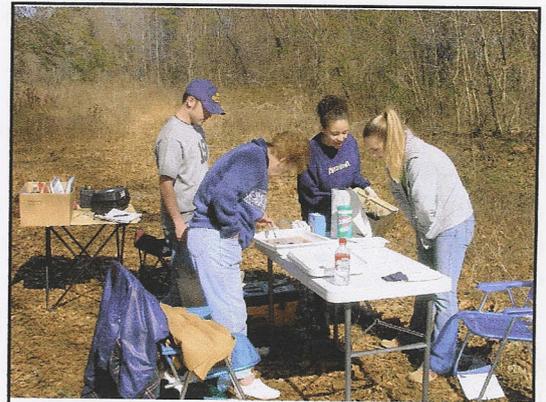
The Mill Branch site may not be established on February 26. It all depends on the number of volunteers we have. Some will visit the area and make plans for another day.

Stream Drainage Areas Determined

Drainage areas are those surfaces of land funneling rain water to particular observation points—namely, the sites where we collect our data. After further use of **John Graham's** planimeter, and after some further research by **Garrett Weiss**, most of the drainage areas have been determined. Areas and elevations are shown in the site visitation schedule table on the next page. Maps of these areas will likely be presented in a later issue. Garrison has supplied a plethora of other data and charts for more detail analyses. Watch for presentations in later issues.



Both stream flow and volume can be measured with just the depth of the water at the culvert lip and the culvert width. Garrison Weiss is demonstrating.



February 4 the **Evans High School** students and teacher **Sara Jo Braid** visited Crawford Creek Site 2 again. Here some are looking for macroinvertebrates and getting DO.

SITE VISITATION SCHEDULES, LOCATIONS, DRAINAGE AREAS

We aren't aware of all of your schedules. Those known are subject to change due to weather, school attendance schedules, and school events. Please report changes and corrections!

Most visits will be on Saturday mornings, from 10-12; biological studies will surely take longer. Middle school teams will have activities on weekdays—either during regular hours or after hours. Knowing schedules is important because we must occasionally share labor and other resources.

Known macro study dates are shown in **boldface**. Master's Week and July AAS workshop dates may see changes. August schedules are affected by school opening dates. The months of May and December, and sometimes January, make macro studies in particular difficult for schools.

Stream channel transects (profiles) should be done at least twice a year— but better, once a quarter, as our sandy channels get impacted significantly in heavy rains.

Drainage areas appear below site names. The drainage of Euchee Creek, where it passes under Chamblin Road near the County Landfill, 251 ft elev., is about 24.1 sq. mi. Euchee Creek's whole drainage is about 71 sq. mi.

Site	Area/Elevation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Crawford Site 1 N 33,29.59.8 W 82,9,19.2	ca. 3.621 sq. mi. elev. 312 ft.	9	12-13	12	9	14	11	9	13
Crawford Site 2 N 33,4,02 W 82,11,01	ca. 2.963 sq. mi. elev. 318 ft.	9	5	5*	2	7?	4	2	2? 13?
Betty's Branch N 33,33,25.5 W 82,8,40.0	ca. elev. 245 ft.	3	19	16	21	18	18	16	13
Reed Creek N 33,32,6.75 W 82,6,3.6	17.8 sq. mi. elev. 235 ft.	no mtg	?						
Euchee Creek 1 N 33,27,23.1 W82,13,58.6	ca. 25 sq. mi. elev. 285 ft.	no mtg	~17?						
Euchee Creek 2 N 33,34,02 W 82,11,01	ca. 58.4 sq. mi. elev. 185 ft	no mtg	26	26	23	28	25	30	27
Mill Branch N 33,29,26 W 82,12,31	est. 5-7 sq. mi. elev. 285 ft.	-	?						
Jones Creek N 33,33,54.2 W 82,6,8.7	3.157 sq. mi. elev. 205 ft.	29	27	27	30	29	26	30	28

* It is hoped that on this day a cleanup of the Crawford Creek can be accomplished at Site 2. Large pieces of metal and/or wood will have to be removed for hauling to the landfill. The operations manager of **Aces, LLC** has volunteered the company's services. Aces, LLC is the former **Economy Sanitation**. Aces, LLC is a growing Columbia County based hauler of garbage and yard waste from all of our neighborhoods.

COLUMBIA COUNTY RAINFALL FOR JANUARY AND START OF FEBRUARY

In January, Columbia County experienced significantly less rainfall than Bush Field in Richmond County. This is the latest reason for using our own rainfall data. Some average of the various Columbia County values may be the best choice for any one Adopt-a-Stream report in our area. Values in the last 1-3 days may be the best for explaining peak values; those for longer periods or earlier dates would be useful in explaining the non-peak values. However special effects like channelizing, damming or loss of damming may explain variant levels...

Day (2004)	Jones Creek (Graham/Smith)	Crawford Creek (Ricketson)	Crawford Creek (Hinchcliff/Luebke)	Betty's Branch (Capps)	Reed Creek (Fisher/Greenwood)	Euchee Creek (Garrett/Weiss)	Columbia County Average (of 5)	Airport (Bush Field)
1 Jan								
2 Jan								
3 Jan								
5 Jan								
6 Jan	0.10				Trace	Trace	Trace	0.07
7 Jan	0.12	0.10			0.075		0.059	
8 Jan		Trace	0.10				0.02	
9 Jan								
11 Jan				>0.20			0.04	
13 Jan		Trace			^		Trace	0.11
14an		1.00	1.10		2.000	0.98	1.016	1.18
22 Jan								0.01
20 Jan								0.68
28 Jan								Trace
29 Jan	1.00				0.10	0.39	0.298	0.99
30 Jan	0.10	0.70	1.41		1.40	0.55	0.832	0.03
31 Jan				1.20		0.20	0.28	
JAN	1.32	1.80		>1.40	3.575	2.12	2.043	2.39
2 Feb	0.12	Trace	^	1.20	0.15		0.296	n/r
3 Feb	1.23		1.20		1.20	0.41	0.808	"
9 Feb	0.95	3-9 Feb: 1.30	0.52	?	?	?	?	?

^ Rainfall on given date is thought to have occurred but was not checked until the date on which a value is next given..

? Reading was initially reported but questioned later or was not available.

PLEASE TURN IN TO US COPIES OF YOUR MONTHLY REPORTS

Contributions to this newsletter are always welcome.

Your Editor: Dr. John Graham at jopagr@comcast.net; 868-0296; 885 Chase RD, Evans, GA 30809