

GEORGIA ADOPT-A-STREAM: Basic Visual Form

To be used with: Photo Points, Wentworth Pebble Count, Cross Section, Bio Survey, Stream Habitat Survey, Stream Flow and Site Sketch

SITE INFORMATION	Group Name: _____	Event Date: _____ (MMDDYYYY)
	Group ID: G- _____ Site ID: S- _____	Time Sample Collected: _____ (HHMM am/pm)
	Stream Name: _____	Time Spent Sampling: _____ (Min)
	Monitor(s): _____	Total Time Spent Traveling (optional): _____ (Min)
	Number of Participants: _____	Furthest Distance Traveled (optional): _____ (Miles)
WEATHER	Present conditions (check all that apply)	
	<input type="checkbox"/> Heavy Rain <input type="checkbox"/> Steady Rain <input type="checkbox"/> Intermittent Rain <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Cloudy <input type="checkbox"/> Clear/Sunny	
	Amount of rain, if known?	
	Amount in Inches: _____	
	In Last Hours/Days: _____	
	*Refer to <i>wunderground.com</i> for rainfall data	
OBSERVATIONS	Flow/Water Level: <small>(check all that apply)</small> <input type="checkbox"/> Dry <input type="checkbox"/> Stagnant/Still <input type="checkbox"/> Low <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Flood (over banks)	
	Water Clarity: <input type="checkbox"/> Clear/Transparent <input type="checkbox"/> Cloudy/Somewhat Turbid <input type="checkbox"/> Opaque/Turbid <input type="checkbox"/> Other: _____	
	Water Color: <input type="checkbox"/> No Color <input type="checkbox"/> Brown/Muddy <input type="checkbox"/> Green <input type="checkbox"/> Milky/White <input type="checkbox"/> Tannic <input type="checkbox"/> Other: _____	
	Water Surface: <input type="checkbox"/> Clear <input type="checkbox"/> Oily sheen: Does it break when disturbed? Yes/No (circle one) <input type="checkbox"/> Algae <input type="checkbox"/> Foam <input type="radio"/> Greater than 3" high <input type="radio"/> It is pure white <input type="checkbox"/> Other: _____	
	Water Odor: <input type="checkbox"/> Natural/None <input type="checkbox"/> Gasoline <input type="checkbox"/> Sewage <input type="checkbox"/> Rotten Egg <input type="checkbox"/> Fishy <input type="checkbox"/> Chlorine <input type="checkbox"/> Other: _____	
	Trash: <input type="checkbox"/> None <input type="checkbox"/> Yes, I did a cleanup <input type="checkbox"/> This site needs an organized cleanup	
PHOTO POINTS	Photos: Please take images to document your observations and changes in water quality conditions. Photo point directions can be found in the manuals. Send photos to AAS@gaepd.org .	
	Reference Location (RL): Latitude (+) _____ (DD.DDDD°) Longitude (-) _____ (DD.DDDD°)	
	Compass bearing to permanent Photo Point Location (PPL): Degrees (°) _____	
	Distance to permanent Photo Point Location (PPL) from Reference Location (RL): Distance _____ (ft/in)	
	Camera height at permanent Photo Point location (PPL): Height _____ (ft/in)	
COMMENTS	Any changes since you last sampled at this site? If yes, please describe.	

Please submit data to our online database at AdoptAStream.Georgia.gov

GEORGIA ADOPT-A-STREAM: Stream Habitat Survey

(Also fill out the Basic Visual Form when completing this survey)


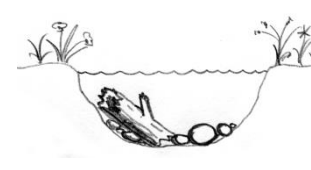
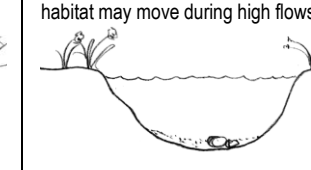
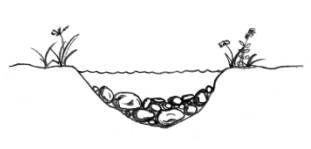
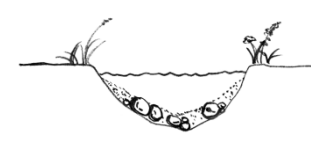
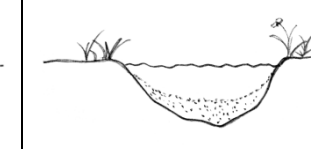


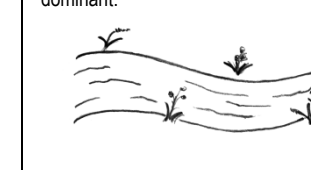
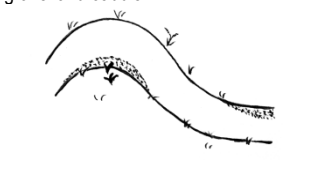
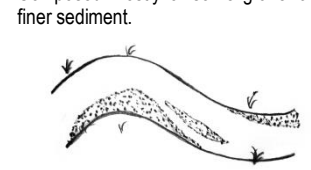
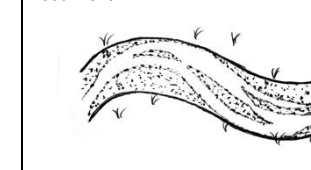
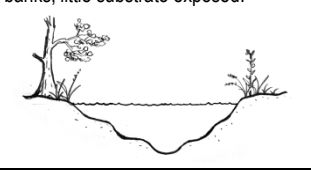
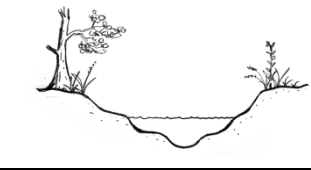

Type of Stream:

Rocky bottom











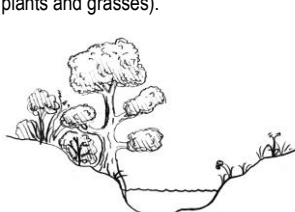
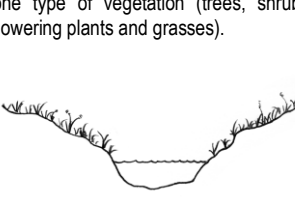
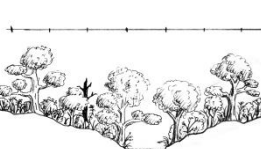
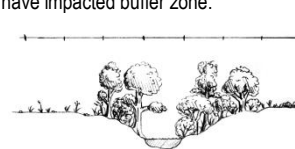
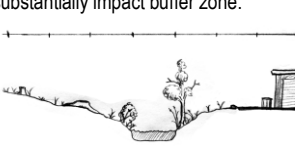
Muddy bottom

Stream habitat will be evaluated looking both upstream and downstream, and includes: channel bottom materials, streamside vegetation, slope, and other channel characteristics. You may choose a value between 0-10 for each parameter. Note #s 8-10 ask you to evaluate each bank separately.

All measurements should be taken during baseflow conditions. Stream reach is defined as 12 times stream width, bankfull to bankfull.

Habitat Parameter	Excellent -----Poor														
1. Epifaunal Substrate What types of submerged materials are on the channel bottom?	<p>Abundant stable habitat cover for colonization by macroinvertebrates and fish: submerged roots, woody and vegetative debris, cobbles, leaf packs and undercut banks.</p> 	<p>Adequate stable habitat cover for colonization by macroinvertebrates and fish: submerged roots, woody and vegetative debris, cobbles, leaf packs and undercut banks.</p> 	<p>Little or no stable habitat cover available for colonization by macroinvertebrates and fish: submerged roots, woody and vegetative debris, cobbles, leaf packs and undercut banks; habitat may move during high flows.</p> 	10	9	8	7	6	5	4	3	2	1	0	What did you see?
2. Embeddedness * For ROCKY BOTTOM streams only Are fine sediments being deposited in riffle/run area?	<p>Gravel and cobble are slightly embedded in riffle area.</p> 	<p>Gravel and cobble are partially embedded in riffle area.</p> 	<p>Gravel and cobble are completely embedded in riffle area.</p> 	10	9	8	7	6	5	4	3	2	1	0	What did you see?
3. Riffle/Run/Pool Is a diversity of instream habitats available: riffle, runs and pools?	<p>Yes, all three (3) habitat types (riffle, run, pool) are present and frequent.</p> 	<p>Two (2) habitat types are present.</p> 	<p>Only one (1) habitat type present and dominant.</p> 	10	9	8	7	6	5	4	3	2	1	0	What did you see?
4. Sediment Deposition Are point bars and islands present?	<p>Point bars and islands stable and of small size and frequency with some vegetation. Composed mostly of gravel and cobble.</p> 	<p>Point bars and islands less stable and of moderate size and frequency with some sparse vegetation. Composed mostly of some gravel and finer sediment.</p> 	<p>Point bars and islands unstable and of a large size with little or no vegetation. Composed almost entirely of fine sediment.</p> 	10	9	8	7	6	5	4	3	2	1	0	What did you see?
5. Channel Flow Status How much water is in the stream channel?	<p>Water reaches base of both lower banks; little substrate exposed.</p> 	<p>Some substrate is exposed and water partially fills channel.</p> 	<p>Most substrate is exposed and very little water in channel.</p> 	10	9	8	7	6	5	4	3	2	1	0	What did you see?

Total first side _____

Habitat Parameter	Excellent -----Poor												
6. Channel Alteration													
Is the stream channel altered by humans?	No evidence of channelization (straightening) or alterations such as dredging, agriculture, concrete banks or construction activities.	Some evidence of channelization (straightening) and/or alterations such as dredging, agriculture, concrete banks or construction activities.			Most of stream reach channelized and/or many alterations present such as dredging, agriculture, concrete banks or construction activities.						What did you see?		
													
	10	9	8	7	6	5	4	3	2	1	0	Score	
7. Channel Sinuosity													
Does the channel have lots of curves and bends?	Yes, bends in the channel are frequent.	There are more bends than straight sections.			There are more straight sections than sections with bends or channel is entirely straight.						What did you see?		
													
	10	9	8	7	6	5	4	3	2	1	0	Score	
8. Bank Stability													
How stable are the streambanks?	Bank stable; erosion, scouring, undercutting or bank failure absent or minimal. Vegetation overhanging the stream is abundant.	Bank moderately stable; evidence of small areas of erosion, undercutting and scouring, or bank failure present. Moderate amounts of overhanging vegetation present.			Bank unstable; many eroded and scoured areas with undercutting; bank failure present; steep banks. Little overhanging vegetation present.						What did you see?		
													
	5	4.5	4	3.5	3	2.5	2	1.5	1	.5	0	Score	
	5	4.5	4	3.5	3	2.5	2	1.5	1	.5	0	Score (Add both)	
9. Vegetative Protection													
Are streambanks covered & shaded by a variety of vegetation?	Most streambank surfaces covered and shaded by a large variety of vegetation (trees, shrubs, flowering plants and grasses).	Some streambank surfaces covered and shaded by some variety of vegetation (trees, shrubs, flowering plants and grasses).			Few streambank surfaces covered and shaded by vegetation. Little variety of vegetation. Streambank dominated by one type of vegetation (trees, shrubs, flowering plants and grasses).						What did you see?		
											Did you see any nonnative vegetation? Check here if YES <input type="checkbox"/>		
	5	4.5	4	3.5	3	2.5	2	1.5	1	.5	0	Score (Add both banks)	
	5	4.5	4	3.5	3	2.5	2	1.5	1	.5	0	Score (Add both banks)	
10. Riparian Vegetative Zone Width													
What is the amount of buffer available?	Buffer present; a large variety of vegetation extends at least three channel widths on each side.	Some buffer present; some variety of vegetation extends two to one channel width on each side. Human activities have impacted buffer zone.			Little or no buffer present; vegetation extends less than one channel width on each side. Human activities substantially impact buffer zone.						What did you see?		
											Did you see any nonnative vegetation? Check here if YES <input type="checkbox"/>		
	5	4.5	4	3.5	3	2.5	2	1.5	1	.5	0	Score (Add both banks)	
	5	4.5	4	3.5	3	2.5	2	1.5	1	.5	0	Score (Add both banks)	

Stream Habitat Score: **Excellent (69-90)** **Good (46-68)** **Fair (23-45)** **Poor (0-22)** Total second side _____

Total first side _____

Total _____

Please submit data at: AdoptAStream.Georgia.gov
 Or send to: 2 MLK Jr. Dr. SE, Suite 1462 East, Atlanta, GA 30334
 Email: AAS@gaepd.org

GEORGIA ADOPT-A-STREAM: Stream Flow

(Also fill out the Basic Visual Form when completing this survey)

CALCULATE AREA

Area = depth x width

It is advisable to take multiple depth and width measurements Always start at the water's edge with a first measurement of zero All data should be recorded in feet, with inches replaced by decimals

Depth Measurements	1.	2.	3.	4.	5.	6.	7.	8.	sum
	0 ft								

Average Depth ft = $\frac{\text{sum of depth measurements}}{\text{number of measurements}}$

Width Measurements	1.	2.	sum
	ft		

Average Width ft = $\frac{\text{sum of width measurements}}{\text{number of measurements}}$

Area ft² = width X depth

CALCULATE SPEED- Measure the time it takes a float to travel a desired distance

It is advisable to take at least 2 measurements of current speed

Take measurements from the stream run

length = feet (20 feet is recommended)

time in seconds	1.	2.	3.	4.	sum
	s				

average time s = $\frac{\text{sum of time measurements}}{\text{number of measurements}}$

Speed ft/s = $\frac{\text{length in feet}}{\text{average time in seconds}}$

CALCULATE STREAM FLOW

Flow cfs = **Area** X **Speed** X **Coefficient**

Flow in cubic feet per second

0.9 coefficient for muddy bottom stream
0.8 coefficient for rocky bottom stream

GEORGIA ADOPT-A-STREAM: Channel Cross-Section: Part 1

(Also fill out the Basic Visual Form when completing this survey)

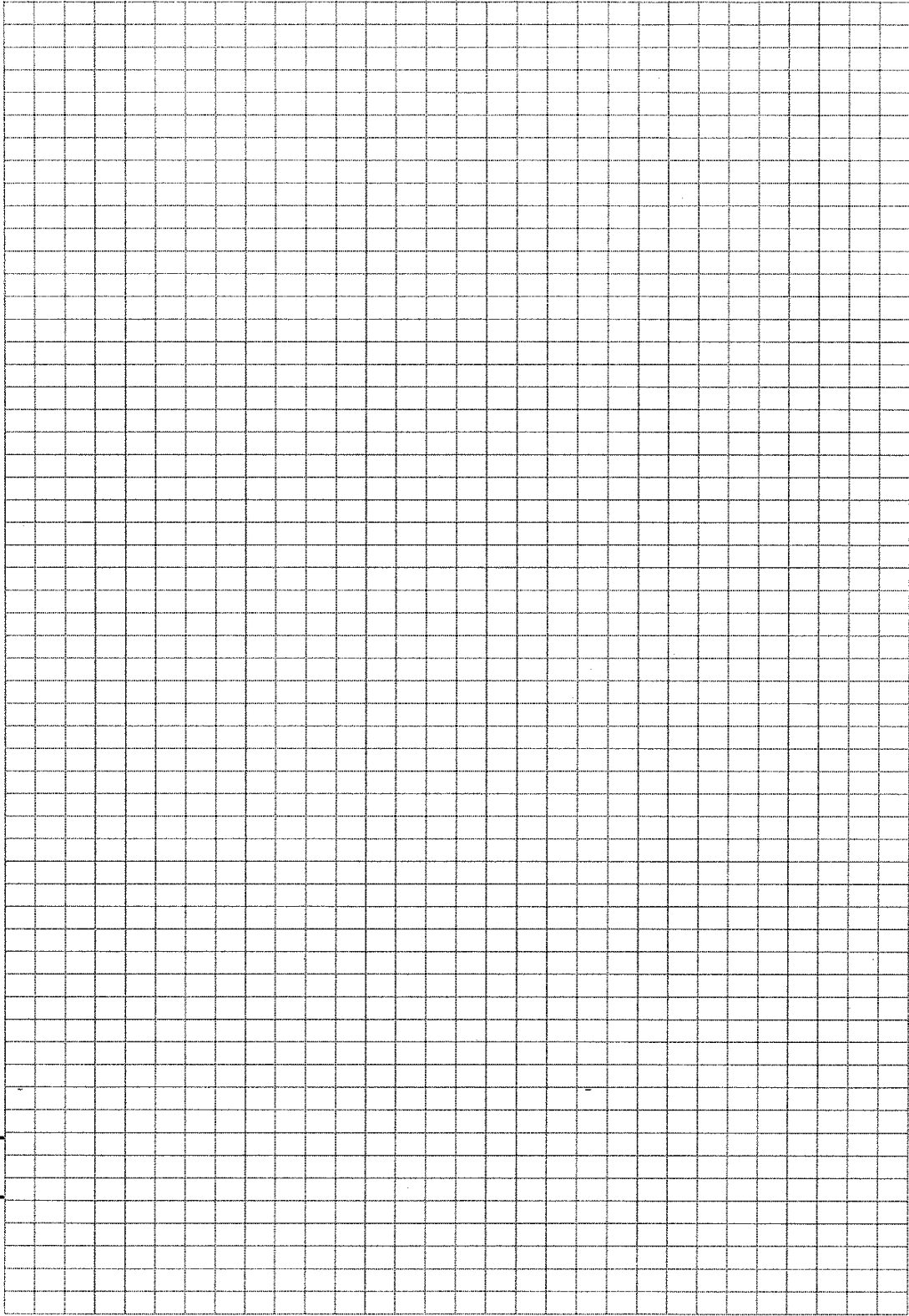
Measurements are always taken from the left stream bank, looking downstream. Depth measurements are taken every two feet and in sections where there is a notable change. Be sure to note left and right bankfull, water edge, and sand bars.

CROSS-SECTION			
Distance from LEFT Pin		Measurement Depth	Comments
Point	Ft.	Ft.	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

CROSS-SECTION			
Distance from LEFT Pin		Measurement Depth	Comments
Point	Ft.	Ft.	
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
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47			
48			
49			
50			

GEORGIA ADOPT-A-STREAM: Channel Cross-Section: Part 2
(Also fill out the *Basic Visual Form* when completing this survey)

Graph Paper for Stream Channel Cross-section Measurements



D E P T H

Right

WIDTH

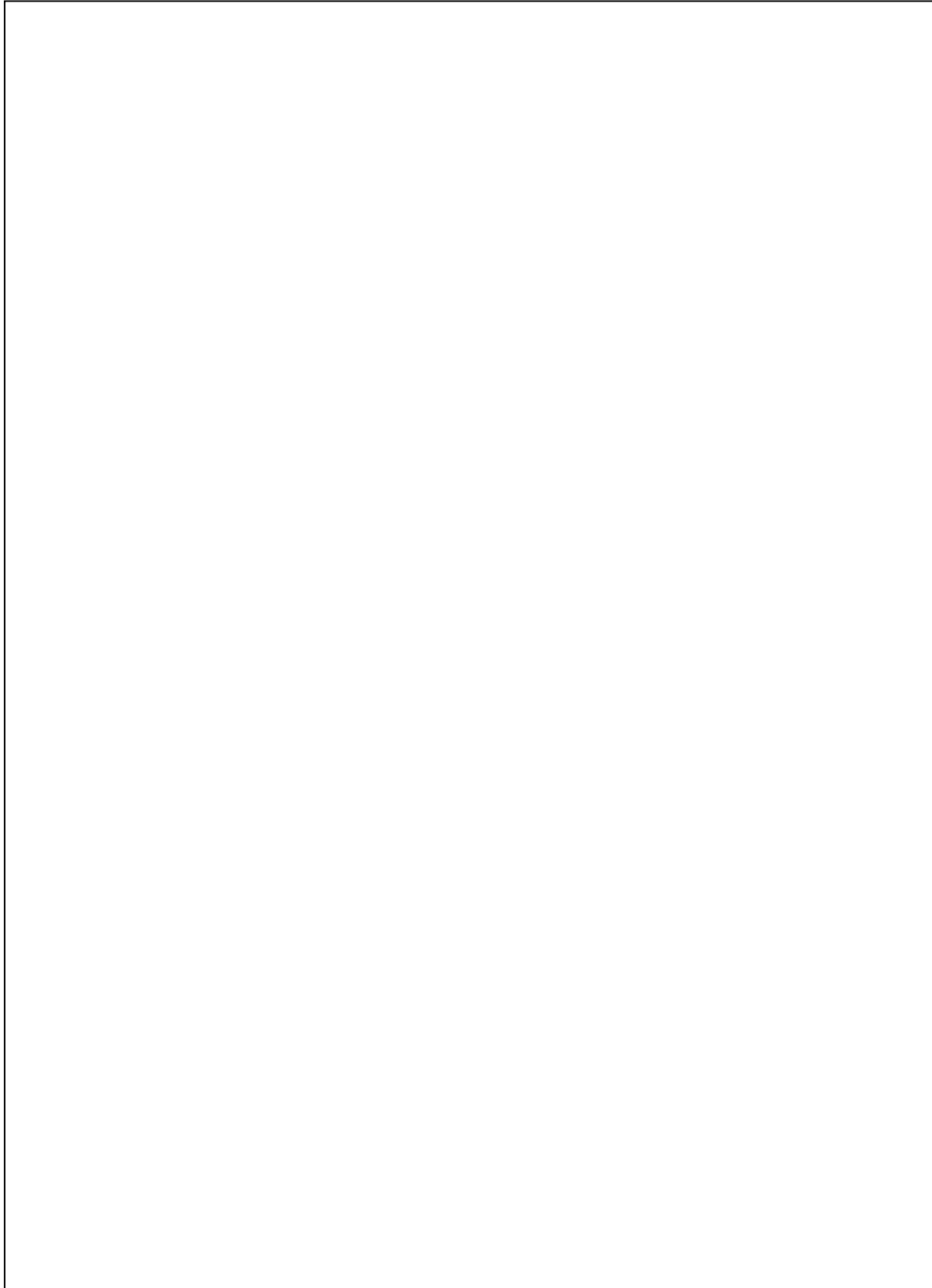
Left (looking downstream)

GEORGIA ADOPT-A-STREAM: Wentworth Pebble Count
(Also fill out the Basic Visual Form when completing this survey)

Count#/Size Class	Silt/Clay	Sand	Gravel	Cobble	Boulder	Bedrock
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
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43						
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45						
46						
47						
48						
49						

Count#/Size Class	Silt/Clay	Sand	Gravel	Cobble	Boulder	Bedrock
50						
51						
52						
53						
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58						
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86						
87						
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89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						
Total in each column (%)						

GEORGIA ADOPT-A-STREAM: Site Sketch
(Also fill out the Basic Visual Form when completing this survey)

A large, empty rectangular box with a thin black border, intended for a site sketch. The box is oriented vertically and occupies most of the page below the title.

GEORGIA ADOPT-A-STREAM: Visual Biological Survey

(Also fill out the Basic Visual Form when completing this survey)

1. Wildlife in or around the stream:

- amphibians waterfowl reptiles mammals mussels/clams/oysters
 crustaceans birds

2. Fish in the stream: (Check all that apply)

- no yes, but rare yes abundant
 small (1-2") medium (3-6") large (7" and above)

Are there barriers to fish movement?

- none beaver dams waterfalls > 1ft
 dams road barriers other: _____

3. Aquatic plants in the stream: (Check all that apply)

- none

- | | | |
|--|--------------------------|--------------------------|
| <input type="checkbox"/> attached plants | occasional | plentiful |
| stream margin/edge | <input type="checkbox"/> | <input type="checkbox"/> |
| pools | <input type="checkbox"/> | <input type="checkbox"/> |
| near riffle | <input type="checkbox"/> | <input type="checkbox"/> |

- | | | |
|---|--------------------------|--------------------------|
| <input type="checkbox"/> free-floating plants | occasional | plentiful |
| stream margin/edge | <input type="checkbox"/> | <input type="checkbox"/> |
| pools | <input type="checkbox"/> | <input type="checkbox"/> |
| near riffle | <input type="checkbox"/> | <input type="checkbox"/> |

4. Extent of algae in the stream:

a) Are the submerged stones, twigs, or other material in the stream coated with a layer of algae? (Check all that apply)

- none

- | | | |
|------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> brownish: | occasional | plentiful |
| light coating | <input type="checkbox"/> | <input type="checkbox"/> |
| heavy coating | <input type="checkbox"/> | <input type="checkbox"/> |

- | | | |
|------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> greenish: | occasional | plentiful |
| light coating | <input type="checkbox"/> | <input type="checkbox"/> |
| heavy coating | <input type="checkbox"/> | <input type="checkbox"/> |

- | | | |
|---------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> other: _____ | occasional | plentiful |
| light coating | <input type="checkbox"/> | <input type="checkbox"/> |
| heavy coating | <input type="checkbox"/> | |

b) Are there any filamentous (string-like) algae?

	none	occasional	plentiful
brownish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
greenish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c) Are any detached "clumps" or "mats" of algae floating on the water's surface?

	none	occasional	plentiful
brownish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
greenish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other _____:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Presence of naturally occurring organic material in stream: (*Good habitat for aquatic organisms*)

Logs or large woody debris:	<input type="checkbox"/> none	<input type="checkbox"/> occasional	<input type="checkbox"/> plentiful
Leaves, twigs, root mats, etc.:	<input type="checkbox"/> none	<input type="checkbox"/> occasional	<input type="checkbox"/> plentiful

6. Stream shade cover: How well is the water surface shaded by vegetation?

Looking down stream:

