# Georgia Adopt-A-Stream's Amphibian Monitoring Program

**Tara Muenz**
**Georgia Adopt-A-Stream**
**Atlanta, Georgia 30354**
**www.GeorgiaAdoptAStream.com**
**Tara.Muenz@gaepd.org**
**404.675.1635**


Georgia Adopt-A-Stream

DEPT. OF NATURAL RESOURCES
GEORGIA

# Georgia Adopt-A-Stream

GEORGIA'S VOLUNTEER WATER QUALITY MONITORING PROGRAM

www.georgiaadoptastream.com

WATERSHED PROTECTION BRANCH

## Announcements

**Become an AAS Trainer**

**Print the NEW AAS Who to Call List**

**Watch a new AAS video by Tom Mills from Greenshortz.com**

**'Like' AAS on Facebook!**

May 2, 2012

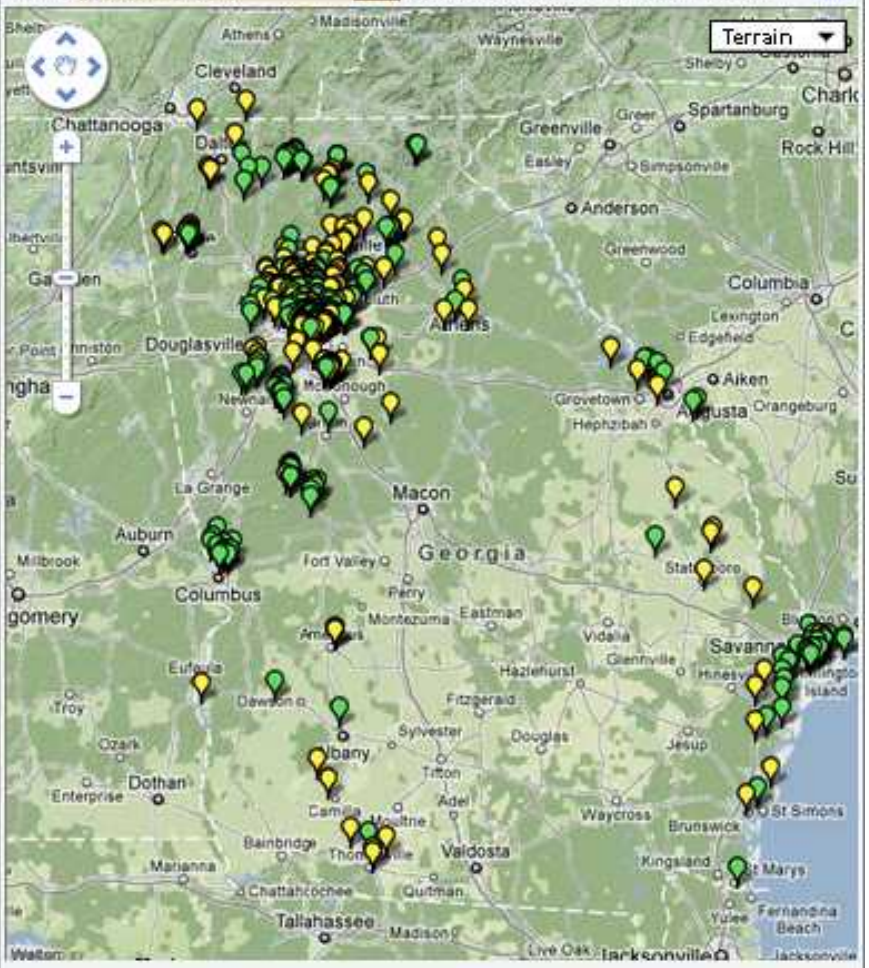
**Did you know?** You can view monitoring data in many different ways through the website. **Read more**

| Currently active (5/3/2011 - 5/2/2012) | Database Totals | Newsletters |
|---|---|---|
| 392 Sites | 1734 Sites | |
| 191 Groups | 1307 Groups | Mar-Apr 2012 |
| 28 Watersheds | 16436 Events | Archived newsletters |
| 2524 Events | 18080 People | |

Wednesday, May 2 | View monthly calendar | Print

Saturday, May 5
9:00am Columbia Co: Chemical
10:00am DeKalb Co -Getting Started + Visual Survey
Saturday, May 12
9:00am Columbus - Chemical Monitoring Workshop
Saturday, May 19
10:00am Cobb Co: Biological Monitoring Workshop

Show: All active sites | Sites with 5 or more events are green.

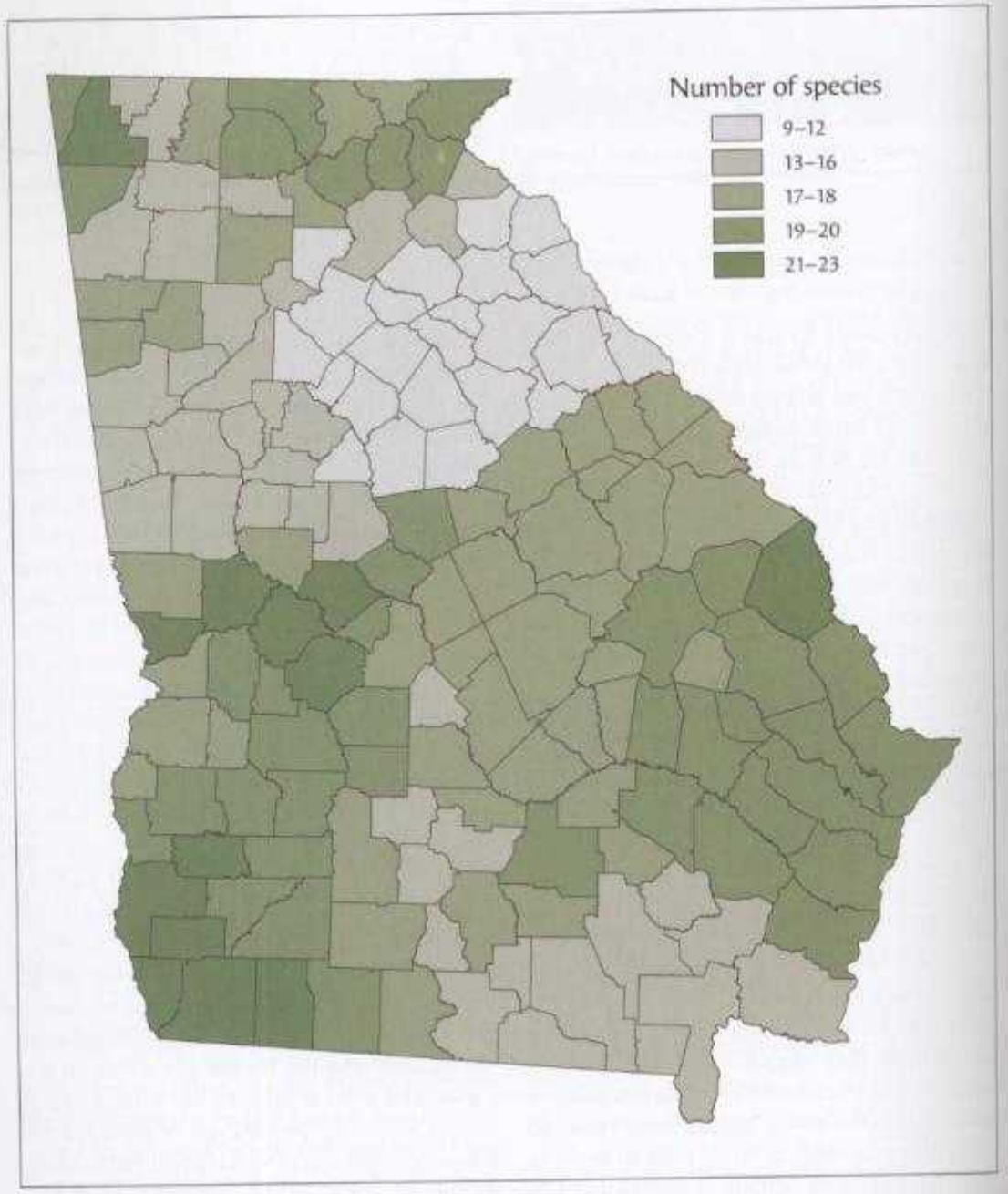



This database is supported in partnership with the University of Georgia, Marine and Cooperative Extension Services.

# AAS Program Structure: Quality Assurance Project Plan

- QAQC monitoring
  - -Bacterial
  - -Chemical
  - -Macroinvertebrate

- Non-QA/QC monitoring
  - -Visual/Physical
  - -Watershed
  - -Wetland
  - -Amphibian




Salamander Species Richness by County, Based on Predicted Ranges

# Georgia's Diversity

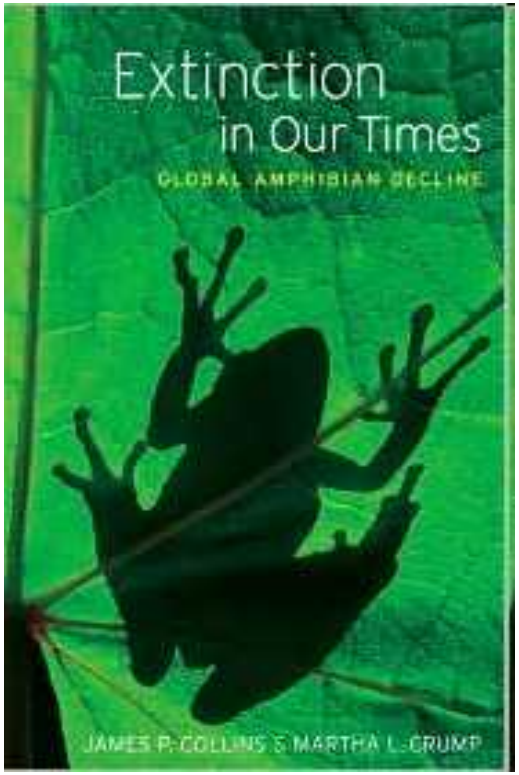
- 5 Physiographic Provinces
- 14 Major River Basins
- 32 species of frogs/toads
- 57 species of salamanders

# Why Care About Amphibians?

# Amphibians as a Target Group

- **SOME are sensitive to disturbances, but not necessarily a 'canary in the coal mine'**

- **Needs: Life History Information:**
  - -Ranges
  - -Pres/abs
  - -Pollution tolerances

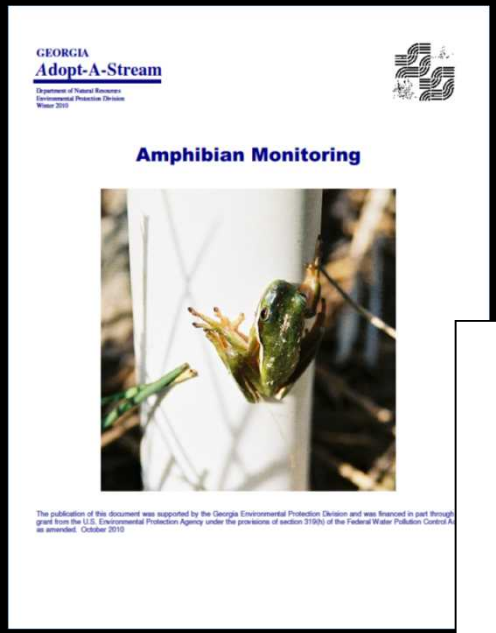


# What Can I do?

- Protect Existing Habitat
- Landscape Naturally
- Be on the lookout for invasive species
- Create a pond or Toad Abode
- Help Scientists Collect Useful Information

# AAS Amphibian Workshop

- 3 hour training
  - Life History
  - Challenges & opportunities
  - Identification
  - Photo Vouchers
  - Safe Handling
  - Methods/ datasheets
  - Manual
  - Invasive species
  - Malformations
  - Frog calls
  - Field experience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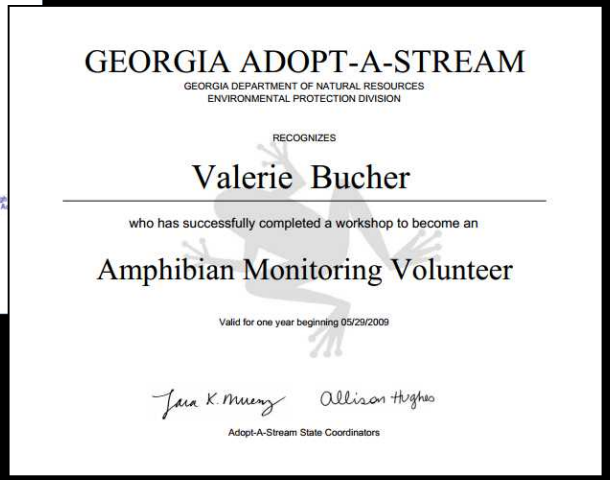
Adopt-A-Stream

Amphibian Monitoring




GEORGIA ADOPT-A-STREAM

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

RECOGNIZES

Valerie Bucher

who has successfully completed a workshop to become an

Amphibian Monitoring Volunteer

Valid for one year beginning 05/29/2009

Adopt-A-Stream State Coordinators

# Amphibian Survey Methods

## 1) Treefrog Adults: Hyla spp.

-PVC ground or tree pipes
-6 Species in GA

*Hyla squirella*, Squirrel treefrog

*Hyla cinerea*, Green treefrog

# Amphibian Survey Methods

## 2) **Salamanders Adults & Larvae**

-Artificial cover/ coverboards

-Aquatic macroinvertebrate collections (larvae)

-Families of Focus:

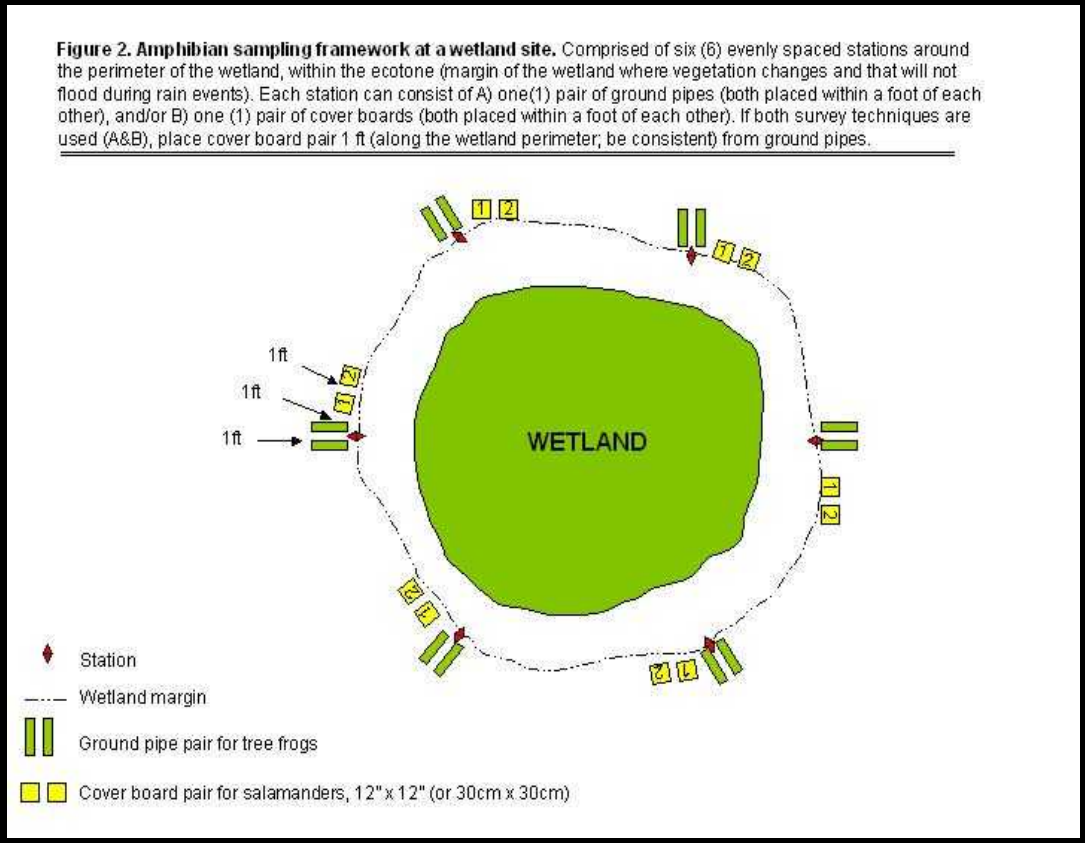
Ambystomatidae (mole

Plethodontidae (lungless )

Salamandridae (newts)

# Monitoring Design: Stream & Wetland

- Six stations within the adopted reach* or ecotone
- Check bimonthly
- At each station:
  1 pipe & board at 0ft
  1 pipe & board at 3ft
- Total of 12 pipes and 12 boards to monitor



# GEORGIA ADOPT-A-STREAM
## Amphibian Monitoring Data Sheet

Return to: GA AAS
4220 International Parkway
Suite 101
Atlanta, GA 30354

AAS group name: _____ County: _____
Group ID number AAS-G Topo Map
Site ID Number AAS-S Quadrant: _____
Investigators: _____
Stream name _____
Date: _____ Time: _____ Picture/Photo Documentation? yes / no
Site/location Description: _____ Time spent Monitoring: _____

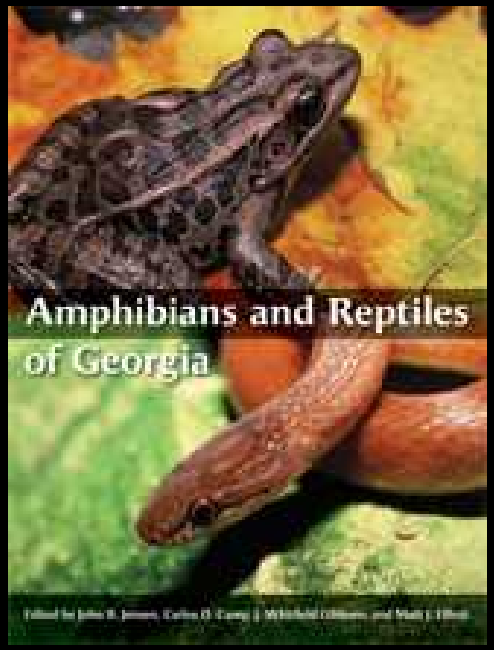
*Rain in last 24 hours*
☐ heavy rain ☐ steady rain ☐ intermittent rain ☐ none

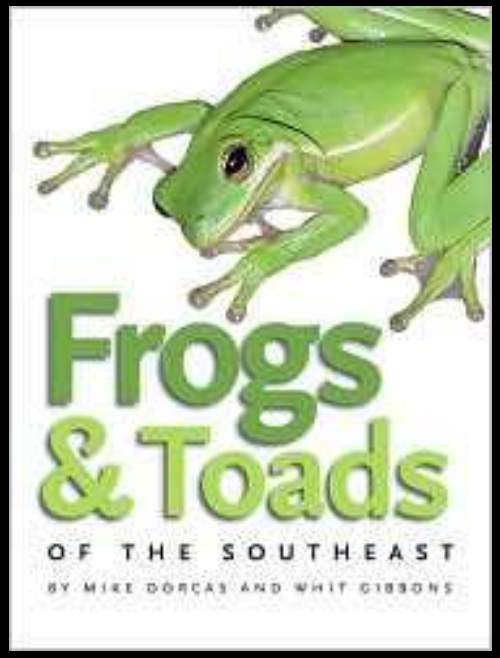
*Present conditions*
☐ heavy rain ☐ steady rain ☐ intermittent rain ☐ overcast ☐ partly cloudy ☐ clear/sunny

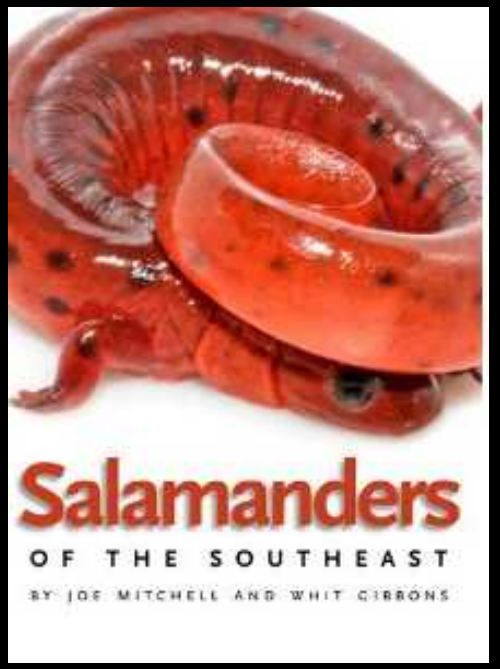
Amount of rain, if known? _____ Inches in last _____ hours/days

| Reach | | PVC Pipes (Treefrogs) | | | | | | Coverboards (Salamanders) | | | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *H. cinerea* | *H. squirella* | *H. chrysoscelis* | *H. femoralis* | *H. gratiosa* | *H. avivoca* | | | | | | | | |
| 1 a | 0' | | | | | | | / | | | | | | | |
| b | 3' | | | | | | | / | | | | | | | |
| 2 a | 0' | | | | | | | / | | | | | | | |
| b | 3' | | | | | | | / | | | | | | | |
| 3 a | 0' | | | | | | | / | | | | | | | |
| b | 3' | | | | | | | / | | | | | | | |
| 4 a | 0' | | | | | | | / | | | | | | | |
| b | 3' | | | | | | | / | | | | | | | |
| 5 a | 0' | | | | | | | / | | | | | | | |
| b | 3' | | | | | | | / | | | | | | | |
| 6 a | 0' | | | | | | | / | | | | | | | |
| b | 3' | | | | | | | / | | | | | | | |

# Useful ID Guides in the Southeastern U.S.



# *Projects…*

- **Testing Additional Methods:**
  1. Instream Salamanders: Bottle Traps/Leaf Packs

- **Partnerships:**
  -PARC's National Volunteer protocol development
  -GA EPD's Intensive Surveys Unit, wetland surveys
  -Georgia State Parks
  -GA DNR, invasive species ID: Cuban Treefrog

- **School groups: 'Educator's Guide' Activities**

- **Amphibian Workshop Trainers**

# Invasive Cuban Treefrog in Coastal Georgia

The Cuban Treefrog (*Osteopilus septentrionalis*) is NATIVE to Cuba, the Cayman Islands and the Bahamas. They have been INTRODUCED in Florida, Hawaii and Texas, and **some individuals have been found on the Georgia Coast in Brunswick and Savannah.** They cause damage to the local animals by competing for food resources and also by eating other native frogs and lizards.

Cuban Treefrogs can be white, gray, green or brown, and can change colors. Some can have streaks while others are a solid color. All have large toepads.

## What Can You Do?

**If you suspect that you have found a Cuban Treefrog, send images of the individual to: John Jensen, Georgia Department of Natural Resources**

Email: JOHN_JENSEN@DNR.STATE.GA.US

***Other information to collect:** Date and Location (Latitude/ Long)

**Georgia is also home to several native treefrogs such as the ones below:**

Green Treefrog, Hyla cinerea

Copes' Gray Treefrog, Hyla chrysoscelis

Barking Treefrog, Hyla gratiosa

# Amphibian Program Committee

**Partners in Amphibian and Reptile Conservation (PARC)**
**Dept. of Natural Resources, Wildlife Resources, Nongame Section**
**Zoo Atlanta**
**Amphibian Arc**
**Atlanta Botanical Gardens**
**Joseph W. Jones Ecological Research Center**
**Stone Mountain Environmental Education Center**
**The University of Georgia, Odum School of Ecology**

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# GEORGIA ADOPT-A-STREAM

## Amphibian Monitoring Data Sheet

*To be conducted quarterly*

Save Clear

**Site and Group Information**

AAS Site ID: S- Long Creek (1233)
Enter the site number without the S-, and select from the list.
Note that you must be a member of a group before you can submit data for its sites.

AAS Group ID: Three Forks Alliance (G-1160)
Fannin County

Long Creek is one of 3 creeks that converge to form Noontootla Creek at a location known as Three Forks.

**Event Date and Participants**

| Date: (mm/dd/yyyy) | Time: (hh:mm am/pm) | Time Spent Monitoring | Picture/Photo Documentation? |
|---|---|---|---|
| 03232012 | 10:30 am | 70 minutes (don't include *E. coli* incubation time) | (•) yes / ( ) no |

**Registered participants**
Enter one at a time, and select from the drop-down list. At least one must be QA/QC certified.

Tara Muenz (5592) x  Allison Hughes (10164) x

**Unregistered participants**

Mary Mayfly

Total number of participants: 2

| Rain in last 24 hours Clear | | Present conditions Clear | | |
|---|---|---|---|---|
| ( ) heavy rain | ( ) steady rain | ( ) heavy rain | ( ) steady rain | ( ) intermittent rain |
| (•) intermittent rain | ( ) none | ( ) overcast | (•) partly cloudy | ( ) clear/sunny |

Amount of rain, if known? 0.5 inches in last 10 (•) hours / ( ) days

## Frogs

- [ ] *Hyla avivoca* — Bird-voiced Treefrog
- [x] *Hyla chrysoscelis* — Cope's Gray Treefrog
- [ ] *Hyla cinerea* — Green Treefrog
- [ ] *Hyla femoralis* — Pine Woods Treefrog
- [ ] *Hyla gratiosa* — Barking Treefrog
- [x] *Hyla squirella* — Squirrel Treefrog

## Salamanders

- [ ] *Ambystoma bishopi* — Frosted Flatwoods Salamander
- [ ] *Ambystoma cingulatum* — Reticulated Flatwoods Salamander
- [ ] *Ambystoma maculatum* — Spotted Salamander
- [x] *Ambystoma opacum* — Marbled Salamander
- [x] *Ambystoma talpoideum* — Mole Salamander
- [ ] *Ambystoma tigrinum* — Eastern Tiger Salamander
- [ ] *Amphiuma means* — Two-toed Amphiuma
- [ ] *Amphiuma pholeter* — One-toed Amphiuma
- [ ] *Cryptobranchus alleganiensis* — Hellbender
- [ ] *Desmognathus aeneus* — Seepage Salamander
- [ ] *Desmognathus apalachicolae* — Apalachicola Dusky Salamander
- [ ] *Desmognathus auriculatus* — Southern Dusky Salamander
- [ ] *Desmognathus conanti* — Spotted Dusky Salamander
- [ ] *Desmognathus folkertsi* — Dwarf Black-bellied Salamander
- [ ] *Desmognathus marmoratus* — Shovel-nosed Salamander
- [ ] *Desmognathus monticola* — Seal Salamander
- [ ] *Desmognathus ocoee* — Ocoee Salamander
- [ ] *Desmognathus quadramaculatus* — Black-bellied Salamander
- [ ] *Eurycea bislineata complex* — Two-lined Salamander
- [x] *Eurycea cirrigera* — Southern Two-lined Salamander
- [ ] *Eurycea guttolineata* — Three-lined Salamander
- [ ] *Eurycea longicauda* — Long-tailed Salamander
- [ ] *Eurycea quadridigitata* — Dwarf Salamander
- [ ] *Gyrinophilus porphyriticus* — Spring Salamander
- [ ] *Hemidactylium scutatum* — Four-toed Salamander
- [ ] *Necturus cf. beyeri* — Alabama Waterdog
- [ ] *Necturus maculosus* — Mudpuppy
- [ ] *Necturus punctatus* — Dwarf Waterdog
- [ ] *Notophthalmus perstriatus* — Striped Newt
- [ ] *Notophthalmus viridescens* — Central Newt
- [ ] *Plethodon glutinosus* — Slimy Salamander
- [x] *Plethodon grobmani* — Southeastern Slimy Salamander
- [ ] *Pseudobranchus striatus* — Slender Dwarf Siren
- [ ] *Pseudotriton montanus* — Mud Salamander
- [ ] *Pseudotriton ruber* — Red Salamander
- [ ] *Siren intermedia* — Lesser Siren
- [ ] *Siren lacertina* — Greater Siren
- [ ] *Stereochilus marginatus* — Many-lined Salamander

| Station Number | | PVC Pipes (Treefrogs) | | Coverboards (Salamanders) | | | | Notes |
|---|---|---|---|---|---|---|---|---|
| | | H. chrysoscelis | H. squirella | A. opacum | A. talpoideum | E. cirrigera | P. grobmani | |
| 1 a | 0' | 1 | 0 | 0 | 0 | 0 | 0 | |
| b | 3' | 0 | 0 | 1 | 0 | 0 | 0 | |
| 2 a | 0' | 0 | 0 | 0 | 0 | 0 | 0 | |
| b | 3' | 0 | 2 | 0 | 0 | 0 | 1 | |
| 3 a | 0' | 0 | 0 | 0 | 0 | 0 | 0 | |
| b | 3' | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4 a | 0' | 0 | 0 | 0 | 0 | 1 | 0 | |
| b | 3' | 0 | 0 | 0 | 0 | 0 | 0 | |
| 5 a | 0' | 1 | 0 | 0 | 0 | 0 | 0 | |
| b | 3' | 0 | 0 | 0 | 1 | 0 | 0 | |
| 6 a | 0' | 0 | 0 | 0 | 0 | 0 | 0 | |
| b | 3' | 0 | 0 | 0 | 0 | 0 | 0 | |