



Stormwater SMART

Healthy Water for a Healthy Future.

General Program Guidelines

1. Stormwater SMART encourages civic organizations, local businesses, watershed groups, academic institutions, and scout groups to adopt local streams, rivers, and lakes for the purpose of managing water quality and removing litter from streambanks, shorelines and in waterways.
2. Adopt-a-Stream organizations will be awarded a sign which will include the organization's name, to place at a location of their choice.
3. The organization will be responsible for posting and maintaining their Adopt-a-Stream sign.
4. Each group must include at least one participating adult of 18 years or older. Individuals under the age of 18 can participate with adult supervision.
5. Groups shall not trespass on private property. Permission from property owner must be secured before entering private property.
6. Each group is responsible for the pickup and disposal of litter on their stream.
7. Stormwater SMART encourages recycling materials to minimize overall environmental impact.
8. After each project, the designated representatives must send copies of sign-in sheets, all completed and signed safety liability release forms, and stream cleanup data forms to the program coordinator at:

Stormwater SMART Adopt-a-Stream
Piedmont Triad Council of Governments
2216 W. Meadowview Road, Suite 201
Greensboro, NC 27407



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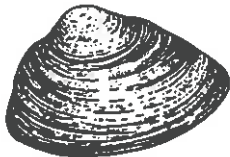
Adopt-a-Stream



Salamanders are sensitive to changes in the environment making them important biological indicators.

Super Salamanders (Level 1)

- ◆ Walk stream at least twice yearly. Report how stream looks and smells on visual monitoring data sheets.
- ◆ Organize a stream clean-up either in the spring around Earth Day or during the NC Big Sweep in the fall.
- ◆ Report potential water pollution violations to your local government.



Mussels are sensitive to siltation and low dissolved oxygen.

Mad Mussels (Level 2)

- ◆ Walk stream monthly and report using visual monitoring data sheets.
- ◆ Observe stormwater outfall entering the stream
- ◆ Organize 1-2 stream clean-ups per year in the spring and fall.
- ◆ Report potential water pollution violations to your local government.



Alderflies are generally intolerant of pollution

Bugs Galore (Level 3)

- ◆ Walk stream monthly and report using visual monitoring data sheets.
- ◆ Sample and identify aquatic insects twice a year (optional).
- ◆ Conduct at least two stream clean-ups a year during the spring and fall
- ◆ Use water quality testing kit provided by Stormwater SMART (requires training) twice yearly.

2216 West Meadowview Road · Suite 201 · Greensboro, NC 27407-3480

(336) 294-4950 · Fax (336) 632-0457 · email: Ltrosper@ptcog.org



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Adopt-a-Stream

Members of the Piedmont Triad can work to keep a stream from pollution that threatens drinking water quality, aquatic life, and recreation associated with our waterways. Depending on your level of commitment, we offer three levels of participation. Check out the attached flyer to see which level fits with your lifestyle, then fill out the following questionnaire as completely as possible. All sizes of streams, rivers, lakes, and estuaries are eligible for adoption. Not sure which stream is right for you? Let us know, and we'll help you find one.

Date: _____

Name of adopting organization: _____

Level of adoption (see attached flyer):

- Super Salamanders (Level 1)
- Mad Mussels (Level 2)
- Bugs Galore (Level 3)

Designated Representative (**Primary**): _____

Street Address: _____

City: _____ State: _____ Zip: _____

Telephone Number (*daytime*): _____

Designated Representative (**Secondary**): _____

Street Address: _____

City: _____ State: _____ Zip: _____

Telephone Number (*daytime*): _____

Describe the location of the water body to be adopted. Use bridges, roads, towns, or confluences with other bodies of water to define the upstream and downstream limits of your segment. (This is for your benefit, and you should not feel constrained by what you put down.) Please go the US Geological Survey website at <http://gis.enr.state.nc.us/topoviewer/default.htm> and follow the instructions to locate your area. Print the map and mark your choice of stream, creek, or section of river, and return it to us along with your proposal for adoption. If you do not have access to the internet, please include a copy of a street or topographic map with your section of the waterway highlighted.

Stream Information:

Water Body: _____

County (ies): _____

Upstream identifier: _____

Downstream identifier: _____

Approximate # of stream miles: _____

River basin in which water body is located: _____

What features made you consider this stream for the Adopt-a-Stream program?

May Stormwater SMART provide other individuals interested in joining the Adopt-a-Stream program with your contact information? Yes No

How did you hear about the Adopt-a-Stream program?

Stormwater SMART and the Piedmont Triad Council of Governments are not responsible for any liability associated with the Adopt-a-Stream program. We reserve the right to revise or discontinue the Adopt-a-Stream program at any time. All work should be performed under and in accordance with the Stormwater SMART Adopt-a-Stream General Program Conditions and Safety Guidelines attached to this application.

**As a representative of _____,
I have read, understand, and comply with the Adopt-a-Stream general program conditions and safety guidelines.**

Signature: _____

Date: _____

Upon completion, please return by:

Mail: Stormwater SMART
Piedmont Triad Council of Governments
2216 W. Meadowview Rd. Suite 201
Greensboro, NC 27407

By Fax: (336) 632-0457
Attn: Stormwater SMART

By Email: Ltrosper@ptcog.org



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Adopt-a-Stream

Stream Cleanup Checklist

- Establish a group and determine a site.
- Decide what level of commitment is suited to your group.
- Submit Application to Stormwater SMART Program Coordinator
- Select project date and time of event.
- Locate a meeting place
- Arrange for the disposal and/or recycling of litter
- Obtain written permission from landowners if necessary
- Recruit stream cleanup volunteers from your community
- Publicize your stream cleanup project
- Arrange for proper equipment and materials
- Post Adopt-A-Stream sign.
- Ensure designated representatives receive liability forms from all volunteers
- Begin planning for the next cleanup
- Send necessary forms to Stormwater SMART Coordinator
- Thank volunteers!



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Adopt-a-Stream

PARTICIPANT CONSENT, WAIVER AND RELEASE FROM LIABILITY

I acknowledge that participating in a Stormwater SMART Adopt-a-Stream event or related active involves an above average risk of personal injury. I knowingly and voluntarily agree to the terms and conditions outlined in this form. In consideration and exchange for being permitted to participate in Adopt-a-Stream events, I agree to the following:

I am over eighteen (18) years of age and in good health with no physical conditions that affect my ability to participate. I will remain aware of my site and advise event coordinator of any unsafe conditions. I will abide by any guidelines made available to me. I consent to the use and publication of my name and image in all forms of media while participating in Adopt-a-Stream events.

I assume full responsibility for risks associated with my participation and the risk of injury or damage which may not be foreseeable. I hereby release, waive, discharge and agree not to sue the participants affiliated with the Adopt-a-Stream program.

I agree to wear appropriate safety equipment during all Adopt-a-Stream events and if I experience any injury or other medical conditions, I authorize medical treatment deemed necessary by medical personnel if I am not able to act on my own behalf. I agree not to sue any applicable medical practitioners who may provide medical treatment for malpractice.

This waiver is a legally binding agreement and will apply to the current event or any future event.

I HAVE READ THIS DOCUMENT AND UNDERSTAND ITS CONTENT. BY SIGNING BELOW, I HAVE GIVEN UP SUBSTANTIAL RIGHTS. I HAVE VOLUNTARILY SIGNED THIS RELEASE AND AGREE THIS DOCUMENT IS NOT ONLY BINDING ON ME BUT WILL ALSO BE BINDING ON MY PERSONAL REPRESENTATIVES, EXECUTORS, HEIRS AND NEXT OF KIN.

Signature of Participant _____ Date _____

Printed Name _____ Address _____

Phone _____ Email _____

PARENT OR GUARDIAN CONSENT (If participant is under age 18): I am the parent or legal guardian of the participant and agree that the foregoing agreement shall be binding on me and the minor participant.

Signature of Participant's Parent or Guardian _____

Date _____

Printed Name _____

Address _____



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Stream Survey Data Sheet

(Please forward a copy of the stream survey data, the visual monitoring, litter clean-up, and any optional testing sheets to the NC Stream Watch Coordinator and retain the original for your files.)

Stream location: _____

County: _____

Group: _____

Number of Participants: _____

(Optional)

You should select a riffle where the water is not running too fast (ideal depth is 3 – 6 inches), and the bed consists of cobble-sized stones or larger if possible. Try to select a 3-foot square area if possible.

Width of study area:

Pool section _____ Riffle section _____

Depth of study area:

Pool section _____ Riffle section _____

Speed of stream's flow: _____ Water Temperature (C) _____

Sample number _____ Date _____ Time _____

(Required)

Type of Monitoring: _____ visual monitoring
_____ macroinvertebrate count
_____ chemical tests (Please list) _____
_____ other (Please list) _____

Comments:

Visual Monitoring

(This section is required. A copy should be made and returned to the Stream Watch State Coordinator. Please retain the original for your records.)

Water appearance:

scum _____

foam _____

muddy _____

clear _____

tea _____

milky _____

color sheen (oily) _____

brownish _____

other _____

Stream bed coating:

orange to red _____

yellowish _____

black _____

brown _____

none _____

Odor:

rotten egg _____

musky _____

other _____

none _____

Bank cover

good cover _____

(70% -- 100% of bank soil covered by plants, rocks, and logs)

fair cover _____

(30% -- 70% of bank covered by plants, rocks, and logs)

poor cover _____

(less than 30% of bank soil covered by plants, rocks, and logs)

Stability of stream bank:

Bed sinks beneath your feet in:

_____ no spots

_____ a few spots

_____ many spots

Bed composition of riffle:

_____ % silt (mud)

_____ % sand (1/16" – 1/4")

_____ % gravel (1/4" – 2")

_____ % cobbles (2" – 10")

_____ % boulders (> 10" stones)

Algae color:

_____ light green

_____ dark green

_____ brown coat

_____ matted on stream bed

_____ hairy

Algae located:

_____ everywhere

_____ in spots

_____ % bed cover

Land use in watershed:

_____ homes _____ stores _____ factories _____ farming
_____ woods _____ fields

Are there any discharging pipes? _____ yes _____ no

If so, how many discharging pipes are there? _____

Did you test above the discharge and below the discharge to determine any changes in water quality and were changes notices? _____

Structure causing a water level difference of one foot or more:

_____ waterfalls _____ dams _____ beaver dams _____ none
_____ other _____

Barrier to fish movements:

_____ waterfalls _____ dams _____ beaver dams _____ none
_____ other _____

Comments:

AQUATIC LIFE

Macroinvertebrate Count

Use letter codes (A=1 – 9, B=10 – 99, C= 100 or more) to record the numbers of organisms found in a 3 foot by 3 foot area. Then add up the number of letter in each column and multiply by the indicated index value.

GOOD

_____ caddisfly larvae
_____ dobsonfly larvae
_____ mayfly nymphs
_____ other snails
_____ riffle beetle adult
_____ stonefly nymphs
_____ water penny larvae

FAIR

_____ beetle larvae
_____ clams
_____ crane fly larvae
_____ crayfish
_____ damselfly nymph
_____ dragonfly nymphs
_____ scuds
_____ sowbugs
_____ atherix

POOR

_____ aquatic worms
_____ blackfly larvae
_____ leeches
_____ midge larvae
_____ pouch snails

_____ # of letters
times 3 =
_____ index value

_____ # of letters
times 2 =
_____ index value

_____ # of letters
times 1 =
_____ index value

Now add together the three index values = _____ total index value.

Compare this total index value to the following numbers to determine the water quality of your stream. Good water quality is indicated by a variety of different kinds of organisms, with no one kind making up the majority of the sample.

_____ EXCELLENT (> 22)

_____ GOOD (17 – 22)

_____ FAIR (11 – 16)

_____ POOR (< 11)

Note: You should test at least 3 different riffles within a 24-foot area to ensure that you have a truly representative sample which includes all key organisms. You may also want to sample some of the rocks in the slower-moving water, nearer the banks, because mayflies and stoneflies are sometimes found there instead.

Fish:

_____ scattered individuals
_____ scattered schools

Crayfish:

_____ scarce
_____ abundant

Chemical and Physical Parameters

Collection Date: _____ Monitor Name: _____

Group Name: _____

Site name/Location: _____

Water temperature (C): _____ Phosphorous: _____ mg/l**

pH: _____ ** Nitrogen: _____ mg/l**

D.O.: _____ mg/l** Turbidity: _____ (meters, units, or
JTU's)**

Rainfall: _____ mm over _____ time period

Streamflow: _____ cubic feet/second

** Describe which method or brand of test kit used.

Litter Cleanup

Length of stream cleaned: _____ Date: _____

Number of participants: _____

Describe % and type of litter in and around the stream: _____

Average number of small and large items collected:

paper, small trash

can and bottles

tires, carts, etc.

_____ 0 – 5

_____ 0 – 5

_____ 0 – 5

_____ 5 – 10

_____ 5 – 10

_____ 5 – 10

_____ 10 – 50

_____ 10 – 50

_____ 10 – 50

_____ more than 50

_____ more than 50

_____ more than 50

Total number of trash bags: _____

Unusual items found: _____
