

# Stream Team Program Guide

2019-2020



**Stream Team** is a supplemental educational program that creates opportunities for hands-on learning in our local watersheds. Budding scientists will learn to monitor and test water quality, brainstorm conservation and restoration projects, take positive actions for their watershed, and foster a love for their surrounding environment.

WaterWays wants to get every member of the community connected with their environment. Stream Team can be conducted with our staff on site to guide the lesson, or materials and training is offered for those who wish to facilitate a Stream Team on their own.

**"OUR MISSION IS TO EMPOWER KIDS AND THEIR  
COMMUNITIES TO PROTECT AND RESTORE THEIR WATER  
WHERE THEY LIVE, WORK, AND PLAY."**

**--MARY BETH SUTTON, EXECUTIVE DIRECTOR**



# Program Details

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## ***Requirements of your Stream Team***

1. Engage students with their local creek, river or stream
2. Collect data (water quality testing, macro-invertebrate study)
3. Develop ideas on how to improve your local waterway and take positive actions (stewardship projects) in your watershed
4. Document your Stream Team program (video, photos, illustrations, creative writing)
5. Celebrate success with other Stream Teams at the end of the school year!

Stream Team is uniquely geared towards your group. You, as a leader or facilitator, will work closely with a WaterWays representative to develop your program. Stream Team can be as simple as an after school club that meets once a month to play, explore, and collect data or a weekly in-school program with those same objectives. Or the program can be more in-depth, covering topics such as aquatic chemistry, environmental engineering, and socio-economic aspects of freshwater.

## ***Training & Materials Provided***

WaterWays provides a free initial leader training and some materials. Full materials can be provided to outings that WaterWays facilitates. Materials will include items such as nets, macro-invertebrate identification sheets, activity supplies, and water quality testing kits. Some materials can be created for or loaned to those wishing to facilitate the program themselves.

## Commonly Asked Questions

### **Who leads the program?**

Teachers and mentors are responsible for leading the team. WaterWays will provide training and some materials for the program. Waterways can also facilitate sessions at a rate of \$60 per hour and provide full materials.

### **Is the program during school or after?**

Your Stream Team can meet after school like a club or during school in lieu of class. This is entirely up to you!

### **What type of data are we collecting?**

Students can test for pH, bacteria, dissolved oxygen, nitrates, nitrites, and phosphates. Your group can also assess water quality by a macroinvertebrate survey. Certain macroinvertebrates cannot tolerate pollution. The presence of intolerant macroinvertebrates can indicate a healthy ecosystem and vice versa of the absence of those critters.

### **Why are we collecting data?**

The data collected by your Stream Team will be available to the public on our website [www.mywaterways.org](http://www.mywaterways.org). WaterWays is building an interactive map that will show all the Stream Team data collected. Eventually, we hope to build a comprehensive and current overview of our local stream health!

### **While not all action projects will require funding, some more extensive projects might. How will we pay for a stewardship project?**

WaterWays can help your team present their ideas to the schools/land owners of the chosen stream. WaterWays will also help search for grants to fund the project as well as aiding in the development of the project.

### **Does the stewardship project have to involve construction?**

No. Not all local waterways require alteration of the land for improvement. Your project could be a simple awareness campaign where the students identify the issues and conceptually solve those issues. [Find more examples of stewardship projects on page 5.](#)

# Sample Course Outline

## Program Goal

Expose students to the natural world around their homes and schools to foster a love and appreciation for our living environment and *inspire positive actions to protect and restore it.*

## Stewardship Project

Projects can be simple or complex and can be the capstone for your year! Resources and guidance are provided by WaterWays. [Check page 5 for options!](#)

Session #	Concentration	Activities	Key Discussion
1	Watersheds	<b>Enviroscape</b> demonstration  <b>Project WET</b> watershed games and activity take-home booklet	<i>What is a watershed? What positive and negative impacts do we have on our watershed in our everyday lives?</i>
2	Pollution & Water Quality	History of Chattanooga water quality issues  Water filtration activity	<i>How does pollution affect water quality, aquatic life, and ultimately humans?</i>
3	Campus Creek Investigation	Aquatic life & water quality indicators discussion  Macroinvertebrate study	<i>What is water quality and how do we determine if a waterway is healthy or not?</i>
4	Wetlands on Campus	Food web game  Assess water quality/collect macroinvertebrates  Search for signs of wetland health issues	<i>Why are wetlands important? How can we make our wetland more effective? Propose actions that could improve wetland quality &amp; promote aquatic life</i>
5	Field Trip	Macroinvertebrate/water quality study where school is compared to campus  Video recap	<i>What is water quality and how do we determine if a waterway is healthy or not?</i>

# Stewardship Projects

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Stewardship projects can be a range of activities, and we will be available for consultation on what actions are the best fit for your specific area! Here are some examples of stewardship projects:

- Invasive plant removal
- Planting native plants and trees
- Creating a pollinator garden
- Building a rain garden
- Cleaning up trash or adopting a section of creek
- Stabilizing a stream bank
- Hosting watershed education programs

## *Past Stewardship Projects*

**Red Bank High School** mapped and calculated runoff from the school and then designed and built their own rain garden.

**Thrasher Elementary Environmental Club** learned about stormwater, investigated their campus and proposed designs to their principal, who then approved them. An engineer (Stantec Engineering) and landscape architect (Appalachian Design) were brought in to collaborate on the creation of a rain garden, which is now maintained by the students and PTA. Their rain garden is used for continual studies of the campus.

At **Skyuka Hall** (formerly Scenic Land School), WaterWays provided watershed education that prepared the students to design and propose a wetland installation to the landowner, Bill Raines. The wetland was successfully completed in 2015, providing crucial habitat and stormwater retention services for the property. The students also planted butterfly gardens, and were approved as a Schoolyard Wildlife Habitat and Monarch Waystation.

Thank you for your interest in the **WaterWays Stream Team Program**. We look forward to hearing from you and building a healthy future to provide clean water to all.

Contact us to get your Stream Team started!

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