

Annual Report

Watershed Stewardship Program
2015-2016

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During the
2015-2016 reporting year,
18,818 community members participated
in the Watershed Stewardship Program.

Volunteer Programs:
1,409 participants,
974 training hours,
4,250 volunteer service hours

Community Programs:
2,140 participants, 141 hours

School Programs:
15,269 students, 396 instruction hours

This report summarizes Cobb County Water System's program to educate the community about issues impacting local water quality, to foster good habits and responsible behaviors, and to promote an ethic of respect for and a connection to our natural resources.

Cobb County's Watershed Stewardship Program is part of Cobb County Government's effort to educate residents of the county on various issues related to improving the quality of life for ourselves and future generations. The activities and events facilitated by the Watershed Stewardship Program are designed to fulfill Cobb County Water System's education requirements as outlined by the Metro North Georgia Water Planning District and the Georgia Environmental Protection Division.

Vision

We envision all Cobb County residents becoming ecologically literate, understanding their role in water quality and environmental health.

Mission

Cobb County's Watershed Stewardship Program promotes respect for our environment by educating the community about the connection between behavior and water quality.

Message From Program Staff

2016 marks the 15th anniversary of the Watershed Stewardship Program. The educators who dedicated their talents and energy to the program over the last decade and a half have left an indelible mark on the structure of our outreach efforts and programs. Through the diverse skills and creative implementation strategies of the collective members of this team, our program continues to meet the growing needs of the community.

When reflecting on the program over the past 15 years, one can see the steady progress we've made toward building a strong foundation to support environmental education and stewardship practices for Cobb County residents. The scope of our school outreach programs has grown to the extent that we are now serving over 75% of local public schools (Cobb County and City of Marietta). Our volunteer programs continue to have robust engagement with long-term projects, such as data collection and storm drain making, as well as one day events like cleanups and privet pulls. In addition, our community education efforts have developed into seasonal niches that effectively compliment the needs of our partners without exceeding staff capacity. Much of our ability to adapt and accommodate has been due to the development of efficient operational systems that support the programming efforts.

Knowing that being progressive and responsive is a constant, we find ourselves increasingly inspired to grow. There is a great sense of fulfillment in the task of discovering and utilizing the talents within ourselves and developing relationships with our partners and team of incredible volunteers. As we continue to refine how we work as a unit, we are extremely excited about the coming year. We have restructured our part-time staffing schedule and plan to implement new efforts to engage the community. Within the routine developed over the past fifteen years, we've found a balance that honors the intention to provide quality programs and service to the community, our commitment to support our volunteers and partners, and the need to establish and maintain operational control to support all these efforts. There is a significant link between the service we strive to provide and the individuals we interact with on a daily basis. Our gratitude is endless for those who act as stewards of the watersheds we depend on for safe, clean, and healthy water. Strengthening these relationships will be a focus in the coming year.

-The Cobb County Watershed Stewardship Program

SUMMARY OF ACTIVITY BY WATERSHED

	Water Quality Monitoring	Waterway Clean-ups	Storm Drain Marking	Privet Pulls	Community Education	School Outreach
Chattahoochee	•	•			•	•
Mud			•			•
Mulberry	•	•				
Nickajack	•	•	•	•	•	•
Noses	•	•			•	•
Olley	•	•	•	•	•	•
Poplar	•	•				•
Powder Springs	•	•			•	•
Rottenwood	•	•	•		•	•
Sewell Mill	•	•	•	•	•	•
Sope	•	•	•			•
Sweetwater						•
Ward		•			•	•
Willeo	•	•	•			•
Etowah	•					
Allatoona	•	•	•	•	•	•
Butler	•	•			•	•
Noonday	•	•	•		•	•
Proctor		•			•	•
Rubes	•	•	•		•	•

COMMUNITY PROGRAM ACCOMPLISHMENTS

Cobb County Watershed Stewardship offers free ecology workshops throughout the year including providing the training and tools needed to be a monitoring volunteer.

During the 2015-2016 reporting year, the value of Cobb's volunteer watershed stewards is estimated at \$101,150. *Based on the 2015 estimated value of volunteer time for Georgia (\$23.80 published by Independent Sector).*

Volunteer Opportunities

Adopt-A-Stream Chemical Monitoring

271 volunteers trained, 391 monitoring events, 1,273 service hours

Chemical monitoring consists of collecting water samples and testing for pH, levels of dissolved oxygen, temperature, and conductivity. These chemical tests gather information about the aquatic habitat and its ability to sustain life. Participants are required to attend a certification workshop and adopt their site for monthly monitoring.

Adopt-A-Stream Macroinvertebrate Monitoring

26 volunteers trained, 16 monitoring events, 614 service hours

Participants monitor the population and diversity of benthic macroinvertebrates, aquatic insects, and mollusks that act as bioindicators of water quality. Studying the diversity of organisms at a site gives a general picture of water quality. Individuals interested in macroinvertebrate monitoring are required to attend a certification workshop, adopt their waterway site, and commit to monitoring once per quarter.

Adopt-A-Stream Bacteria Monitoring

174 volunteers trained, 157 monitoring events, 449 service hours

Volunteers learn how to monitor *E. coli* levels in their streams. *E. coli* is an indicator organism that is often used to assess the water quality. Monitoring levels of *E. coli* can help identify possible sources of pollution. This workshop focuses on proper collection of a water sample, processing samples for incubation, and interpretation of results. Volunteers must attend a certification workshop and adopt their site for monthly monitoring.

Adopt-A-Stream Watershed & Visual Monitoring

5 volunteers trained, 32 monitoring events, 15 service hours

This is two workshops in one! We start with "Getting to Know Your Watershed", which includes mapping your watershed, learning how human activity can impact a watershed, identifying sources of pollution, and discussing how to address non-point source pollution. Next, we assess the physical health of your stream and its habitats using the Adopt-A-Stream protocol for Visual Stream Assessment.

Frog and Toad Monitoring

5 active volunteer groups, 29 monitoring events, 87 service hours

Cobb County residents are learning to identify frog and toad vocalizations and recording their observations to collect data on local amphibian populations. Once trained and a monitoring route is registered, participants take a walk and complete a frog call survey once a week.

Waterway Clean-ups

680 volunteer participants, 97 events, 1,169 service hours*

Cobb County asks residents to help clean local waters and raise awareness about waterway health. Scout groups, church groups, schools, and homeowners associations across the county are provided with gloves, bags, and planning assistance throughout the year to encourage trash removal efforts. *calculation includes GA AAS's volunteer reporting of cleanup activities during monitoring events. 64 small collection events were recorded via this mechanism.





Storm Drain Marking

116 volunteer participants, 26 events, 331 service hours, 743 drains marked

Rain water runs off the landscape from roads, driveways, lawns, rooftops, and parking lots and carries pollution into our water. In addition, any litter on roads will wash into streams through the storm drain system. To emphasize the connection between runoff and water pollution, volunteers are helping mark storm drains around Cobb County. Participants are provided with marking kits including aluminum markers, adhesive glue, gloves, garbage bags, and education materials.

Watershed Stewardship Fair - March 23, 2016

42 volunteer participants

The Watershed Stewardship Fair is a data sharing event that showcases volunteer stream projects. Volunteer groups are invited to create a display and share their initiatives during the event. Participants are given a chance to tour the Water Quality Laboratory. Watershed Stewardship Awards were presented for the Volunteer of the Year, School of the Year, Partner of the Year, and Stewardship In Action.

River Rendezvous - April 30, 2016

24 participants, 72 service hours

The Sierra Club Cobb Centennial Group partners with the Water Quality Laboratory each year to monitor 30 sites along Rottenwood Creek. Parameters include dissolved oxygen, pH, conductivity, temperature, biological oxygen demand, *E. coli*, nutrients, metals, and turbidity. The results are shared on GA Adopt-A-Stream's online database. This event provides a comprehensive look at the Rottenwood Creek Watershed.

Wildlife and Rain Garden

50 volunteer participants, 28 events, 130 service hours

Community volunteers continue to assist with site maintenance including new plant installations, pruning, seed propagation, weeding, labeling, and leading tours. Participants include local master gardeners, community members seeking service hours, and those interested in gaining practical gardening experience. Weekly project days, currently every Thursday morning from 9-11, provide a consistent opportunity for those interested in helping. Participants also learn about stormwater pollution prevention and stewardship practices.

Privet Pulls

15 participants, 6 events, 33 service hours

The removal of invasive Asian privet has become a popular stewardship project, especially with older students seeking community service hours. Volunteers seeking to organize a project are asked to complete a project proposal, identifying the site location and vegetative waste disposal plan. WSP assists by providing tools and logistical support. In addition, we are working with GA Native Plant Society and Cobb County Parks to help recruit volunteers for ongoing privet removal efforts at Heritage Park along Nickajack Creek.



Watershed Internship

1 volunteer participant, 77 service hours

In partnership with the University of Georgia, WSP is hosting a student intern during the summer of 2016. The position was filled just as the school year came to a close. She will be working 40 hours per week through July. Duties include assisting with community outreach programs, prepping for service projects, and shadowing field staff with routine duties.

Chattahoochee Volunteer Challenge

We partnered with National Park Service again to incentivize service project participation. Registered groups competed to receive a free ranger-led rafting trip. Daughters of the American Revolution, Fielding Lewis Chapter logged the most service hours this year. We hope to continue offering the *Chattahoochee Challenge*.

Summary of Volunteer Activities by Watershed

Stewardship Projects - Chattahoochee

WATERSHED	GROUP	# SITES	YEAR INITIATED	ACTIVITY TYPE
Mud Creek	Fielding Lewis Chapter of DAR	3	2014	SD
Mud Creek	Marie & Conner Lord	1	2016	SD
Mulberry Creek	Friends of Mulberry Creek	1	2003	CH, CL, MAC, BAC
Nickajack Creek	Keep Smyrna Beautiful	10	2010	CH, CL, BAC
Nickajack Creek	SG5	1	2011	CH
Nickajack Creek	Chattahoochee Challenge	1	2014	PP
Nickajack Creek	Fielding Lewis Chapter of DAR	3	2014	SD
Noses Creek	McEachern High AP Environmental Science	1	2007	CL
Noses Creek	Chance Science	1	2015	AN
Noses Creek	Cyrier Family	1	2015	AN
Noses Creek	Daydreamers	1	2015	CH, CL, BAC
Noses Creek	Hillgrove High School	1	2015	CL
Olley Creek	Donna-n-Camen	1	2012	CH
Olley Creek	Chattahoochee Challenge	2	2014	SD
Olley Creek	Ranstad Staffing	1	2016	CL, SD, PP
Poplar Creek	Keep Smyrna Beautiful	2	2012	CH
Poplar Creek	Anne Ledbeter	1	2012	CH, MAC, BAC
Powder Springs Creek	Fairfax Consulting Group	1	2010	CH, BAC, CL
Rottenwood Creek	Friends of Victory Heights Subdivision Park	1	2002	CH
Rottenwood Creek	Sierra Club Centennial Group	3	2004	CH, MAC, BAC, CL
Rottenwood Creek	Water Quality Laboratory	1	2009	CL, BEA
Rottenwood Creek	Marriott Hotels	1	2014	CL
Rottenwood Creek	Fielding Lewis Chapter of DAR	1	2014	SD
Rottenwood Creek	Americore	1	2016	BEA
Sewell Mill Creek	Dodgen Middle School	9	2002	MAC
Sewell Mill Creek	Walton HS AP Environmental Science Class	1	2006	CH, CL, PSA
Sewell Mill Creek	Rotary Club of East Cobb	1	2010	CL, SD
Sewell Mill Creek	Bushart	1	2012	CH
Sewell Mill Creek	Pope High School	3	2013	CH, CL, SD
Sewell Mill Creek	Pam Barker	1	2013	CH
Sewell Mill Creek	Casa Montessori	1	2016	CL
Sope Creek	Walton High School Environmental Club	1	1995	CH, CL
Sope Creek	Friends of Gable Creek	1	2009	CH, CL
Sope Creek	Salty	1	2012	CH
Sope Creek	Sedalia Park Elementary School	1	2012	CH, CL
Sope Creek	Pollywog in a Bog	1	2013	CH
Sope Creek	Sope Creek Sentry	1	2015	CH, CL
Sope Creek	Fielding Lewis Chapter of DAR	4	2014	SD
Sope Creek	Walton High School APES	1	2016	SD
Trib of Chattahoochee	Crooked Branch	1	2011	CH, BAC

Stewardship Projects - Chattahoochee continued

Ward Creek	Fielding Lewis Chapter of DAR	2	2014	CL, SD
Ward Creek	Ridenhour Homeowners	1	2015	CL
Ward Creek	Hillgrove High School	1	2016	PSA
Willeo Creek	Willeo Watershed Alliance of Loch Highland	1	2001	CH, BAC, CL
Willeo Creek	Tritt River Kids	1	2004	CH, CL, SD
Willeo Creek	Bishop Lake	6	2008	CH, BAC, CL
Willeo Creek	Village North Highlands Subdivision	1	2012	CH, BAC, AN
Willeo Creek	Lutheran Church of the Resurrection	1	2015	SD
Willeo Creek	Walton High School APES	1	2016	SD

Stewardship Projects - Etowah

WATERSHED	GROUP	# SITES	YEAR INITIATED	ACTIVITY TYPE
Allatoona Creek	Kahle	1	2010	CH, CL, AN
Allatoona Creek	Richard's Creek	1	2014	CH
Allatoona Creek	Ford Elementary School	1	2014	CL
Allatoona Creek	Fielding Lewis Chapter of DAR	2	2014	SD
Allatoona Creek	Hillgrove High School	1	2015	CL
Allatoona Creek	Harrison High School	1	2016	PSA
Butler Creek	Butler Creek Kennesaw	1	2009	CH, BAC, VS, CL
Butler Creek	John Keiler	1	2015	CH
Noonday Creek	Devereux Georgia Treatment Network	1	2013	CH, BAC
Noonday Creek	Emerson Unitarian Universalist Congregation	1	2014	CH
Noonday Creek	Girl Scout Troop 13385	1	2015	SD
Noonday Creek	Cub Scout Pack 710	1	2016	SD
Noonday Creek	Big Shanty Stream Sentries	1	2015	CL
Proctor Creek	North Cobb High School SAVE Club	1	2008	CL
Rubes Creek	Keheley Elementary 3rd Grade Target Class	2	2004	CL
Rubes Creek	McCleskey Middle School	1	2006	CH, MAC, BAC
Rubes Creek	David Zandstra	1	2008	CH, BAC
Rubes Creek	Ric & Sharon Donato	1	2009	AN
Rubes Creek	Lassiter High School APES classes	1	2010	CH, MAC, BAC, PSA
Rubes Creek	Mabry Middle School	1	2011	CL
Rubes Creek	Fielding Lewis Chapter of DAR	1	2014	SD
Rubes Creek	Rocky Mount Elementary School	1	2015	CL
Trib of Etowah	Fielding Lewis Chapter of DAR	1	2014	SD

Activity Type Key

CH Adopt-A-Stream Chemical Monitoring BAC Adopt-A-Stream Bacteria Monitoring AN Anuran Monitoring CL Cleanup
 MAC Adopt-A-Stream Macroinvertebrate Monitoring VS Adopt-A-Stream Visual Monitoring SD Storm Drain Marking PP Privet Pull
 BEA Beautification Project PSA Video Contest

Community Ecology Programs

Rain Barrel Make & Takes

62 participants

Urban runoff causes bank erosion, siltation, and water quality impairment. It is one of the hardest sources of stream pollution to control. In this free workshop, participants build their own rain water harvesting barrel (donated by Coca-Cola Bottling) using power tools and provided supplies. The collected water can be used to irrigate ornamental plants, shrubs, and trees while preventing non-point source pollution and saving potable water.

Household Hazardous Waste (HHW) Reduction and Medication Disposal

1,200+ participants
HHW from 180 households
Medication from 243 households

Several efforts are implemented to educate Cobb County residents on hazards in the home including disposal events. The first Cobb County HHW Amnesty Day was held on July 25, 2015. Approximately 20,000 lbs of HHW were collected from residential customers through this program. Organized by Keep Cobb Beautiful, two pharmaceutical disposal events were held. Education focused on the importance of removing expired and unused medications from the home and the problems associated with flushing these products into the sewer system. Residents were also provided fall and spring opportunities to recycle textiles, paint (for a fee), batteries, scrap metal, and electronics (for a fee), and participate in document shredding. Collection totals include approximately 900 pounds of textile, 3,400 gallons of paint, 68,000+ pounds of batteries, metals, electronics, and 60,000 pounds of shredded paper.

Library Programs

153 participants

During June and July of 2015, the Watershed Stewardship Program partnered with Cobb County libraries for the summer reading program. WSP staff presented a program about frogs and pollution prevention which included a reading of Cathryn Sill's *About Amphibians*.

Scout Programs

39 participants

For the past several years, WSP has honored requests from scouts to provide opportunities for scouts to earn badges, to participate in speaking engagements at pack/daisy troop meetings, and to provide consultation for Eagle Scout projects. In addition, Girl Scout and Boy Scout groups often participate in watershed stewardship activities to obtain service hours.

Summer Camp Outreach

34 participants

Watershed Stewardship Program supported 2015 summer camp programming for three local providers. Campers participated in a creek stomp, visiting a local creek and learning about macroinvertebrates, and received a snake program including a live corn snake demonstration from WSP staff.

Summer Family Programs

125 participants

Staff continued to offer Creek Stomping and Fairy House Building for kids and families. WSP also organized a Family Pollinator Day in partnership with Parks and Extension.



Professional Presentations and Partnerships

100+ participants

WSP staff routinely provide expertise and support at conferences, professional development meetings, and seminars. In the 2015-2016 reporting year, we presented at several events including the Outdoor Learning Symposium, the Georgia Association of Water Professionals Annual Conference, and NPDES Training with AGC Georgia.

Pet Waste Education Initiatives

3,000+ recipients

WSP continues to support volunteer *E. coli* testing, distribute pet waste education materials during storm drain marking projects, implement our *Pick It Up Pals Pledge Program* to increase pet owner awareness of the pollution problems associated with pet waste, and maintain the *Pick It Up* Waste Stations installed along the Silver Comet Trail. Staff also explicitly discusses proper pet owner stewardship during our *What Is A Watershed?* school outreach programs.

National Park Service Tire Disposal Partnership

196 tires

As in previous years, we offer the Chattahoochee National Recreation Area tire disposal services for all tires removed from the river and contributing tributaries within the Cobb County jurisdiction. National Park Service delivers the tires to our waste transfer station and Cobb County Water System pays the disposal fees for the transaction.

Senior Services Programs

159 participants

WSP continues to develop programs for local seniors. We have expanded programming to a second facility this year and are now providing programs for the Austell Neighborhood Center as well as the North Cobb Senior Center. The sessions are focused on water and nature and have included topics on pollinators, birds, frogs, and gardening. Stewardship components are imbedded in the content. Depending on the audience and weather, some session content is facilitated outdoors.

Invited Speaker Presentations

62 participants

In addition to facilitating public programs, WSP staff continues to accept invitation to speak to community clubs on various topics. This year we received requests for talks on seasonal gardening, butterflies, and frogs from local nature and garden clubs.

Wildlife & Rain Garden Programming/Tours

86 participants

While the demonstration gardens at Cobb's Water Quality Lab are always open for visitors, we do organize and facilitate guided tours and programs with age appropriate content developed for PK-Senior adult audiences. We've also had a group setup a geocache at the site and have had visitors via this effort.



SCHOOL OUTREACH ACCOMPLISHMENTS

Program staff visited local schools routinely, offering free water-related education programs to K-12 students in Cobb County, Marietta City, and private schools. In the 2015-2016 school year, our programs reached 15,269 students at 84 schools, serving 663 classrooms, and providing 396 instructional hours. We estimate the cost of this service at \$15,353.

Ecoregions of Georgia

679 participants

Georgia ranks sixth in the nation for overall species diversity, particularly due to our five distinctive ecoregions! Learn the characteristics and natural history facts about each ecoregion by exploring how geographical topography contributes to biological diversity.

What is a Watershed?

750 participants

We all live in a watershed - upstream and downstream. During this interactive session, students use a watershed model to demonstrate the impacts of pollution on streams and lakes while learning about local water quality issues. This hands-on program reveals how everyday activities affect our drinking water and wildlife while encouraging discussion about watershed protection and pollution prevention.

Erosion & The Hydrologic Cycle

1,454 participants

Erosion and Weathering - what's the difference? Students visit lab stations to study the causes and effects of erosion, weathering, and sediment deposition while discovering how these forces change the landscape and aquatic habitats. Using a wetland model, students decide how to mitigate the consequences of human impacts and how natural systems are beneficial to the hydrologic cycle.

Ecosystems & Adaptations

437 participants

Explore ecosystems by looking at living and nonliving factors affecting interdependency, determine plant and animal adaptations and limitations, follow energy as it moves through food chains and food webs, and conclude how human impacts on the watershed can make a difference. In this 60 minute program, we look at skulls to determine the *vore* type of certain animals, look at slides of various ecosystems and adaptations, investigate the decomposer box, and apply knowledge with a live corn snake!

Adopt-A-Stream Overview

192 participants

Students learn about stream monitoring including the basics of a visual stream survey, water testing (temperature, conductivity, pH, dissolved oxygen), bacteria monitoring, and look at common macroinvertebrates found in local streams. Program includes equipment demonstrations. This program can be extended to include Georgia's AAS certification process.

Adopt-A-Stream Water Chemistry Study

472 participants

Learn to collect water samples and perform water quality experiments including dissolved oxygen, pH, temperature, and conductivity. This hands-on chemistry activity incorporates the scientific method. Data collected from monitoring groups will be entered into the Georgia Adopt-A-Stream statewide database.

Macroinvertebrate Lab

457 participants

Macroinvertebrates (stream bugs) are excellent indicators of water quality. Learn to identify and categorize aquatic insects by pollution tolerance levels to determine stream health. Introduce your students to these fascinating water bugs before taking a water monitoring field trip to a local pond or stream. Data collected from monitoring groups will be entered into the Georgia Adopt-A-Stream statewide database.

Bacteria Monitoring Lab

340 participants

This program explores different diseases present in the U.S. and in other countries and their impact on environmental health. Students will have the opportunity to practice laboratory procedures by monitoring their local environment for *E. coli*, and determining what levels exceed a healthy baseline.

River to River

1,108 participants

Where does our drinking water come from? What happens to our water after we use it? Explore how a drinking water and wastewater treatment facility function.

Snakes of Georgia & Their Adaptations

649 participants

Some people fear them, some are attracted to them, but almost nobody is indifferent toward snakes. How have snakes adapted to survive in their environment? Which species in Georgia are venomous and how can you tell? Most importantly, how do they benefit our ecosystem? This lab includes the use of live specimens.

Visual Stream Survey

25 participants

A healthy stream is a busy and constantly changing place. Learn how to assess a stream by examining different factors, such as stream bank, stream vegetation, stream channel, and substrate type to better understand how your stream is functioning.

Monarchs & Butterfly Life Cycle

254 participants

This program explores how a butterfly grows from a tiny egg into an adult, features the amazing annual migration of the Monarch from Canada to Mexico, and discusses habitat needs and conservation efforts to address human impact.

Wild in the Watershed

200 participants

How are reptiles different from amphibians? Are there mammals that lay eggs? Learn about beavers and their impact on water quality and habitat. Students will examine animal artifacts, such as skins and bones. This program focuses on Georgia species and may include live or preserved specimens.

Investigating Urban Streams and Ponds

619 participants

Join us at a stream, pond or wetland to conduct a study about water quality and habitat. Activities may include water quality testing, sampling for aquatic insects, and investigating physical characteristics of the waterway. The group is responsible for its own transportation to the site. This program can be done at a schoolyard stream or pond, or at a local park.

Blue Traveler

133 participants

Water exists in three states (solid, liquid and vapor) and changes from one state to another depending on conditions. In this kinesthetic activity, students will become a water molecule and travel the natural and human-made water cycle, gaining an understanding of how water moves, where it remains for long periods of time, and how this precious resource can become purified and polluted.

Green Landscaping

182 participants

Learn how the landscape affects nearby waterways and the larger watershed. Students consider pervious and impervious surfaces, learn basic green landscaping concepts (rain barrels, swales, rock gardens, rain gardens, native plants, ground covers, retention ponds, etc.), and discuss ways that they can help protect the watershed from pollution and flooding.





Brooke & Branch Puppet Show

6,899 participants

Brooke is a little girl who goes on a big adventure! Join her as she learns about water quality and biodiversity from the friends she meets along the way. This program emphasizes ecological concepts and vocabulary in a fun and engaging way while demonstrating how we can help the environment.

Ticket to Ride

254 participants

With funding from The National Parks Foundation and in partnership with Chattahoochee River National Recreation Area (CRNRA), three Title-One schools from Cobb County, with 90+% students on free or reduced lunch, participated in water quality and stewardship education. Students received three sessions, one at CRNRA and two in the classroom. The grant covered the transportation costs to bus students to the park for a day of lessons at the Chattahoochee River. We are exploring alternate funding for the 2016-2017 school year and anticipate serving another 250+ students.

Homeschool Science Series

156 participants

WSP continues offering programming for local homeschool students. Free to participants, students learn about local stream ecology and benthic macroinvertebrates. Sessions include both classroom and field experiences.

Traveling Treasure Trunk

17 participating schools

A collection of water and nature resources including books, field guides, games, music, and videos. The trunk is loaned to K-5 classrooms for three week periods.

Other Shared Resources

15 participating schools

Our program loans educational resources to teachers for use in their classroom, including water testing kits, nets, curriculum activities, preserved insect specimens, the Our Shared Forest Science Night Kit, and Enviroscape tabletop models.

Children's Water Festival

291 participants

Scheduled for May 3rd, 165 4th graders from Park Street Elementary and Argyle Elementary, along with students from four other school districts, were invited to attend this annual event. Unfortunately severe weather predictions caused the event to be canceled this year. In place of the field trip, WSP staff, along with staff from National Park Service at the Chattahoochee River National Recreation Area, visited the two Cobb County schools and facilitated the activities on campus that day. WSP staff also assisted Cherokee County with their re-scheduled event on May 9th at a local park (126 kids). Participants received hands-on water education lessons including local wildlife and conservation, pollution prevention, water source and distribution, FOG, and utility trucks with equipment demonstrations.



Green Schools

38 schools, 673 classrooms

Cobb's Green School Initiative continues to draw interest and provide encouragement for teachers to integrate environmental education activities into their classrooms. Those that participate, complete, and log five EE activities are recognized as Green Classrooms. When five teachers in a school participate, the school is recognized as a Green School. In 2015-2016, 27 schools achieved Gold Status (15 or more Green Classrooms) and the teachers logged over 3,900 EE hours.

Professional Development for Educators

126 participants

Staff continues to facilitate education opportunities for teachers. In addition to our routine efforts, during the summer of 2015, we hosted Georgia Association of Water Professionals Cool Waters Workshop in Cobb County, transporting the participants to Cobb treatment facilities. WSP staff also organized and presented at the annual Outdoor Learning Symposium on November 13, 2015 with 131 attendees.

Trainings included:

- Life Is A River
- Adopt-A-Stream for Middle School Teachers
- Outdoor Learning Symposium
- Cobb County Science Preservice Workshops
- Project WET/Cool Waters
- Monarchs In The Classroom

UPDATE ON RESOURCE DEVELOPMENT

Septic Tank Education

To supplement our Water and Wastewater 101 program, we are developing content to address water-only users to ensure those customers with on site sewage management systems are educated about care and maintenance. With MNGWPD initiating a septic-focused campaign during Pollution Prevention/Septic Smart Week, the third week of September, we hope to have this project completed and a new *Eco-Logical* video episode. The script has been completed. We are identifying footage needed, film locations, and scheduling production.

Household Hazardous Waste Reduction

CCWS in partnership with Keep Cobb Beautiful hosted Cobb's first HHW Amnesty Day. The event generated enthusiastic responses from the community. An online pre-registration system was used to capture intended waste quantities and ensure funding allowance was not exceeded. The 2016 event is scheduled for June 25th.

Cobb County Pollinator Week Celebration

June 2015 was the second year WSP organized community education specifically during National Pollinator Week. Activities included broadcasting a butterfly documentary on Cobb TV23 and hosting a family pollinator day at our Wildlife and Rain Garden. These efforts were organized in partnership with Cooperative Extension, NRCS, and Cobb Parks.

Wildlife and Rain Garden Demonstration Site

WSP continues developing the garden as an educational resource by installing new plantings, creating informational displays, designing interpretive programs, and recruiting volunteers to assist with our educational efforts. Ongoing relations with Cobb County Master Gardeners remain strong with volunteers continuing to assist with site maintenance. Staff completed the development of content and has installed interpretive signage throughout the garden.

Newsletter and www.cobbstreams.org

Four issues of the quarterly newsletter, *The Thalweg*, were published this year. Approximately 2,000 paper and more than 4,400 electronic issues were distributed per edition to our local contacts. The Watershed Stewardship website provides education and promotional information to the community and averages approximately 7,500 hits per month. We completed development and re-launched cobbstreams.org in spring 2016 with a new look and improved navigation.

Watershed Profiles and Signage

The watershed profile project, which creates documents that provide history, statistics, and points of interest for the major watersheds in Cobb County, is under development. We continue working with Cobb County DOT to install watershed and stream name signage at Adopt-A-Stream locations across the county. Volunteer groups are identified on separate blades at each location.

New School Outreach Program and Resource

Developed in response to teacher requests, our GPS-correlated *Ecosystems and Adaptations* program was created and piloted for 4th grade students this year. We also developed a new bookmark focused on runoff and tips to prevent non-point source pollution. It has been printed and will be distributed in the 2016-2017 school year.



A Rainbow of tips
to prevent
non-point source
pollution

Pet Waste: Bag it. Trash it.
Pick up after your pets. On a walk, in the yard, or anywhere. A single gram of pet waste contains 23 million fecal coliform bacteria.

Car Washing: Prevent it.
The soap and car dirt rinsed onto the ground can pollute surface water. Always use a car wash.

Lawn Clippings: Save them. Use them.
Collect lawn clippings and yard trimmings. Use them as mulch or compost. Don't let them wash into storm drains, causing flooding and water quality issues in nearby streams.

Fertilizers: Limit It.
Limit or eliminate the use of chemical fertilizers. Excess gets washed away into storm drains.

Rain Barrels: Retain It.
Rain barrels lessen the amount of stormwater that would wash pollution into a stream. It's perfect for capturing water for watering your plants & garden!

Stormdrains: Know It.
All stormdrains in Cobb County lead to the nearest waterway. Only rain should go into the storm drain.

www.cobbstreams.org

COMMUNITY CONNECTIONS

As active practitioners in Georgia's environmental education community, the Watershed Stewardship Program partners with many organizations and staff serves on numerous boards and committees. These activities enrich local program offerings and ensure Cobb County remains engaged with other water and environmental professionals.

Boards, Committees, Leadership Roles

- Cooperative Extension - Cobb County Office: Green Industry Advisory Board
- Environmental Education Alliance of Georgia: Executive Committee, Advisory Council Chair
- Georgia Association of Water Professionals: Public Education Committee Vice Chair
- Georgia No Child Left Inside Coalition: Member
- Metro North Georgia Water Planning District: Education Technical Coordinating Committee
- Monarchs Across Georgia: Steering Committee Member
- Rivers Alive: Advisory Board, Education and Messaging Committee
- Council of Outdoor Learning: Steering Committee Co-Chair
- Georgia Adopt-A-Stream: Coordinator, Technical Advisor, Conference Planning Committee
- Southeast Environmental Education Alliance: Secretary, Vice President
- Our Shared Forest Committee: Co-Chair

Partnerships

- Georgia EPD Outreach Unit
- National Park Service
- Georgia Association of Water Professionals
- Environmental Education Alliance of Georgia
- Metro North Georgia Water Planning District
- Cobb County DOT
- Cobb County School System
- Cobb County P.A.R.K.S.
- Keep Cobb Beautiful
- Keep Marietta Beautiful
- Keep Smyrna Beautiful
- Cobb County Master Gardeners
- Coca-Cola Bottling Company
- Vickery Hardware
- Emory University
- Kennesaw State University
- Sierra Club Cobb Centennial Group
- State Botanical Gardens of Georgia
- RBC (Royal Bank of Canada)
- Georgia Southern University
- City of Atlanta
- City of Marietta - Marietta Water
- City of Roswell
- City of Smyrna - Keep Smyrna Beautiful
- Cherokee County
- DeKalb County
- Fulton County
- Gwinnett County
- Marietta City Schools
- UGA Cooperative Extension

Program History

2016

- WSP staff recognized by Cobb County Board of Commissioners for Excellence in Customer Service.
- WSP Volunteer (Norm Fagge) receives Excellence in Data Collection Award.
- WSP Volunteers (Pope High School) receive Rivers Alive Clean-up Award.
- WSP recognizes Norm Fagge as Volunteer of the Year.
- WSP recognizes GA AAS as Partner of the Year.
- WSP recognizes Sedalia Park as School of the Year.
- WSP recognizes Simon Locke with a Stewardship In Action Award.

2015

- Watershed Stewardship Program (WSP) staff receives New Trainer of the Year Award from EPD.
- WSP Volunteers (Fairfax Consulting Services) receives Excellence in Data Collection Award.
- WSP recognizes Fairfax Consulting Services as Monitoring Group of the Year.
- WSP recognizes Chattahoochee River National Recreation Area as Partner of the Year.
- WSP recognizes Daughters of the American Revolution Fielding Lewis Chapter as the Stewards of the Year.

2014

- Cobb County Water System (CCWS) receives 2014 Best Direct Media Award for *The Thalweg* from GAWP.
- WSP receives Watershed Award from EPD.
- WSP staff receives New Trainer of the Year Award from EPD.
- WSP receives Rivers Alive Club Award from EPD.
- WSP Volunteer (Ina Allison) receives Excellence in Data Collection Award.
- WSP Volunteers (Pope High School) receives Nymph Award.
- WSP recognizes Ina Allison as Volunteer of the Year.
- WSP recognizes Kennesaw State University School of Art and Design as Partner of the Year.
- WSP recognizes Pope High as School of the Year.

2013

- WSP in partnership with KCB receives a \$2000 grant for our Cigarette Litter Prevention.
- WSP Volunteer (Morning Washburn) receives AAS in Action Award.

2013-continued

- WSP Volunteer Group (Sierra Club Centennial Group) receives Extraordinary Volunteer Watershed Effort Award.
- WSP recognizes Simon Locke as Volunteer of the Year.
- WSP recognizes David Zanstra and Ric & Sharon Donato as Monitoring Group of the Year.
- WSP recognizes Lassiter High as School of the Year.

2012

- CCWS receives 2012 Innovative Initiative Program Award for *Eco-Logical...Tips to Reduce Your Footprint* from GAWP.
- WSP Volunteer (Eric Lee) receives Excellence in Data Collection Award.
- WSP Volunteer (Cheryl Ashley-Serafine – Nicholson Elementary School) receives Adopt-A-Stream in Action Award.
- WSP recognizes Carla Loosier as Community Organizer of the Year.
- WSP recognizes Eric Lee as AAS Volunteer of the Year.
- WSP recognizes Nicholson Elementary as School of the Year.
- WSP recognizes Diane Powell as Rain and Wildlife Garden Volunteer of the Year.
- WSP staff serves as President of Environmental Education Alliance of Georgia (EEA).

2011

- WSP staff is expanded to include additional part-time Program Assistants to perform the Brooke and Branch Puppet Show.
- WSP receives Watershed Award from GA Environmental Protection Division (EPD).
- WSP Volunteer (Connie Ghosh - McCleskey Middle School) receives Red Flag Award.
- WSP recognizes as Amy Boggs as Community Organizer of the Year.
- WSP recognizes Pam Subalusky AAS Volunteer of the Year.
- WSP recognizes Tritt Elementary as School of the Year.
- WSP staff serves as President of EEA.
- WSP staff receives Volunteer Service Award from EEA.
- WSP receives \$5000 grant from Royal Bank of Canada for the Demonstration Rain Garden.

2010

- WSP receives Adopt-A-Stream in Action Award from EPD for the Brooke & Branch Puppet Show.
- WSP staff receives Georgia Project WET 2009 Facilitator of the Year.
- WSP recognizes The Donnelly Family as Storm Drain Markers of the Year.
- WSP recognizes Ric and Sharon Donato as Anuran Monitors of the Year.
- WSP recognizes Terri Tornroos as AAS Volunteer of the Year.
- WSP recognizes Walton High as School of the Year.

2009

- WSP staff recognized by Cobb County Board of Commissioners for Excellence in Customer Service.
- WSP Volunteers (Tim Phillips and Stacey Haire) receives Excellence in Data Collection Award.
- WSP staff receives 2008 Monarch Across GA Service Award.
- WSP recognizes Girl Scout Troop 21 as Storm Drain Markers of the Year.
- WSP recognizes Connie Ghosh as Anuran Monitor of the Year.
- WSP recognizes Tim Phillips and Stacey Haire as AAS Volunteers of the Year.

2008

- WSP receives Watershed Award from EPD.
- WSP Volunteer (Didi Johnson) receives Outstanding Outreach and Partnership Award.
- WSP staff receives Teaching Conservation Facilitator of the Year from GA Conservancy.
- WSP staff recognized by Rivers Alive for Most Cleanups Attended.
- WSP recognizes Didi Johnson as AAS Volunteer of the Year.

2007

- WSP staff is expanded to include a part-time Program Assistant.
- Cobb Adopt-A-Stream Program (AAS) changes name to Watershed Stewardship Program.
- AAS receives Adopt-A-Stream in Action Award, for Our Color Your Watershed Mural Grant Program from EPD.
- AAS Volunteer (Judy Cox - Dodgen Middle School) receives & Outstanding Outreach Award.
- WSP recognizes Judy Cox as AAS Volunteer of the Year.

2006-2001

- Demonstration Rain Garden is certified as a Back Yard Wildlife Habitat, a Monarch Waystation, and a Pollinator Garden.
- AAS staff is expanded to two full-time employees.
- AAS receives Rivers Alive: Outstanding Large Cleanup Award.
- Demonstration Rain Garden is installed.
- AAS receives Watershed Award from EPD.
- AAS Volunteer (Greg Linton) receives Excellence in Data Collection Award.
- AAS receives Outstanding Outreach and Partnership Award from EPD.
- Cobb County Water System (CCWS) receives Public Education Award from GA Assoc. of Water Professionals (GAWP) - 2002 & 2006.
- Cobb Adopt-A-Stream (AAS) Program Coordinator is hired and program is launched.

REFLECTIONS



Several education programs and stewardship projects were facilitated. Activities included teacher trainings, invasive plant removal, natural history, local wildlife, and water quality.



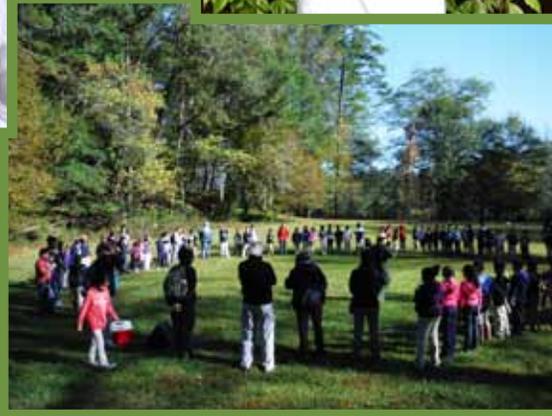
In addition to hosting, the 2015 GAWP Cool Waters Teacher Training in Marietta and touring Cobb facilities, WSP arranged a river float with National Park Service staff to get teachers on the water, gaining personal experience on the Chattahoochee River .



We continue to facilitate monthly Adopt-A-Stream workshops as well as work one-on-one with volunteers to support their monitoring projects.



Our partners continue to support collaborative programs such as Rivers Alive, Children's Water Festival, Ticket To Ride field trips, and River Rendezvous.



Four groups were recognized locally this year at our Watershed Stewardship Fair. In addition, GA Adopt-A-Stream selected one of Cobb's monitoring volunteers for state-wide recognition for his efforts.



THANK YOU

The Watershed Stewardship Program would like to thank our volunteers and supporters:

Ghosoon Abuhaija
April Adams
Jo Adang
Ina Allison
Cheryl Ashley-Serafine
Seirisse Baker
Delon Barfuss
Israel Baryeshua
Rick Bauer
Steve and Linda Bell
Jake Blaydes
Bill Blythe
Gordon Bollig
Robert Bourne
Angie Bolton
Christi Brady
David Bridges
Sally Brooking
Roger Buerki
Paige Bushart
Sharon Camp
Hannah Campbell
JJ Campbell
Annette Clark
Richard and Nancy Cole
Ryan Coover
Cheri Craft
Sally Creel
Stacy Cromer
Vicki Culbreth
Alan and Rita Cyrier
Elizabeth Davis
Gretchen Davis
Jaap DeRoode
Ric and Sharon Donato
Jeremy Eaves
Joan Ellars
Katey Evans
Norm Fagge
Dolly Fehd
Erin Feichtner
Aida Ford
Cynthia Foster
Maddie Fulton
Denise Gadd
Mitzy Gann
Emily Gantert
Matt Garfinkel
Sylvia Gerbovaz
Connie Ghosh
Alicia Giddens
Frank Gipson
Nekeshia Griffin
Amy Gutierrez

Kristina Ha
Stacey Haire
Terrilyn Hannah
Harold Harbert
Bill Higgins
Dallin Higgins
Jerry Hightower
Rick Hitchcock
Jeff Hite
Kevin Hill
Kim Holland
Chelsea Hopkins
Judy Huguenard
Virginia Huckaby
John Huth
Stephanie Ives
Ken Jacob
Bre Johnson
Carmen Johnson
Eric Johnson
Karen Johnson
Nick Jokay
Judy Jones
Rebecca Kapala
Cora Keeber
John Keiler
Monica Kilpatrick
Anne Kirk
Julie Knight
Jennifer and Daniel Kunz
Donna Leavall
Jesse LeBoeuf
Anne Ledbetter
Eric Lee
Kathleen Lemley
Renaee Lemon
Norman Leonard
Simon and Patti Locke
Carla Loosier
Joe Lukas
Mark Mandica
Linda Martin
Linda May
Cathie McCabe
Jason McCoy
Steve McCullers
Jennifer Mercure
Susan Meyers
Andrea Mielke
Linda Mitchell
Heather Moody
Mary Moore
Lois and Nancy Morrison
Tamera Neal

Jessica Neely
Connie Nelson
Tim Nelson
Steve Nestor
Travis Neumuller
Kathy Nguyen
Dave and Diane Ochala
Zack Orr
Matthew O'Brien
Michael O'Shield
Rosemary Peasron Clarke
Sabrina Pemberton-Piper
Pic Petelle
Tim Phillips
Brad Plumley
Cornelius Pope
Diane Powell
David Price
John Purcell
Eddie Richards
Marvin Richards
Teresa Roby
Nikeya Savala
Daryl Sawyer
Tim and Chris Schneller
Charles Scott
Diane Searles
Joshua Seigla
Pradip Shah
Steve Shelton
Anne Shenk
John Shimmin
Annette Simpson
Rusty Simpson
Zachary Sjostrom
Dennis Smith
Kevin Smith
Robert Smith
Sharon Smith
Jamie Stones
Pam Subalusky
Adam Sukenick
Dave Thomas
Jennifer Thomas
Marjorie Thomas
C.J. Turner
David Tyler
Timmy Vaughn
Melody Wang
Amy Warnock
Morning Washburn
Debra Whatley
Michael Williams
Kaye Wilson

Jeff Wix
Karan Wood
Leslie and Connor Wylie
David Zandstra

**... And to anyone
we inadvertently
forgot!**

OUR TEAM

The Watershed Stewardship Program is housed in the Water Quality Laboratory of the Cobb County Water System's Environmental Compliance Division.

Jennifer McCoy, Program Coordinator

Jennifer has worked for Cobb County since 2000 as an environmental educator and as an environmental compliance inspector. Her work as a naturalist at a nature center, an instructor at a science museum, and a biologist for an environmental consultant contributes over 15 years of professional experience to our program.

Education:

Master of Public Administration, Kennesaw State University, 2011
Master of Science (Ecological Teaching & Learning), Lesley University, 2007
Certificate (Geographic Information Systems), Kennesaw State University, 2000
Bachelor of Science (Biology), Kennesaw State University, 1997

Facilitator Certifications: Project WET, Project Learning Tree, Project Wild, Monarchs in the Classroom, Leopold Education Project, Native Waters, Native Seasons, Biodiversity Basics, Healthy Water Healthy People, Adopt-A-Stream Chemical/Macroinvertebrate/Bacteria Trainer

Mike Kahle, Environmental Programs Specialist

Mike joined our team in October 2011 as a part-time educator. He previously worked as program coordinator with The Nature Conservancy and as a naturalist with the Orange County Department of Education in California and Chattahoochee Nature Center.

Education:

Bachelor of Science (Geography), University of Nevada, 2008

Facilitator Certifications: Project WET, Project Wild, Project Learning Tree, Adopt-A-Stream Chemical/Macroinvertebrate/Bacteria Trainer

Sonya Wood Mahler, Environmental Programs Specialist

Sonya joined our team in January 2016 after relocating to Georgia. Her prior experience includes working in environmental education with the Tennessee Wildlife Federation, Kentucky Dept of Fish & Wildlife Resources, Alabama Cooperative Extension, and Florida Cooperative Extension.

Education:

Master of Science (Natural Resource & Environmental Education), University of Wisconsin, 1992
Bachelor of Science (Secondary Science Education), Auburn University, 1983
Bachelor of Science (Marine Biology & Physics), Auburn University, 1982

Facilitator Certifications: Project WET, Project Learning Tree, Project WILD, Master Environmental Educator, Classroom in the Forest

Angie Marcus, Program Assistant

Angie joined our team in July 2015 and works primarily on coordinating the Brooke and Branch Puppet Show. Her background includes work in youth counseling as well as environmental education with Virginia 4-H and Learning Tree Farms.

Education:

Master of Social Work (Family & Children), Kennesaw State University, 2014
Master of Education (Outdoor Education Administration), Georgia College & State University, 2000
Bachelor of Arts (Sociology), Lenoir-Rhyne University, 1997

Facilitator Certifications: Project WET, Project Learning Tree, Project WILD, Challenge Course Trainer

Penny Costanzo, Program Assistant

Penny came to WSP in January 2015. She has been an environmental educator and professional actress for over thirty years, having taught at the Harvard University Zoology Museum and for Young Audiences, an arts in education program.

Education:

Master of Education (Elementary), Tufts University, 1975
Bachelor of Arts (English), Kenyon College, 1974

Facilitator Certifications: Master Naturalist, Brain Education Teacher/Trainer, Dahn Yoga Master

Cobb County Water System
Watershed Stewardship Program
662 South Cobb Drive
Marietta, Georgia 30060

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Connecting Community to Local Ecology
www.cobbstreams.org

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Cobb County...Expect the Best!

Tim Lee, Chairman

Bob Weatherford, District One

Bob Ott, District Two

JoAnn Birrell, District Three

Lisa Cupid, District Four

David Hankerson, County Manager

June 2016