

Annual Report

Watershed Stewardship Program

2013-2014

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During the
2013-2014 reporting year,
16,584 community members participated
in the Watershed Stewardship Program.

Volunteer Programs:
1,693 participants,
962 training hours,
5,413 volunteer service hours

Community Programs:
1,415 participants, 167 hours

School Programs:
13,476 students, 322 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 behavior, and to promote an ethic of respect for and a connection to our natural resources.

Cobb County's Watershed Stewardship Program is a 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

After working through several years with staff in training, we finally had a full cycle with experienced educators and a stable workforce. This has allowed for the development of several innovative programs including our new *Water and Wastewater 101* materials. As would be expected, our program numbers are up and more community members were served this year. However, we continue to evaluate and implement adjustments to more effectively serve Cobb County residents. One of the changes we are making is to the *Watershed Stewardship Mob* concept. While we like the idea of monthly service projects and did have success recruiting participants from specific areas within the county, WSP staff decided to rebrand this program. We are taking the most popular service projects and promoting them as independent events instead of as part of a list of ongoing monthly activities. Most notably, we are formalizing *Privet Pulls* as one of our ongoing volunteer opportunities. Other program adaptations include continued work with the Cobb County School District to modify our outreach programs for better alignment to the changing curriculum as new standards are implemented. We also continue to improve our volunteer programs. In 2013-2014, we worked on updating the frog and toad monitoring materials. This year we are evaluating how we can streamline service project requests.

This year our program received recognitions for our Georgia Adopt-A-Stream and Rivers Alive efforts. Mike Kahle was also awarded as an Outstanding New Adopt-A-Stream Trainer. Two of our volunteer monitoring groups were given awards by Georgia Adopt-A-Stream for the quality of their watershed service. It has been another great year for our program. We are proud of the work accomplished and thankful to all the partners and volunteers who continue to support our program.

As we transition into summer, staff will be visiting again with local volunteers in the field at their streams. Getting to know the people who are giving their time to our program remains a top priority. As we check-in to see how they are doing, we will be learning the watershed better and gaining perspective on the concerns and challenges of our residents and neighbors. We hope this will translate into new and innovative projects and programs for the community. As we continue to reflect and build our program, note that our office works through a collaborative process and welcomes your feedback. Please share your ideas and suggestions.

-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 | ● | ● | | | ● | ● |
| Popular | ● | ● | | | ● | ● |
| 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 2013-2014 reporting year, the value of Cobb's volunteer watershed stewards is estimated at \$120,439. *Based on the 2013 estimated value of volunteer time for Georgia (\$22.25) published by Independent Sector.*

Volunteer Opportunities

Adopt-A-Stream Chemical Monitoring

490 volunteers trained, 428 monitoring events, 2,152 service hours

Chemical monitoring consists of taking 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 Biological Monitoring

31 volunteers trained, 16 monitoring events, 503 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 biological monitoring are required to attend a certification workshop, adopt their waterway site, and commit to monitoring once per quarter.

Adopt-A-Stream Bacteria Monitoring

85 volunteers trained, 154 monitoring events, 204 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

7 volunteers trained, 3 monitoring events, 42 service hours

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

Anuran Monitoring

8 active volunteer groups, 132 monitoring events, 240 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

657 volunteer participants, 20 events, 1,468 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.





Storm Drain Marking

253 volunteer participants, 34 events, 502 service hours, 657 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

41 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. In January 2014, Watershed Stewardship Awards were presented for the School of the Year, Volunteer of the Year, and Partner of the Year.

River Rendezvous - May 10, 2014

24 participants, 104 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

51 volunteer participants, 31 events, 98 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

45 participants, 4 events, 90 service hours

Previously promoted through our service mob initiative as one of several monthly activities offered throughout the year, the removal of invasive Asian privet has become a popular activity for middle and high school students seeking community service hours. Moving forward we plan to actively promote this activity as a routine component of our volunteer program, handled the same as our waterway clean-ups and storm drain marking programs.



Watershed Internship

1 volunteer participant, 10 service hours

In partnership with South Cobb High School, WSP is hosting a student intern over the summer of 2014. The position was filled just as the school year came to a close. He will be working with staff 25 hours per week through July. Duties will include assisting with community outreach programs, prepping for service projects, and shadowing field staff with routine duties.

Summary of Volunteer Activities by Watershed

Stewardship Projects - Chattahoochee

| WATERSHED | GROUP | # SITES | YEAR INITIATED | ACTIVITY TYPE |
|----------------------|---|---------|----------------|------------------|
| Mud Creek | The Biroschick Family | 1 | 2012 | SD |
| Mud Creek | Still Elementary School | 1 | 2013 | SD |
| Mulberry Creek | Friends of Mulberry Creek | 1 | 2003 | CH, BAC |
| Nickajack Creek | Keep Smyrna Beautiful | 11 | 2010 | CH, CL |
| Nickajack Creek | Friends of Gable Creek | 1 | 2011 | CH |
| Nickajack Creek | SG5 | 1 | 2011 | CH |
| Nickajack Creek | Campbell Middle School | 1 | 2013 | PP |
| Nickajack Creek | Hillgrove High School | 1 | 2013 | SD, PP |
| Nickajack Creek | Cola-Cola One Team HR | 1 | 2013 | CL, SD |
| Noses Creek | McEachern High AP Environmental Science | 1 | 2007 | CL |
| Noses Creek | Walker School's 5th Grade | 1 | 2007 | CH |
| Noses Creek | Boy Scout Troop 405 | 1 | 2014 | SD |
| Noses Creek | Fairfield Community | 1 | 2014 | SD |
| Olley Creek | Donna-n-Camen | 1 | 2012 | CH |
| Olley Creek | Katherine Roberts | 2 | 2014 | CL |
| Olley Creek | Harry's Farmers Market | 2 | 2014 | CL, BEA |
| Popular Creek | Keep Smyrna Beautiful | 2 | 2012 | CH |
| Popular Creek | Anne Ledbeter | 1 | 2012 | CH, BAC |
| Powder Springs Creek | Fairfax Consulting Group | 1 | 2010 | CH, BAC |
| Rottenwood Creek | Friends of Victory Heights Subdivision Park | 1 | 2002 | CH, BAC |
| Rottenwood Creek | Sierra Club Centennial Group | 3 | 2004 | CH, BIO, BAC, CL |
| Rottenwood Creek | Water Quality Laboratory | 1 | 2009 | CL, BEA |
| Rottenwood Creek | Sabre Holdings | 1 | 2012 | BEA |
| Rottenwood Creek | Boy Scout Troop 772 | 1 | 2013 | CL |
| Rottenwood Creek | Marriott Hotels | 1 | 2014 | CL |
| Sewell Mill Creek | Dodgen Middle School | 9 | 2002 | BIO |
| Sewell Mill Creek | Boy Scout Troop 955 | 1 | 2004 | CH |
| Sewell Mill Creek | Walton HS AP Environmental Science Class | 1 | 2006 | CH |
| Sewell Mill Creek | Isabel Ott | 2 | 2008 | CH |
| Sewell Mill Creek | The Duke Family | 1 | 2008 | CH, BAC |
| Sewell Mill Creek | Murdock Elementary School | 1 | 2011 | CH, CL |
| Sewell Mill Creek | Marietta Metro Rotary Club | 1 | 2013 | CL |
| Sewell Mill Creek | Bushart | 1 | 2012 | CH |
| Sewell Mill Creek | Pope High School | 3 | 2013 | CH, CL |
| Sewell Mill Creek | Pam Barker | 1 | 2013 | CH |
| Sewell Mill Creek | Karan | 1 | 2013 | CH |
| Sewell Mill Creek | Carla Bell | 1 | 2014 | AN |
| Sope Creek | Walton High School Environmental Club | 1 | 1995 | CH |
| Sope Creek | Friends of Gable Creek | 1 | 2009 | CH |
| Sope Creek | Salty | 1 | 2012 | CH |
| Sope Creek | Sedalia Park Elementary School | 1 | 2012 | CH |

| | | | | |
|-----------------------|--|---|------|-------------|
| Sope Creek | Pollywog in a Bog | 1 | 2013 | CH |
| Sweetwater Creek | Dragon Frog | 1 | 2014 | AN |
| Sweetwater Creek | Faith Ann | 1 | 2014 | AN |
| Trib of Chattahoochee | Crooked Branch | 1 | 2011 | CH, BAC |
| Ward Creek | Seth Meador | 1 | 2014 | CH |
| Ward Creek | Teresa Roby/Fielding Lewis Chapter of DAR | 9 | 2014 | CL, SD |
| Willeo Creek | Willeo Watershed Alliance of Loch Highland | 1 | 2001 | CH, BAC |
| Willeo Creek | Tritt River Kids | 1 | 2004 | CH, CL |
| Willeo Creek | Bishop Lake | 6 | 2008 | CH, BAC |
| Willeo Creek | Girl Scout Troop 2193 | 2 | 2012 | CH, BAC |
| Willeo Creek | Village North Highlands Subdivision | 1 | 2012 | CH, BAC, AN |
| Willeo Creek | Interlaken Monitoring | 1 | 2012 | CH |
| Willeo Creek | Rotary Club of East Cobb | 1 | 2010 | SD |

Stewardship Projects - Etowah

| WATERSHED | GROUP | # SITES | YEAR INITIATED | ACTIVITY TYPE |
|-----------------|--|---------|----------------|---------------|
| Allatoona Creek | Kahle | 1 | 2010 | CH, AN |
| Allatoona Creek | Harrison High School | 1 | 2012 | PSA |
| Allatoona Creek | Troop 12121 | 1 | 2014 | SD |
| Allatoona Creek | Old Hickory Bluffs | 1 | 2013 | CH, CL |
| Allatoona Creek | Cub Scout Pack 350 | 1 | 2014 | SD |
| Butler Creek | Butler Creek Kennesaw | 1 | 2009 | CH, BAC, VS |
| Butler Creek | EnvEagles | 1 | 2012 | BEA |
| Butler Creek | Ridgecrest Drive @ NE Butler Creek Tributary | 2 | 2014 | CH, VS, AN |
| Lake Allatoona | GA Lake Monitoring | 4 | 2013 | CH |
| Noonday Creek | Jennifer Pramuk | 1 | 2012 | CH |
| Noonday Creek | The Holms Family | 1 | 2013 | CH |
| Noonday Creek | Daniell Middle School Science Club | 1 | 2014 | SD |
| Noonday Creek | Girl Scout Troop 12135 | 1 | 2014 | SD |
| Proctor Creek | North Cobb High School SAVE Club | 1 | 2008 | CL |
| Rubes Creek | Keheley Elementary 3rd Grade Target Class | 2 | 2004 | CL, SD |
| Rubes Creek | McCleskey Middle School | 1 | 2006 | CH, BIO, BAC |
| Rubes Creek | David Zandstra | 1 | 2008 | CH, BAC |
| Rubes Creek | Ric & Sharon Donato | 1 | 2009 | AN |
| Rubes Creek | Girl Scout Troop 2910 | 11 | 2010 | CH, BAC, SD |
| Rubes Creek | Lassiter High School APES classes | 1 | 2010 | CH, BAC, PP |
| Rubes Creek | Mabry Middle School | 1 | 2011 | CL |
| Rubes Creek | North Hampton Culdesac | 1 | 2012 | CH |
| Rubes Creek | Olde Man of the Creek | 1 | 2014 | CH |
| Rubes Creek | Cheryl Ashley-Serafine | 1 | 2014 | AN |
| Trib of Etowah | Big Shanty Stream Sentries | 1 | 2013 | CL |

Activity Type Key

CH Adopt-A-Stream Chemical Monitoring BAC Adopt-A-Stream Bacteria Monitoring AN Anuran Monitoring CL Cleanup
 BIO Adopt-A-Stream Biological 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

53 participants

Urban runoff, causing bank erosion, siltation, and water quality impairment, is one of the hardest sources of stream pollution to control. In this 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 Reduction Medication Disposal

1000+ participants and drugs from 639 households

Several efforts have been developed to educate Cobb residents on hazards in the home. Organized by Keep Cobb Beautiful, two pharmaceutical disposal events were held. Residents were provided the opportunity to recycle batteries and electronics, and participate in a document shredding event. 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.

Library Programs

193 participants

As in previous years, the Watershed Stewardship Program partnered with Cobb libraries for the Summer Reading Program. During 2013, staff presented at 8 libraries. An ecological education program was developed based on the children's picture book *Dirt Boy*, by Erik Jon Slingerup. Outreach programming included seed starting, wetland model, rocks/minerals, and decomposing.

Scout Programs

8 groups

Girl Scout and Boy Scout groups often participate in watershed stewardship activities to earn badges and obtain service hours. In 2013-2013, 8 scout groups participated in Adopt-A-Stream monitoring, storm drain marking, and waterway cleanups. We continue to actively promote our program by offering events and exhibiting at their service project expo.

Summer Camp Outreach

110 participants

Watershed Stewardship Program staff supported summer camp programming for three organizations during 2013. The hands-on programs were water and wildlife education focused with participants learning about non-point source pollution, water quality, and stewardship.

Summer Family Programs

178 participants

In partnership with Cobb County Parks, Recreation, & Cultural Affairs, we continued to offer the *Outdoor Romping & Creek Stomping Summer Series* for kids and families. The four sessions included stream critters, fairy house building, and a family scavenger hunt.



Professional Presentations and Partnerships

100+ participants

WSP staff routinely provide expertise and support at conferences, professional development meetings, and seminars. In the 2013-2014 reporting year, we presented at several events including the Georgia Adopt-A-Stream Conference, Metro North GA Water Planning District Education TCC, and the Georgia Association of Water Professionals Annual Conference. In fall 2013 we drafted a grant, applying for funding from the Captain Planet Foundation (CPF), to restore the educator scholarship for Paddle Georgia. CPF did fund the proposal and WSP staff members are managing this program on behalf of Georgia River Network, who organizes Paddle Georgia and received the CPF grant funds.

Pick It Up Initiatives

1900+ recipients

Bacteria education efforts include the *Pick It Up Pals Pledge Program* that increases pet owner awareness of the pollution problems associated with pet waste by providing recognition and a reward mechanism. Participants are tracked by watershed and given free pet waste bags. Images of participating pets are published on our website. When funding allows, a *Pick It Up Pals* bandanna will also be given to each pet when the owners signs the *Pick It Up* pledge. We continue to maintain the *Pick It Up* Waste Stations that were installed along the Silver Comet Trail, include bacteria education with all storm drain marking project materials, and explicitly discuss proper pet owner stewardship during our *What Is A Watershed?* school outreach programs.

National Park Service Tire Disposal Partnership

100+ 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.

Earth Day

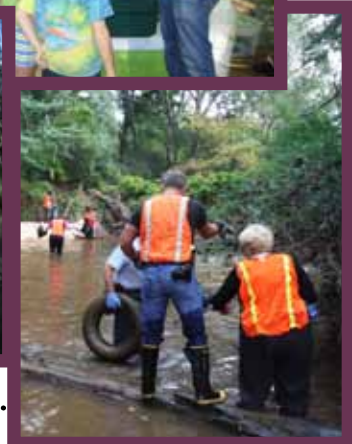
62 participants

We continued to facilitate our Earth Day program with Cobb County Parks, Recreation, & Cultural Affairs Therapeutic Recreation Unit (as well as the Natural Resource Unit and Keep Cobb Beautiful). This service-focused event for developmentally disabled adults includes removing invasive species, installing mulch, and picking up litter. Home school groups are also invited to participate and comprise about 50% of the group.

Senior Services Programs

62 participants

WSP continues to develop programs for local seniors. This year we worked with clients from North Cobb Senior Center. Participants requested programming on birds and butterflies. Four outreach session were facilitated as well as designing and installing a certified pollinator habitat. This service project was completed in partnership with students from North Cobb Christian School who held two service days at the site, cleaning up raised beds to prepare for the garden installation.



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 2013-2014 school year, our programs reached 13,476 students at 83 schools, serving 560 classrooms, providing 322 instructional hours. We estimate the cost of this service at \$14,857.

Ecoregions of Georgia

634 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?

1,161 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 can affect our drinking water and wildlife while encouraging discussion about watershed protection and pollution prevention.

Erosion & The Hydrologic Cycle

775 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.

Adopt-A-Stream Water Chemistry Study

1,066 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

589 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

29 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.

What Do You Know About Where You Live?

416 participants

What is a community? Students develop a working definition of a community and identify essential elements/characteristics of the community they live in. What biotic and abiotic factors are found in your community? Explore your campus to see what other organisms share their community.

Snakes of Georgia & Their Adaptations

571 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

152 participants

A healthy stream is a busy place and constantly changing. 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.

River to River

1,235 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.

Monarchs & Butterfly Life Cycle

200 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

203 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

135 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.

Ticket to Ride

330 participants

With funding from The National Parks Foundation and in partnership with Chattahoochee River National Recreation Area, four 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 have received this grant again for the 2014-2015 school year and anticipate serving another 300+ students.





Brooke & Branch Puppet Show 6,302 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.

Fats, Oil, and Grease (FOG) Education Program 4 participants
 Students learn about the problems associated with improper kitchen grease disposal, the impact blocked sewer lines have on community health, and proper FOG disposal in the home using videos and interactive activities.

Non-point Source Pollution & Storm Drain Marking 4 participants
 Offered in preparation for a stewardship event, students participate in a discussion about non-point source pollution typical of local neighborhoods. They are provided training on the purpose of and how to safely mark storm drains and distribute educational materials.

Homeschool Series 141 participants
 New this year, WSP developed and facilitated a three-part series for local home school students. Free to participants, students learned about habitat, migration, and culture (through the Our Shared Forest kits), local wildlife including snakes and anurans (through our Snake and Anuran Labs), and local stewardship activities including waterway monitoring, cleanups, and storm drain marking through our service project expo.

Traveling Treasure Trunk 14 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 23 participating schools
 Our program loans educational resources to teachers for use in their classroom, including water testing kits, nets, boots, curriculum activities, preserved insect specimens, the Our Shared Forest Science Night Kit, and Enviroscape tabletop models.

Children’s Water Festival 446 participants
 On May 8th, 4th graders from Smyrna Elementary, along with students from four other school districts, participated in this annual event. It was held in partnership with other local governments, Metro N. GA Water Planning District, Fernbank Museum of Natural History, and the National Park Service at the Chattahoochee River National Recreation Area. Participants attended several hands-on water education sessions including topics on local wildlife and conservation, pollution prevention, water source and distribution, and FOG.

Green Schools 34 schools, 542 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 2013-2014, 19 schools achieved Gold Status (15 or more Green Classrooms) and 69 more classrooms participated in the program.



Professional Development for Educators 103 participants

- Life Is A River
- Monarchs In The Classroom
- Project WET
- Preservice Workshops

UPDATE ON RESOURCE DEVELOPMENT

Wildlife and Rain Garden Demonstration Site

We continue developing the garden as an education resource, 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. We are in the process of completing development of interpretive signage which is being purchased from grant funds received from Royal Bank of Canada.

Cigarette Litter Pollution Prevention (CLPP)

In partnership with Keep Cobb Beautiful, WSP received a \$2000 Keep America Beautiful CLPP grant. Ten CLPP stations were installed at the three Chattahoochee Technical College campuses located in Cobb County. Materials that were developed with this funding include educational signage, a CLPP webpage, and a fact sheet.

Newsletter and www.cobbstreams.org

Four issues of the quarterly newsletter, *The Thalweg*, were published this year. Approximately 2,000 paper and more than 3,700 electronic issues were distributed to our local contacts. The Watershed Stewardship website provides education and promotional information to the community and averages approximately 22,000 hits per month. We are in the process of converting the site to a content management system and are using this opportunity to re-design the organization and update the content. We hope to launch the new and improved site later this year.



Watershed Profiles

These fact sheets will provide history, statistics, and points of interest for the major watersheds in Cobb County. A template has been developed, GIS mapping completed, and land use statistics for each watershed calculated.

Watershed Signage

We have continued our partnership 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.

Anuran Monitoring

Developed in-house in 2007, based on concern from residents about the lack of spring peepers in their area, our frog call program continues to generate interest and engagement with schools and community groups. We updated the resources for this program to better recruit and retain participants and have trained 37 new data collectors. 6 new groups have registered monitoring routes and submitted data.

Water and Wastewater 101

In addressing outreach requests, we realized there was an education gap for several water and wastewater basics. Components like water heaters being non-potable water sources, how to check water pressure, and non-flushables like rags and wipes don't require full fact sheets or education programs but need to be disseminated. As a result, WSP has developed a new program called Water and Wastewater 101. Resources include a new fact sheet, table-top display, and an outreach presentation.

Household Hazardous Waste Education

Efforts to address HHW reduction include the production of a two-part video for our series *Eco-Logical...Tips to Reduce our Footprint* and recruiting Keep Cobb Beautiful to serve as a development partner to assist Cobb County Water System in organizing and funding a local HHW amnesty day for 2015.

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: Advisory Council, Chair
- Georgia Association of Water Professionals: Public Education Committee
- 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
- Georgia Adopt-A-Stream: Coordinator, Technical Advisor
- Southeast Environmental Education Alliance: Secretary

Partnerships

- Georgia EPD Outreach Unit
- National Park Service
- Georgia Association of Water Professionals
- Environmental Education Alliance of Georgia
- Georgia River Network
- Captain Planet Foundation
- Metro North Georgia Water Planning District
- Cobb County DOT
- Cobb County School System
- Cobb County Health Department
- Cobb County Parks, Recreation & Cultural Affairs
- Keep Cobb Beautiful
- Keep America Beautiful
- City of Roswell
- City of Atlanta
- City of Marietta - Marietta Water, Keep Marietta Beautiful
- City of Smyrna - Keep Smyrna Beautiful
- DeKalb County
- Fulton County
- Gwinnett County
- Marietta City Schools
- UGA Cooperative Extension
- 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)

Program History

2014

- 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

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

- Cobb County Water System (CCWS) receives 2012 Public Education Innovative Initiative Program Award for *Eco-Logical... Tips to Reduce Your Footprint* program from Georgia Association of Water Professionals (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 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.
- AAS Program is launched.
- CCWS receives Public Education Award from GA Assoc. of Water Professionals (GAWP) - 2002 & 2006.
- Cobb Adopt-A-Stream (AAS) Program Coordinator is hired.

REFLECTIONS



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



Three volunteer groups were recognized locally this year at our Watershed Stewardship Fair. In addition, GA Adopt-A-Stream selected two of Cobb's monitoring groups for state-wide recognition for their efforts.



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

Local homeschool students participated in *Our Shared Forest* activities during the three part series.

2014 Children's Water Festival Approximately 450 kids, including Cobb students from Smyrna Elementary, participated in our annual water celebration at the Chattahoochee River.



THANK YOU

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

| | | | | | |
|----------------------------|---------------------|--------------------------|-------------------------|--------------------|-----------------------|
| April Adams | Mathis Curry | Rick Hitchcock | Jennifer Maxwell | Cornelius Pope | Jamie Stones |
| Jo Adang | Pamela Dabrowa | Jeff Hite | Linda May | Diane Powell | Wendy Strickland |
| De'De' Ajaron | Steve Dark | Kevin Hill | Jason McCoy | Will Powell | Pam Subalusky |
| Ina Allison | Elizabeth Davis | Nancy Hoalst-Pullen | Steve McCullers | Jennifer Pramuk | Adam Sukenick |
| Derek Angel | Gretchen Davis | Gene Hoke | Bre'onna McDaniel | David Price | Cornelius Tarver |
| Bob Arnold | John Davis | Zeb Holcomb | Nancy McGregor | Michael Quatagno | Silvia Tenenbaum |
| George Aycock | Jaap DeRoode | Kim Holland | Seth Meador | Katherine Roberts | Dave Thomas |
| Maria Azarraga | Joshua Doherty | Glenn Holley | Masoud Mehrjerdian | Teri Rakusin | Marjorie Thomas |
| Amari Banks | Don Domanik | Misty Holm | LaToi Mercer | Alexander Reeves | Brigitte Thompson |
| Zaria Banks | Maureen Donahue | Chelsea Hopkins | Jennifer Mercure | Marvin Richards | Nigel Thompson |
| Delon Barfuss | Ric & Sharon Donato | Jiayi Huang | Maurice Meredith | Richard Richey | James Thorpe |
| Pam Barker | Brian Duke | John Huth | Susan Meyers | Katherine Roberts | Andrew Trilby-Bassett |
| Israel Baryeshua | Jeremy Eaves | April Ingle | Lauren Michell | Teresa Roby | C.J. Turner |
| Brett Bass | Katey Evans | Ken Jacob | Diane Minick | Charles Roebuck | David Tyler |
| Rick Bauer | Martha Estrada | Ana Jobe | Abby Mize | Sierra Samie | Florence Urum |
| Layne Baumgartner | Alex Eylar | Darshaun Johnson | Jasmyn Monteiro | Steve Sanchez | Kobus Van den Berg |
| Tyler Behl | Norm Fagge | Didi Johnson | Brandon Moody | Donna Sausville | Timmy Vaughn |
| Carla Bell | Margaret Faircloth | Eric Johnson | Heather Moody | Nikeya Savala | Kelli Volkman |
| Tamy Benard | FaithAnn Fletcher | Shalexia Johnson | Alondra Morales | Daryl Sawyer | Yvette Ashea Wade |
| Cecelia and Lisa Birochnik | Karen Faucett | Madeline Johnston | Kelly Morris | Donna Saylor | Jake Waldner |
| Jake Blayoles | Jennifer Farace | Judy Jones | Lois and Nancy Morrison | Charles Scott | Wayne Waldrip |
| Bill Blythe | Dolly Fehd | Rebecca Kapala | Tara Muenz | Emily Seed | Selina Walker |
| Jenny Boucher | Austin Fehn | Tim Kelley | Joseph Mundy | Edlyn Seraphin | Bryan Wang |
| Robert Bourne | Erin Feichtner | Kim Kellett | Tamera Neal | Pradip Shah | Amy Warnock |
| Angie Bolton | Nestor Franklin | Helen Kennedy | Rita Neely | Karen Shaw | Morning Washburn |
| David Bridges | Rex Freeman | Monica Kilpatrick | Connie Nelson | Steve Shelton | Michael Watson |
| Morgan Bromell | Cynthia Foster | Annie Kim | Steve Nestor | Anne Shenk | Leza and Norm Weber |
| Sally Brooking | Jeff Fulton | Max Kipp | Travis Neumuller | John Shimmin | Jzsanettae Webster |
| David Brown | BK Fusru | Anne Kirk | Kathy Nguyen | Darren Shonyo | Michael Williams |
| Thomas Brown | Denise Gadd | William Klosowski | Phi Hung Nguyen | David Short | Daijah White |
| Roger Buerki | Mitzy Gann | Corrinne Koschewa | Phivan Nguyen | Mary Alice Shreve | Taylor White |
| Evelyne Burdette-Elgqvist | Sharika Gavin | Alecs Kronson | Carina O'Bara | Lesley Siggins | Jeanine Whitmire |
| Jenice Burke | Carolyn Gentry | Jennifer and Daniel Kunz | Jessica Oeller | Annette Simpson | Kaye Wilson |
| Paige Bushart | Sylvia Gerbovaz | Pete Lafontaine | Odao Ogbonmwan | Rusty Simpson | Jeff Wix |
| Heather Byrd | Donna Gerrado | Hayden Lankford | Joshua Oiumba | Colin Skees | Karan Wood |
| Shelly Calico | Connie Ghosh | Donna Leavall | Ella Ojobi | Dana Skelton | Pam Wood |
| Sharon Camp | Alicia Giddens | Jesse LeBoeuf | Adenike Oluyombo | Dennis Smith | Andrew Wright |
| JJ Campbell | Frank Gipson | Anne Ledbetter | Blossum Onunekum | Kevin Smith | David Zandstra |
| Ethan Carter | Johnny Glover | Eric Lee | Sasha Orewa | Roberta Smith | Laura Zerlin |
| Amy Chambers | Ariana Gay | Katie Lee | Victor Osanyialsi | Sharon Smith | Tracy Zoblisein |
| Li Chenglin | Allen Griffin | Renaee Lemon | Michael O'Shield | Marle Spurlocke | |
| Jamie Cint | Nekeshia Griffin | Terry Lester | William Ostrozynski | Anne Stahley | |
| Annette Clark | Florence Gustave | Kathy Lively | Saori Otsuka | jay Stanhope | |
| Carmen Cantero | Kristina Ha | Simon Locke | Isabel Ott | Dean Stockwell | |
| Kathy Jo Champion | Stacey Haire | Carla Loosier | Myles Parker | Colin Skees | |
| Marisela Cisneros | Michael Hallen | Bill Lovelace | Adriana Parra | Dana Skelton | |
| Anna Clemens | Deborah Hampe | Melanie Luangrath | Toi Patin | Brendan Skowronski | |
| Joe Cook | Phillip Hannaford | Deb Luedtke | Mark Patterson | Dennis Smith | |
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| Scott Corcoran | Harold Harbert | Joe Lukas | Michael Petelle | Roberta Smith | |
| Cheri Craft | Emily Harper | Madison Mabey | Sabrina Pemberton-Piper | Samantha Smith | |
| Candice Crawford | Frances Hebb | Jacqueline Macias | Consuelo Pereira-Lazo | Sharon Smith | |
| Sally Creel | Eva Henriquez | Judy Madonia | Larry Phillips | Marle Spurlocke | |
| Todd Crew | Sachi Henriquez | Holly Martin | Tim Phillips | Anne Stahley | |
| Stacy Cromer | Bill Higgins | Justess Mathis | Ed Plansker | Jay Stanhope | |
| Vicki Culbreth | Jerry Hightower | Alex Maxwell | Brad Plumley | Dean Stockwell | |

... 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/Biological/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/Biological/Bacteria Trainer

Kathleen Lemley, Environmental Programs Specialist

Kathleen was hired in March 2013. Most recently she worked with Georgia's Environmental Protection Division assisting with the GA Adopt-A-Stream, Georgia Project WET, Rivers Alive, and River of Words programs.

Education:

Bachelor of Science (Middle Grades Education), N. GA College & State University, 2011
Educator Certifications: Middle Grades Math, Middle Grades Social Science

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

Cheryl Ashley-Serafine, Program Assistant

Cheryl came to us after retiring from the Cobb County School District in 2012, where she taught special ed, 5th grade, and gifted students. After 31 years in the classroom, she is looking forward to working in the field of environmental education. She is one of our seasonal educators who present the water quality puppet show during the school year.

Education:

Educational Specialist (Instructional Technology), University of West Georgia, 2007
Master of Education (Educational Leadership), Kennesaw State University, 2005
Bachelor of Science (Elementary/Special Education), Fitchburg State College, 1976

Facilitator Certifications: Project WET, Project Learning Tree, Project Wild, Adopt-A-Stream Biological Trainer, Master Birder, Oxford Institute of EE, Garden Earth Naturalist, Certified Interpretive Guide

Lori Watterson, Program Assistant

Lori joined our team in July 2012 as an educator performing our water quality puppet show. She has worked as a community education coordinator for Pine Jog EE Center in West Palm Beach, a fisheries biologist for Florida DNR, and as a naturalist at Chattahoochee Nature Center.

Education:

Bachelor of Arts (Zoology), University of South Florida, 1982

Facilitator Certifications: Adopt-A-Stream Chemical/Biological/Bacteria Trainer, Master Naturalist, Certified Interpretive Guide

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

Helen Goreham, District One

Bob Ott, District Two

JoAnn Birrell, District Three

Lisa Cupid, District Four

David Hankerson, County Manager

June 2014