

Annual Report

Watershed Stewardship Program

2012-2013

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During the
2012-2013 reporting year,
15,911 community members participated
in the Watershed Stewardship Program.

Volunteer Programs:
1,547 participants,
1,111 training hours,
4,144 volunteer service hours

Community Programs:
3,603 participants, 95 hours

School Programs:
10,761 students, 229 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 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

Significant time was invested this year to develop new resources and programs. We are excited to see where 2013-2014 takes us. After restructuring school outreach programs last year, we have been able to accommodate the volume of requests we receive from local schools better. Based on teacher evaluations and program bookings, response has been very positive to these changes. We also experimented with our volunteer programs, adding new opportunities for community service this year. This included developing a new student intern program that has proven to be very valuable. Our new video series, *Eco-logical...Tips to Reduce Your Footprint*, has been recognized by the Georgia Association of Water Professionals with the Public Education Innovative Initiative Award. Also this spring, two of our long standing volunteer monitoring groups were recognized by Georgia Adopt-A-Stream for the quality of their watershed efforts. It has been a great year for our program and we are proud of the work accomplished.

Developing and refining our practice keeps our Program and education staff strong and fresh. We will be launching an upgraded website this fall along with building a strong ecological ethic through projects like our newly developed Fairy Houses and Fairy Forts workshops. As we continually reflect and build our program, to better serve the needs of the community, we encourage feedback and suggestions. Our office works through a collaborative process and welcomes your ideas.

Staying engaged with the community is important to us. Looking forward, we plan to re-visit our Anuran Monitoring Program, continue developing resources for our Cigarette Litter Pollution Prevention Program (thanks to the grant we have received in partnership with Keep Cobb Beautiful from Keep America Beautiful), and work more on our community service "Watershed Mob" project. In addition, spending time getting to know the people who are giving their time to our program is a priority. Therefore, we planning to visit with our volunteers in the field, check out their monitoring sites, talk to them about their observations, and check-in to see how they are doing. We are off to a great start and look forward to another adventure-filled year.

-The Cobb County Watershed Stewardship Program

SUMMARY OF ACTIVITY BY WATERSHED

	Water Quality Monitoring	Storm Drain Marking	Waterway Cleanups	Community Education	School Outreach	Compliance Education
Chattahoochee	●	●	●	●	●	
Mud	●	●			●	
Mulberry	●			●		
Nickajack	●	●	●	●	●	●
Noses	●				●	
Powder Springs	●			●	●	●
Olley	●			●	●	●
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 2012-2013 reporting year, the value of Cobb's volunteer watershed stewards is estimated at \$86,100.

Volunteer Opportunities

Adopt-A-Stream Chemical Monitoring

401 volunteers trained, 491 monitoring events, 1,991 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

23 volunteers trained, 35 monitoring events, 487 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

154 volunteers trained, 171 monitoring events, 358 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

6 volunteers trained, 2 monitoring events, 85 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

4 active volunteer groups, 58 monitoring events, 82 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 an evening walk and complete a frog call survey once a week.

Waterway Clean-ups

197 volunteer participants, 13 events, 464 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

105 volunteer participants, 12 events, 179 service hours, 285 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

30 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 February 2013, Watershed Stewardship Awards were presented for the School of the Year, Volunteer of the Year, and Monitoring Group of the Year.

River Rendezvous - May 7, 2013

23 participants, 70 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

23 volunteer participants, 34 events, 127 service hours

Community volunteers have been assisting 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.

Watershed Stewardship Mobs

26 participants, 7 events, 45 service hours

This year we tried organizing monthly service events similar to the Urban Crop Mob Movement. Projects included storm drain marking, litter removal from streams, privet pulls, stream bank stabilization with live stakes, cigarette butt pick-up, and winter wildlife conservation. While this type of service has been very successful in other local Atlanta communities, we are still trying to determine if Cobb residents are interested in this program format. We will continue to refine the concept in 2013-2014.



Watershed Internship

1 volunteer participants, 150 service hours

In partnership with Kennesaw State University's GIS Department, we implemented an internship program for students seeking practical experience working with watershed data and mapping. This is an unpaid position that provided us with a highly skilled volunteer to assist with volunteer data mapping. Maps were created using data from our Storm Drain Marking Program, Anuran Monitoring Program, and Adopt-A-Stream Program.

Summary of Volunteer Activities by Watershed

Stewardship Projects - Chattahoochee

WATERSHED	GROUP	# SITES	YEAR INITIATED	ACTIVITY TYPE
Mulberry Creek	Friends of Mulberry Creek	1	2003	CH, BAC
Mud Creek	Burnt Hickory Hills	2	2011	CH, BAC
Mud Creek	The Biroschick Family	1	2012	SD
Nickajack Creek	Three Forks Alliance	1	2010	CH
Nickajack Creek	Keep Smyrna Beautiful	7	2010	CH, CL
Nickajack Creek	Friends of Gable Creek	1	2011	SD
Nickajack Creek	SG5	1	2011	CH
Noses Creek	McEachern High AP Environmental Science	1	2007	CH
Noses Creek	Walker School's 5th Grade	1	2007	CH
Olley Creek	HoneyFern School	1	2011	CH, BIO
Olley Creek	Donna-n-Camen	1	2012	CH
Popular Creek	Keep Smyrna Beautiful	1	2012	CH
Popular Creek	Anne Ledbetter	1	2012	CH
Powder Springs Creek	Fairfax Consulting Group	1	2010	CH, BAC
Powder Springs Creek	Smurray's	1	2012	CH
Rottenwood Creek	Friends of Victory Heights Subdivision Park	1	2002	CH
Rottenwood Creek	Sierra Club Centennial Group	3	2004	CH, BIO, BAC, CL
Rottenwood Creek	MCAA Rockets	2	2007	CH
Rottenwood Creek	Water Quality Laboratory	1	2009	CL
Rottenwood Creek	Sabre Holdings	1	2012	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	Brian Duke	2	2008	CH, BAC
Sewell Mill Creek	Emerson Unitarian Universalist	1	2008	CH
Sewell Mill Creek	Marietta Metro Rotary Club	1	2013	CL
Sewell Mill Creek	Bushart	1	2012	CH
Sewell Mill Creek	Clean Water For All	1	2012	CH, BAC
Sope Creek	Walton High School Environmental Club	1	1995	CH
Sope Creek	Friends of Gable Creek	1	2009	CH, BAC
Sope Creek	Water Guardians	1	2010	CH
Sope Creek	Water Watchers	1	2012	CH
Sope Creek	Salty	1	2012	CH
Sope Creek	Sedalia Park Elementary School	1	2012	CH
Sope Creek	Girl Scout Troop 11437	1	2013	SD
Sweetwater Creek	South Cobb Council of PTA	1	2010	CL
Trib of Chattahoochee	Crooked Branch	1	2011	CH, BAC
Trib of Chattahoochee	Riverview Nichols	1	2012	CH
Trib of Chattahoochee	River Springs Stream Team	1	2012	CH
Ward Creek	A.L. Burruss Environmental Club	1	2008	CH

Willeo Creek	Willeo Watershed Alliance of Loch Highland	1	2001	CH, BAC
Willeo Creek	Higgins Family	1	2003	CH
Willeo Creek	Tritt River Kids	1	2004	CH, CL
Willeo Creek	Bishop Lake	7	2008	CH, BAC
Willeo Creek	Connie Ghosh	1	2008	AN
Willeo Creek	Clary Lakes	1	2010	CH
Willeo Creek	Girl Scout Troop 2193	2	2012	CH, BAC
Willeo Creek	Village North Highlands Subdivision	1	2012	CH, BAC
Willeo Creek	Oak Creek Stables	2	2012	CH
Willeo Creek	Interlaken Monitoring	1	2012	CH
Willeo Creek	Cub Scout 770 Den 1	1	2013	SD
Willeo Creek	Girls On The Run - Garrison Mill ES	1	2013	SD
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, BAC, SD, CL
Allatoona Creek	Ackermann/Griffin	1	2012	SD
Allatoona Creek	Harrison High School HOPE Club	1	2012	CH
Allatoona Creek	Vaughan Elementary School	1	2011	SD
Allatoona Creek	Ford Elementary School	1	2012	CH
Allatoona Creek	Foundations For the Future	1	2012	CH
Allatoona Creek	Old Hickory Bluffs	1	2013	CH
Butler Creek	Butler Creek Kennesaw	1	2009	CH, BAC, VS
Butler Creek	EnvEagles	1	2012	CH
Butler Creek	Lewis Elementary School	1	2012	CH
Noonday Creek	Barfuss	1	2007	AN
Noonday Creek	Friends of Noonday Creek	2	2011	CH, BAC
Noonday Creek	Jennifer Pramuk	1	2012	CH
Noonday Creek	Devereux Georgia Treatment Network	1	2012	CH, BAC
Proctor Creek	North Cobb High School SAVE Club	1	2008	CH, BIO
Rubes Creek	Keheley Elementary 3rd Grade Target Class	2	2004	CH, BIO, VS, CL, SD
Rubes Creek	McCleskey Middle School	1	2006	CH, BIO, BAC
Rubes Creek	Nicholson Target Stars	1	2006	CH, CL
Rubes Creek	David Zandstra	1	2008	CH, BAC
Rubes Creek	Ric & Sharon Donato	1	2009	AN
Rubes Creek	Girl Scout Troop 2910	1	2010	CH, BAC
Rubes Creek	Lassiter High School APES classes	1	2010	CH, BAC
Rubes Creek	Guerra Family	1	2012	CH, BAC
Rubes Creek	North Hampton Culdesac	1	2012	CH
Rubes Creek	Boy Scout Troop 479	1	2012	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

Community Ecology Programs

Rain Barrel Make & Takes

96 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 55-gallon 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 503 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

355 participants

As in previous years, the Watershed Stewardship Program partnered with Cobb libraries for the Summer Reading Program. During 2012, staff presented at 11 libraries. An ecological education program was developed based on the children's picture book *Tuesday*, an imaginative story about flying frogs by David Wiesner. We also facilitated a special *Critters In The Creek* session for Earth Day at one of the libraries this spring.

Scout Programs

85 participants

Girl Scout and Boy Scout groups often participate in watershed stewardship activities to earn badges and obtain service hours. In addition to the scout groups that participate in Adopt-A-Stream monitoring, storm drain marking, and waterway cleanups, many participate in our school outreach programs. These include the *Butterfly Lab*, *What is a Watershed?*, and tours of the water quality lab and rain garden. In 2012, we organized and hosted a butterfly badge program in our garden in partnership with Cobb County Parks, Recreation, & Cultural Affairs.

Summer Camp Outreach

100 participants

Watershed Stewardship Program staff supported summer camp programming for five organizations during 2012. 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

175 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, wetlands and wildlife, and a family scavenger hunt.



Conference/Professional Presentations

459 participants

Staff routinely present at conferences and during professional development seminars. During the 2012-2013 reporting year, we presented at several events including the Environmental Education Alliance of Georgia Outdoor Learning Symposium, Georgia Association of Water Professionals Annual Conference, The Learning Garden Workshop, Keep Cobb Beautiful Earth Fair, and for various Cobb County School System teacher development meetings and community organization meetings including garden clubs.

Pick It Up Initiatives

1800+ participants

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

33 participants

We developed a special program for Earth Day this year. Working with Cobb County Parks, Recreation, & Cultural Affairs Therapeutic Recreation Unit (as well as the Natural Resource Unit and Keep Cobb Beautiful), we designed a service-focused event for developmentally disabled adults. Participants helped with beautification efforts at a local park including removing invasive species, installing mulch, and picking up litter. We also facilitated a seed-starting session as a take-away gift for their service. The event was very successful. We hope to continue developing programs to reach this population.

Master Gardener Garden Tour and Plant Faire/Plant Sale

500+ participants

The Master Gardener Volunteers of Cobb County used our Water Quality Laboratory and Rain and Wildlife Garden as the host site for their Plant Faire/Plant Sale this spring. Several hundred people visited our garden and learned about residential methods for stormwater pollution prevention. In addition to offering tours and wildlife education, we setup a booth to distribute education resources including materials on rain gardens, water conservation, household hazardous waste reduction, and proper pet waste disposal.



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 2012-2013 school year, our programs reached 10,761 students at 82 schools, serving 486 classrooms, providing 229 instructional hours. We estimate the cost of this service at \$11,875.

Ecoregions of Georgia

344 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?

674 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

227 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.

Campus Explorer

286 participants

Nature is everywhere - offering the perfect setting and basis for instruction! Let us guide your class on an engaging and inquiry-based interpretive walk on your campus. Students use their senses to explore, apply scientific processes, and journal observations.

Adopt-A-Stream Water Chemistry Study

414 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

294 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- Waterborne Illnesses and Human Health

125 participants

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

Snakes of Georgia & Their Adaptations

146 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.

Aquatic Bioindicators 91 participants
By taking a look at macroinvertebrates as bioindicators of water quality, students learn about the pollution sensitivity levels of different organisms and how this information provides a valuable gauge for stream health. These concepts are reinforced by playing an interactive game about how water quality affects aquatic macroinvertebrates.

Stream Monitoring...Understanding Human Impact on Water Quality 121 participants
This lesson focuses on how to determine water quality by using the Adopt-A-Stream Chemical and Macroinvertebrate data. Students engage in a discussion about the effects human behavior has on local water quality issues and how to recognize and prevent non-point source pollution.

Visual Stream Survey 24 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.

Monarch Lab (August - October only) 137 participants
Discover the different stages of Monarch butterfly development from egg to adult. Uncover exciting facts about their extraordinary natural history, such as their annual migration to Mexico. The Monarch Lab incorporates several stations for hands-on, individual learning.

Wild in the Watershed 139 participants
Why is a bird a bird, and how are reptiles different from amphibians? Are there mammals that lay eggs? Learn about animal groups and classification by examining 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 210 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.

Life Cycles 94 participants
Many animals and plants have unique life cycles. 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.





Brooke & Branch Puppet Show 7,039 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.

Career Day 214 participants
 Students learn about the field of environmental education and how Cobb County Water System works with the community. Students observe wildlife specimens, ask questions, and have the opportunity to share their personal experiences about local waterways, providing an opportunity to link positive behavior to water quality.

Fats, Oil, and Grease (FOG) Education Program 67 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 and Storm Drain Marking 15 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.

Traveling Treasure Trunk 12 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 29 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 700 participants
 On May 7th, 4th graders from Teasley 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 32 schools, 473 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 2012-2013, 16 schools achieved Gold Status (15 or more Green Classrooms) and 24 more classrooms participated in the program.

Professional Development for Educators 24 participants
 - Life Is A River
 - Monarchs In The Classroom



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)

Based on volunteer feedback, we launched targeted efforts to address cigarette litter in Cobb County, producing an *Eco-Logical...Tips to Reduce Your Footprint* episode focused on the water quality problems associated with tobacco product littering. We approached the Metro N. GA Water Planning District, proposing they also develop educational messaging for the region. They agreed and have drafted educational materials for an upcoming campaign. In partnership with Keep Cobb Beautiful, we drafted and received a \$2000 Keep America Beautiful CLPP grant and are in the process of implementing a project with that funding. We intend to produce a fact sheet and install CLPP stations at a local college campus this summer.

Newsletter and www.cobbstreams.org

Four issues of the quarterly newsletter, *The Thalweg*, were published this year. Over 2,000 paper and more than 3,000 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. 39 signs were requested and installed this year.

Fairy Forts and Houses

As part of our *Outdoor Romping & Creek Stomping Summer Series*, we have developed a land ethic program for youth that engages children in unstructured outdoor play and taking care of the land. Two sessions are scheduled this year. Based on participant feedback, we hope to continue developing this concept.

Anuran Monitoring

Developed in-house in 2007, based on concern from residents about the lack of spring peppers in their area, our frog call program has generated interest and engagement with schools and community groups. We plan to revisit the structure and update the resources for this program to better recruit and retain participants.

Fats, Oil, and Grease (FOG) Education

The Metro N. GA Water Planning District recently announced their intention to implement a FOG-themed video contest for high school students in spring 2014. In preparation for this program, we are planning to develop age-appropriate outreach that supports content knowledge for students to better develop their ideas regarding FOG education. It hopes to address specifically, problem behaviors, pollution impacts, and prevention strategies.

COMMUNITY CONNECTIONS

As active practioners 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
- 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 Chair
- Rivers Alive: Advisory Board, Education Chair
- Council of Outdoor Learning: Steering Committee
- Georgia Adopt-A-Stream: Coordinator, Technical Advisor
- Southeast Environmental Education Alliance: Project Manager

Partnerships

- Georgia Adopt-A-Stream
- Rivers Alive
- GA Project WET
- GA Project Wild
- GA Forestry Association - Project Learning Tree
- National Park Service
- Georgia Association of Water Professionals
- Monarchs Across Georgia
- American Rivers
- Council of Outdoor Learning
- Environmental Education Alliance of Georgia
- 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 Kennesaw - Smith-Gilbert Gardens
- City of Smyrna - Keep Smyrna Beautiful
- City of Roswell
- City of Atlanta
- DeKalb County
- Fulton County
- Gwinnett County
- Marietta Water
- 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

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

- CCWS receives Public Education Award from GAWP.
- Demonstration Rain Garden is certified as a Back Yard Wildlife Habitat, a Monarch Waystation, and a Pollinator Garden.

2005

- AAS staff is expanded to two full-time employees.
- AAS receives Rivers Alive: Outstanding Large Cleanup Award.

2004

- Demonstration Rain Garden is installed.
- AAS receives Watershed Award from EPD.
- AAS Volunteer (Greg Linton) receives Excellence in Data Collection Award.

2003

AAS receives Outstanding Outreach and Partnership Award from EPD.

2002

- AAS Program is launched.
- CCWS receives Public Education Award from GA Assoc. of Water Professionals (GAWP).

2001

- Cobb Adopt-A-Stream (AAS) Program Coordinator is hired.

REFLECTIONS



Several education programs were facilitated this year across Cobb County. Hands-on activities included wetlands, wildlife, invasive plants, natural history, 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-one-one with volunteers to support their monitoring projects.



2013 Children's Water Festival
Approximately 700 kids, including Cobb students from Teasley 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:

Brian Abernathy	Ric & Sharon Donato	John Huth	Carina O'Bara	Jamie Stones
The Ackermann Family	Brian Duke	Ken Jacob	Odao Ogbonmwan	Pam Subalusky
Jo Adang	Jeremy Eaves	Eric Johnson	Judy Osborne	Adam Sukenick
Laura Aikens	Chidinma Egekonye	Nick Jokay	Michael O'Shield	Cornelius Tarver
Ina Allison	Lisa Ellison	Cary Jones	Isabel Ott	Silvia Tenenbaum
Derek Angel	Micah Entrekin	Jessica Jones	Toi Patin	Mary Terry
Chuck Armentrout	Alyson Epp	Judy Jones	Mark Patterson	Dave Thomas
Bob Arnold	Ashley Evans	K.C. Kadow	Angela Payne	Marjorie Thomas
Delon Barfuss	Katey Evans	Rebecca Kapala	Sabrina Pemberton-Piper	Breanne Thompson
Scott Baun	Norm Fagge	Tim Kelley	Mike Perry	James Thorpe
Brett Bass	Karen Faucett	Monica Kilpatrick	Mike Petelle	Susie Throop
Jessica Bassett	Jennifer Farace	Shanna King	Stacy Pitts	Andrea Trilby-Bassett
Rick Bauer	Dolly Fehd	Anne Kirk	Tim Phillips	Amy and Luke Turner
Terry Bennekou	Erin Feichtner	William Klosowski	Ed Plansker	Elizabeth Turner
Cecelia and Lisa Birochnik	Amy Frost	Suzzannah Kolbeck	Brad Plumley	David Tyler
Annie Blissit	Cynthia Foster	Oluwatobi Komolade-Williams	Diane Powell	Timmy Vaughn
Yolanda Boazman	Jeff Fulton	Steve Lawton	Will Powell	Meghan Vetraino
Ken Bouland	Patricia Fulton	Donna Leavall	Sharon Powers	Jake Waldner
Robert Bourne	Denise Gadd	Jesse LeBoeuf	Jennifer Pramuk	Wayne Waldrip
Angie Bolton	Katie Gaudette	Anne Ledbetter	David Price	Lynn Walston
Steve Brady	Sharika Gavin	Eric Lee	Carolyn Pusey-Wade	Amy Warnock
Jamie Brener	Carolyn Gentry	Judith Lee	Donald Radford	Morning Washburn
Lauren Brewer	Sylvia Gerbovaz	Simon Locke	Denny Rhodes	Michael Watson
Brittany Breymeier	Rositsa Germanova	Robert Longyear	Eddie Rhodes	Ashley Wayman
David Bridges	Connie Ghosh	Carla Loosier	Marvin Richards	Leza Weber
Sally Brooking	Alicia Giddens	Joe Lukas	Richard Richey	Hubert Weiland
Thomas Brown	Frank Gipson	Samirra Madhlom	Jack Riggensbach	Charles Wells
Roger Buerki	Christy Goss	Hunter Marine	Charles Roebuck	Michael Williams
Evelyn Burdette-Elgqvist	Roseanne Guerra	Holly Martin	Debra Roman	Justin Wilson
Gigi Burke	Charles Gutierrez	Ginny Mauldin-Kinney	Kim Sanders	Jeanine Whitmire
Paige Bushart	Kristina Ha	Linda May	Donna Sausville	John Wickson
Edward Cammann	Stacey Haire	Gayle McAllister	Nikeya Savala	Kaye Wilson
George Camp	Michael Hallen	Jason McCoy	Daryl Sawyer	Jeff Wix
Sharon Camp	Kit Hambleton	Steve McCullers	Scott Schomer	Andrew Wright
JJ Campbell	Phillip Hannaford	Montavious McDonald	Ashley Schoolfield	David Zandstra
Kimberly Caras	Terrilyn Hannah	Nancy McGregor	Charles Scott	
Jamie Cint	Melanie Hansel	Grady McWhorter	Andrea Searles	... And to anyone
Annette Clark	Harold Harbert	Jennifer Mercure	Diane Searles	we inadvertently
Carmen Cantero	Emily Harper	Marty Meloy	The Seedorf family	forgot!
Ryan Coover	Melanie Harris	Susan Meyers	Mike Seeley	
Cheri Craft	Lallie Hayes	Ande Millsaps	Pradip Shah	
Candice Crawford	John Henry	Diane Minick	Steve Shelton	
Sally Creel	Bill Higgins	Michael Montoya	Anne Shenk	
Todd Crew	The Higgins Family	Heather Moody	John Shimmin	
Stacy Cromer	Jerry Hightower	Lois and Nancy Morrison	Andreas Shoredits	
Vicki Culbreth	Larry Hill	Tara Muenz	David Short	
Gretchen Davis	Rick Hitchcock	Sarah and Stephen Murray	Annette Simpson	
John Davis	Jeff Hite	Michelle Myers	Rusty Simpson	
Kim Davis	Zeb Holcomb	Cindy Nablo	Henry Skoog	
Jaap DeRoode	Kim Holland	Tamera Neal	Dennis Smith	
Susan DeRosa	Glenn Holley	Rita and Patrick Neely	Kevin Smith	
Daniela Dewendt	Chelsea Hopkins	Steve Nestor	Pamela Smith	
Michael Dobbins	Aaron Howard	Travis Neumuller	Roberta Smith	
Dan Domanik	Allison Hughes	Kathy Nguyen	Sharon Smith	

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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Conneting 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 2013