



# Annual Report of Activities

YEAR 6 / SEPTEMBER 2013 - AUGUST 2014

DECEMBER 2014



The initial regional watershed partnership that led to the creation of the Florence Darlington Stormwater Consortium (FDSC) began in the fall of 2008 and was officially adopted in November 2009 with the signing of a joint resolution by officials from the City of Florence, Darlington County, and Florence County. During this 2013-2014 reporting year, the FDSC welcomed an additional community partner. Aware of the group's water quality outreach and involvement efforts, the City of Darlington elected to join the FDSC in anticipation of MS4 designation.

The FDSC's education partners play a vital role in providing public education opportunities. The Environmental Discovery Center at Lynches River County Park and Kalmia Gardens of Coker College integrate water quality protection into the majority of their programs. Participants in those programs constitute a large portion of the overall impacts of the Consortium.

Keep Florence Beautiful, the local Keep America Beautiful affiliate, continues to provide strong support for water resource protection and stewardship by coordinating community cleanup activities including hosting a cleanup location in conjunction with the statewide Beach Sweep/River Sweep. This year, they expanded their efforts to include proper pet waste disposal and were successful in securing a Keep South Carolina Beautiful grant from PalmettoPride to support the "Clean Water, Clean Yards, Clean Shoes!" campaign. Grants funds were used to purchase portable pet waste bag dispensers for distribution through the Florence Area Humane Society and fifteen pet waste stations were available by application to homeowner associations, neighborhood associations, and public parks.

A fats, oils, and grease (FOG) campaign targeting restaurants was launched in the summer of 2014. This commercial effort will continue and will be paired with the residential effort "Keep Your Drain Fat Free" beginning in the fall of 2014. Additional plans for Year 7 include the installation of practice demonstrations which serve as passive learning opportunities with the goal of having at least one demonstration in each MS4 community by 2017. Given the valuable role our education partners serve in reaching a larger and more diverse audience, the FDSC will continue to seek new partners who share a passion for protecting South Carolina's water resources.



**Josh Whittington**  
*Compliance Superintendent  
City of Florence*

*The City of Florence was happy to assist with the Rain Barrel Art Review (RBAR) from building the barrels to displaying them at the Pecan Festival in downtown Florence. The call for artists was a great way to tap into the local arts community. With festival attendance estimates exceeding 50,000, it is a great venue for sharing information with the local community.*

## 2014 Highlights

- Principles of watershed-friendly landscaping practices were highlighted through a 9-month Carolina Yards/WBTW News 13 partnership that included both television and online elements.
- 4-H<sub>2</sub>O, a water based science day camp was offered in both Florence and Darlington Counties, increasing the number of youth participating in hands-on, inquiry based lessons and activities designed to foster an appreciation of South Carolina's water resources.
- A new event, the Rain Barrel Art Review, engaged the local arts community to showcase the benefits of rainwater harvesting by painting rain barrels which were displayed at the Pecan Festival in downtown Florence and later auctioned online to support the FDSC's water education and protection efforts.
- Education partner Keep Florence Beautiful enhanced the FDSC's Pet Waste Outreach Campaign by securing grant funding for the distribution of pet waste stations to high traffic areas such as homeowner/neighborhood associations and public parks.
- Participation in public involvement activities such as community cleanups and storm drain marking remained high, demonstrating community support for healthy waterways.

### TOTAL OUTREACH ACTIVITIES AND TOTAL NUMBER REACHED (*estimated*)

1. Television: 2,309,025
2. Radio: 29,086
3. Internet and Social Media: 375,492
4. Publications: >286,910
5. Outreach Materials: 1,031
6. Public Events: 63,015
7. Presentations: 5,235
8. Workshops, Summer Camps, Outdoor Tours: 642
9. Community Cleanups: 610 Volunteers / 25.5 Tons of Litter
10. Storm Drain Marking: 6 Volunteers / 84 Markers
11. Council/Committee Meetings: 303
12. Rain Barrel Art Review: 8 artists/groups, 8 purchasers, ~50,000 in attendance

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The Florence Darlington Stormwater Consortium includes representatives from three regulated Small Municipal Separate Storm Sewer Systems (SMS4): the City of Florence, Darlington County, and Florence County. Through the Consortium, these representatives work as a single entity to maximize the efficiency of stormwater education and outreach efforts in the Pee Dee region of South Carolina. The City of Darlington joined the Consortium on April 8, 2014 in anticipation of MS4 designation.

## Local SMS4 Consortium Representatives

SMS4	Representatives
City of Florence	Michael Hemingway Donnie McBride Forrest Whittington Josh Whittington
Darlington County	Doug Reimold Rodney Tucker Julie Ritz
Florence County	Tripp Ward

Future SMS4	Representatives
City of Darlington	Howard Garland Lisa Challian-Rock



The Florence Darlington Stormwater Consortium’s education partners include government agencies, non-profits, and businesses who share the Consortium’s mission of enhancing water resource protection and stewardship. These education partners are a tremendous asset which enable the FDSC to reach a larger and more diverse audience than any single entity acting alone.



## MISSION STATEMENT

*To enhance water resource protection and stewardship throughout Florence and Darlington Counties through stormwater education, public involvement and outreach, and by fostering partnerships with local governments, citizens, businesses, schools, and organizations to support healthy waterways.*

- Maximize efficiency of stormwater education efforts in the upper Pee Dee region of South Carolina by using a regional/watershed approach.
- Develop and implement a cohesive education strategy that addresses the range of stormwater pollutants using a prioritized approach that capitalizes on local training resources.
- Foster and expand upon citizen involvement in stormwater management through this effort's education and participation in programs.
- Encourage behavioral change towards improved environmental protection and awareness through stormwater education.
- Facilitate collaboration among local organizations interested in watershed-related education to best meet the educational needs of the local communities and their public.
- Through partnership with MS4s, leverage local education resources and organized outreach programs to meet the NPDES Phase II permit requirements for public stormwater education and outreach to achieve greater water resource protection.
- Actively participate in collaborative stormwater education that can be presented and applied in South Carolina and nationwide.



*“We are never far from the lilt and swirl of living water. Whether to fish or swim or paddle, or only to stand and gaze, to glance as we cross a bridge, all of us are drawn to rivers, all of us happily submit to their spell. We need their familiar mystery. We need their fluent interflowing with our own.”*

*~John Daniel*

# Annual Report of Activities Format

The annual report is a comprehensive document that provides a summary of all stormwater related public education and outreach activities carried out by the Consortium during the September 1, 2013 through August 31, 2014 reporting year. Please note that some dates may include previous or future reporting years due to varied reporting time frames.

Information included in the annual report is obtained from an online database. Consortium members and partners contribute to the database throughout the year.

The report delineates between two basic activity categories: public education and public involvement. Each activity includes the following information: lead provider, supporting partner, activity description, date, number of impacts and target audiences. Due to space limitations, target audiences have been abbreviated throughout the report and are identified in the table below.

## Target Audience Abbreviations

Abbreviation	Audience
GP	General Public
HM	Homeowners
YT	K-12 Youth and Teachers
HE	Higher Education (Students, Faculty, Staff)
T	Technical (Engineers, Developers, Contractors, Landscape Architects)
EA	Elected and Appointed Officials
DIS	Directly-involved and Supervisory Staff (Stormwater Managers, Maintenance, Facilities, Custodians, Groundskeepers, etc.)
P	Pet Owners
R	Restaurant Staff



## Mass Media (Television)

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension	SC ETV	Making It Grow!: FDSC Coordinator Terasa Lott highlights water related stewardship practices and addresses questions concerning best management practices for protecting water quality each week during the show. *Number reported is the average number of persons per household applied to the projected number of households that viewed Making It Grow! during the monitored period of November 2013 - July 2014. This number is conservative as it does not account for the SC Channel and only represents one episode's viewing.	Weekly	27,025	GP, HM
Clemson Extension	WBTW	February topic addressed problems associated with leaves and storm drains such as clogging, flooding, and excess algae growth.	2/1/14 - 2/28/14	326,000	GP, HM
Clemson Extension	WBTW	March topic focused on the importance of soil testing and smart fertilization practices as well as the downstream impacts of nutrient pollution.	3/1/14 - 3/31/14	326,000	GP, HM



### WBTW/CAROLINA YARDS PARTNERSHIP:

Viewers in the Myrtle Beach-Florence market were exposed to the principles of watershed-friendly landscaping through the Carolina Yards campaign. The campaign, a 9-month partnership with WBTW, consisted of: monthly promotional spots, online banner ads, a news at noon interview, and news segment. The campaign, endorsed by Chief Meteorologist Frank Johnson, targeted avid gardeners and weekend warriors with the goal of encouraging them to engage in gardening activities that make positive changes in the environmental quality of their yards, neighborhoods, and surrounding waterways.

## Mass Media (Television)

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension	WBTW	April topic highlighted the benefits of rainwater harvesting and using rain as a resource.	4/1/14 - 4/30/14	326,000	GP, HM
Clemson Extension	WBTW	May topic encouraged the use of native plants in the landscape.	5/1/14 - 5/31/14	326,000	GP, HM
Clemson Extension	WBTW	June topic illustrated the connection between pet waste and water quality.	6/1/14 - 6/30/14	326,000	GP, HM, P
Clemson Extension	WBTW	July topic presented viewers with suggestions for conserving water and protecting water quality in the home landscape.	7/1/14 - 7/31/14	326,000	GP, HM
Clemson Extension	WBTW	August topic emphasized the concept of managing yard pests responsibly through Integrated Pest Management.	8/1/14 - 8/31/14	326,000	GP, HM

## Mass Media (Radio)

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension	Miller Communications	Radio PSA discussing the importance of proper disposal of fats, oils, and grease (FOG).	2/24/14 - 8/31/14	14,543	GP, HM
Clemson Extension	Miller Communications	Radio PSA regarding septic system maintenance.	2/24/14 - 8/31/14	14,543	GP, HM

**GENERAL STORMWATER AWARENESS PSA SCRIPT:** *“This is Terasa Young with Clemson Extension. Fats, oils, and grease, known as FOG, add flavor to our food but can wreak havoc on sewer and septic systems. As FOG accumulates, flow through pipes is restricted leading to backups and overflows. To keep your drain fat free, pour FOG into a container and discard when full; scrape food scraps into the garbage and wipe dishes with a paper towel before washing. This message is brought to you by the Florence Darlington Stormwater Consortium, Sumter Stormwater Solutions, and Clemson’s Carolina Clear.”*

## Mass Media (Internet)

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		Carolina Clear website	9/1/13-8/31/14	24,516 page views	GP, HM, YT, T, EA, DIS, P
Clemson Extension		Florence Darlington Stormwater Consortium website	9/1/13-8/31/14	615 page views	GP, HM, YT, T, EA, DIS, P
Darlington County		Darlington County Stormwater Management website	9/1/13-8/31/14	263 page views	GP, HM, YT, T, EA, DIS, P
Clemson Extension		Florence Darlington Stormwater Consortium Facebook Page. The page received 32 new “likes” from the previous reporting year.	9/1/13-8/31/14	98 “likes”	GP, HM, YT, T, EA, DIS, P
Clemson Extension	WBTW	February banner ads addressed problems with leaves and storm drains.	2/1/14 - 2/28/14	50,000	GP, HM
Clemson Extension	WBTW	March banner ads focused on healthy soil, including the importance of soil testing to determine fertilizer needs.	3/1/14 - 3/31/14	50,000	GP, HM
Clemson Extension	WBTW	April banner ads promoted rainwater harvesting. The more generic was designed to appeal to outdoor enthusiasts by connecting to local waterways while the other listed specific benefits.	4/1/14 - 4/30/14	50,000	GP, HM
Clemson Extension	WBTW	May banner ads encouraged the use of native plants in the home landscape.	5/1/14 - 5/31/14	50,000	GP, HM
Clemson Extension	WBTW	June banner ads focused on protecting water quality through proper pet waste disposal.	6/1/14 - 6/30/14	50,000	GP, HM, P
Clemson Extension	WBTW	July banner ads illustrated water conservation and water quality protection measures related to irrigation.	7/1/14 - 7/31/14	50,000	GP, HM
Clemson Extension	WBTW	August banner ads emphasized managing yard pest responsibly through Integrated Pest Management.	8/1/14 - 8/31/14	50,000	GP, HM

## Mass Media (Internet)

### SAMPLE WBTW/CAROLINA YARDS BANNER ADS

**Leaf Litter and Catch Basin Clogging Awareness**



- Yard debris clogs pipes and leads to flooding.

For more environmental topics

[Click Here >](#)

**Carolina YARDS**  
A GLENN EXTENSION SERVICE

**Pesticides can harm our recreational and drinking waters when not applied and stored correctly.**



Your actions can protect our rivers and beaches

To Learn More

[Click Here >](#)

**Carolina YARDS**  
A GLENN EXTENSION SERVICE

**Love your pond?**  
Create a no-mow zone



- Enhance the shoreline
- Reduce erosion
- Deter geese
- Encourage desirable wildlife

To Learn More

[Click Here >](#)

**Carolina YARDS**  
A GLENN EXTENSION SERVICE



**FD Florence/Darlington Stormwater Consortium**

**Don't Let Pollutants Down the Drain**  
It's all five stormwater!

City of Florence 843-663-3333  
Darlington County 843-335-3333  
Florence County 843-672-3333

112 people reached



## Publications

### NEWSPAPER & MAGAZINE

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		Personal column “We are all living downstream of stormwater” discussed the problems associated with stormwater including: increased volume and flow as well as water quality issues. Readers were directed to the Carolina Clear website to “be a solution to stormwater pollution.”	9/1/13	28,631	GP, HM
Darlington County		Press release titled “What is Coming Out of that Pipe” released to local media. The focus was on the importance of not discharging to water bodies, ditches, or drains and included reporting procedures.	9/5/2013	unknown	GP, HM
Clemson Extension		Personal column “When dooty calls...pick it up” spoke about pet waste and water quality. Readers were made aware of the “Clean Water. Clean Yards. Clean Shoes” campaign and the opportunity to get a doggie bandana in return for signing the Clean Water Pledge at Howl-O-Ween at Timrod Park.	10/13/13	28,631	GP, HM, P



**MORNING NEWS** FDSC Coordinator Terasa Lott utilizes a personal column to raise awareness about water quality issues and solutions. The column appears in the Pee Dee Living Section and scnow.com on the first Sunday of each month.

The image to the left is a screen capture of the October 2013 column “When dooty calls...pick it up” published in scnow.com. Through a recent experience with a foster dog, Lott shared the importance of proper disposal of pet waste.

## Publications

### NEWSPAPER & MAGAZINE

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		Personal column “Gardening: A combination of art and science” promoted soil testing as well as use of rain barrels including promoting the barrels produced through the Rain Barrel Art Review available for purchase at <a href="http://www.32auctions.com/rainbarrelartreview">www.32auctions.com/rainbarrelartreview</a> .	11/2/13	28,631	GP, HM
Darlington County		Press release titled “Scoop the Poop” released to local media. The release focused on proper disposal of pet waste.	11/13/13	unknown	GP, HM, P
Clemson Extension		Personal column “Give thanks for clean, plentiful water” appeared in the Pee Dee Living section of the Morning News. It challenged readers to consider their daily use of water and pointed out that access to clean water is something we often take for granted. Water conservation tips were included.	12/1/13	28,631	GP, HM
Clemson Extension		Personal column “Bring on the gardening events” spoke about sustainable landscaping features such as green roofs, rainwater harvesting, and composting. It also highlighted the Consortium’s rain barrel and compost bin sale at the Florence County Master Gardener Spring Extravaganza.	3/2/14	28,631	GP, HM
Clemson Extension		Personal column “Turn your trash into treasure” discussed the benefits of composting including: reducing the amount of material going to landfills, improving soil structure, increasing water holding capacity, and improving soil fertility. The column also made readers aware that compost bins are available for purchase at the Florence County Extension Office.	4/6/14	28,631	GP, HM

## Publications

### NEWSPAPER & MAGAZINE

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		Personal column titled "Learn to recognize the good guys" highlighted the components of integrated pest management in an effort to protect water quality.	5/5/14	28,631	GP, HM, DIS
Clemson Extension		Personal column titled "Beauty is in the eye of the beholder" pointed out the wildlife benefits of clover and encouraged readers to re-frame the concept of a lawn to include more than just turfgrass which requires a lot of inputs.	6/1/14	28,631	GP, HM, DIS
Darlington County		Press release titled "Swimming Pool Breaks the Law" released to local media. The release highlighted the importance of not releasing swimming pool water prior to dechlorination.	6/24/14	unknown	GP, HM, DIS
Clemson Extension	SCNLA	"Clemson's Carolina Yards Reaches Milestone During Cooperative Extension Centennial" featured in the July/August issue of the South Carolina Nurseryman Magazine. The article described each of the principles of this watershed-friendly landscaping program and encouraged residents to seek certification.	7/1/14 - 8/31/14	600	GP, HM, DIS



## Clemson's Carolina Yards Reaches Milestone During Cooperative Extension Centennial

*Terasa M. Lott, Clemson Extension*

## Publications

### NEWSPAPER

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		Personal column titled "A greener way to pressure clean" provided tips for protecting water quality while pressure cleaning.	7/6/14	28,631	GP, HM, DIS
Clemson Extension		Personal column titled "Litter harms a critter" discussed a recent live animal presentation to City of Florence youth as a mechanism for encouraging proper disposal of trash to protect wildlife and water quality.	8/3/15	28,631	GP, HM

## A greener way to pressure clean

I spend what seems like an inordinate amount of time cleaning. Our canine companions (three permanent and two fosters at the moment) have an abundance of hair, and those 20 paws track in a lot of dirt. Last week as I was cleaning their "nose art" off the storm door, I noticed an outdoor cleaning project. The vinyl siding is looking pretty dingy.

Pressure cleaning is a "go-to" for many homeowners when it comes to cleaning the exterior of a house. Be forewarned that exterior surfaces of homes are not made to withstand the force of high-pressure water. You may end up forcing water behind siding or cracks in mortar, leading to mold problems lurking where you can't see them. Whether you are a DIYer or using a professional contractor, you'll want to use pressure similar to a garden hose (under 70 psi) instead of several thousand psi, which is typical for high-pressure systems.

Having said all of that, pressure washers can be great tools in certain residential and commercial applications. Since cleaning products and the substances removed with pressure washers, such as automobile fluids, chemicals, paint and grease, can enter local waterways, care should be taken to protect water quality. Here are some ways you can be greener when pressure cleaning:

- » Don't deliberately wash dirt and debris down storm drains. Stormwater is untreated and empties directly into waterways. Instead, use a broom and dustpan to collect and place it in the trash.
- » Avoid using cleaning products that pollute waterways. If you use soap, choose phosphorus-free or biodegradable soaps so as not to promote excess algae growth.
- » When selecting a contractor, be sure they use spill containment technology to prevent wash water from entering storm drains. This includes devices such as storm drain seals and guards. While these are an extra cost to a business, they are important tools for protecting our water resources and can protect a business from costly fines for illegally discharging into storm drains.

Water is essential for life, and the recreational opportunities associated with water add so much to our quality of life. It is our job to protect the water we need, love and enjoy. As Jacques Cousteau said, "We forget that the water cycle and the life cycle are one."

**Terasa Lott**  
Natural Resources Agent

Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer.



## Outreach Materials

### POSTCARDS, HANDOUTS, AND PROMOTIONAL ITEMS

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension	City of Florence, City of Darlington, Darlington County, Florence County	Information displays are located in at least one high-traffic location per community.	9/1/13 - 8/31/14	475	HM, GP, P
Darlington County	SC DHEC, US EPA	Coloring and activity sheets produced by SC DHEC and US EPA are given to youth visiting the Darlington County Planning Office and distributed at public events.	9/1/13 - 8/31/14	125	YT
Keep Florence Beautiful, Clemson Extension	Florence Area Humane Society	Portable pet waste bag dispensers were distributed through the Florence Area Humane Society. *See Partner Highlight for more information.	4/16/13 - 8/31/14	200	P
Clemson Extension		Pens, fish shaped compressed sponges, stormwater hotline business cards, and "Be Wise When You Fertilize Stickers" were distributed at public events.	9/1/13 - 8/31/14	176	HM, GP, YT



## Outreach Materials

### POSTCARDS, HANDOUTS, AND PROMOTIONAL ITEMS

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
City of Florence	Clemson Extension	FOG Outreach Material (Poster, Handout, and Grease Bin Stickers) were distributed to City FSEs to discourage stormwater pollution through improper disposal of FOG.	7/23/14 - 8/31/14	55	R



**FOG OUTREACH CAMPAIGN:** An outreach campaign targeting proper handling and disposal of fats, oils, and grease (FOG) by restaurant staff was initiated in the summer of 2014 and will continue into the next reporting period. Printed materials include: grease bin stickers (pictured to the left), educational handouts (pictured bottom left), and employee posters (bottom right). Materials are being distributed by MS4 staff.

### The Dangers of FOG



What does FATS, OILS, and GREASE management have to do with *your* business and local water quality?

FOG (fats, oils, and grease) is a major factor in most kitchens. These cooking-by-products come from deep fryers, frying pans, and grills. It is transported by buckets and is washed off of cleaning surfaces, often finding its way down the stormwater drain and being discharged directly to streams, rivers, and the ocean. These by-products are devastating to our environment and lead to compliance issues for restaurants. Below are a few benefits to proper FOG management.

- 1. Avoid Expensive Repairs.**  
FOG solidifies around the insides of underground stormwater pipes. This can lead to pipe bursts, overflows, backups, and blockages, which can cost you a lot more money than proper FOG management (this includes steep fines and repair costs up to \$20,000). Food service establishments that contribute to FOG buildup in pipes can even face lawsuits.
- 2. Prevent Pollution.**  
When FOG accumulates in sewer systems and leads to overflows, sewer waste ends up in lakes, streams, and oceans, causing serious damage to the ecosystem. Furthermore, proper FOG management can help the environment by providing an otherwise wasted source of biodiesel.
- 3. Prevent inconveniences that are bad for business.**  
Greasy pipes and parking lots lead to bad odors, rodents, and pest problems.





### Tips for Minimizing Problems Associated with FOG

- 1. Prevent oil spills.** Remind kitchen workers to be careful when handling oils and fats.
- 2. Inform your employees.** Talk to employees (perhaps as part of training) about the importance of proper FOG management and the damaging effects that poor FOG management has on the environment.
- 3. Recycle or sell used oil.** Find a grease handler that will recycle grease instead of throw it away.
- 4. Clean grease traps regularly.** Any sink or floor drains that might take in oil should be connected to a grease trap or grease separation device. An overly full grease trap does not properly separate grease from water. Clean drain traps at least once a week. Contract a grease handler to remove grease from interceptor tanks at least once every three months.
- 5. Dry clean FOG.** If you use water to clean up grease, it will ultimately go down the drain. Instead of soaking up grease spills with usable rags that must be washed with water, use food grade paper to wipe up grease.
- 6. Keep FOG out of garbage disposal.** Never put fatty food scraps or oil down a garbage disposal, even if it is connected to a grease trap.
- 7. Locate grease bins appropriately.** Location, location, location! Ensure that employees can easily access outdoor grease bins and that they are placed in well-lit areas and within reasonable distance of the kitchen door.
- 8. Schedule for grease bins to be pumped regularly.** Be alert to how full grease containers are and when the grease pumping company is next scheduled to pump.
- 9. Designate a safe equipment washing area.** Kitchen mats, grills, and other equipment should be washed down in an area that does not lead to a storm drain.

**Only rain down the drain!**




Sources:  
1. Food Service Warehouse  
2. Charleston County Public Works Department

## ATTENTION EMPLOYEES

Help keep our water clean by keeping grease out of the storm drains!

- 1. Pour grease carefully.**
- 2. Always keep lid securely closed.**
- 3. IMMEDIATELY notify management when grease bin is approaching full.**



**ONLY RAIN down the drain!**



## Public Events

### FAIRS, FESTIVALS, AND CONFERENCE DISPLAYS

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson University Restoration Institute	Carolina Clear and multi-partner conference hosts	Hosted a booth at the Next Step for STEM Schools three-day institute for teachers and administrators, with take home USB drives with four classroom lessons and activities focused on the water cycle, landscape changes and pollution, pollution prevention, and bioaccumulation. Received feedback on lessons and outreach and increased website and resource awareness.	9/30/13 - 10/2/13	300	YT, DIS
Clemson Extension		Exhibit at Eastern Carolina Agricultural Fair highlighted the Carolina Yards program including rainwater harvesting. A variety of stormwater related postcards and handouts were available.	10/2/13 - 10/12/13	~60,000 *denotes total estimated fair attendance	GP, YT, HM
Clemson Extension	Florence County Master Gardeners Association	Information about the Carolina Yards program including yard certification was included at the FCMGA booth at the Fall Plant & Flower Festival at the Pee Dee State Farmers Market.	10/4/13 - 10/6/13	~100	GP, HM
Florence Area Humane Society	Clemson Extension	Informational display at Howl-O-Ween event focused on proper disposal of pet waste. Attendees signing the Clean Water Pledge were given a doggie bandana and invited to submit a photo to be posted on the FDSC website.	10/16/13	19 pledges signed for 26 dogs	GP, P



*Photos from Howl-O-Ween: Ellie, Sadie, and Annabelle's owner visited the FDSC booth and signed the Clean Water Pledge. She submitted this photo of them showing off their new bandanas. They are featured on the FDSC website as Canines for Clean Water!*

## Public Events

### FAIRS, FESTIVALS, AND CONFERENCE DISPLAYS

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Darlington County Humane Society	Clemson Extension	Distributed dog biscuit give-a-ways containing information about pet waste disposal at adoption event at Pet Lover's Warehouse in Hartsville.	11/23/13	31	P
South Carolina Nursery and Landscape Association	Clemson Extension	Booth at SCHI Trade Show highlighted the Carolina Yards program including the debut of the online searchable Plant Database. Trivia questions relating to water use and invasive species helped to engage attendees in dialogue regarding environmentally/ watershed friendly landscaping.	2/6/14 - 2/7/14	1404	T, DIS
Kalmia Gardens	Clemson Extension	Rain barrels and compost bins were available at the Kalmia Gardens booth at the Hartsville Good Living Marketplace.	3/8/14	0 sales at event but generated later sale	GP, HM
Clemson Extension	Florence County Master Gardeners Association	Educational display along with rain barrel and compost bin sale at the Florence County Master Gardeners Spring Extravaganza.	3/22/14	101	GP, HM
Kalmia Gardens	Clemson Extension	The FDSC had an educational display at the Earth Day festival at Kalmia Gardens. Rain barrels and compost bins were available for sale. Other festival activities included recycled crafts, planting seeds, and informational tables.	4/5/14	150	GP, HM, YT



## Public Events

### FAIRS, FESTIVALS, AND CONFERENCE DISPLAYS

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Environmental Discovery Center	Clemson Extension, Florence County	Booth at River Jamboree included display illustrating how stormwater can become polluted and ways to prevent that from happening. Educational postcards and coloring sheets were available as well.	4/26/14	600	GP, YT, HM, P
City of Darlington	Clemson Extension	Information booth at Market on the Square including rain barrels and compost bins available for purchase and pet bandanas for those signing the Clean Water Pledge.	6/7/14	10 pledges signed for 17 dogs	GP, HM, YT, P
SCAC	Clemson Extension	Presented booth at the SC Association of Counties to speak with county leaders regarding stormwater permits, water quality regulations, and Carolina Clear efforts.	8/3/14 - 8/4/14	300	EA



## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		Darlington County 4-H youth participated in the Butterfly garden project. Students learned the importance of rainwater harvesting throughout the school year.	8/24/13 - 6/2/14	422	YT
Clemson Extension		Clemson Extension 4-H in Darlington County conducted water quality activities in the school during the school year. Student's learned how our activities on land can pollute water and how to keep our water safe.	9/1/13 - 6/2/14	1034	YT
Kalmia Gardens		Dan Hill spoke with a class from the SC Governor's School for Science and Mathematics about stormwater runoff and potential pollutants.	9/10/13	30	YT
Clemson Extension		Presentation to 4th graders at Lucy T. Davis Elementary School at the water cycle, stormwater, and ways students can keep water clean and safe.	9/13/13	87	YT
Environmental Discovery Center		Students participating in the "Eye On The Sky" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	9/19/13	20	YT
Kalmia Gardens		Dan Hill spoke with the Coker College Education majors about the use of outdoor classrooms. He pointed out the storm drain outfall in the Gardens and talked to the group on storm water runoff, the pollutants it can carry, and the garbage patch gyres in the oceans which is a result from man's trash.	9/19/13	40	HE
Environmental Discovery Center		General stormwater awareness was included during a tour of the Environmental Discovery Center and Lynches River County Park.	9/27/13	17	GP

## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Kalmia Gardens		Dan Hill spoke to the Spring Beauty Garden Club. While speaking he informed the group about stormwater runoff and the work that Carolina Clear does in helping educate the public.	10/2/14	30	GP, HM
Environmental Discovery Center		Students participating in the “Tiny Seed” program learned about stormwater and ways to protect water quality during the nature walk portion of the program.	10/3/13	38	YT
SC Forestry Commission	Clemson Extension	T. Young and M. Nevins were instructors for the “Gifts of the Forest” station at Wood Magic Forest Fair. The station teaches 4th graders about the benefits of forests including water quality protection.	10/7/13	142	YT
Environmental Discovery Center		Students in the “Weather Watchers” program learned about stormwater and water quality during the nature walk portion of the program.	10/10/13	63	YT
Environmental Discovery Center		Students in the “Weather Watchers” program learned about stormwater and water quality during the nature walk portion of the program.	10/11/13	68	YT
Clemson Extension		The Consortium set up a table at Farm/Ag Day at All Saints Episcopal Day School in Florence. The Enviroscape was used to illustrate how stormwater becomes polluted and children were encouraged to think of ways to keep waterways clean and safe.	10/18/13	328	YT
Kalmia Gardens		Dan Hill spoke with the Coker College 101 class at Kalmia Gardens. They discussed stormwater runoff and way to keep waterways clean.	10/29/13	30	HE
Environmental Discovery Center		General stormwater awareness was included during a tour of the Environmental Discovery Center and Lynches River County Park.	11/3/13	7	GP

## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Environmental Discovery Center		Students in the “Birds and Worms” program learned about stormwater and water quality during the nature walk portion of the program.	11/5/13	21	YT
Environmental Discovery Center		Students in the “Tiny Seed” program learned about stormwater and water quality during a nature walk.	11/7/13	90	YT
Environmental Discovery Center		Students in the “Earth’s History” program learned about stormwater and water quality during a nature walk.	11/8/13	18	YT
Clemson Extension		T. Young visited the Pamplico Boys & Girls Club where the children (5th-8th grade) participated in an interactive story titled “Who polluted the river.” They made an origami frog and learned about how amphibian skin makes these animals sensitive to pollution.	11/11/13	103	YT
Clemson Extension		T. Young visited the Pamplico Boys & Girls Club where the children (1st-4th grade) participated in an interactive story to learn about how pollutants get into surface water. They made a paper plate frog to remember that water quality can hurt wildlife.	11/13/13	105	YT





## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		T. Young spoke to the 4 O’Clock Garden Club about Carolina Yards. The presentation highlighted the twelve principles and the certification component of this program.	11/14/13	15	GP, HM
Environmental Discovery Center		Students in the “Weather Watchers” program learned about stormwater and water quality during the nature walk portion of the program.	11/15/13	41	YT
Environmental Discovery Center		Students in the “Weather Watchers” program learned about stormwater and water quality during the nature walk portion of the program.	11/19/13	45	YT
Clemson Extension		“Rain Gardens: Putting Plants to Work” presentation to Pee Dee Plant Professionals.	11/21/13	14	DIS
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	11/26/13	46	YT
Clemson Extension		Hosted SC Green Steps Schools training at Sneed Middle School. Green Steps Schools is an environmental education and action initiative that recognizes schools in South Carolina who take annual sustainable steps toward becoming more environmentally responsible. The training focused on water quality projects.	12/4/13	4	YT
Clemson Extension		4th graders at Carolina Elementary learned about stormwater runoff using the Enviroscape. Ways to protect water quality were discussed and the children made an origami frog.	12/6/13	47	YT
Environmental Discovery Center		Students in the “Extinction is Forever” program learned about stormwater and water quality during a nature walk.	12/6/13	75	YT

## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Environmental Discovery Center		Students in the “Fossil Discovery” program learned about stormwater and water quality during a nature walk.	3/4/14	44	YT
Kalmia Gardens		Dan Hill spoke with the Green Thumb Garden Club. While speaking he informed the group about stormwater runoff and the work that Carolina Clear does in helping educate the public.	3/5/14	45	GP, HM
Environmental Discovery Center		Students in the “Growing Up Wild” program learned about stormwater and water quality during a nature walk.	3/19/14	19	YT
Kalmia Gardens		Dan Hill led a Jr. Green Gardener class in a discussion using the enviroscape model about the importance of water and protecting our waterways.	3/20/14	20	YT
Clemson Extension		T. Young spoke to two health class at Francis Marion University about stormwater and water quality. The talk focused on ways the students could keep waterways clean and safe.	3/25/14 - 3/26/14	42	HE
Environmental Discovery Center		Students in the “Extinction is Forever” program learned about stormwater and water quality during a nature walk.	3/28/14	75	YT
Kalmia Gardens		Dan Hill spoke with the North Hartsville Elementary Butterfly Club about the importance of protecting our waterways.	4/10/14	20	YT

*“With every drop of water you drink, every breath you take, you’re connected to the sea.*

*No matter where on Earth you live.”*

*~Sylvia Earle*

## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Kalmia Gardens		Dan Hill participated in the Cherryvale Elementary School Earth Day Festival in Sumter, SC. He covered many topics including stormwater runoff, the importance of clean water, and protecting our waterways.	4/15/14	200	YT
Environmental Discovery Center		Students participating in the “Eye On The Sky” program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	4/22/14	73	YT
Environmental Discovery Center		Students in the “Growing Up Wild” program learned about stormwater and water quality during a nature walk	4/23/14	31	YT
Environmental Discovery Center		Students in the “Sensational Seasons” program learned about water quality and stormwater during a nature walk.	4/24/14	43	YT
Kalmia Gardens		Dan Hill spoke with the Kiwanis group about Kalmia Gardens and the Gardens efforts to keep Black Creek clean.	4/28/14	50	GP, HM
Environmental Discovery Center		Students participating in the “Tiny Seed” program learned about stormwater and ways to protect water quality during a nature walk.	4/29/14	47	YT
Environmental Discovery Center		Students in the “Wildlife and Weather” program learned about stormwater and water quality during a nature walk.	5/2/14	51	YT
Clemson Extension		Extension Agents Terasa Young and Ben Powell spoke to the Bridgewood Community HOA Pond Committee regarding their issues with erosion/ bank failure. The presentation discussed the problems with “golf course” type maintenance and gave information about shorescaping and buffers.	5/5/14	6	HM

## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Environmental Discovery Center		Students in the “Growing Up Wild” program learned about stormwater and water quality during a nature walk.	5/7/14	22	YT
Environmental Discovery Center		Students participating in the “Tiny Seed” program learned about stormwater and ways to protect water quality during the nature walk portion of the program.	5/9/14	5	YT
Environmental Discovery Center		Students in the “Extinction is Forever” program learned about stormwater and water quality during a nature walk.	5/9/14	90	YT
Environmental Discovery Center		Students in the “Healthy People/ Healthy Planet” program learned about stormwater and water quality during a nature walk.	5/13/14	15	YT
Environmental Discovery Center		Students in the “Weather Watchers” program learned about stormwater and water quality during the nature walk portion of the program.	5/14/14	120	YT
Environmental Discovery Center		Students in the “Fossil Discovery” program learned about stormwater and water quality during a nature walk.	5/15/14	29	YT
Clemson Extension		Enviroscape presentation to 5th/6th grade classes at Briggs Elementary highlighted ways to protect water quality. Students created water cycle bracelets and were given a rain barrel which they planned to paint and install.	5/16/14	47	YT
Environmental Discovery Center		Students in the “Growing Up Wild” program learned about stormwater and water quality during a nature walk.	5/21/14	43	YT
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	5/21/14	80	YT

## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Environmental Discovery Center		Students in the “How Many is Too Many” program learned about stormwater and water quality during a nature walk.	5/22/13 - 5/22/16	115	YT
Environmental Discovery Center		Students in the “Water Quality Assessment” program used scientific equipment to perform a chemical analysis of the Lynches River.	6/5/14	15	YT
Environmental Discovery Center		Students in the “Extinction is Forever” program learned about stormwater and water quality during a nature walk.	6/10/14 - 6/11/14	85	YT
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	6/12/14	35	YT
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	6/20/14	23	YT
Environmental Discovery Center		Students in the “Making Tracks” program learned about stormwater and water quality during a nature walk.	6/26/14	14	YT
Environmental Discovery Center		Students in the “Lost in the Wild” program learned about stormwater and water quality during a nature walk.	7/9/14	26	YT
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	7/9/14	10	YT
Environmental Discovery Center		Students in the “Extinction is Forever” program learned about stormwater and water quality during a nature walk.	7/10/14	29	YT
Environmental Discovery Center		Students in the “Tiny Seed” program learned about stormwater and water quality during a nature walk.	7/15/14	15	YT

## Presentations

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	7/15/14 - 7/18/14	260	YT
Environmental Discovery Center		Students in the “How Many is Too Many” program learned about stormwater and water quality during a nature walk.	7/22/14	21	YT
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	7/22/14	25	YT
Environmental Discovery Center		Students in the “Making Tracks” program learned about stormwater and water quality during a nature walk.	7/23/14	63	YT
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	7/25/14	39	YT
Environmental Discovery Center		Students in the “Wonders of Wildlife” program learned about stormwater and water quality during a nature walk.	7/29/14 - 7/30/14	72	YT
City of Florence	Clemson Extension	T. Lott spoke to Summer Playground Program youth about litter and its impact on water quality and wildlife.	7/30/14	144	YT
Environmental Discovery Center		Students in the “Making Tracks” program learned about stormwater and water quality during a nature walk.	8/7/14	18	YT
Florence County		Florence County hosted a training on residential stormwater permitting requirements.	8/20/14	29	T



*“Teaching children about the natural world should be treated as one of the most important events in their lives.”*

*~Thomas Berry*



## Workshops, Summer Camp, Outdoor Tours

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Environmental Discovery Center		5 mile paddle of Lynches River with a stop at the beach area to discuss the importance of clean river habitats.	9/7/13	30	GP, HM, YT
Kalmia Gardens		Dan Hill led a nature tour at Kalmia Gardens. The group visited the “What is Stormwater” sign and talked about stormwater and ways to keep water clean and safe.	9/24/13	25	YT
Kalmia Gardens		Dan Hill led a nature tour at Kalmia Gardens. Time was spent discussing stormwater while observing the outfall into Black Creek.	10/11/13	28	YT
ScienceSouth		Middle school students learned about water quality in the “What’s in your watershed” workshop. The workshop included testing for pH, temperature, and conductivity as well as separation of solids by filtration, magnetism, and skimming.	10/16/13	29	YT
Kalmia Gardens		Participants in the Jr. Green Gardener class walked to and read the “What is Stormwater” sign.	3/20/14	20	YT
Clemson Extension		Clemson Extension 4-H students from Darlington County visited a local greenhouse to learn about the daily operations, safe pesticide use, and potential problems with improper disposal of pesticides.	3/23/13	34	YT
Clemson Extension		Conducted a 4-H Junior Master Garden program at a local church in Darlington county. The program included watershed and water cycle activities.	4/1/14 - 5/29/14	22	YT
Kalmia Gardens		Dan Hill led a nature tour which stopped at the “What is Stormwater” sign and discussed stormwater runoff and ways to reduce pollution entering waterways.	4/22/14	30	YT

## Workshops, Summer Camp, Outdoor Tours

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Kalmia Gardens		Dan Hill led a nature tour which stopped at the “What is Stormwater” and discussed ways to reduce polluted runoff.	4/23/14	30	YT
Kalmia Gardens		Nature tour stopped at the “What is Stormwater” and participants discussed ways to reduce polluted runoff.	4/30/14	20	GP
Kalmia Gardens		Nature tour stopped at the “What is Stormwater” and participants discussed ways to reduce polluted runoff.	5/2/14	35	GP
Environmental Discovery Center		5 mile paddle of Lynches River with a stop at the beach area to discuss the importance of clean river habitats.	5/3/14	30	GP, HM, YT
Kalmia Gardens		Dan Hill led an elementary school field trip at Kalmia Gardens where he discussed the Black Creek watershed and the importance of clean water.	5/7/14	25	YT
Kalmia Gardens		Dan Hill led a walk for a senior group. The group stopped at the stormwater outfall and discussed runoff as “people pollution” and ways to minimize polluted runoff.	5/8/14	40	GP, HM
Environmental Discovery Center		5 mile paddle of Lynches River with a stop at the beach area to discuss the importance of clean river habitats.	5/10/14	30	GP, HM, YT
Kalmia Gardens		Dan Hill led an elementary school field trip at Kalmia Gardens where he discussed the Black Creek watershed and the importance of clean water.	5/15/14 - 5/16/14	53	YT
Kalmia Gardens		Dan Hill led an elementary school field trip at Kalmia Gardens where he discussed the Black Creek watershed and the importance of clean water.	5/20/14	38	YT



## Workshops, Summer Camp, Outdoor Tours

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension	Kalmia Gardens	4-H2O Camp: The educational camp taught youth to understand, appreciate, and protect life in and around the water. Participants learned about the aquatic environment, how a watershed works, how it affects the quality of water resources and how to protect water. They also learned about insects and their role in the ecosystem.	6/5/14 - 6/6/14	24	YT
Kalmia Gardens		Dan Hill held a half day camp for Carolina Kids. In this camp we looked at the enviroscape model, the water cycle, stormwater runoff, protecting our waterways, the importance of clean water, were some of the topics discussed.	6/16/14 - 6/20/14	20	YT
Clemson Extension		Children participating in 4-H2O day camp in Florence County learned about watersheds, water quality, aquatic life, and stewardship through a variety of lessons and activities. Campers learned about fish biology and management from DNR staff, sampled macroinvertebrates as indicators of water quality, and spent time kayaking to foster an appreciation for our water resources.	6/16/14 - 6/20/14	20	YT
Kalmia Gardens		Dan Hill led a half-day Eco Camp for middle school children. Activities included water chemistry, aquatic macroinvertebrate sampling, and paddling.	6/23/14 - 6/28/14	8	YT

*“The most important environmental issue is one that is rarely mentioned, and that is the lack of a conservation ethic in our culture.”*

*~Gaylord Nelson*

## Workshops, Summer Camp, Outdoor Tours

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Kalmia Gardens		Week in the Wild camp for rising 1st and 2nd graders. In this camp many water quality topics were discussed.	7/14/14 - 7/18/14	25	YT
Kalmia Gardens		Week in the Wild camp for rising 3rd and 4th graders. Water quality topics and activities were included.	7/21/14 - 7/25/14	20	YT
Kalmia Gardens		Week in the Wild camp for rising 5th and 6th graders. The camp included lessons and activities related to water quality and stewardship.	7/28/14 - 8/1/14	6	YT



## Community Cleanups

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
City of Florence		The City of Florence maintains 3 sites where the public can safely and properly dispose of used motor oil and filters.	7/1/13 - 6/30/14	435 gallons of oil	GP
Darlington County		Recycling/disposal stations accept paint, used cooking oil, use motor oil, and e-waste.	9/1/13 - 8/31/14	unknown	GP, HM
SC DNR, SC Sea Grant Consortium	Clemson Extension, Keep Florence Beautiful	Cleanup at Jeffries Creek Park in Florence as part of Beach Sweep/ River Sweep.	9/21/13	275 lbs collected, 54 volunteers	GP, YT
Clemson Extension		4-H youth in Darlington County adopted a spot for beautification purposes.	9/30/13 - 7/2/14	82	YT
City of Florence		Special scrap metal collection for City of Florence residents to ensure proper disposal of metal and prevent illicit dumping.	10/22/13 - 10/25/13	1.07 tons	GP, HM
Clemson Extension		Darlington 4-H youth participated the local Animal Shelter Cleanup. and learned the importance of cleaning up pet waste.	2/4/14	27	YT
City of Florence	Keep Florence Beautiful	E-Waste collection by City of Florence in conjunction with the Great American Cleanup.	3/15/14	3.19 tons collected	GP, HM
Keep Florence Beautiful	City of Florence, Clemson Extension	Great American Cleanup	3/15/14	42,190 lbs collected, 447 volunteers	GP, HM, YT
City of Florence		E-Waste collection by City of Florence in conjunction with the Great American Cleanup.	3/17/14 - 3/21/14	1.74 tons	GP, HM



## Storm Drain Marking

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		A volunteer marked storm drains in the College Park Neighborhood.	9/9/13	1 volunteer, 60 markers	GP, HM
Clemson Extension		Volunteers from CSX marked storm drains in the Cloisters Neighborhood.	10/11/13	5 volunteers, 24 markers	GP, HM



**STORM DRAIN MARKING:** Educational door hangers (pictured left) are placed on houses in area where storm drains are marked to raise awareness of the message behind the markers. The photograph below shows a storm drain with a Florence Darlington Stormwater Consortium marker.



*"...the care of the earth is our most ancient and most worthy and, after all, our most pleasing responsibility. To cherish what remains of it, and to foster its renewal, is our only legitimate hope."*

*~Wendell Berry*

## Council/Committee Meeting

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Darlington County		Monthly stormwater updates are provided to Planning Commission and documented in meeting minutes. Minutes are sent to County Council for approval and posted online.	9/1/13 - 8/31/14	279	EA
City of Florence		Semi-open invited meeting to review final copy of the Unified Development Ordinance.	3/20/14	15	T
Darlington County		Martin S. Fox, PE and Doug Reimold, Planning Director, gave special presentation to Planning Commission regarding stormwater permit and the importance of water quality protection activities.	8/21/14	9	EA

## Rain Barrel Art Review

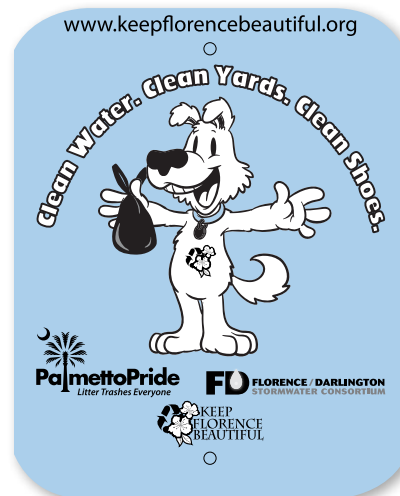
LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension	City of Florence	Rain Barrel Art Contest and Auction	9/1/13 - 11/18/13	8 artists, 8 purchasers	HM



## Keep Florence Beautiful Awarded Keep SC Beautiful Grant

In January 2014, Keep Florence Beautiful (KFB) was awarded a Keep South Carolina Beautiful Grant in the amount of \$2983.00 to support the “Clean Water, Clean Yards, Clean Shoes!” campaign. The campaign, originally piloted by the Florence Darlington Stormwater Consortium, was aimed at educating citizens about the negative impacts of pet waste with the ultimate goal of increasing the number of people picking up after their pets.

A portion of the grant funds were used to purchase portable pet waste bag dispensers. These dispensers were paired with pet waste postcards from the Florence Darlington Stormwater Consortium and given to the Florence Area Humane Society for distribution to anyone adopting a dog or puppy. The remainder of the funds were used to purchase fifteen pet waste stations. The stations were made available to homeowner associations, neighborhood associations, and public parks through an application process. At the conclusion of this reporting year, five of the fifteen stations had been awarded. KFB will continue to seek applications for the remaining pet waste stations.



## 2013 Rain Barrel Art Review

Looking for a creative way to promote rainwater harvesting, the Florence Darlington Stormwater Consortium presented the 2013 Rain Barrel Art Review. The program challenged local artists to use their talent to educate the community about the benefits of rainwater harvesting. A total of eight barrels were entered in the review. The barrels were displayed at the Pecan Festival on Saturday, November 2 in downtown Florence. An online poll was used to allow people to vote for their favorite barrel and prizes were awarded for 1st, 2nd, and 3rd place. Following the voting, the painted barrels were auctioned online with proceeds support the Consortium's water education and protection efforts. A second Rain Barrel Art Review is planned for spring 2015.

*1st place  
Winter Moore*



*2nd place  
Northwest Park  
Community Center*



*3rd place  
Barnes Street  
Teen Program*



*Jordan Blackman*



*Jordan Blackman*



*Holly Beaumier*



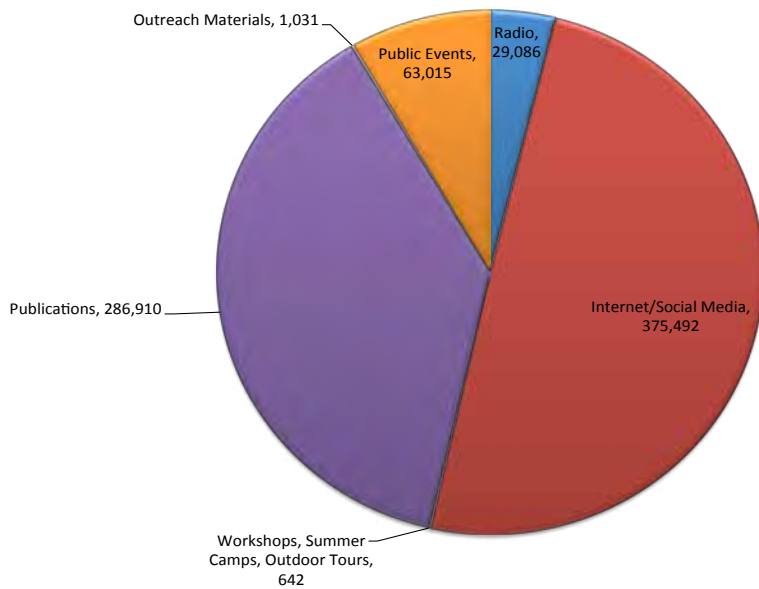
*Levy Park Youth Center*



*Maple Park Afterschool  
Participants*

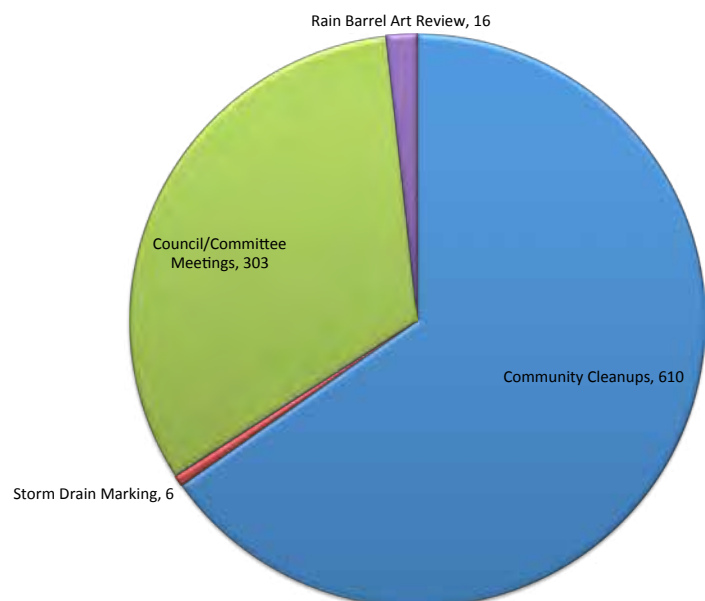


## YEAR 6 EDUCATION IMPACTS BY METHOD



In Year 6, the Florence Darlington Stormwater Consortium reached approximately 3,070,426 people through public education programs and activities. Television accounted for the largest number of impacts (2,309,025) due to the large reach of the Carolina Yards/WBTW Partnership. The pie chart to the left illustrates the number of impacts by each method, excluding television.

## YEAR 6 INVOLVEMENT IMPACTS BY TYPE



More than 900 citizens participated in public involvement activities. Community cleanups accounted for the largest percentage of participation at 65%. The actual number of involved citizens is likely significantly higher given some activities such as motor oil, scrap metal, and e-waste collection, are reported in material collected rather than number of participating individuals. The pie chart to the right illustrates the number of participants by activity type.



## Articles

Samples from FDSC Coordinator Terasa Lott's personal column that appears in the Pee Dee Living section of the *Morning News* on the first Sunday of each month.

SUNDAY, NOVEMBER 3, 2013 • 7C

### Gardening: A combination of art and science



**T**heresa Young  
Natural Resources Agent

There is no denying that gardening has its roots in science, and it starts with soil. Soil is the foundation of any garden yet it is often ignored by exuberant gardeners anxious to get plants in the ground to see the fruits of their labor.

Admittedly, I am guilty of this but when we ignore the soil, we are setting ourselves up for failure. Do yourself a favor and prime yourself for success. At the very least, have your soil tested. It will tell you about the soil's pH (relative acidity or basicity) and nutrient composition.

While understanding soil science is a start in the right direction, there are other disciplines that are important such as plant physiology, plant pathology and even entomology. Don't worry; successful gardening doesn't require you have a degree in any of these but the more you understand, the more likely you are to have healthy plants.

Gardening is not based on science alone; take landscape design for example. Landscape design, as defined by the South Carolina Master Gardener Training Manual, is "the art of arranging and enriching outdoor spaces by creating pleasing and functional relationships with plants and structures and the natural environment." This aspect of gardening is much more difficult for people like me who tend to be more analytical and not particularly creative.

In fact, we expanded a garden bed barrier this year but it has yet to be planted as I am still struggling with the design aspect.

In addition to the principles of unity, simplicity, variety, balance, repetition, rhythm, scale, and harmony addressed in landscape design through

plant layout, actual artwork is often incorporated. This might take the form of a sculpture serving as the focal point in a garden bed or an elegant bird bath that adds both beauty and function to the space. Just because something is functional doesn't mean it can't be beautiful. Take rain barrels for example. Rain barrels are often repurposed barrels, which is great for reducing waste but not so great perhaps for the aesthetics of your yard. With a little creativity and elbow grease, however, a repurposed rain barrel can be transformed into an attractive landscape addition that looks good and serves a purpose.

Would you like to add a hand-painted rain barrel to your landscape? The Florence Darlington Stormwater Consortium recently challenged local artists to use their artistic talent to educate the community about the benefits of rain barrels. Completed barrels are available for purchase through an online auction at [www.32auctions.com/rainbarrelartreview](http://www.32auctions.com/rainbarrelartreview). The auction closes at 6 p.m. Monday, Nov. 18, and funds generated will be used to support local water education and protection efforts.

Terasa Young is a natural resources agent for Clemson Extension, Carolina Clear coordinator for the Florence/Darlington Stormwater Consortium and a master naturalist. Email Young at [terasa@clermson.edu](mailto:terasa@clermson.edu). Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer.

HOME & GARDEN

MORNING NEWS • [www.scriotow.com](http://www.scriotow.com)

### We are all living downstream of stormwater



**T**heresa Young

precipitation sure has been plentiful this summer. There were days when I thought perhaps I'd somehow been transported to Seattle as the moderate temperatures and excess rainfall were not characteristic for summer in the Pee Dee.

For someone working to protect water quality, it was quite depressing to watch the stormwater run down the streets and into the storm drains.

So what's the big deal about stormwater? In a natural setting, only a small amount of rain ends up as runoff. In urbanized areas, the impervious surfaces such as rooftops, roads and parking lots dramatically increase the amount of runoff. The runoff is collected through a system of ditches and pipes known as the storm sewer system. Runoff from a large area is concentrated and discharged at a single point in a creek, stream or other waterway.

The force of the water entering the waterway can destroy streambanks and associated vegetation as well as aquatic habitat.

What happens when you put the hose nozzle on the jet setting and spray it at the ground? The force of the water makes a hole in the ground, right? Each stormwater pipe that discharges into a waterway acts like a hose with the nozzle set to jet.

And if that weren't bad enough, more water flowing across the landscape means more opportunity for pollutants to be transported to waterways.

The list of nasty pollutants includes: pesticides, nutrients, oil, heavy metals, viruses and bacteria. I don't know about you but I don't want to go swimming in water filled with all of those contaminants.

You may think that I am exaggerating as most pollutants are naked to the invisible eye so the water appears to be "clean."

According to SC DHEC's 2012 303(d) list, there are 34 monitored sites in Florence and Darlington counties that do not meet water quality standards. Since a waterbody can be impaired for multiple causes, there are 42 impairments at those 34 sites. The most common cause for impairment is excess bacteria levels associated with fecal waste.

Water is such an important natural resource. Vital to life, it has many other uses besides drinking and household needs. According to the CDC, the other most common uses for water include: recreation, industry and commerce, agriculture and thermo-electricity/energy.

Remember, we all live downstream. What you do affects the water in someone else's backyard. Find out how you can be a solution to stormwater pollution by visiting Clemson's Carolina Clear website at [www.clemson.edu/carolinaclear](http://www.clemson.edu/carolinaclear).

Terasa Young is a natural resources agent for Clemson Extension, Carolina Clear coordinator for the Florence/Darlington Stormwater Consortium and a master naturalist. Email Young at [terasa@clermson.edu](mailto:terasa@clermson.edu).

## Articles

Carolina Yards article featured in the July/August issue of the *South Carolina Nurseryman* magazine.



## Clemson's Carolina Yards Reaches Milestone During Cooperative Extension Centennial

Teresa M. Lott, Clemson Extension



Clemson's Carolina Yards program reached a milestone this year, one that is very fitting considering 2014 marks the 100<sup>th</sup> anniversary of the signing of the Smith-Lever Act which formalized the Cooperative Extension Service. In May, the program certified its 100<sup>th</sup> yard. Today, there are nearly one hundred ten yards from twenty-five counties have earned Certified Carolina Yard status, a number we hope will continue to grow by leaps and bounds.

Carolina Yards was designed to assist and guide a variety of audiences in creating healthy, watershed-friendly landscapes. From landscape architect, to grower, to yard owner, to landscape technician, the program's goal is to maximize the benefit to the yard owner while minimizing environmental impact. This is achieved by implementing twelve basic principles:

**(1) Maintain Healthy Soil** – Soil is the foundation of any landscape. Preserving the health of this important resource is the first step to successful gardening.

**(2) Recycle Yard Waste** – Composting yard waste means less garbage in the landfill and rich organic matter that can be added to the garden. More organic matter in the soil is good for plants and increases the soil's water holding capacity.

**(3) Mulch Matters** – In addition to giving the landscape a neat, finished appearance, mulch helps to retain soil moisture, moderate soil temperature, prevent erosion, and inhibit weed growth.

**(4) Right Plant, Right Place** – Good landscape design hinges on this one basic principle. Selecting plants that match the site's conditions reduces the need for water, fertilizer, pesticides, and maintenance.

**(5) Garden Like A Local** – Native plants play a vital role in protecting biodiversity and often require less inputs compared to non-natives.



**(6) Remove Invasives** – Invasive species disrupt overall ecosystem health and threaten native plants and animals. Prevention is the key to controlling these nuisance species but if they are found to already be established, seek advice on control options from Clemson Extension at the Department of Plant Industry.

**(7) Be Wise When You Fertilize** – When it comes to fertilizer, our motto is "don't guess, soil test". Following the recommendations of a soil test ensures you are applying exactly what the plants need and minimizes the chance for leaching. Maintaining a "no fertilization zone" around a waterbody and sweeping up any spills from hard surfaces helps to prevent those nutrients from being carried to waterways during storm or due to excess irrigation.

**(8) Manage Yard Pests Responsibly** – The goal is to use as few chemicals as possible. Choosing native and/or pest-resistant plants, planting them in a suitable location, and using proper maintenance procedures all help to prevent damage from pests. Frequent observation can also help as control may be as simple as handpicking when pest numbers are low. Don't forget that some insects are good since they act as meat-eating predators that feast on those plant-damaging insects.

**(9) Water Wisely** – Choosing plants that are drought tolerant certainly conserves water but other practices such as grouping plants with similar water needs, mowing at the proper height, and using a rain gauge to track rainfall can also reduce outdoor water use.

**(10) Rain As A Resource** – Allow rain to serve as a resource in your yard by collecting, storing, and filtering it. Rain barrels, rain gardens, and vegetated swales are all ways to put rainwater to good use.

**(11) Reduce Stormwater Runoff** – As water moves across the landscape, it can carry

pollutants directly to our creeks, streams, rivers and even the ocean. These pollutants can harm wildlife, negatively affect water quality, and pose a threat to human health. Using porous materials such as permeable pavers, picking up after pets, and washing your car on the lawn instead of the driveway are all ways you can reduce polluted runoff.

**(12) Provide For Wildlife** – By providing food, water, shelter, and space, a yard can become a haven for wildlife. Let's face it, everyone needs to eat and you can lend a hand by selecting plants that provide foliage, berries, seeds, nuts, flowers, and pollen that many animals rely on. This vegetation can also serve as a refuge from predators, people, and inclement weather. A clean supply of water is also essential to life, not only for drinking but also for bathing and in some cases, reproduction. Supplemental shelter and nest boxes are also great ways to provide wildlife habitat.

Each of the twelve principles of the Carolina Yards program has a number of actions associated with it that when taken, earn "inches" or credit toward certification. A minimum of thirty-six inches are required for certification. Yard owners obtaining Certified Carolina Yard status receive a certificate and have the option to purchase recognition items such as an engraved garden stone or yard sign that show their commitment to environmental stewardship.

A new tool was also made available this year to assist yard owners in selecting the right plant for the right place. The Carolina Yards Plant Database features nearly 300 plants that were selected based on the principles of environmental landscape design. Users may select various criteria from which a customized list of plants is generated.

Any South Carolina resident who gardens with the environment in mind may pursue certification. Visit the Carolina Yards website at [www.clemson.edu/cy](http://www.clemson.edu/cy) and download the scorecard to see if you measure up. Once your yard is certified, your neighbors will want to join in the fun and have their yards certified too. Collectively we can make positive changes in the environment's quality of our yards, neighborhoods, and surrounding waterways.

Clemson University Cooperative Extension Service offers its programs to people of all ages regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer.

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)									Other Service Providers	Expected Month/ Quarter
			General	Bacteria	Toxic Contaminants	Sediment	Nutrients	Volume	Debris	Temperature	Other		
General Public													
Darlington County	Residential oil, cooking oil, paint collection through convenience centers	Darlington County		X	X								through-out
City of Florence	Residential Oil Collection	City of Florence		X	X								through-out
Clemson	Social Media (FDSC Website & Facebook Page, Darlington County Stormwater webpage)	Pee Dee Region	X	X	X	X	X	X	X	X			through-out
Clemson	CC postcard display	each MS4	X	X	X	X	X	X	X			each community partner	through-out
Clemson	Monthly Article in Morning News	Florence County	X	X			X	X	X		topics vary by month		through-out
Clemson	Beach Sweep/ River Sweep	Florence County	X						X			Keep Florence Beautiful	09/21/13

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)								Other Service Providers	Expected Month/ Quarter	
			General	Bacteria	Toxic Contaminants	Sediment	Nutrients	Volume	Debris	Temperature			Other
Florence Area Humane Society	Howl-O-Ween: (Pet Waste Focus)	Florence County	X	X								Clemson	10/26/13
City of Florence	Pecan Festival: Display of Rain Barrel Art Review	Pee Dee Region	X					X				Clemson, Keep Florence Beautiful	11/02/13
Clemson	PSA Campaign: FOG, Septic	Pee Dee Region		X							FOG/SSOs	Miller Communications	Winter/Spring 2014
City of Florence	Bi-Annual Scrap Metal Week	City of Florence			X				X				Oct-13 & Mar-14
City of Florence	E-waste collection	City of Florence			X				X			Keep Florence Beautiful	03/15/14
Keep Florence Beautiful	Great American Cleanup - clean-up + rain barrel/compost bin sale	City of Florence	X		X			X	X			City of Florence, Clemson	03/15/14
Environmental Discovery Center	River Jamboree exhibit	Florence County	X	X			X					Clemson	04/26/14

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)								Other Service Providers	Expected Month/ Quarter	
			General	Bacteria	Toxic Contaminants	Sediment	Nutrients	Volume	Debris	Temperature			Other
City of Florence	Bi-Annual Scrap Metal Week	City of Florence			X					X			Oct-13 & Mar-14
Youth / K-12 / Teachers													
Clemson	Darlington County 4-H Adopt A Spot	Darlington County	X							X			9/30/13 - 7/2/14
CURI	Nest Step for STEM schools: booth with lesson plans for teachers	statewide									water cycle, landscape changes and pollution, pollution prevention, bioaccumulation	Carolina Clear and multi-partners hosts	9/30/13 - 10/2/13
Darlington County	Coloring/Activity Pages for Youth	Darlington County	X	X						X		SC DHEC, EPA	through-out

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)								Other Service Providers	Expected Month/ Quarter	
			General	Bacteria	Contaminants	Toxic	Sediment	Nutrients	Volume	Debris			Temperature
Kalmia Gardens	Stormwater education included with field trips and tours	Pee Dee Region	X	X	X		X		X				through-out
Environmental Discovery Center	Stormwater education included with field trips and tours	Pee Dee Region	X	X	X		X		X				as requested by schools
Clemson	Junior Master Gardener Program	Darlington County	X				X		X		watershed awareness	Kalmia Gardens	April and May 2014
Kalmia Gardens	Earth Day @ Kalmia Gardens	Pee Dee Region	X				X	X	X		rain barrels and compost bins available for sale	Clemson	04/05/14

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)								Other Service Providers	Expected Month/ Quarter	
			General	Bacteria	Toxic Contaminants	Sediment	Nutrients	Volume	Debris	Temperature			Other
Kalmia Gardens	Eco Camp	Darlington County	X	X	X							macro-invertebrates and water quality	June 2014
Clemson	4H2O Water Quality Camp (Darlington County and Florence County)	Pee Dee Region	X	X			X		X	X		watershed awareness/stewardship	June 2014
Kalmia Gardens	Week in the Wild Summer Camp (4 week-long sessions)	Darlington County	X						X			watershed awareness	Summer 2014
Clemson	Enviroscape Presentations	Pee Dee Region	X	X	X	X	X		X				as requested by schools/youth groups

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)									Other Service Providers	Expected Month/ Quarter	
			General	Bacteria	Contaminants	Toxic	Sediment	Nutrients	Volume	Debris	Temperature			Other
Science South	“What’s In Your Watershed” program	Pee Dee Region	X	X	X	X	X			X	X	pH, macro-invertebrates, electrical conductivity		as requested by schools
Clemson	Storm Drain Marking and Watershed Education	Pee Dee Region	X	X	X	X	X			X	X			throughout
Planning Commission / Advisory Board / Elected and Appointed Officials														
City of Florence	Stormwater Advisory Board / Unified Development Ordinance Meetings	City of Florence	X	X	X	X	X			X	X	ordinance review, enforcement review, overall stormwater management guidance		as determined by City of Florence



## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)								Other Service Providers	Expected Month/ Quarter			
			General	Bacteria	Contaminants	Toxic	Sediment	Nutrients	Volume	Debris			Temperature	Other	
SCAC	Booth: storm-water permits, water quality regulations, Carolina Clear efforts	statewide	X					X					CYN	Clemson	8/3/14 - 8/4/14
Darlington County	Monthly storm-water updates to planning commission; minutes sent to County Council for approval and posted online	Darlington County	X												through-out
Homeowners & Homeowner Associations															
Clemson	Rain Barrel Art Review	Pee Dee Region	X					X					rain-water harvesting	City of Florence	9/1/13 - 11/18/13
Clemson	ECA Fair	Pee Dee Region	X	X				X					CYN, rain-water harvesting		10/2/13 - 10/12/13

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)								Other Service Providers	Expected Month/ Quarter		
			General	Bacteria	Toxic Contaminants	Sediment	Nutrients	Volume	Debris	Temperature			Other	
Clemson	Fall Plant & Flower Festival	Pee Dee Region					X					CYN	Florence County Master Gardeners	10/4/13 - 10/6/13
Clemson	Making It Grow!	statewide	X				X	X				CYN	SCETV	throughout
Keep Florence Beautiful	Pet Waste Campaign Grant	Florence County	X	X									Palmetto Pride, Clemson	January-August
Clemson	Carolina Yards Partnership	Pee Dee Region	X	X		X	X	X				CYN	WBTW	February-October
Kalmia Gardens	Hartsville Good Living Marketplace	Darlington County					X	X				rain barrel and compost bin sale	Clemson	03/08/14
Clemson	Florence County Master Gardeners Spring Extravaganza	Pee Dee Regions	X				X	X				rain barrel and compost bin sale, CYN	FCMGA	03/22/14

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)								Other Service Providers	Expected Month/ Quarter	
			General	Bacteria	Toxic Contaminants	Sediment	Nutrients	Volume	Debris	Temperature			Other
Kalmia Gardens	Earth Day @ Kalmia Gardens	Pee Dee Region	X				X	X	X		rain barrels and compost bins available for sale	Clemson	04/05/14
City of Darlington	Market on the Square display	City of Darlington/ Darlington County	X	X							rain barrels, compost bins		06/07/14
Clemson	HOA/Civic Group/Garden Club Presentations	Pee Dee Region	X	X	X	X	X	X	X		topics vary by request		through-out
Technical													
SCNLA	CY display at SCHI trade show	Statewide				X	X				CY principles and plant database	Clemson	2/6/14 - 2/7/14

## Year 6 Adaptive Education Plan

Lead Service Provider	Activity	Target Geography/ Land Use	Target Pollutant(s)								Other Service Providers	Expected Month/ Quarter	
			General	Bacteria	Toxic Contaminants	Sediment	Nutrients	Volume	Debris	Temperature			Other
Florence County	Training: Residential storm-water permitting requirements	Florence County	X								permit requirements		8/20/14
Commercial													
Clemson	FOG Outreach Materials for Restaurants	Pee Dee Region		X							disposal of FOG	City of Florence, Florence County, Darlington County	Summer 2014

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Katie Giacalone, City of Florence, Darlington County, Florence County,  
Clemson Extension, Environmental Discovery Center, Kalmia Gardens of Coker College,  
Keep Florence Beautiful, and ScienceSouth

### WITH APPRECIATION TO THE FOLLOWING REVIEWERS:

Amy Scaroni (Clemson Carolina Clear)  
Florence Darlington Stormwater Consortium Representatives



*Carolina Clear is a program of Clemson University's Public Service Activities. Information is provided by Faculty and Cooperative Extension Agents. Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, sex, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer.*




*“The rivers are our brothers. They quench our thirst. They carry our canoes and feed our children. So you must give the rivers the kindness that you would give any brother.”*

*~Chief Seattle*



[www.clemson.edu/carolinaclear](http://www.clemson.edu/carolinaclear)

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March 17, 2015

Mr. Brian Wisnewski  
SC Department of Health and Environmental Control  
Bureau of Water  
2600 Bull Street  
Columbia, SC 29203

**RE: SMS4 Reporting for Public Education and Outreach and Public Involvement/  
Participation**

Dear Brian,

Clemson Extension's Carolina Clear program delivers to its partners, annual reports of regional activities in support of stormwater education and involvement, typically in the summer months. Following the new SMS4 permit made regulation on January 1, 2014, the reporting cycle for existing permittees was set to the calendar year (fourteen months after effective date of coverage).

In order to provide activity information between the end of the Carolina Clear planning and reporting cycle for each consortium, and the existing SMS4 permittee reporting cycle, we have created a supplement for submission by community partners to SC DHEC Bureau of Water. Please find the attached list of activities performed in support of the region's stormwater education and involvement objectives. These objectives are determined based on pollutants and behaviors of concern, target audiences, and the opportunity to modify behaviors through educational programming; the details of these strategies can be found at each consortium's website at [www.clemson.edu/carolinaclear](http://www.clemson.edu/carolinaclear) or provided to you upon further request.

In ensuing years under this 2014 SMS4 permit, reports for existing permittees will be provided to partners annually, reporting on activities in each calendar year. This supplement is for this first reporting year only.

Please contact me with any questions or concerns. We are appreciative of the support and guidance in these regional efforts and look forward to working with you.

Best regards,

Katie Giacalone  
Director

**Florence Darlington Stormwater Consortium  
Addendum to Year 6: September - December 2014**

<b>LEAD PROVIDER</b>	<b>SUPPORTING PARTNER</b>	<b>ACTIVITY</b>	<b>DATE</b>	<b>NUMBER OF IMPACTS</b>	<b>TARGET AUDIENCE</b>
<b>Mass Media (Television)</b>					
Clemson Extension	SC ETV	Making It Grow! FDSC Coordinator Terasa Lott highlights water related stewardship practices and addresses questions concerning best management practices for protecting water quality each week during the show. *Number of person reported is the average number of person per household applied to the projected number of households that viewed Making It Grow! during the monitored period of November 2013 - July 2014. This number is conservative and does not account for the SC Channel and only represent's one episode's viewing.	Weekly	27,025	GP, HM
Clemson Extension	WBTW	September topic of WBTW/Carolina Yards partnership highlighted pond best management practices.	9/1/14 - 9/30/14	326,000	GP, HM
Clemson Extension	WBTW	October topic of WBTW/Carolina Yards partnership discussed the water quality problems associated with geese and ways to deter geese from residing at a pond year-round.	10/1/14 - 10/31/14	326,000	GP, HM
<b>Mass Media (Internet)</b>					
Clemson Extension	WBTW	September banners ads encouraged pond owners to "protect the waterfront" with strategies such as: using of shoreline plants, maintenance free zone, removal of aquatic invasive plants.	9/1/14 - 9/30/14	50,000	GP, HM
Clemson Extension	WBTW	October banner ads asked people to think twice before feeding geese given that goose waste fouls water and can make property unusable.	10/1/14 - 10/31/14	50,000	GP, HM



LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
<b>Publications (Newspaper &amp; Magazine)</b>					
Clemson Extension		Personal column titled "Give your lawn a rest" warned readers not to apply nitrogen containing fertilizers to warm season grasses. Minimizing turf area with low maintenance plants was encouraged. The benefits for homeowners is reduced maintenance time and possible financial benefits with less water and fertilizer use. Environmental benefits include water and air quality protection and increased wildlife habitat.	9/7/14	28,631	GP, HM, T
Clemson Extension		Personal column titled "It's not polite to litter" spoke about the amount of trash collected at local Beach Sweep/River Sweep sites. The problems associated with litter were mentioned including the fact that litter serves as a breeding ground for bacteria. The concept of Southern etiquette was used to encourage citizens to help reduce litter.	10/5/14	28,631	GP, HM
Darlington County		Full page advertisement in The List magazine titled "Don't Wreck The Environment" showed all the recycling stations which accept used motor oil, oil bottles, and oil filters.	11/1/14	unknown	GP, HM
Clemson Extension	Clemson Extension	Personal column titled "Fats, oils, and greese....a real pain in the drain" discussed the importance of proper disposal of FOG and the potential problems resulting from FOG accumulation in pipes. Proper disposal methods were outlined as well as the recycling option that exists for Darlington County residents.	11/2/14	28,631	GP, HM

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Extension		<p>Personal column "The gift of fallen leaves" provided alternatives to disposing of leaves in the landfill. Mulching leaves into lawns was suggested as a method to return nutrients to the soil. Using leaves as mulch in landscape beds was also suggested as well as composting. Problems associated with yard debris and waterways such as clogging and algal blooms were mentioned.</p>	12/7/14	28,631	GP, HM
Clemson Extension		<p>Personal column in the News and Press titled "The gift of fallen leaves" provided alternatives to disposing of leaves in the landfill. Mulching leaves into lawns was suggested as a method to return nutrients to the soil. Using leaves as mulch in landscape beds was also suggested as well as composting. Problems associated with yard debris and waterways such as clogging and algal blooms were mentioned.</p>	12/24/14	9,500	GP, HM
<b>Public Events (Fairs, Festivals, and Conference Displays)</b>					
Clemson Extension	Florence County Master Gardeners Association	<p>Information about the Carolina Yards program including yard certification was included at the FCMGA booth at the Fall Plant &amp; Flower Festival at the Pee Dee State Farmers Market.</p>	10/3/14 - 10/5/14	~100	GP, HM
Clemson Extension		<p>Exhibit at Eastern Carolina Agricultural Fair: Temporary goose fencing was illustrated along with facts about the reasons not to feed Canada Geese. A variety of stormwater postcards were available as well as pens with the FDSC logo.</p>	10/14/14 - 10/18/14	~30,000	GP, HM, YT

<b>LEAD PROVIDER</b>	<b>SUPPORTING PARTNER</b>	<b>ACTIVITY</b>	<b>DATE</b>	<b>NUMBER OF IMPACTS</b>	<b>TARGET AUDIENCE</b>
City of Florence	Clemson Extension	The FDSC hosted a booth at the Florence Area Humane Society's Howl-O-Ween event promoting the proper disposal of pet waste. Postcards and coloring sheets were available. Those signing the Clean Water Pledge received a dog bandana.	10/25/14	18 pledges, 20 dogs	GP, P
<b>Presentations</b>					
Environmental Discovery Center		Students participating in the "Wonders of Wildlife" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	9/4/14	19	YT
Florence County		Class centered around residential stormwater permitting requirements and the process of which the county administers the permit.	9/10/14	21	T, DIS
Environmental Discovery Center		Students participating in the "Weather Watcher" program discussed stormwater and ways to protect water quality during the nature walk portion of their field trip.	9/16/14	11	YT
Environmental Discovery Center		Students participating in an archery workshop talked about stormwater and ways to protect water quality.	9/16/14	11	YT
Environmental Discovery Center		Students participating in the "Wonders of Wildlife" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	9/19/14	25	YT

<b>LEAD PROVIDER</b>	<b>SUPPORTING PARTNER</b>	<b>ACTIVITY</b>	<b>DATE</b>	<b>NUMBER OF IMPACTS</b>	<b>TARGET AUDIENCE</b>
Environmental Discovery Center		Students participating in the "Growing up Wild" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	9/25/14	15	YT
Environmental Discovery Center		Students participating in the "Ecosystem Investigation" program discussed stormwater and water quality during the field trip portion of the field trip.	9/26/14	51	YT
Environmental Discovery Center		Water quality information was shared with a group students touring the EDC.	9/26/14	25	YT
Environmental Discovery Center		Students participating in the "Eye on the Sky" program discussed stormwater and ways to protect water quality during the nature walk part of the field trip.	10/3/14	51	YT
Clemson Extension		Presentation to Maple Park Neighborhood Association on the importance of proper disposal of FOG. "Keep your drain fat free" grease can lids were distributed along with FOG postcards.	10/9/14	14	GP, HM
Environmental Discovery Center		Students participating in the "Ecosystem Investigation" program discussed stormwater and water quality during the field trip portion of the field trip.	10/14/14	75	YT
Environmental Discovery Center		Students participating in the "Ecosystem Investigation" program discussed stormwater and water quality during the field trip portion of the field trip.	10/15/14	73	YT
Environmental Discovery Center		Students participating in the "Tiny Seed" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	10/21/14	48	YT

<b>LEAD PROVIDER</b>	<b>SUPPORTING PARTNER</b>	<b>ACTIVITY</b>	<b>DATE</b>	<b>NUMBER OF IMPACTS</b>	<b>TARGET AUDIENCE</b>
Environmental Discovery Center		Water quality information was included in a scavenger hunt and tour for higher education students.	10/22/14	15	HE
Environmental Discovery Center		Students participating in the "Tiny Seed" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	10/23/14	40	YT
Environmental Discovery Center		Students participating in the "Fossil Discovery" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	10/28/14	62	YT
Environmental Discovery Center		Students participating in the "How Many Is Too Many" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	11/4/14	28	YT
Environmental Discovery Center		Students participating in the "Fossil Discovery" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	11/5/14	54	YT
Environmental Discovery Center		Students participating in the "Healthy Habitat/Healthy People" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	11/6/14	51	YT
Environmental Discovery Center		Students participating in the "Healthy Habitat/Healthy People" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	11/7/14	56	YT

<b>LEAD PROVIDER</b>	<b>SUPPORTING PARTNER</b>	<b>ACTIVITY</b>	<b>DATE</b>	<b>NUMBER OF IMPACTS</b>	<b>TARGET AUDIENCE</b>
Environmental Discovery Center		Students participating in the "Growing up Wild" program discussed stormwater and ways to protect water quality during the nature walk portion of the field trip.	11/12/14	57	YT
Environmental Discovery Center		Students participating in a tree identification walk talked about stormwater and the importance of protecting water quality.	11/13/14	28	YT
Environmental Discovery Center		Water quality information was shared with a group of senior adults touring the Environmental Discovery Center.	11/13/14	9	GP, HM
Environmental Discovery Center		Students participating in the "Eye on the Sky" program discussed stormwater and ways to protect water quality during the nature walk part of the field trip.	11/14/14	24	YT
Clemson Extension		Enviroscape presentation to 4th graders at Carolina Elementary School illustrated the connection between pollutants left on land and surface water. Children brainstormed ways to protect water quality such as picking up after pets and washing vehicles on lawns rather than impermeable surfaces.	12/5/14	42	YT
<b>Workshops and Outdoor Tours</b>					
Environmental Discovery Center		Water quality information was shared with participants of this guided canoe trip on Lynches River.	9/6/14	18	GP, HM
Clemson Extension		Paint a rain barrel workshop held at Addie's Baby Studio in downtown Florence.	9/19/14	4	HM

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
Clemson Pee Dee Research and Education Center	Clemson Extension	Sarah Nyikos, Education and Outreach Coordinator at Clemson Pee Dee Research and Education Center, held a half-day workshop for a high school Chemistry class from Kingstree, SC. Students and teachers toured the PDREC's Outdoor Education Trail, where they learned concepts related to water resources, riparian buffers, pollutants and water quality. Students also conducted multiple parameter water quality tests on two ponds/lakes at the PDREC.	9/23/14	26	YT
Kalmia Gardens		Dan Hill led a nature walk for 70 middle school children. On this walk he discussed several factors that can lead to water pollution.	10/7/14	80	YT
Kalmia Gardens		Dan Hill led a short nature walk for the Coker College "Coker 101" class. On this walk we stopped at the storm drain outfall pipe in the garden and discussed what a rain event could pick up from the landscape and deposit in this area.	10/7/14	10	HE
Kalmia Gardens		Dan Hill led a short nature walk for the "Coker 101" class. Stopping at the storm drain outfall pipe in the Gardens, storm water and things that could pollute it were discussed.	10/21/14	14	HE
Kalmia Gardens		Dan Hill led the Town and Country Garden Club on a tour of Kalmia Gardens. On this tour some time was spent at the outfall pipe located within the Gardens. Time was also spent at the Carolina Clear educational sign just above the outfall pipe where stormwater water issues were discussed.	10/21/14	75	GP, HM

LEAD PROVIDER	SUPPORTING PARTNER	ACTIVITY	DATE	NUMBER OF IMPACTS	TARGET AUDIENCE
<b>Community Cleanups</b>					
SC DNR, SC Sea Grant Consortium	Keep Florence Beautiful, Clemson Extension	T. Young and M. Bailey served as site captains for River Sweep held on the Florence trail system behind West Florence High School adjacent to ponds/Beaverdam Creek as part of the annual Beach Sweep/River Sweep. Approximately 820 lbs. of litter were collected.	9/20/14	35	GP, HM, YT, HE
Environmental Discovery Center		Combination cleanup/paddle of Lynches River.	10/4/14	15	GP, HM