FLORENCE/DARLINGTON STORMWATER CONSORTIUM BY CLEMSON® EXTENSION



Annual Report of Activities

JANUARY - DECEMBER 2022





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Executive Summary

The initial 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. The group has welcomed three additional community partners in recent years with the City of Darlington joining in the 2013-2014 reporting year and the Town of Timmonsville and the Town of Quinby joining in 2015.

Mass media continues to be an area of emphasis for FDSC outreach efforts. Building on the strengths of the previous seven years' WBTW campaigns, a similar campaign was launched in October of 2022. The campaign focused on the prevention of sanitary sewer overflows (SSOs). The 2022 Mass Media Campaign resulted in 888,826 impressions.

Campaign elements included:

- Statewide "What not to Flush" Commercial
- Three local billboards encouraging residents to "only flush TP"
- Door hangers to inform residents in vulnerable areas what not to flush.

As the community recovers from COVID-19 pandemic, programs were adapted to reach varying audiences. In-person programming saw more demand than previous years, while webinars and virtual workshops continue to be an option to those who are unable to attend in-person programming. Hybrid programs were well accepted and proved to be an effective way to reach multiple audiences.

In 2023 the FDSC will revisit the strategic plan to update and revise concerns, target audiences, outreach strategies, and short-term and longterm goals. Adjustments will be made based on stakeholder input, current state of the knowledge, prior programming efforts, and feedback gained from program survey results.



FDSC Coordinator Tancey Belken joined Clemson Cooperative Extension as a Water Resources Agent in March of 2020. Tancey holds a B.S. in Wildlife and Fisheries Biology with Clemson University. A South Carolina local, Tancey has spent her life in and around the waters of South Carolina. She is passionate about the outdoors and educating the public to ensure responsible stewardship of natural resources. She is a certified Master Pond Manager and Master Rain Gardener. Her professional interests include youth education, rainwater harvesting, and aquatic wildlife.



2022: A Year in Pictures









Executive Summary



EXECUTIVE SUMMARY January - December 2022 Annual Report

Impact Summary

2022 Highlights

 The statewide mass media campaign commercial on "What Not to Flush" was viewed by 698,400 individuals in the FDSC region. The three billboards in the FDSC region created 190,426 weekly impressions from passing motorists.

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- Water Myth Wednesday saw an increase in viewers from 2021. The popular social media campaign busting common water myths made 600 more impressions from the previous year.
- The City of Florence began work on stormwater systems across the area, and the City launched a new website for residents to see the Stormwater Improvement Plan and even learn ways they can assist the City in keeping stormwater pollution free.
- Statewide programs had a successful year with in person workdays and involvement. Certified Erosion Prevention and Sediment Control Inspector (CEPSCI) and Certified Stormwater Plan Reviewer (CSPR) both saw an increase in participants, with CEPSCI gaining over 600 participants this year!
- The City of Florence and Keep Florence Beautiful combined efforts to get a stormwater BMP known as a WaterGoat installed in Gully Branch at Timrod Park. Read more about this new BMP on page 8.

OUTREACH ACTIVITIES AND TOTAL NUMBER REACHED (estimated)

- 1. Television: 1,106,052
- 2. Internet and Social Media: 214,348
- 3. Billboards: 190,426 Weekly Impressions
- 4. Publications: 70,061
- 5. Outreach Materials: 1,768
- 6. Public Events: 585
- 7. Presentations: 1183
- 8. Motor Oil Collected: 15,718
- 9. Environmental Testing: soil tests, water tests: 481

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Jack and Jill of America, Inc. cleaned their street in honor of Carole Robertson for their Community Service Day.



The Florence Darlington Stormwater Consortium includes representatives from all of the regulated Small Municipal Separate Storm Sewer Systems (SMS4) communities in the Florence and Darlington Urbanized Area. Through the Consortium, these representatives work together to maximize the efficiency of stormwater education and outreach efforts in the Pee Dee region of South Carolina.

Local MS4 Consortium Representatives: 2022

| SMS4 | Representatives |
|----------------------|---|
| City of Florence | Jerry Dudley, Malcolm Cook, Geraldine Cuypers, Brian Hays, Jonathan Thomas |
| City of Darlington | Lisa Challian-Rock |
| Darlington County | Terri Cribb, Paula Newton, Wayne Yarborough |
| Florence County | Brian Kennedy, Colton Carnell |
| Town of Quinby | Represented by Florence County via IGA |
| Town of Timmonsville | Mary Bines |





The Florence Darlington Stormwater Consortium partners with a variety of organizations including government agencies, non-profit organizations, businesses, and individuals that share an interest in educating the public about stormwater and water quality. These educational partnerships ensure a uniform and consistent message while leveraging valuable resources, organizational strengths, and collaborations. FDSC is grateful to all of the partners and citizens of Florence and Darlington Counties who are helping to keep our waterways clean and beautiful.



Mission and Goals

MISSION STATEMENT

FLORENCE/DARLINGTON

ORMWATER CONSORTIUM

The mission of the FDSC is 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.

PROGRAM GOALS

- 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 FDSC'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, use 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.





Consortium goals are determined at quarterly meetings that are open to the public and include community partners, education partners, and other stakeholders. To offer the most relevant and impactful programming, meeting members determined pollutants of concern (POCs) in our community through an open voting process. POCs were selected based on impaired water bodies on the 303(d) list, total maximum daily loads (TMDLs), and field observations.

Outreach strategies and goals were then determined by the consortium based on stakeholder input, current state of the knowledge, prior programming efforts, and feedback gained from Carolina Clear survey results. The FDSC 2019-2023 Strategic Plan details pollutants of concern, target audiences, outreach strategies, and short-term and long-term goals.

| Pollutant of Concern | Contributing Behaviors |
|---------------------------------|--|
| Fats, Oils, and Grease (FOG) | Residents who improperly dispose of FOG at home. Restaurant staff who do not properly dispose of FOG, maintain grease receptacles, and/or properly clean equipment. |
| Litter | People who contribute to roadside littering or improperly dispose of household items. Municipal waste disposal services and residents who do not tarp their waste material and contribute to roadside littering. Littering and illegal dumping fines are not fully imposed by enforcement professionals. |
| Bacteria | Septic systems that are not properly maintained/repaired. Residents are unaware of how to identify SSO (Sanitary Sewer Overflows) and where to report them. Dog owners who do not pick up and properly dispose if their pet waste. |
| General Awareness | Residential and commercial properties contribute to nutrient, sediment, and bacteria pollution. Residents are not familiar with the effects of local stormwater runoff on the larger watershed. |

Program assessment is a crucial step in determining the impacts of past outreach efforts and in developing future efforts. Program assessment includes, but is not limited to, the following:

- Five-year regional telephone surveys to determine attitudes and behavior related to water resources and pollution prevention.
- Google analytics to evaluate impacts of web-based programming and outreach.
- Short-term and long-term program evaluations to determine knowledge gain, program value, implementation of stormwater practices, and behavior change.

Overall, strengths of the FDSC outreach program include:

- Strong mass media presence which allows for stormwater messaging to reach a large and diverse audience.
- Dedicated education partners that incorporate watershed protection/stewardship into their programming.
- Demonstrated positive behavior change in the area of pet waste disposal.

FOR FLORENCE / DARLINGTON BY CLEMSON® EXTENSION

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 January 1, 2022 - December 31, 2022 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 contribute to the database throughout the year as activities are conducted.

The report delineates between two basic activity categories: public education and public involvement. Each activity includes information about the following: 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.

| Abbreviation | Audience | Abbreviation | Audience |
|--------------|---|--------------|--|
| R | Residential (Homeowners and Renters) | DIS | Directly Involved and Supervisory Staff (Stormwater Managers, Maintenance, Facilities, Groundskeepers, etc.) |
| ΥT | K -12 Students/Youth | SP | Stormwater Pond Managers |
| HE | Higher Education Students | LD | Landscape Contractors, Nurseries |
| E | Teachers/Educators | CR | Commercial - Restaurant |
| EA | Elected and Appointed Officials and High- Level Staff | Р | Pet owners |
| Т | Technical (Engineers, Developers, Contractors, Landscape Architects) | | |

"Science is a cooperative enterprise spanning the generations. It's the passing of a torch from teacher, to student, to teacher. A community of minds, reaching back to antiquity and forward to the stars." - Neil deGrasse Tyson Statewide Mass Media Highlight

In 2022, Clemson Extension's Carolina Clear program launched our newest mass media campaign focused on the prevention of sanitary sewer overflows (SSOs). SSOs can lead to degradation of water quality in local water bodies through bacteria and other forms of pollution as well as cause costly damages to infrastructure. Stormwater Consortiums across the State, including the Florence Darlington Stormwater Consortium, have identified bacteria in waterways as a pollutant of concern. The prevention of flushing of non-flushable materials has been identified as a target behavior to address through education.



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The multi-part mass media campaign included a billboard and Television commercial. The theme of the campaign is "Flush Only TP." The billboard reads "Protect Your Pipes. Flush Toilet Paper Only. Trash Everything Else." In the fall of 2022, 18 copies of the billboard were installed around the state through a partnership with the Outdoor Advertising

2022 Highlight

Association of South Carolina. These billboard impacts are documented with weekly views and had a combined total of over 13 million people. In the FDSC-region, billboards are rotating through select locations and have included I-20, W. Palmetto, and S. Irby with a combined 190,426 weekly views.

Development of the commercial was based on feedback from regional Consortiums and the Carolina Clear Advisory Committee. The commercial aimed to include humor, demonstrate positive behavior adoption, and share a clear message. As a result, the "angelic plumber", originally featured in the 2020 Mass Media Campaign, returned and arrives just in time to prevent a non-flushable wipe from entering the toilet. The commercial directs viewers to visit Clemson.edu/carolinaclear for more information about the prevention of SSOs in their community. The commercial was shared on five stations and streaming services around the State and reached over 3 million viewers across South Carolina during the two months it aired in fall of 2022. Locally, the commercial resulted in 698,400 total impressions.



To view the commercial, scan the QR Code, or visit:

<u>https://www.clemson.edu/</u> <u>extension/carolinaclear/campaign.</u> <u>html</u>





City of Florence Stormwater Website

As part of the City of Florence Stormwater Capital Improvement Program, city staff in partnership with a Stormwater Engineering Team from AECOM, have developed a web page with access to a storyboard to educate and keep residents informed.

Residents can access this new resource at www.cityofflorence.com on the homepage under "News & Announcements" titled, "Capital Improvements", and will be able to learn about the City's Stormwater Program, up to date project information, and anticipated hurdles. Residents can use the website to find out if there is a stormwater issue near their house and see what work is planned near the area.

The site also includes a survey for residents. City staff is asking the public to give their input to help determine locations that are vulnerable to flooding or drainage issues to help prepare a Stormwater Master Plan. Signs of stormwater issues include flooded yards, impassable streets, discolored or foul-smelling stormwater runoff or sediment deposits after a storm. City residents are greatly encouraged to participate in the plan development by providing feedback.



The City of Florence launched a web page for the new Stormwater Master Plan. Residents are encouraged to provide feedback to help finalize a Stormwater Master Plan.



WaterGoat installation at Timrod Park

A new Best Management Practice (BMP) called a WaterGoat was installed at Timrod Park in Florence. This project was made possible through a grant awarded to Keep Florence Beautiful (KFB) from Palmetto Pride in collaboration with the City of Florence. The WaterGoat is a floating device that consists of a series of buoys wrapped in netting, which is held down by a chain. This design allows water to flow through it while collecting floating litter that flows in its direction. Since the netting on the device is submerged only about a foot and a half, wildlife such as turtles and fish will still be able to swim underneath it. The positioning of the WaterGoat device will trap floating litter and trash that ends up in Gully Branch at Timrod Park. The litter collected by the City of Florence employees will be weighed before it is properly disposed of at the landfill, allowing Keep Florence Beautiful to keep track of the waste that was prevented from entering our waterways.

Geraldine Cuypers, Compliance Inspector with the City of Florence, and KFB Board Member said, "My hope and goal as a city employee, KFB board member, and a citizen of our community, is that the public will clearly see the immense amount of litter that ends up in our waterways. Trash negatively impacts our environment and I hope people care enough to take action. What many people do not realize is that much of the litter that is thrown out of vehicles ends up washing into the storm drains, and then into our waterways."





WaterGoat installed by the City of Florence thanks to cooperation from Keep Florence Beautiful.

Mass Media (Internet)

FLORENCE/DARLINGTON

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| LEAD PROVIDER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|----------------------|--|------|----------------------|--|
| Clemson Extension | Total unique views in 2022 for the Carolina Clear, Florence Darlington Stormwater Consortium, Carolina Yards, Stormwater Ponds, Clemson Extension Water Team, Rain Gardens, and Living Shorelines websites. | 2022 | 132, 046 | R, YT, HE, E, EA, T, DIS, SP, CR, P |
| Clemson Extension | Carolina Clear Facebook Page: provides updates on programmatic efforts and tips for stormwater pollution prevention | 2022 | 49,591 | R, YT, HE, E, EA, T, DIS, SP, CR, P |
| Clemson Extension | Florence Darlington Stormwater Consortium Facebook Page (314 followers) | 2022 | 10,768 | R, YT, HE, E, EA, T, DIS, SP, CR, P |
| Clemson Extension | Carolina Clear YouTube Channel: The channel provides short "how to" videos on Stormwater BMPs. (646 hours watched) | 2022 | 21,943 | R, YT, HE, E, EA, T, DIS, SP, CR, P |

Mass Media (Billboards and Television)

The 2022 Carolina Clear mass media campaign focused on water pollution associated with sanitary sewer overflows. See report highlight for additional information.

| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|----------------------|-----------------------|---|------|----------------------------------|--------------------|
| Clemson Extension | FDSC | Billboard messaging was provided on the target behavior "Protect Your Pipes, Flush only TP, Trash Everything Else," | 2022 | 190,426 Weekly Impressions | R |
| Clemson Extension | SC ETV | Making It Grow! *Number reported is the average number of persons per household applied to the projected number of viewing households during the 2021 calendar year. This number is conservative as it does not account for all channels or reruns. | 2022 | 19,405 | R |
| Clemson Extension | WBTW | Commercial messaging was provided on the target behavior "Protect Your Pipes, Flush only TP, Trash Everything Else," | 2022 | 698,400 | R |
| WBTW | Clemson Extension | WBTW mini clips - Four segments on gardening practices for clean water aired between February and May 2022 | 2022 | 388,247 | R |

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Publications ARTICLES - NEWSPAPERS, MAGAZINES, & E-NEWS

NUMBER **SUPPORTING** LEAD TARGET DATE ACTIVITY OF PROVIDER PARTNER AUDIENCE **IMPACTS** Factsheets located on the Clemson Home and Garden Information Network (HGIC) that have R, YT, HE, been authored by Water Resource Agents and that Clemson Clemson E, EA,T, directly relate to stormwater education include 2022 52,129 Extension University DIS, SP, topics on pond management, landscape-level CR, P stormwater management, vegetative buffers, low impact development, and more. "Drop in the Bucket" E-Newsletter on current and Clemson EA, T, E, FDSC upcoming events for the FDSC. 57 impacts per 2022 228 Extension R, DIS newsletter. Land Grant Press publications authored by the Clemson Extension Water Resources Team include 12 publications since 2020. Topics include pond Clemson R, P, DIS, Clemson 2021 dredging, headwater streams, watershed based 28,631 Extension University LD, CR planning, harmful algal blooms and more. This publications can be accessed at lgpress.clemson. edu Clemson Clemson's Rain Garden Manual Ongoing Unknown R Extension Clemson Clemson's Rainwater Harvesting Manual for Ongoing Unknown R Extension Homeowners

"To leave the world better than you found it, sometimes you have to pick up other people's trash." —Bill Nye

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FLORENCE/DARLINGTON

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Public Education



Outreach Materials

RACKCARDS, HANDOUTS, AND PROMOTIONAL ITEMS

| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|----------------------|----------------------------|---|------|-------------------------|--------------------|
| Clemson Extension | FDSC Municipal Partners | Rackcard displays are placed in at least one high-traffic location per community. Promotional items like FOG awareness pot holders, FOG lids, and pens are also available | 2022 | 750 | R |
| Florence County | | Magnets and brochures detailing recycling opportunities available to Florence County Residents are located in public buildings, convenience centers (15), and provided upon request. | 2022 | 50 | R |
| City of Florence | Clemson Extension | City of Florence handed out FOG Door Hangers to residents who live in areas vulnerable to Sanitary Sewer Overflows (SSO). | 2022 | 500 | R, CR |
| AECOM | | FOG information, How to Handle Grease packets, What Not to Flush door hangers passed out to residents and restaurants | 2022 | 518 | R, CR |



A volunteer helps to pick up roadside litter during the 2022 River Sweep.



Items to promote FOG awareness are available in at least one high-traffic location per community.

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Soil and Water Testing

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FLORENCE/DARLINGTON

STORMWATER CONSORTIUM

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| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|---|-----------------------|--|------|-------------------------|--------------------|
| Clemson Agricultural Services Lab | Clemson Extension | Clemson Extension, in cooperation with Clemson's Agricultural Service Lab, processed soil and water samples for Florence County residents and commercial audiences. | 2022 | 337 Soil Tests | R, C |
| Clemson Agricultural Services Lab | Clemson Extension | Clemson Extension, in cooperation with Clemson's Agricultural Service Lab, processed soil and water samples for Darlington County residents and commercial audiences. | 2022 | 144 Soil Tests | R, C |

Public Education

Installations/Demonstrations

| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|----------------------------|-----------------------|--|---------|-------------------------|--------------------|
| City of Florence | Clemson Extension | Timrod Park rain gardens (2012) with educational signs explaining the function of rain gardens. | ongoing | ~1000 | R |
| Clemson Extension | City of Darlington | Storm drain mural in Darlington County in front of City Hall raises awareness that land based activities impact local water bodies by depicting types of wildlife that depend on clean water. | ongoing | ~200 | R |
| Kalmia Gardens | Clemson Extension | Regenerative Stormwater Conveyance System (RSC) was completed in March of 2018. Since its installation, there has been visible improvement in erosion previously associated with the stormwater outfall, helping to reduce the amount of sediment pollution in Black Creek. | ongoing | ~100 | R |
| Keep Florence Beautiful | Clemson Extension | Sidewalk Buttlers installed to encourage smokers to dispose of their butts properly. Cigarette butts collected are mailed off and recycled into plastic items like pallets, ashtrays, and benches. | ongoing | 4 | R |

Trainings and Certifications

FLORENCE/DARLINGTON STORMWATER CONSORTIUM BY CLEMSON® EXTENSION

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| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|----------------------|-----------------------|--|----------------------|-------------------------|--------------------|
| Clemson Extension | SCDHEC | Certified Stormwater Plan Reviewer (CSPR) program to educate personnel on the proper design and review of stormwater and sediment control plans for development sites in order to meet regulatory and environmental requirements. | 2022 | 85 | T, DIS |
| Clemson Extension | | The statewide Master Pond Manager Course offers pond management strategies to pond owners and managers through an online classroom and in-person field days. | Fall 2022 | 27 | T, DIS, SP |
| Clemson Extension | | CEPSCI Course: Clemson provides training and certification for the Certified Erosion Prevention and Sediment Control Inspector (CEPSCI) program to assist in pollution prevention control on construction projects. Impacts reflect statewide trainings. | 2022 | 1,581 | Т |
| Clemson Extension | | Master Rain Gardener is a certification program focused on rain garden and rainwater harvesting system design and installation. | Fall 2022 | 59 | R, T, DIS |
| Clemson Extension | | Post-Construction BMP Inspector Re-Certification Course: online and field-based training focused on inspection and maintenance of best management practices used for stormwater management. | Fall 2022 | 73 | Т |
| Clemson Extension | | Carolina Yards Online Guide to Environmentally Friendly Landscaping: Five week online course based on 12 principles of environmentally/watershed friendly landscaping. | Spring 2022 | 60 yards | R |
| Kalmia Gardens | Clemson Extension | Adopt-a-Stream Class offered at Kalmia Gardens Dan Hill held a training class for citizen scientist. At the end of the day participants were certified to be in the Adopt-a- Stream program. | December 10, 2022 | 3 | R, T |



Participants of the Adopta-Stream training at Kalmia Gardens learned how to monitor water quality and report their results to the Adopt-astream database.



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Presentations

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FLORENCE/DARLINGTON STORMWATER CONSORTIUM BY CLEMSON° EXTENSION

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| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|--------------------------------------|-----------------------|---|---------------------------------|-------------------------|--------------------|
| Kalmia Gardens | | South Carolina Governor's School for Science and Mathematics Tour Kalmia Gardens: Dan Hill led a nature walk for the GSSM, covering possible stormwater pollutants and ways to stop this kind of pollution. | January 7, 2022 | 20 | YT, E |
| Darlington Kiwanis Club | Clemson Extension | Presentation at Darlington Kiwanis Club meeting on the purpose and role of the FDSC and the impact stormwater has on our day to day lives. | January 20, 2022 | 30 | R, P |
| Kalmia Gardens | | Spring Beauty Garden Club talk: Dan Hill discussed the impact homeowners could have on stormwater quality. | March 2, 2022 | 28 | R, P |
| Kalmia Gardens | | Pine Lake Garden Club Talk: Dan Hill spoke with the garden club about ways the homeowner can prevent stormwater pollution. | March 9, 2022 | 23 | R |
| Environmental Discovery Center | | Fossil Discovery: Students will learn about and examine different types of fossils as well as gain an understanding of how they are formed. They will also have the opportunity to make their own fossil or fossil rubbing to take home. (3 sessions) | March 4, May 18, 24, 2022 | 91 | R |
| Clemson Extension | | Master Gardener Bootcamp presentation on Waterwise Landscaping | March 16, 2022 | 7 | R |
| Darlington Kiwanis Club | Kalmia Gardens | Kiwanis Club talk: Dan Hill spoke with the Kiwanis Club about general stormwater pollutants and how to prevent these pollutants from getting into our waterways. | March 24, 2022 | 60 | R, P |
| Environmental Discovery Center | | Wonders of Wildlife Using a variety of live animals common to SC, students are taught about different animal adaptations and structures and how each species uses those features to survive in their individual habitats. (8 sessions) | April - November 2022 | 378 | ΥT |
| Environmental Discovery Center | | Growing Up Wild: Students will learn how different animals grow and change throughout their life cycle. (2 sessions) | April 1, 13 2022 | 41 | ΥT |

Presentations

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FLORENCE/DARLINGTON STORMWATER CONSORTIUM BY CLEMSON° EXTENSION

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| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|--------------------------------------|-----------------------|---|---------------------------------|-------------------------|--------------------|
| Environmental Discovery Center | | Birds and Worms: Students learn about characteristics and adaptations as they pretend to be birds in search of "worms" in this physically involved outdoor activity. (2 sessions) | April 5, October 21, 2022 | 116 | ΥT |
| Clemson Extension | | DIY Rain Barrel Virtual Workshop: Participants received the materials to assemble a rain barrel then watched an instructional video to learn how to assemble it. | April 8, 2022 | 30 | R |
| Environmental Discovery Center | | Ecosystem Investigation: Students examine various characteristics of the environment including sunlight, soil moisture, temperature, wind, plants and animals. They then draw conclusions about how nonliving characteristics influence the living elements in an ecosystem. | April 29, 2022 | 53 | ΥT |
| Environmental Discovery Center | | Healthy People/Healthy Habitats: Students examine the connection a healthy environment has to human health. Students will conduct their own experiment which demonstrates how quickly and easily diseases can spread through wildlife and human populations. | May 3, 2022 | 10 | ΥT |
| Moore Farms Botanical Gardens | Clemson Extension | Rain Barrel Workshop: Participants learned how rainwater harvesting helps to protect water quality and learned how to make a rain barrel. All participants took a barrel home. | May 7, 2022 | 9 | R |
| Clemson Extension | | Half and Half Webinar: Waterwise Landscaping: How to protect water quality by reducing the amount of water used in landscaping and gardening. | May 18, 2022 | 42 | R |
| Environmental Discovery Center | | How Many is Too Many? Students portray black bears while looking for one or more components needed to survive in their distinct environment. They will learn about limited resources and carrying capacity during this physically involved activity. | May 25, 2022 | 81 | ΥT |
| Kalmia Gardens | | Kalmia Gardens Tour: Dan Hill led a tour of the Gardens, stopping to talk about stormwater at the Gardens RSC. | May 25, 2022 | 20 | R |
| Clemson Extension | | Children attending a gardening camp at the Darlington YMCA learned about stormwater and how wise water use can protect water quality. | June 7, 2022 | | R |

Presentations

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FLORENCE/DARLINGTON STORMWATER CONSORTIUM BY CLEMSON° EXTENSION

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| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|--------------------------------------|-----------------------|--|---------------------------------|-------------------------|--------------------|
| Clemson Extension | | Presentation to the Pee Dee Landscape Professionals about Waterwise Landscaping. | June 16, 2022 | 10 | LD |
| Clemson Extension | | Children attending multiple 4-H Cooking Camps learned about proper grease disposal and how clogged pipes can lead to water pollution. | June 22, July 21, 2022 | 30 | YT |
| Kalmia Gardens | Clemson Extension | Week in the Wild Summer Camp | July, 2022 | 30 | ΥT |
| Moore Farms Botanical Gardens | Clemson Extension | Rain Barrel Workshop: Participants learned how rainwater harvesting helps to protect water quality and learned how to make a rain barrel. All participants took a barrel home. | August 13, 2022 | 16 | R, YT, P |
| Clemson Extension | | Environmental educators learned about the connections between wetlands and clean water and how to teach those water quality concepts to students. | September 7, 2022 | 6 | E |
| Clemson Extension | | Presentation to Garden Club about rain water harvesting and how it improves water quality. | September 14, 2022 | 30 | R |
| Clemson Extension | Darlington Library | Children at the Darlington Library were read books about water quality and rain, then did activities related to the books. | September 19, 26, 2022 | 15 | YT, R |
| Environmental Discovery Center | | Fossil Discovery: Students will learn about and examine different types of fossils as well as gain an understanding of how they are formed. They will also have the opportunity to make their own fossil or fossil rubbing to take home. (3 sessions) | March 4, May 18, 24, 2022 | 91 | R |
| Clemson Extension | | Ivy Rain Barrel Sale: Residents have the option to purchase an Ivy Rain Barrel and attachments at an affordable price. | Ongoing | 28 | R |

FORENCE/DARLINGTON BY CLEMSON* EXTENSION OCCOMPANY OF EXTENSION

Public Events

| LEAD PROVIDER | SUPPORTING PARTNER | ACTIVITY DESCRIPTION | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|--------------------------------------|-----------------------|---|--------------------------------|-------------------------|--------------------|
| Keep Florence Beautiful | Clemson Extension | Tarp Give Away | October 8, 2022 | 160 | R |
| Environmental Discovery Center | Clemson Extension | Carolina Clear pet waste bags were distributed to pet owners attending the Paws on the Pad event. | September 24, 2022 | 25 | Р |
| Clemson Extension | | Eastern Carolina Fair Rain Barrel Display | October 27 - Nov. 5 2022 | TBD | R |
| City of Florence | Clemson Extension | Trunk-or-treat for members of the community. Residents came by to get candy while getting exposure to the FDSC mission. | October 29, 2022 | 60 | R |
| Scranton Elementary | Clemson Extension | Trunk-or-Treat for children attending Scranton Elementary. | October 31, 2022 | 200 | |
| Clemson Extension | | Water Resource Agent responded to calls and emails from the community. Issues addressed included: dam maintenance, rain gardens, aquatic weeds, nuisance wildlife, and rainwater harvesting. | 2022 | 40 | R |
| Darlington County | | Conversations with residents about development activities including general stormwater information, how to protect bodies of water, the use and importance of rain gardens and rain barrels, pet waste, and other stormwater concerns. | 2022 | 100 | R, T, LD |



The 2022 River Sweep was a huge success, with over 600 pounds of litter removed from the roadside and adjacent waterways.

PUBLIC EDUCATION January - December 2022 Annual Report

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| | | | | collected | |
|----------------------------|--|---|-----------------------|--|-----------------|
| Keep Florence Beautiful | | Mini Clean Ups - volunteers clean a small area during a mini session during the work day. | 2022 | 38 Volunteers, 1,570 lbs collected | R |
| Keep Florence Beautiful | City of Florence, Clemson Extension | Great American Cleanup: Litter clean up improving parks, lands, trails, streets and highways. | March- June 2022 | 278 volunteers, 4,950 lbs collected | R, YT, E, HE |
| Keep Florence Beautiful | Clemson Extension | 2022 River Sweep - Participants cleaned up a 1 mile section of Woody Jones Blvd. in Florence. | September 24, 2022 | 6 volunteers, 600 lbs collected | R |



FLORENCE/DARLINGTON STORMWATER CONSORTIUM BY CLEMSON° EXTENSION

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| LEAD PROVIDER | SUPPORTING PARTNER | ΑCΤΙVΙΤΥ | DATE | NUMBER OF IMPACTS | TARGET AUDIENCE |
|----------------------------|--|---|-----------------------|---|--------------------|
| Darlington County | | Darlington County residents can safely and properly dispose of used motor oil to be recycled using Santee Cooper GOFER containers. | 2022 | TBD gallons recycled | R |
| Florence County | | Florence County residents can safely dispose of and recycle used motor oil using Santee Cooper GOFER containers. Cooking oil was collected at recycling centers. | 2022 | Motor Oil: 15,718 gal Cooking oil: TBD | R |
| Keep Florence Beautiful | | Adopt-a-Street Program | 2022 | 263 Volunteers, 3,847 lbs collected | R |
| Keep Florence Beautiful | | Mini Clean Ups - volunteers clean a small area during a mini session during the work day. | 2022 | 38 Volunteers, 1,570 lbs collected | R |
| Keep Florence Beautiful | City of Florence, Clemson Extension | Great American Cleanup: Litter clean up improving parks, lands, trails, streets and highways. | March- June 2022 | 278 volunteers, 4,950 lbs collected | R, YT, E, HE |
| Keep Florence Beautiful | Clemson Extension | 2022 River Sweep - Participants cleaned up a 1 mile section of Woody Jones Blvd. in Florence. | September 24, 2022 | 6 volunteers, 600 lbs collected | R |

Public Involvement



Left: The Spaulding Heights Community gets together every year to pick up litter and keep their neighborhood clean.

Right: City of Florence Employee, Geraldine Cuypers, participates in 2022 River Sweep.





In the 2022 reporting year, the Florence Darlington Stormwater Consortium documented 1,584,656 impacts through diverse education strategies including television, internet, billboards, publications, outreach materials, presentations, training and certification programs, and other public involvement activities. Television accounted for the largest number of impacts at 1,106,052. Participation for each of the education activities is illustrated in the pie charts below. Public involvement efforts are highlighted on the following page.





An estimated 1181 citizens participated in public involvement activities during the 2022 reporting year. The actual number of participants is likely higher, since some activities are not able to be accurately tracked. Residents who get their soil tested help to promote clean water by reducing the amount of unnecessary fertilizer applied to yards, thereby reducing the amount of excess nutrients in waterbodies.



"We don't have to engage in grand, heroic actions to participate in the process of change. Small acts, when multiplied by millions of people, can transform the world." - Howard Zinn



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AUTHORS





"Setting an example is not the main means of influencing others, it is the only means." - Albert Einstein





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