

# ASHLEY COOPER

## STORMWATER EDUCATION CONSORTIUM

BY CLEMSON® EXTENSION



## Annual Report of Activities

YEAR 15 / JANUARY 2023 - DECEMBER 2023



**COOPERATIVE EXTENSION**  
*College of Agriculture, Forestry and Life Sciences*

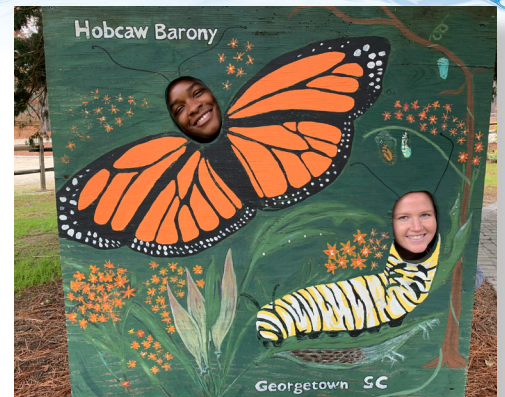
**THIS PAGE INTENTIONALLY LEFT BLANK.**

The Ashley Cooper Stormwater Education Consortium's Year Fifteen Annual Report of Activities summarizes outreach and involvement programming offered by the Ashley Cooper Stormwater Education Consortium (ACSEC) community and education partners in 2023. The ACSEC implements a region-wide outreach strategy to educate Charleston Tri-County residents on water quantity, quality, and the cumulative impacts of stormwater. Education programming is steered by the ACSEC Stormwater Outreach Strategic Plan 2018-2023, which identifies priority issues to address through messaging, and outreach that targets residential and commercial audiences. In year fifteen, many of our outreach efforts returned to in-person while maintaining some virtual programs as well.

Through partner collaboration, new initiatives in stormwater outreach offered creative methods to work with communities to address pollution in the region.

## 2023 Highlights

- In 2023, The Ashley Cooper Stormwater Education Consortium teamed up with Charleston County 4H agent Madison Parker to revamp the 4-H2O camp. 4-H2O engages youth ages 9-12 in hands-on activities that allow them to explore the outdoor world and study their local watershed.
- The Ashley Cooper Stormwater Education Consortium partnered with SC Sea Grant, SC DNR North Inlet-Winyah Bay NERR, SC DNR ACE Basin NERR, Coastal Waccamaw Stormwater Education Consortium, and the Lowcountry Stormwater Partners to launch a Stormwater Awareness Week social media campaign from September 25-29, 2023. The campaign highlighted different aspects of stormwater each day in social media posts.
- In 2023, Clemson Extension's Carolina Clear agents educated the citizens of South Carolina through coordinated and unified efforts on issues associated with stormwater. As a team, Carolina Clear Water Resources Agents working with partners across the state, including Ashley Cooper Stormwater Education Consortium, improved the lives and had a significant impact on our communities.



**ACSEC Co-Coordinator**  
*Beatriss Calhoun (left) and Samantha Porzelt (right) are Water Resource Agents for the Clemson Cooperative Extension Service. As part of their work with the Carolina Clear program, they Co-Coordinate the Ashley Cooper Stormwater Education Consortium. Bea's professional interests include bacteria pollution management through septic tank and rainwater harvesting. Samantha's professional interests include landscape-level best management practices and the use of native plants. Our goal is to build upon one another's expertise to better suit the needs of the ACSEC region.*



## 2023: A Year in Pictures



*Floating Treatment Wetland install in Mount Pleasant. Thank you to our partners at the Town of Mount Pleasant.*



*From Seeds to Shoreline Seed Collection Day at SC Department of Natural Resources. Thank you to our partners at SC Sea Grant.*



*In September, 2023, Clemson Extension, SCDNR, and USDA provided a Geese Management Workshop. Thank you to our partners at the Town of Mount Pleasant.*



*2023 Charleston Rainproof Minigrant workshop at Corrine Jones Park. Thank you to our partners at the City of Charleston.*



*Year 2023 ACSEC and Ivy Rainwater Solutions Team up for a Rain Barrel Sale. Over 300 Sold. Thank you to our partners at Charleston County and Town of Summerville.*



*2023 Master Rain Gardener certificate course field day at Folly River Park. Thank you to our partners at the City of Folly Beach.*



# Table of Contents

Executive Summary.....	I-II
Community Partners.....	1
Education Partners.....	2
Mission and Goals .....	3
Education and Involvement Program History.....	4
Highlight: 4-H2O Summer Camp .....	6
Highlight: Stormwater Awareness Week .....	7
Highlight: Clemson Extension Site Visits .....	8
Report Format.....	10
Public Education: Indirect.....	11
Public Education: Direct .....	17
Public Involvement .....	20
ACSEC Year Thirteen Outreach Summary.....	23
Appendix .....	25



*From Seeds to Shoreline Planting Day with 4H Agent, Madison Parker*

The majority of designated Small Municipal Separate Storm Sewer Systems (SMS4) communities in the Charleston Urbanized Area, representing approximately 90% of the population, have committed to the ACSEC regional collaboration. These communities are represented by a dedicated group of public servants who have been engaged for many years in building the partnership.

## Local SMS4 Consortium Representatives: 2023

Berkeley County	Stephen Tanner, Kevin Kubiak, Robin Stone
Charleston County	Chris Wannamaker, Sonya Cromwell, Brett Champion
Dorchester County	Mike Goldston, Kacy Byrd
City of Charleston	Kinsey Holton
City of Folly Beach	Represented by Charleston County via Inter-Governmental Agreement (IGA)
City of Goose Creek	Represented by Berkeley County via IGA
City of Hanahan	Represented by Berkeley County via IGA
City of Isle of Palms	Represented by Charleston County via IGA
Town of James Island	Represented by Charleston County via IGA
Town of Lincolnton	Represented by Charleston County via IGA
Town of Mount Pleasant	Claire O'Loughlin, Julie Wright, Cody Robinette
City of North Charleston	Mike Dalrymple, John Peckham, Merry Barton
Town of Sullivan's Island	Represented by Charleston County via IGA
Town of Summerville	Bonnie Miley, Skip Tucker



**BERKELEY**  
 COUNTY  
 SOUTH CAROLINA



**CHARLESTON**  
 COUNTY  
 SOUTH CAROLINA



**Dorchester**





# Education Partners

Collaboration is integral in developing and delivering a successful watershed-scale outreach program that reaches diverse audiences. The ACSEC is fortunate to have a variety of organizations in the Charleston Tri-County region that have joined the effort. Education partners include universities, state and local government agencies, utilities, and non-profits. Each brings unique expertise, resources, ideas, and programs to the ACSEC. The ACSEC fosters communication among organizations and through this cooperative effort programs are being created or enhanced. Lead and supporting partners are noted in the following report of activities.



## ACSEC Education Partners

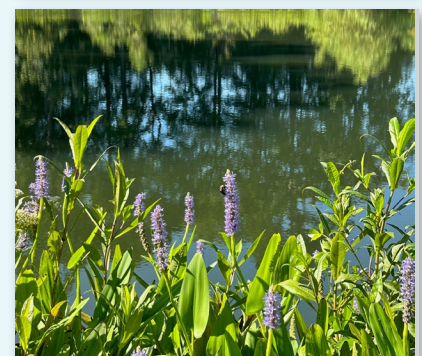
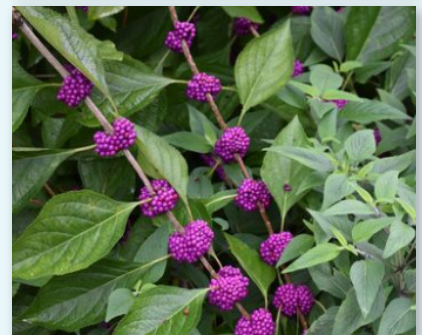


## ACSEC MISSION STATEMENT

*Improve water quality within the Ashley and Cooper River basins by providing educational opportunities on stormwater impacts and our community roles in supporting healthy, fishable, and swimmable waterways.*

## PROGRAM GOALS

- Develop and implement an education plan that defines a cohesive education strategy which outlines target audiences and associated target pollutants relevant to the region using a prioritized approach.
- Facilitate compliance with existing and future educational regulatory requirements by capitalizing on local resources and service providers.
- Foster citizen involvement in stormwater management through ACSEC education and participation programs.
- Encourage behavioral change towards environmental quality improvement through stormwater education.
- Utilize mainstream and developing technologies and tools to maximize citizen exposure to ACSEC stormwater goals and objectives.
- Create an interactive reporting process to facilitate information exchange and dissemination among member entities.





# Education and Involvement Program History

To meet the ACSEC program goals, community and education partners meet twice a year or more frequently as needed to work collaboratively in the development, implementation, and evaluation of new and existing programming. These meetings and decision making process is open to the public.

ACSEC programming priorities were identified and developed through the Ashley Cooper Stormwater Education Consortium Stormwater Outreach Strategic Plan 2018-2023. The Strategic Plan can be found online at: [www.ashleycooper.org](http://www.ashleycooper.org). The Strategic Plan provides a framework for prioritizing regional issues, develops target outreach methods, and determines program evaluation metrics to improve the delivery and impact of ACSEC efforts. It is considered a “living” document to allow for refinement, supplementation, and flexibility as regional efforts and issues evolve over the five-year period. The development of the Strategic Plan was a multi-year effort that involved community and education partner input and an evaluation of geography, pollutant concerns, and public perception as identified in the 2019 Carolina Clear Statewide Survey.

The Strategic Plan process helped identify priority issues, contributing issues, target behaviors, and education strategies to address pollutants of concern in the region. The ACSEC residential and commercial audience priorities are as follows:

## Bacteria

CONTRIBUTING ACTION	TARGET AUDIENCE	TARGET BEHAVIOR
Improper disposal of pet waste	Dog owners who walk their dog.	Increase the number of dog owners who carry a bag for dog waste on walks.
Failing septic tanks	New and existing homeowners with septic tank systems.	Increase the number of new and existing homeowners with septic tank systems who are working with a professional to perform maintenance.

## Litter

CONTRIBUTING ACTION	TARGET AUDIENCE	TARGET BEHAVIOR
Single-use plastic pollution	Shoppers who want to use a reusable bag but forget to bring to the store.	Help understand the ways to recycle plastic or reduce the usage of single-use plastics. Increase the number of shoppers who bring a reusable shopping bag.
Cigarette butts becoming litter	Smokers that do not dispose of cigarette butts in trash.	Increase the number of smokers who carry a personal ashtray or throw away butts in the trash can.

# Education and Involvement Program History

## Nutrients

CONTRIBUTING ACTION	TARGET AUDIENCE	TARGET BEHAVIOR
Improper use and application of fertilizer by home gardener	Home gardeners that perform their own landscaping.	Increase the number of home gardeners who install native plants.
Improper use and application of fertilizer by commercial company	Landscape professionals that do not currently offer soil testing to clients.	Increase the number of landscape professionals who offer soil testing as part of their services.

These priority issues, and subsequent contributing actions, target audiences, and target behaviors, have formed the core of efforts by the ACSEC; education strategies include five-year timelines for program implementation (see Appendix). To evaluate the effectiveness of outreach and involvement campaigns, evaluation metrics include but are not limited to:

- Five-year surveys to gauge perceptions, knowledge gained, and behavior change of residents living in the consortium area.
- Google Analytics to evaluate impacts of web-based programming and outreach.
- Short and long-term program evaluation to evaluate workshop and training success in delivering information, assisting participants in overcoming barriers to practice implementation, and meeting the needs of the target audience.
- Other methods including analysis of distribution numbers.

The ability of the ACSEC to implement and deliver consistent messaging and programming as well as leverage partner-lead initiatives helps the Consortium-model to successfully address community priorities and concerns across multiple waterway “lines.”



## 4-H2O Camp: Exploring Lowcountry Waterways

In 2023, The Ashley Cooper Stormwater Education Consortium teamed up with Charleston County 4-H agent Madison Parker to revamp the 4-H2O camp. 4-H2O engages youth ages 9-12 in hands-on activities that allow them to explore the outdoor world and study their local watershed. Each day, campers became Watershed Ambassadors by learning about the components that make up a watershed through science lessons, scientific equipment, and memorable moments. From June 12-16, campers had the opportunity to engage in fun and educational water activities such as canoeing, boat tours, swamp ecology, birding, and more! Thank you to all volunteers and organizations involved to help make this years 4-H2O camp a success!

Day 1: Old Santee Canal Park boardwalk exploring and canoeing

Day 2: Caw Caw Interpretive Center birding and indigo tie-dying

Day 3: SC Department of Natural Resources Discovery Trawl, sea turtle lesson, and marsh walk

Day 4: Folly Beach seashell scavenger hunt and fish printing at Brittebank Park with SC Sea Grant

Day 5: Caper's Island with Barrier Island Eco Tours



2023 4-H2O SUMMER CAMP

## Stormwater Awareness Week Social Media Campaign

The Ashley Cooper Stormwater Education Consortium partnered with SC Sea Grant, SC DNR North Inlet-Winyah Bay NERR, SC DNR ACE Basin NERR, Coastal Waccamaw Stormwater Education Consortium, and the Lowcountry Stormwater Partners to launch a Stormwater Awareness Week social media campaign from September 25-29, 2023. The campaign highlighted different aspects of stormwater each day in social media posts. The campaign was posted on the SC Sea Grant Facebook page and SC Sea Grant Instagram page and then shared by partner organizations to increase the reach. The last day of the campaign includes 2 giveaway opportunities to encourage community engagement and behavior change.

Day 1 - Stormwater Research

Day 2 - Low Impact Development (LID)

Day 3 - Stormwater Ponds

Day 4 - Native Plant Benefits

Day 5 - Community Science

Across Facebook and Instagram, the campaign had an overall reach of over 18,000 accounts! Thank you to our partners for making our first Stormwater Awareness Week Campaign a success!



### SOUTH CAROLINA LID ATLAS

An interactive map of Low Impact Development (LID) projects throughout the state.



A SAMPLE OF PHOTOS FROM THE STORMWATER AWARENESS WEEK SOCIAL MEDIA CAMPAIGN



## Statewide Highlight: In-Person On-Site Field Visits



PHOTO CREDIT: KIM MORGANELLO AND SUSAN LUNT

In 2023, Clemson Extension's Carolina Clear agents served their communities through outreach in numerous ways to improve the lives of South Carolinians. As a team, Carolina Clear educated the citizens of South Carolina through coordinated and unified efforts on issues associated with stormwater and raised awareness of actions and behaviors to protect our water resources. Water Resources Agents working with partners across the state to administer the Carolina Clear Program, including the Ashley Cooper Stormwater Education Consortium, had a significant impact on our citizens by delivering research-based information on best management practices (BMPs) which help to manage water quantity and quality. Many of these impacts were a result of Clemson Extension Water Resources Agents across the state working together to conduct approximately 200 in-person on-site field visits.

These visits addressed a variety of stormwater runoff issues that impact watershed health: erosion, pollutant & bacteria sources, streambanks, ponds, and fish. The BMPs discussed include behaviors, actions, and structural installations: soil health, slope management, rainwater harvesting, rain gardens, native non-invasive landscaping, pervious surfaces, groundcovers, vegetative buffers, aeration, floating wetlands, integrated management of nuisance plants & animals, responsible use of fertilizers & chemicals, and maintenance.

## Statewide Highlight: In-Person On-Site Field Visits, Continued

The overall objective of field visits is to empower residents to better understand and manage their stormwater concerns utilizing BMPs in their own surroundings and enable them to share their new knowledge throughout the community. Building trust and rapport with our clients through listening to their needs and goals during our initial contact via phone, email, text, or in-person in the office leads to desired outcomes associated with their stormwater issues. Agents offer numerous BMP options that can be adopted to improve the situation and stress that by just starting with one measure has proven productive.

In addition to providing information on BMPs, our education involves increasing understanding on watersheds, our built environment, and population & climate changes as they relate to stormwater runoff. On-site, agents walk the property with the clients, following the path of the water sources and potential contaminant issues to the final water destination, focusing on the clients' areas of concern, identifying areas they may not have considered, and sharing site specific BMPs in an integrated treatment train approach. Visits conclude with the sharing of Clemson Extension resources in print and online, and an introduction to hybrid courses and webinars that will allow the residents to take action and to become better Earth Stewards.

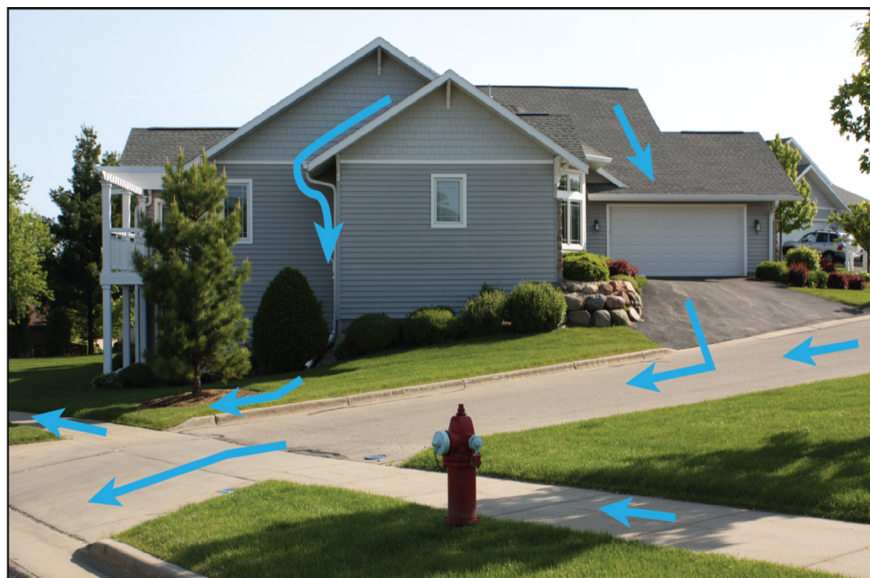


PHOTO CREDIT: USGS



# Annual Report of Activities Format

The annual report utilizes the same general format as the first nine ACSEC reports and the other regional stormwater consortiums in South Carolina. This annual report, number Fifteen for the consortium, is intended to give the reader a comprehensive look at the ACSEC from January 1, 2023 through December 31, 2023. This report delineates activities into public education and public involvement categories. For each activity, a brief description is provided as well as information on lead provider, supporting partners, date, number of impacts, and target audiences. Furthermore, public education activities are identified as either direct or indirect outreach strategies.

Clemson Extension's Carolina Clear program developed an online database in the first ACSEC reporting cycle to record detailed information on activities conducted by consortium partners. The data collected in the online database includes information on target audiences, pollutants addressed, activity type, lead service providers, supporting partners, number of impacts, location, and several other categories. This annual report provides a condensed version of the information collected in the online database as well as supplementary information sourced from ACSEC partners.

Public education activities are classified into two broad categories, **direct** and **indirect** outreach methods, to express mechanisms by which information has been communicated to the public. Direct methods include activities that are implemented via direct personal contact. Examples of direct methods include workshops, presentations, trainings, and public involvement activities. In contrast, indirect outreach methods refer to contacts through traditional media channels including television, radio, print, and billboards. Indirect methods generally reach a much greater portion of the population due to the nature of their mediums; however, it is often more difficult to gauge specific impacts. When dealing with direct methods, smaller numbers of people are reached yet the ones that are reached generally provide a forum for direct evaluation and feedback. Each method is important in the overall education campaign, and both are part of the five year educational strategy for the ACSEC. Throughout the document, the words "direct" or "indirect" are provided at the top of each reporting table.

\*Data provided are as accurate as possible and are reviewed by multiple individuals involved in the reporting process. However, due to the nature of indirect outreach initiatives, indirect impact numbers are typically estimates.

The activities in the report are listed in table format.

# Public Education: Indirect

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
2023	INTERNET: Total unique views for the Carolina Clear, ACSEC, Carolina Yards, Stormwater Ponds, Clemson Extension Water Team, Rain Gardens, and Living Shorelines, LeadSolutions, Be Septic Safe, Streambank Repair, LID, Be Well Informed, CPIT, Dam, Salt Marsh, Seeds to Shorelines websites	Clemson Extension, Clemson University	83,366
2023	INTERNET: Total unique views for ACSEC Facebook page in 2023.	Clemson Extension	1,071
2023	INTERNET: Total unique views for Carolina Yards Facebook page in 2023.	Clemson Extension	6,738
2023	INTERNET: Total unique views for Making It Grow Facebook page in 2023.	Clemson Extension	861,815
2023	INTERNET: Total views on Carolina Clear YouTube page. Average duration of 1 minute and 50 seconds.	Clemson Extension	10,400
2023	INTERNET: Total views on Carolina Clear Facebook page views ( Lifetime Post Numbers).	Clemson Extension	17,892
2023	INTERNET: ACSEC’s “Ripple Effect” provides information on ACSEC education and involvement opportunities. In 2023, 3 newsletters were sent to 2,860 contacts.	Clemson Extension	2,860
2023	INTERNET: SC Coastal Information Network (SCCIN) hosts virtual meetings and resource portal providing educational and training opportunities for coastal community officials, staff, and public. The SCCIN is a coastal partnership of local, state, and federal partners (25) coordinated through the SC Sea Grant Consortium. This number reflects website visits. 50 members attend the winter, spring, and fall virtual meetings.	SC Sea Grant	50
2023	INTERNET: Total visits to Sea Grant’s Stormwater Pond Collaborative webpage. In addition to the webpage views, the Stormwater Pond State of Knowledge report was downloaded 128 times in 2023.	SC Sea Grant, SCDNR, Clemson Extension	29
2023	INTERNET: “From Seeds to Shoreline” South Carolina Salt Marsh Stewardship Program highlights characteristics, common flora, fauna, ecosystem services, and current research of the critically important salt marsh ecosystem. Numbers are based on YouTube views. <a href="https://www.youtube.com/watch?v=q_xbfxDFcf0">https://www.youtube.com/watch?v=q_xbfxDFcf0</a>	SC Sea Grant, SCDNR, Clemson Extension, College of Charleston	750
2023	INTERNET: Seeds to Shoreline Educational Workshop video created for teacher workshop and future educational use. (SC Sea Grant proofed and organized). <a href="https://www.youtube.com/watch?v=xUSfTI39-EU&amp;t=29s">https://www.youtube.com/watch?v=xUSfTI39-EU&amp;t=29s</a>	SC Sea Grant, SCDNR, Clemson Extension, College of Charleston	55
2023	INTERNET: The newly redesigned interactive online map displays current low impact development (LID) projects statewide. The goal of the atlas is to showcase LID projects so that they can serve as models for communities trying to address stormwater- and growth-related issues. Impact numbers are based on total views.	SC Sea Grant, SCDNR, Clemson Extension	109
2023	INTERNET: Total visits to SC Sea Grant’s Clean Marina Program webpage.	SC Sea Grant	420



# Public Education: Indirect

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
2023	INTERNET: Factsheets located on the Clemson Home and Garden Information Network (HGIC) that have been authored by Water Resource Agents and that directly relate to stormwater education include topics on pond management, landscape-level stormwater management, vegetative buffers, low impact development, and more. The total unique views is estimated from previous data due to google analytics platform changes this year. Note: this is an under estimate of the total impacts as this does not include factsheets on topics associated with fertilizer application, composting, native plants, and other best management practices associated with water quality. These publications can be accessed at hgic.clemson.edu	Clemson Extension	55,000
2023	INTERNET: Land Land Grant Press publications authored by the Clemson Extension Water Resources Team include 23 publications since 2019. Topics include stormwater ponds, livestock ponds, recreational ponds, wetlands, aquaponics, funding, flooding, pond dredging, pond weeds, headwater streams, watershed based planning, harmful algal blooms and more. These publications can be accessed at lgpress.clemson.edu	Clemson Extension, Land Grant Press	31,077
July 2023	INTERNET: The City of Charleston had a social media campaign, Plastic Free July, to provide plastic free alternatives to everyday tasks and products.	City of Charleston	3,100
September 2023	INTERNET: The City of Charleston provided Adopt-A-Drain Program informational flyers through social media.	City of Charleston	262
2023	INTERNET: Mount Pleasant Waterworks provided a Septic Smart campaign on Instagram that focused on septic BMPs to protect waterway health. Mount Pleasant Waterworks also produced a FOG disposal Instagram reel for the holidays. Impact numbers are based off of total page followers.	Mount Pleasant Waterworks	351
2023	INTERNET: Mount Pleasant Waterworks produces a wastewater annual report each year. In 2023, it included information in the report on the impacts of FOGs on the sewer system and safe FOG disposal. The report and information were delivered to 40,752 customers through our Water Smart email distribution system.	Mount Pleasant Waterworks	40,752
Continuous	MANUAL: Low Impact Development Manual in Coastal South Carolina: a Planning and Design Guide. This comprehensive manual provides engineering tools, planning guidance, and case study examples that are relevant to the South Carolina coastal zone. This manual is available for download from the S.C. Sea Grant Consortium's and NI-WB NERR's websites. Impact numbers are based on website visits.	SC Sea Grant, SCDNR	358

# Public Education: Indirect

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
January 2023	FLYER: The City of Charleston sent Water Quality Mail Inserts to local residents.	City of Charleston	110,000
September 2023	FLYER: The City of Charleston delivered Hurricane Preparedness Tips flyers to local community centers before Hurricane Ian.	City of Charleston	900
September 2023	FLYER: The City of Charleston provided “What is a Rain Garden” 5-Step Guide flyers to residents.	City of Charleston	55
2023	FLYER: The City of Charleston provided “Clean Ditch Notice” reminders to residents.	City of Charleston	50
August 2023	FLYER: The City of Charleston provided an information flier for the “Charleston Rainproof” program	City of Charleston	150
August 2023	FLYER: The City of Charleston provided a “Floodplain Emergency Preparedness” brochure to residents.	City of Charleston	20,000
2023	FLYER: The College of Charleston Lowcountry Hazard Center and Environmental and Sustainability Studies Masters Program provided rack cards and a story map on environmental issues in Charleston and leaders in addressing those issues with sources on how to connect with them.	College of Charleston	3,000
Continuous	PERMANENT EXHIBIT: A large shoreline planting project and floating wetland at a stormwater pond on the Charleston County Public Services Building campus serves as a demonstration site for stormwater pond best management practices	Charleston County Government, Clemson Extension	500
Continuous	PERMANENT EXHIBIT: Clemson REC “Ed Shed” includes education signage and stormwater best management practices. This space is used to host workshops, trainings, and meetings for diverse groups/classes.	Clemson Coastal Research and Education Center, Tri-County Master Gardeners, Clemson Extension	200
Continuous	PERMANENT EXHIBIT: Rain garden and cistern installed at a Berkeley County library “Pollinator Garden” location in Hanahan.	Berkeley County, Berkeley County School District, Keep Berkeley Beautiful	1,000
Continuous	PERMANENT EXHIBIT: Educational signage about the WaterGoat, “Litter Ends Here”.	Berkeley County, Berkeley County School District, Keep Berkeley Beautiful, Caromi Volunteer Fire Department	100
Continuous	PERMANENT EXHIBIT: Educational signage about the stormwater “Treatment Train” and the process for treatment of stormwater runoff from beginning until point of discharge to receiving waters. Signage can be found at the Cypress Gardens in Moncks Corner, SC.	Berkeley County Stormwater Management, Berkeley County Cypress Gardens	30,000
Continuous	PERMANENT EXHIBIT: Clemson REC Urban Research and Demonstration Area showcases native plants, a rain garden, rain barrel, pollinator space, educational signage and more; open to the public during daylight hours.	Tri-County Master Gardeners, Clemson Coastal Research and Education Center, Clemson Extension	1,000



# Public Education: Indirect

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Continuous	PERMANENT EXHIBIT: Rain garden and signage at Caw Caw Interpretive Center.	Charleston County Parks and Recreation	2,000
Continuous	PERMANENT EXHIBIT: Rain garden “Whirlin’ Waters” at Wannamaker County Park.	Charleston County Parks and Recreation	500
Continuous	PERMANENT EXHIBIT: Rain garden and signage at the Cooper School in West Ashley. Funding for the signs were supplied by the ACSEC.	City of Charleston, Carolina Clear, Clemson Extension	315
Continuous	PERMANENT EXHIBIT: Two rain barrels and drip irrigation at St. Julian Divine Community Center	St. Julian Divine Community Center	1,500
Continuous	PERMANENT EXHIBIT: Two rain gardens, cistern, and antive plants installed at Fort Johnson Community Garden and Outdoor Classroom	SCDNR	5,000
Continuous	PERMANENT EXHIBIT: Cistern at Mitchell Elementary School’s Green Hearts Project Garden.	Mitchell Elementary School, Green Heart Project	350
Continuous	PERMANENT EXHIBIT: Cistern, rain garden, rain barrels, composting station and native plants at the College of Charleston’s Grice Marine Lab’s Green Teaching Garden.	College of Charleston	500
Continuous	PERMANENT EXHIBIT: Cistern and drip irrigation installed for raised beds at College of Charleston’s Political Science Building.	College of Charleston	200
Continuous	PERMANENT EXHIBIT: Cistern and adjacent rain garden located at the Medway Community Garden. Rainwater harvested is utilized to irrigate adjacent raised beds; rain garden doubled as a pollinator garden.	Charleston Parks Conservancy, Clemson Architecture Community Design Build, Clemson Extension	1,000
Continuous	PERMANENT EXHIBIT: Folly Beach Community Center: two rain gardens, a cistern, and interpretive signage were installed as part of the Master Rain Gardener program in the fall of 2022.	City of Folly Beach, Clemson Extension	2,500
Continuous	PERMANENT EXHIBIT: Folly River Park: cistern, rain garden, and interpretive signage were installed as a part of the 2023 Master Rain Gardener program.	City of Folly Beach, Clemson Extension	1,500
Continuous	PERMANENT EXHIBIT: Corrine Jones Park - includes wetland plant garden and cistern at the community garden shed. This was installed as part of the Master Rain Gardener course.	Clemson Extension	1,000
Continuous	PERMANENT EXHIBIT: The Town of Summerville placed three (3) new pet waste stations, two (2) at a boat landing and one (1) in a Town park, which supplement the stations already on the Sawmill Branch Trail. These 23 stations use 1,380 bags each year.. These stations are regularly monitored and are being used.	The Town of Summerville	2,300
Continuous	PERMANENT EXHIBIT: As part of Carolina Schoolyards, a rain garden and rain barrel located at the CREEC School.	Cape Romain Enviro. Ed. School	175

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
2023	TELEVISION: SC ETV Making It Grow! Average viewers per episode (based on average households viewing each episode and persons per household via census)	SCETV, Clemson Extension	18,527
2023	TELEVISION: The 2022-2023 Carolina Clear mass media campaign focused on water pollution associated with sanitary sewer overflows. Commercial messaging was provided on the target behavior “Protect Your Pipes, Flush only TP, Trash Everything Else,” on WTAT and WCSC in Berkeley, Charleston, and Dorchester Counties. Note: there was no air time in 2023; the impact numbers are from 2022 as part of the 2022-2023 mass media campaign	WTAT, WCSC, Clemson Extension	1,435,800
2023	BILLBOARD: The 2022 Carolina Clear mass campaign focused on water pollution associated with sanitary sewer overflows. See report highlight for additional information. Billboard messaging was provided on the target behavior “Protecting your Pipes, Flush on TP, Trash Everything Else.” in high visibility locations in 2023 as the following (weekly impression): - US 52, 0.4 miles E/O Gaillard Rd - 39,119 - I-26, 0.45 miles W/O US 17 - 302,928 - Rivers Ave (0.1 mi W/O Remound Rd -73,080 - US 17, 1 mile S/O State Road 162 - 69,103 - Ashley Phosphate Road, 50’N N/O Dorchester Manor Blvd - 124,743 - I-26, 1.8 miles E/O Jedburg Rd - 116,286	Clemson Extension	725,259



DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
April 2023	FAIRS/FESTIVALS: The MUSC Greenest Day: An Earth Day and Arbor Day Celebration is one of the many ways MUSC sends a clear signal about its commitment to environmental stewardship and recognition of the inextricable link between the health of the environment and human health.	MUSC, Clemson Extension	1,000
August 2023	FAIRS/FESTIVALS: Charleston Green Drinks hosts monthly gatherings that offer environmentally-minded community members a chance to connect, collaborate, and learn more about environmental resources and opportunities in Charleston. Water was the theme for the August event, where several local organizations provided introductions and tabling information on how their organization works to conserve water resources in the Charleston area.	Charleston Green Drinks, Clemson Extension, Coastal Conservation League, Charleston Water Systems, Mount Pleasant Waterworks, Charleston Surfrider, Water Mission	35
2023	PROMOTIONAL ITEM: The <a href="http://www.ashleycooper.org">www.ashleycooper.org</a> sticker includes the ACSEC logo and website utilized to promote website visitation and ACSEC awareness.	Clemson Extension	150
2023	PROMOTIONAL ITEM: Pocket Ashtray distributed to encourage responsible disposal of cigarette butts.	Clemson Extension	20
2023	PROMOTIONAL ITEM: Native Plant Seed Packets: Seeds contained a native plant mix that supports pollinators and songbirds.	Clemson Extension	200
2023	PROMOTIONAL ITEM: Dog bag Dispenser distributed to dog owners at tabling events to remind owners to pick up pet waste.	Clemson Extension	200
2023	PROMOTIONAL ITEM: Grease can lids include disposal directions for used cooking grease.	Clemson Extension	100
2023	PROMOTIONAL ITEM: Surfrider provided the Charleston Farmers Market 200 reusable cotton bags, for vendors to pass out to customers who needed a sustainable bag.	Surfride of Charleston	200

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Continuous	IN-PERSON, PHONE, EMAIL: In the Tri-County, Master Gardeners answered questions relating to a variety of home landscaping issues. Topics include compost, mulch, fertilizer, native plants, irrigation, etc. Conact points include farmers markets and in-office visits.	Clemson Extension, Tri-County Master Gardeners Association	27852
Continuous	IN-PERSON, PHONE, EMAIL: Clemson Extension Agents answered questions and provided services to a variety of Tri-County audiences regarding water resources and stormwater BMPs.	Clemson Extension	350
Continuous	SOIL SAMPLES: Clemson Extension in cooperation with Clemson's Agricultural Service Lab processed soil and water samples for Berkeley, Charleston, and Dorchester Counties.	Clemson Extension	1,860
2023	DIRECT MAIL: The Town of Mt. Pleasant directly mailed education material on FOG disposal and keeping storm drains clear to busniesses and neighborhoods.	Town of Mount Pleasant	100
2023	PRESENTATION: Town of Mt. Pleasant hosted 5 Public Input Matters meetings where they provided stormwater education to residents.	Town of Mount Pleasant	293
Fall 2023	PRESENTATION: The City of Charleston provided education on installing rain gardens was held at Corrine Jones Park as part of the Charleston Rainproof Mini Grant program.	City of Charleston, Charleston Parks Conservancy, Clemson Extension	95
2023	PRESENTATION: The College of Charleston Environmental and Sustainability Studies Masters Program provided a presentation on Managing Resilient Landscapes.	College of Charleston	20
2023	PRESENTATION: 5 students from the Environmental and Sustainability Studies Masters Program provided their these presentation.	College of Charleston, SC Sea Grant, Charleston County, Mt Pleasant Waterworks, Army Corps of Engineers	140
10/19/2023	PRESENTATION: South Carolina Master Gardener Conference: Rain Gardens As A Wildlife Habitat	Clemson Extension, Master Gardener	30
2023	PRESENTATION: The College of Charleston Envirnonmental and Sustainability Studies Program provided presentations on Information Webinars on Lowcountry Environmental Issues and Solutions, Introduction to Flood Mapping - Workshop for GIS user, and Lowcountry Hazard Management	College of Charleston	66
May 2023	IN-PERSON EVENT: Public Works Expo and Water Quality Event.	City of Charleston	30
2023	IN-PERSON EVENT: The City of Charleston held public presentations for Longwood University, East Cooper Realtors Association, and Westchester Community, Porter-Gaud, and city residents	City of Charleston	515
2023	IN-PERSON EVENT: The City of Charleston attended 10 West Ashley Farmers Market events to provide an informational table. Each market reached around 200 people.	City of Charleston	2,000



DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
March 2023	PUBLIC EVENT: The Nature-Based Exchange is designed as a series of practical and outcome-based workshops, the Exchange aims to bring together an array of local partners to discuss and develop natural and nature-based solutions for South Carolina.	The Nature Conservancy, Clemson Resilient Urban Design Program, City of Charleston	45
April 2023	IN-PERSON EVENT: The Town of Mount Pleasant attended the Blessing of the Fleet event to provide ACSEC educational material to the general public.	Town of Mt. Pleasant	1,000
December 2023	IN-PERSON EVENT: The Beaufort Area Stormwater Pond Conference is an in-person event to present the latest information, resources, and tools on stormwater pond management for stormwater pond owners, HOA representatives, and pond management professionals.	Clemson Extension, ACE basin NERR, SCDNR, Clemson Extension	46
2023	IN-PERSON EVENT: Hope Summit: The Environmental and Sustainability Program and Lowcountry Environmental Partners gathered for a free public conference to talk about successes in ocean conservation.	Carolina Ocean Alliance, College of Charleston	200
2023	WORKSHOP: Calling the Coast Home: A series of continuing education elective courses focused on coastal issues and topics are offered throughout the year to real estate professionals through the SC Coastal Information Network partners. The courses include Coastal Lifestyle for Clean Water (CL), Living with Water (LWW), Land Water Connection (LWC), and Tidelands, Water, and Beach: Regulations and Rebuilding (TWB). For course details visit <a href="https://www.sccoastalinfo.org/courses/">https://www.sccoastalinfo.org/courses/</a>	SC Sea Grant, Clemson University and Extension, University of South Carolina, SCDHEC, SCDNR	276
2023	WORKSHOP: Adopt-A-Stream workshops include a virtual lecture and in-person field day. The program trains community scientists to monitor general waterway health.	Charleston Waterkeepers, Clemson Extension, SC DHEC, Clemson Center of Watershed Excellence, Mount Pleasant Waterworks	72
September 2023	WORKSHOP: Goose Management Workshop provided educational information on managing geese in HOA stormwater ponds. The workshop included a field tour.	Clemson Extension, SCDNR, USDA, Town of Mount Pleasant	15
August 2023	WORKSHOP: "From Seeds to Shoreline®" Teacher Workshop provided hands-on experience in growing salt marsh plants and leading activities with students. Each participant received a material packet to try each project with the group.	SC Sea Grant, SCDNR, Clemson Extension, Nemours Wildlife Foundation	40

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
2023	ONLINE TRAINING: Clemson provides training and certification for the 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. Impacts reflect statewide trainings. In 2023, certifications and recertifications were offered in-person.	Clemson Extension, Clemson University, SCDOT, SCDHEC	73
2023	ONLINE TRAINING: Clemson's Department of Pesticide Regulation provides training and certification for commercial, non-commercial, and private licensed applicators. Numbers of impacts represent those in the Tri-County receiving continued educational credits.	Clemson University, Clemson Extension	1,160
2023	ONLINE TRAINING: Carolina Yards Online Course was developed to assist and guide South Carolina homeowners in conserving water in the landscape and making positive changes in the environmental quality of their yards, neighborhoods, and surrounding waterways by implementing and maintaining low impact and low maintenance yard practices.	Clemson Extension	21
2023	ONLINE TRAINING: Dam Ownership in South Carolina Course is an on-demand online course to assist dam owners and/or operator with understanding the basic concepts to protect the integrity and benefit of dams.	Clemson Extension, SCDHEC, NRCS	137
2023	ONLINE TRAINING: South Carolina Certified Landscape Professional Course is an online, self-paced course designed to provide a basic working knowledge of sound horticultural and landscaping practices.	Clemson Extension	124
2023	ONLINE TRAINING: Salt Marsh Course is an on-demand online course that teaches about ecosystems, threats & stressors, flora & fauna, oysters, stewardship, and provides additional resources related to salt marshes.	Clemson Extension, SC DNR, SC Sea Grant, NOAA	149
2023	HYBRID TRAINING: Clemson provides training and certification through the Certified Erosion Prevention and Sediment Control Inspector (CEPSCI) program to assist in pollution prevention control on construction projects. Impacts reflect statewide trainings. In 2023, certifications and recertifications were offered as online and in-person formats.	Clemson University, Clemson Extension, SCDOT, SCDHEC	2,009
Fall 2023	HYBRID TRAINING: The Master Pond Manager course teaches recreation and stormwater pond management training participants through online classroom and field-based curriculum.	Clemson Extension	42
2023	HYBRID TRAINING: Post Construction BMP Inspector; online and field-based training focused on inspection and maintenance of best management practices used for stormwater management.	Clemson University, Clemson Extension	74
Fall 2023	HYBRID TRAINING: The Master Rain Gardener is an online and field based training course on rain garden and rainwater harvesting system design and implementation.	Clemson Extension	44



DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
2023	LITTER SWEEP: Adopt-A-Highway (AAH) held 5 official clean-up events throughout Charleston County. 107 volunteers collected 78,100lbs of trash.	Charleston County Community Pride, Clemson Extension, SCDOT	107
2023	LITTER SWEEP: The Town of Summerville received a PalmettoPride Litter Grant and held a litter cleanup during the Great SC Cleanup. Over 43,000 lbs. of litter was collected and disposed of from two (2) homeless camps located in heavy wooded areas.	Town of Summerville, Palmetto Pride, Norris Landing Clearing	14
2023	LITTER SWEEP: Berkeley County Adopt-A-Highway: During 2023, 126,915lbs of litter were removed through the help of 776 volunteers in 42 groups over a course of 107 cleanup events.	Berkeley County Stormwater Management, Keep Berkeley Beautiful, Adopt-A-Highway, Berkeley County Sheriff's Litter Crew	776
2023	LITTER SWEEP: Berkeley County Stormwater Management hosted several cleanups with the use of the WaterGoat at College Park Middle School in 2023.	Berkeley County Stormwater Management, Berkeley County School District, Keep Berkeley Beautiful, Caromni Volunteer Fire Department	249
2023	LITTER SWEEP: Berkeley County Stormwater Management Adopt-A-Landing: During 2023, 3,315lbs of litter were removed through the help of 127 volunteers in 4 groups over a course of 18 cleanup events.	Berkeley County Stormwater Management, Keep Berkeley Beautiful	127
2023	LITTER SWEEP: The City of Charleston provided various neighborhood cleanup events.	City of Charleston	502
2023	LITTER SWEEP: 463 volunteers removed 4.6 tons of marine debris from marshes at 18 litter sweeps.	Charleston Waterkeepers, Keep Charleston Beautiful, Palmetto PRide, Keep North Charleston Beautiful, SOA Charleston, SC Sea Grant, SCDNR	463
2023	LITTER SWEEP: Over 500 volunteers provided a litter sweep at the Pineapple Fountain in downtown Charleston.	College of Charleston, SC Sea Grant	500
2023	LITTER SWEEP: World Oceans Day: Folly Beach cleanup.	College of Charleston, SC Sea Grant	5,000

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
2023	STORMDRAIN MARKING: Stormdrain marking event were conducted in West Ashley and Mount Pleasant using supplies provided by ACSEC.	Clemson Extension	26
Spring 2023	CERTIFICATION: Carolina Yards certified in SC: residents who meet CY principles for healthy, watershed-friendly, low-maintenance landscapes.	Clemson Extension	54
2023	CERTIFICATION: SC Clean Marina: This voluntary certification program recognizes marinas, boatyards, and yacht clubs for helping create a cleaner marine environment in South Carolina. The program's goal is to protect and improve local water quality by reducing pollution from marinas. A total of 6 marinas were certified in 2023.	SC Sea Grant, SCDNR, Clemson Extension, SCDHEC	6
2023	ENVIROSCAPE: Watershed model is used as a classroom demonstration to showcase stormwater pollution and the associated BMPs for pollution reduction.	Clemson Extension, SC Sea Grant	68
2023	WATER QUALITY MONITORING: ACSEC loaned saltwater monitoring kits to volunteers that were certified through the Adopt-A-Stream program.	Clemson Extension	6
Summer 2023	WATER QUALITY MONITORING: Swim Alert: Volunteers help monitor recreational quality of local waterways to inform the public were it is safe to swim.	Charleston Waterkeepers, College of Charleston Department of Geology	1427
2023	WATER QUALITY MONITORING: Creekwatchers Program: This program engages community scientists in the monitoring of the health of their local waterways. Creek Watchers complete annual training to gain certification to conduct monthly tests of surface water chemistry at a designated site.	Charleston Waterkeepers	628
June 2023	RAIN BARREL SALE: ACSEC, Clemson Extension, and Rainwater Solutions partnered to facilitate a rain barrel sale in the tri-county area. Two pick up days were offered in June 2023 at Gahagan Park in Summerville and at the Charleston County Government building in North Charleston. In 2023, 231 rain barrels were sold.	Clemson Extension, Rainwater Solutions, Town of Summerville, Charleston County	134
2023	GRANT: Up to 20 \$100 mini-grants are available to Berkeley County Schools (projects including litter cleanup supplies, and school recycling/beautification programs.	Berkeley County Stormwater Management, Keep Berkeley Beautiful	9
Fall 2023	RAIN GARDEN INSTALL: 29 new rain gardens and 12 rainwater harvesting systems were installed using native plants in the the City of Charleston through the Charleston Rainproof Mini Grant Program.	City of Charleston, Carolina Clear, Clemson Extension	29

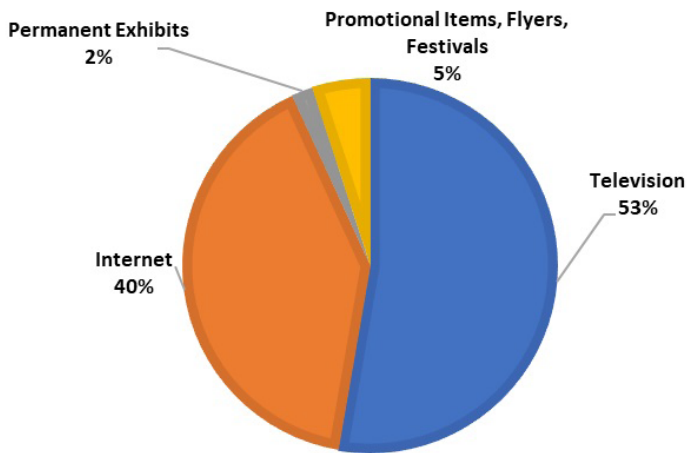
DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Fall 2023	PUBLIC EVENT: The Town gave away 50 pine tree seedlings to in-town residents as part of the Summerville Roots for Trees tree planting initiative. Residents also received a “How to Plant your Tree” flyer with each giveaway.	Town of Summerville, Arborgen	50
2023	PUBLIC EVENT: From Seeds to Shoreline: 10 schools participated in restoration in 2023. A total of 315 students participated in 10 restoration days.	SC Sea Grant, SCDNR, Clemson Extension	315
08/17/2023	PUBLIC EVENT: SC Clean Marina held a training workshop for 24 participants representing 11 marinas.	SC Sea Grant, SCDNR, Clemson Extension, SCDHEC	24
2023	PUBLIC EVENT: SCDNR’s SCORE Program implements oyster reef bag dissection lessons with K-12 school groups. A total of 3 oyster reef bag dissection lessons were implemented with a total of 63 students. The SCORE Program also gives educational presentations to interested groups and 12 of these took place during this reporting period educating a total of 760 people.	SCDNR SCORE Program	823
2023	PUBLIC EVENT: SCDNR’s SCORE volunteer assist with multiple saltmarsh restoration stewardship activities. These include bagged oyster shell, fabricating and deploying manufactured wire reefs, constructing oyster reefs, monitoring oyster populations, smooth cordgrass seed collection, planting smooth cordgrass seeds, greenhouse maintenance, sorting trash from recycled shell, fish sampling, and planting smooth cordgrass on the shoreline. A total of 174 events took plce during this reporting period with a total of 2821 participants.	SCDNR SCORE Program, Charleston Waterkeeper, Coastal Conservation League, Sustainability Insitute, Casual Crabbing with Tia, SC Aquarium	2821



# Outreach Summary

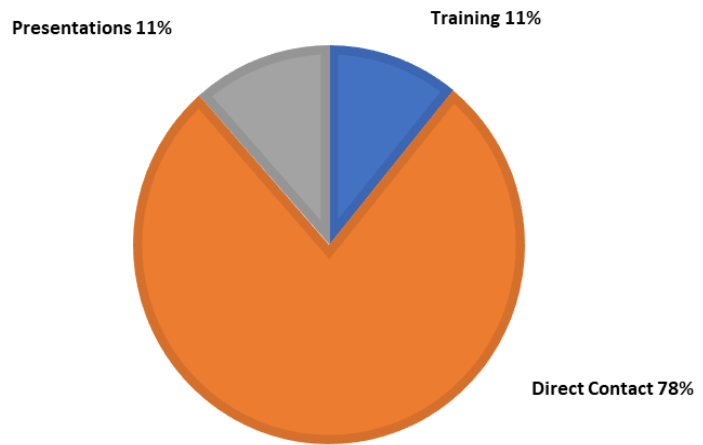
ACSEC program success is, in part, measured by outreach impacts that represent an estimate of individuals reached through direct and indirect education and involvement activities. **Total indirect impacts for the Year Fifteen reporting year total an estimated 3,483,741 individuals, and total direct impacts were estimated 38,878 individuals.**

## PUBLIC EDUCATION: INDIRECT



**INDIRECT METHODS SUMMARY,  
 TOTAL ESTIMATED IMPACTS: 3,483,741**

## PUBLIC EDUCATION: DIRECT



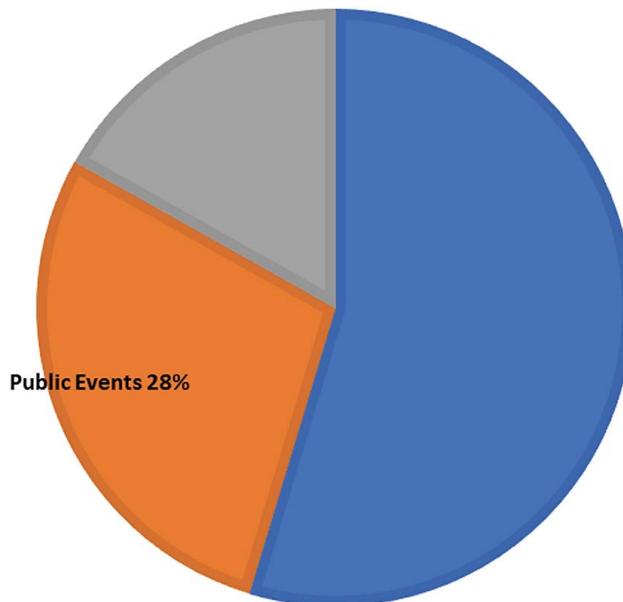
**DIRECT METHODS SUMMARY,  
 TOTAL ESTIMATED IMPACTS: 38,878**

Public Involvement is considered an activity that provided hands-on opportunities for target audiences to take part in stormwater management and pollution prevention. Public involvement opportunities include oyster reef construction, water quality monitoring, litter sweeps, storm drain marking, rain barrel sales, native plant sales, and youth involvement activities. Estimated impacts attributed to public involvement were 14,158 individuals.

**PUBLIC INVOLVEMENT SUMMARY,  
TOTAL ESTIMATED IMPACTS: 14,158**

**PUBLIC INVOLVEMENT**

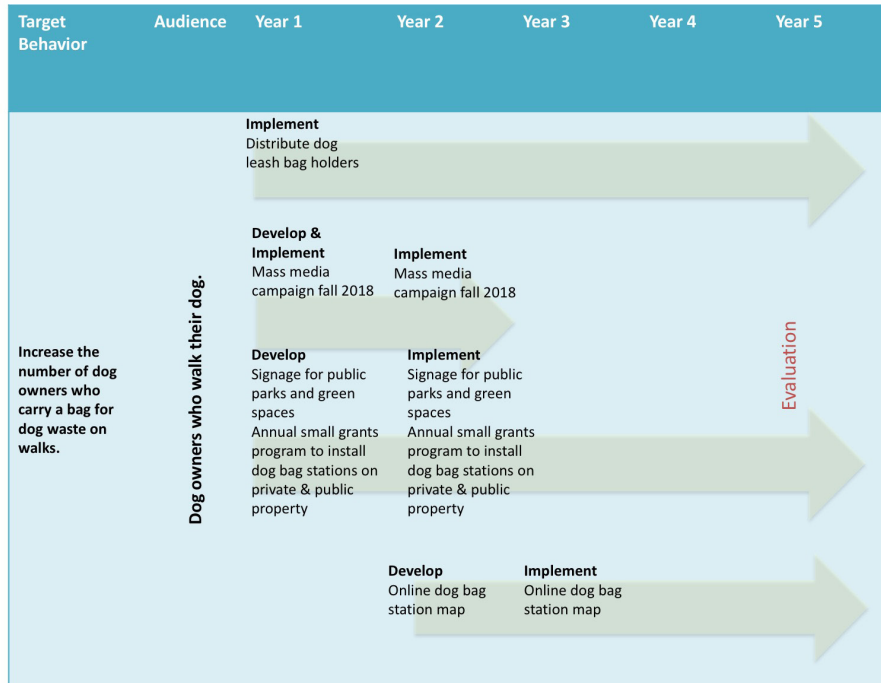
Water Quality 17%



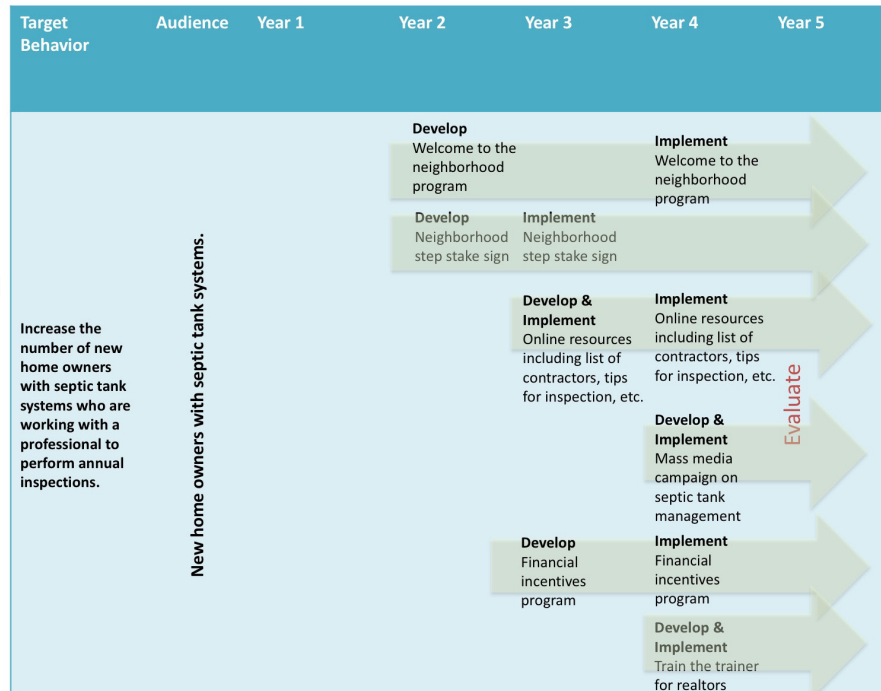
Litter Sweeps 55%

## ACSEC 2018-2023 Strategic Plan: Education Timelines

### Bacteria Management

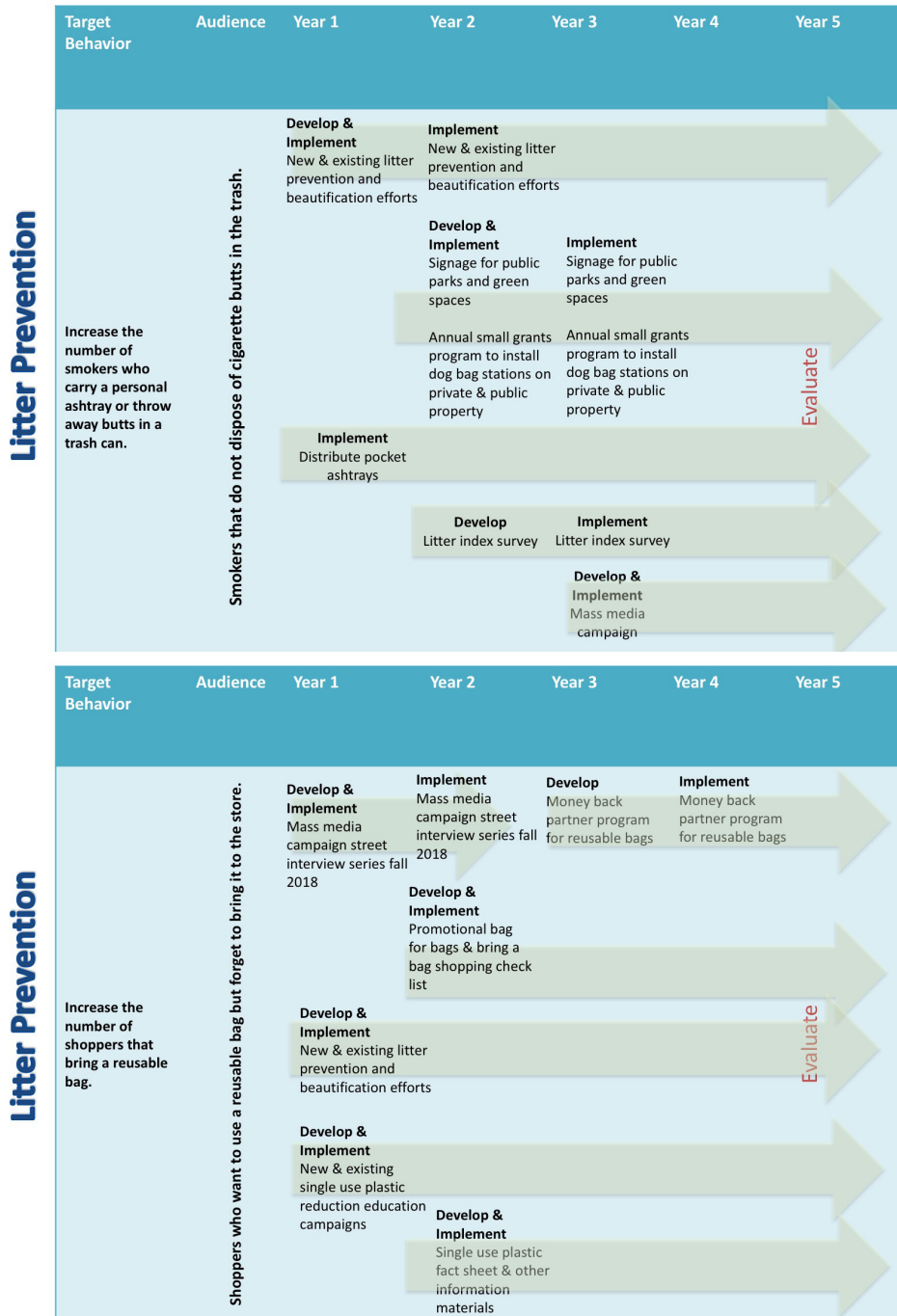


### Bacteria Management





## ACSEC 2018-2023 Strategic Plan: Education Timelines



## ACSEC 2018-2023 Strategic Plan: Education Timelines

### Nutrient Management

Target Behavior	Audience	Year 1	Year 2	Year 3	Year 4	Year 5
Increase the number of landscape professionals who offer soil testing as part of their services.	Landscape professionals that do not currently offer soil testing to clients.	<b>Develop &amp; Implement</b> Green Industry Training	<b>Implement</b> Green Industry Training			
			<b>Develop</b> "We Soil Test!" seal & branding	<b>Implement</b> "We Soil Test!" seal & branding		
			<b>Develop</b> Soil sample test kit for contractors	<b>Implement</b> Soil sample test kit for contractors		<b>Evaluate</b>
				<b>Develop &amp; Implement</b> List of landscape professionals that offer soil testing to clients		
			<b>Implement</b> Existing professional trainings & resources offered through Clemson Extension			

### Nutrient Management

Target Behavior	Audience	Year 1	Year 2	Year 3	Year 4	Year 5
Increase the number of home gardeners who install native plants.	Home gardeners that perform their own landscaping.		<b>Develop &amp; Implement</b> Mass media campaign street interview series fall 2018			
			<b>Implement</b> Existing professional trainings & resources offered through Clemson Extension			
			<b>Develop &amp; Implement</b> Promotional seed packets & transplants			
				<b>Develop</b> Signage & plant tags where native plants are sold	<b>Implement</b> Signage & plant tags where native plants are sold	<b>Evaluate</b>
				<b>Develop</b> Recognition program for nurseries that offer native plants	<b>Implement</b> Recognition program for nurseries that offer native plants	
			<b>Develop</b> Landscape design education materials.	<b>Implement</b> Landscape design education materials		

## AUTHORS

### SAMANTHA PORZELT

ACSEC Coordinator

Water Resources Agent

Clemson University Cooperative Extension Service

259 Meeting Street, Charleston, SC

843-730-5208

sporzel@clemson.edu

### BEATRISS CALHOUN

ACSEC Coordinator

Water Resources Agent

Clemson University Cooperative Extension Service

259 Meeting Street, Charleston, SC

843-729-4523

beatis@clemson.edu

## SPECIAL THANKS TO THE FOLLOWING DATA CONTRIBUTORS:

Susan Lunt, Claire O'Loughlin, Alford Gary, Bonnie Miley, Christine Von Kolnitz, Tammy Lark Lognion, Robin Stone, Terasa Lott, Donna Bowen, Steven O'Shields, Jeremy Pike, Mallory Maher, Catherine Watts, Christopher Burtt, Cheryl Carmack, Morgan Treon, Michael Hodges, Kelly Lambert, Guinn Wallover, April Turner, Robin Kidd, Katie McKain, Madison Parker, Brooke Saari, Marlo Shedlock

## SPECIAL THANKS TO OUR REVIEWERS

Susan Lunt and our ACSEC Representatives



*Carolina Clear is a program of the Clemson University Cooperative Extension Service. 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, gender, religion, national origin, disability, political beliefs, sexual orientation, gender identity, marital or family status and is an equal opportunity employer.*

Produced 03/15/2024



**NOTES:**




The logo features a central circular emblem divided into two halves: a blue upper half and a green lower half, separated by a dark blue wavy line. The text "ASHLEY COOPER" is arched over the top of the circle in blue, and "STORMWATER EDUCATION CONSORTIUM" is arched below the circle in green.

**ASHLEY COOPER**  
STORMWATER EDUCATION CONSORTIUM

BY CLEMSON® EXTENSION



**COOPERATIVE EXTENSION**  
*College of Agriculture, Forestry and Life Sciences*



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