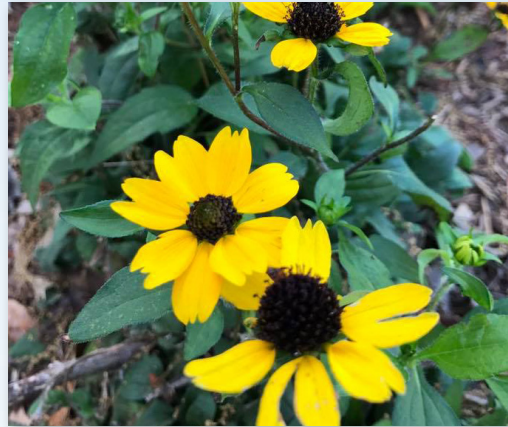
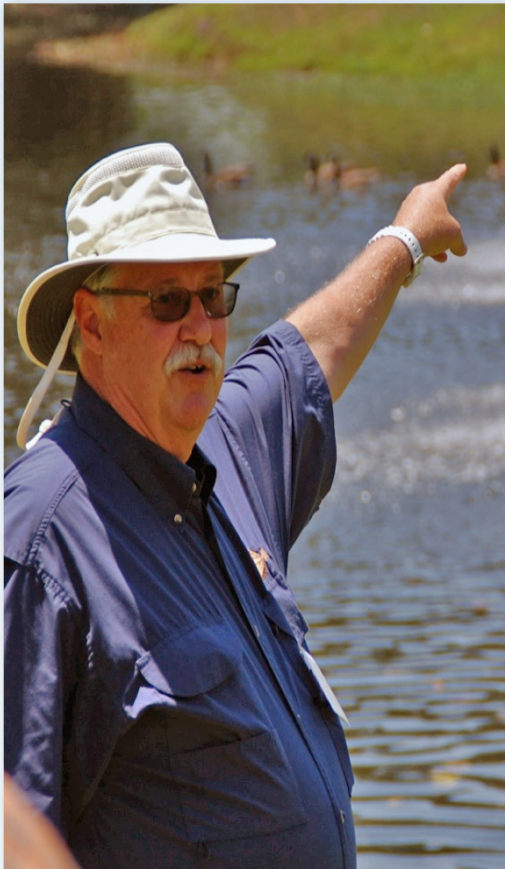


# ASHLEY COOPER

STORMWATER EDUCATION CONSORTIUM



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The Ashley Cooper Stormwater Education Consortium's Year Twelve Annual Report of Activities summarizes outreach and involvement programming offered by the Ashley Cooper Stormwater Education Consortium (ACSEC) community and education partners in 2020. 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 twelve, due to the public health crisis COVID-19, many of our outreach efforts were adjusted for the protection of the public and staff. County agents and staff are available to assist clients through telephone, email, and virtual platforms, and access to lab services (such as soil sampling) are arranged locally. Proper use of Personal Protective Equipment (PPE) and social distancing rules applies to all existing efforts.

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

## 2020 Highlights

- In 2020, Clemson Extension Carolina program launches Statewide Mass Media Campaign for Fats, Oils, and Grease (F.O.G's).
- The "Be Septic Safe" website, developed in 2020, is a hub for frequently asked questions focusing on ways to safely use & maintain septic tank systems. [www.clemson.edu/extension/water/be-septic-safe](http://www.clemson.edu/extension/water/be-septic-safe)
- As part of the ACSEC internet-based efforts for 2020, a variety of education videos were posted and shared across diverse platforms (such as Facebook and more). Online resources were used to safely disseminate water quality and water quantity information to the public. This included numerous publications, 45 webinars, and several social media video series such as the Spring Cleaning series, which promoted best management practices for residents.
- Sea Grant teams up with partners to convert From Seeds to Shoreline Teacher Workshop to a virtual platform. Video content has been updated and material packet provided to participating teachers.



### ACSEC Co-Coordinator

*In August 2019, Beatriss Calhoun (right) joined the Clemson Extension Water Resource Team and assumed the role of ACSEC Coordinator. Bea joins us from the SC Department of Natural Resources and brings a wealth of knowledge in water quality education and community engagement. Support staff in the ACSEC region include Kim Morganello (Center) and Guinn Wallover (Left). Kim is a Water Resource Associate and Coordinator of the statewide Carolina Clear Program. Guinn is a District Water Resource Agent with focus on diverse water resource management topics throughout the coast of South Carolina. Building upon one another's expertise, staff is better suited to meet the needs of the ACSEC region.*



## 2020: A Year in Pictures



*Winter of 2020 Stormwater Acts of Kindness Video focusing on storm drains filmed in Summerville.*



*2020 Winter ACSEC meeting reviewing topics for future Stormwater Management Pond Conference.*



*Pet Waste Infographics rack cards created for reduction of bacteria pollution in year 2020. Full image found on ACSEC Webpage*



*Adopt-A-Highway efforts by Berkeley County Stormwater Management team in year 2020.*



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*Adopt-A-Landing efforts by Berkeley County SC Stormwater Management team year 2020*

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: 2019

Berkeley County	Mikhayla Beste, Thurman Simmons, Kevin Kubiak
Charleston County	Chris Wannamaker, Yaenette Dixon, Brett Champion
Dorchester County	Mike Goldston, Kacy Byrd, Julian Seraphin
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 Lincolnville	Represented by Charleston County via IGA
Town of Mount Pleasant	Hillary Repik, Emily DeMore, Devay Dandy
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, Matt Halter, Jr.





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

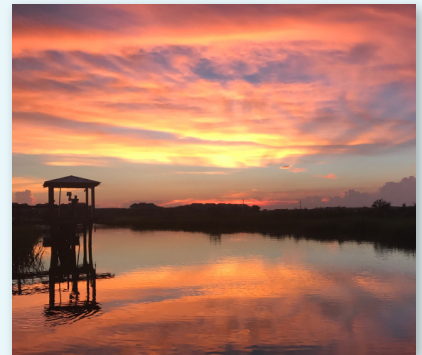


## ACSEC MISSION STATEMENT

*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.	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.”



## Clemson Extension Statewide Mass Media Campaign: F.O.G's

In 2020, Clemson Extension's Carolina program launched its newest mass media campaign focused on the proper management and disposal of fats, oil and grease (FOG). Consortiums across the state, including the ACSEC Consortium, have identified improperly managed FOG material as a pollutant of concern. The target behavior of "Can it, Cool it, Trash it" will prevent FOGs from clogging pipes and causing environmental harm to downstream water quality. In the 2019 Carolina Clear statewide survey, 2,000 residents were asked in an open-ended

question how they currently dispose of their kitchen grease. Approximately one third of the respondents (35%) let the grease cool and solidify, then they put it in the trash. The remaining 65% of respondents had varying answers including pouring it down a sink or toilet, pouring it into the trash when warm, reusing it, etc.

The multi-part mass media campaign included a billboard series and television commercial. In the fall of 2020, there were 22 copies of the billboard installed in eleven Counties around the state. This is an increase in 5 billboards from the 2018 Carolina Clear effort; the billboard campaign was made possible through a partnership with the Outdoor Advertising Association of South Carolina. Locally, billboards are rotated through select county locations and have included Charleston, Berkeley, & Dorchester and resulted in a combined 6,163,344 estimated views (note this is a total of daily counts). The associated television commercial was one minute in length and depicted someone cooking in a residential setting in which the individual was met with conflicting advice from an angelic plumber and a grease goblin. In 2020, the commercial was aired in the Ashley Cooper region on WTAT & WCBD with a total viewership of 382,116 impressions. To view the commercial, visit <https://www.youtube.com/watch?v=Y2-tvWMHW4Q>.



STATE WIDE MASS MEDIA BILLBOARD

**Can it  
Cool it  
Trash it**



COOPERATIVE EXTENSION  
College of Agriculture, Forestry and Life Sciences



**Fats, oils  
and grease  
clog drains!**

STATE WIDE MASS MEDIA BILLBOARD

## Be Septic Safe Webpage is Here!

The Ashley Cooper Stormwater Education Consortium collaborated with Carolina Clear and Clemson Extension to create a Be Septic Safe webpage to serve as a resource to help address bacteria impairments in our state. This tool, housed on the Clemson Extension Website, provides extensive information to educate and assist owners and users of septic tank systems. The page allows individuals to learn more about septic system design as well as use and maintenance to ensure septic systems function as intended. Topics addressed are listed below:

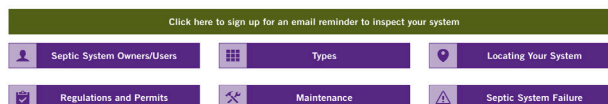
- Septic System Owners/Users
- Types
- Locating Your System
- Regulations and Permits
- Maintenance
- Septic System Failure
- Unique Situations
- Resources
- Acronyms

### Be Septic Safe



Septic systems are used to treat household wastewater through a series of natural and technological processes. These systems are also known as onsite wastewater treatment systems, cluster systems, or private sewage systems, to name a few. Whatever name you know it by, it is important you maintain and use your system properly. Septic systems are sited for areas based on existing soil type, household size, site slope, lot size, and proximity to water bodies. When systems are not installed in proper locations or not properly used or maintained, issues can arise. By having routine inspections and maintenance done, you will save money in the long run compared to the cost of repairing or replacing a failing system. "Regular maintenance fees of \$250 to \$500 every three to five years is a bargain compared to the cost of repairing or replacing a malfunctioning system, which can cost between \$3,000 and \$7,000 for a conventional system." (<https://www.epa.gov/septic/why-maintain-your-septic-system>). By maintaining your system you are ultimately saving money, protecting your property value, keeping your family and neighbors safe, and protecting the environment.

This website provides information to owners and users of septic tank systems; follow links to learn more about system design, use and maintenance to ensure septic systems function as intended.



### BE SEPTIC SAFE WEBPAGE

[www.clemson.edu/extension/water/be-septic-safe](http://www.clemson.edu/extension/water/be-septic-safe)

Each topic contains detailed information and links, when appropriate, to resources such as licensed contractors or specifics on the different types of septic systems. Webpage was peer reviewed by DHEC to ensure this educational resource will serve the community. Septic systems that are regularly maintained save money, protect property values, keep family and neighbors safe, and protect the environment.





## Clemson Extension Goes Virtual

The year 2020 took a few unexpected turns due to the global pandemic. However, instead of stopping the train, we were able to explore innovative ways to serve our community. Starting in April, the Clemson Extension Water Resources Team offered 45 webinars to a total of 1,822 individual participants. Webinar offerings were provided in response to altered operations under COVID-19 conditions. Webinar topics included recreational and stormwater pond management, stream bank repair, low impact development, and landscape-level best management practices.

The Water Resources Team also offered in-depth, multi-day trainings to 1,285 individuals in 2020. Program offerings included compliance-based trainings; Certified Erosion Prevention & Sediment Control Inspector (CEPSCI) and Certified Stormwater Plan Reviewer (CSPR), as well as hybrid courses; Master Pond Manager, Post Construction BMP Inspector, and Master Rain Gardener.

Social media outlets provided an easy avenue to engage and educate the public while continuing to remain socially distanced. The Clemson Extension Spring Cleaning series was offered weekly in April through March on the ACSEC Facebook page. Each post contained a one to two minute video every Wednesday from 1:00 pm to 2:00 pm with a live virtual chat. Videos focused on tips to watershed-friendly approaches to yard care. Topics included *Cleaning Your Gutters*, *Maintaining a Drainage System*, *Keep Your Septic System Healthy*, *Checking Your Car For Leaks*, *Protecting your Pond's Shoreline*, and *Recycling Yard Waste*. These videos were able to reach a variety of audiences and continue to be shared.

We also conducted an ACSEC webpage overhaul to provide information in a more user-friendly fashion. This aids in helping our viewers understand the efforts of ACSEC and associated resources. Members of the public can now find a detailed program list, a resource page for educational materials, an archive of past annual reports and educational plans, and updated consortium partner information.



**SPRING CLEANING: VEHICLE CHECK**



**SPRING CLEANING: GUTTERS**

2020 SPRING CLEANING FACEBOOK VIDEO POST FOR LIVE QUESTIONS. CONTENT BY TANCEY CULLUM BELKEN (LEFT) AND CONTENT BY BEATRIS CALHOUN (RIGHT)

## From Seeds to Shoreline Virtual Teacher Workshop

From Seeds to Shoreline Program(S2S) is a program which seeks to connect students to the saltmarsh by directly involving them in a wetland restoration effort. In the spring of 2020, all participating schools converted to an online classroom for social distancing related to COVID-19 precautions. Springtime is typically when restoration days occur. In preparation for the 2020-21 school year, SC Sea Grant, SC Department of Natural Resources, The SC Aquarium, College of Charleston, and Clemson Extension teamed up to create an online workshop for teachers. Each teacher was



2020 S.C. SALT MARSH STEWARDSHIP  
YOUTUBE VIDEO

equipped with educational materials that could be presented to their students through a virtual platform. Packets included saltmarsh games and experiments, “How to” videos on seed collections and germination, the contact information of past teachers, and a direct line to their local project leaders for further resources.

This two-day workshop, July 29th-30th, had over twenty teachers in attendance from different school districts in South Carolina. Each supporting organization took charge of presenting components of this two-day training to participants and engaged in a panel discussion to give tips to continue this program during the pandemic. Teachers preformed and practiced each activity live during the workshop to insure understanding of course material. Restoration days have been planned and adjust to fit the health concerns of year 2021. To view South Carolina Stewardship Video, visit [https://www.youtube.com/watch?v=q\\_xbfxDFcf0&t=405s](https://www.youtube.com/watch?v=q_xbfxDFcf0&t=405s)





# Annual Report of Activities Format

The annual report utilizes the same general format as the first seven ACSEC reports and the other regional stormwater consortiums in South Carolina. This annual report, number twelve for the consortium, is intended to give the reader a comprehensive look at the ACSEC from January 1, 2020 through December 31, 2020. 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.

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
2020	INTERNET: Total unique views in 2020 for the Carolina Clear, Clemson Extension Water Team, Stormwater Pond Management, Carolina Rain Garden Initiative & Carolina Yards.	Clemson Extension, Clemson University	203,114
2020	INTERNET: Total views for the ACSEC Clemson Extension Webpage in 2020. Consortium webpage has been updated and re-formatted to meet the needs of our communities.	Clemson Extension	1,340
2020	INTERNET: Total Lifetime Post Views for the ACSEC Facebook page in 2020. Followers have increased to 559.	Clemson Extension	756
2019	INTERNET: Total views for the Carolina Clear Facebook page in 2020.	Clemson Extension	6,300
2020	INTERNET: Total unique views for 60 seconds videos for Making It Grow Facebook page in 2020.	Clemson Extension	8,798
2020	INTERNET: Total views on Carolina Clear YouTube page (150 subscribers). Numbers based on total page views.	Clemson Extension	47,642
8/26/2020	INTERNET: ACSEC's "Ripple Effect" provides information on ACSEC education and involvement opportunities.	Clemson Extension	2,913
7/16/2020; 12/11/2020	INTERNET: SC Coastal Information Network (SCCIN) hosts an online event calendar 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 (23) coordinated through the SC Sea Grant Consortium. This number reflects website visits.	SC Sea Grant	2025
2020	INTERNET: Stormwater Pond Collaborative webpage is now complete. Stormwater Ponds Research and Management Collaborative State of the Knowledge Report has hardcopies of the report published/printed March 2020 but due to pandemic very few have been distributed (approximately 25); however, the report pdf has been downloaded from the SC Sea Grant Consortium website 312 times.	SC Sea Grant	337
2020	INTERNET: Seeds to Shoreline promotional video created for teacher workshop and future educational use. (SCDNR produced; S.C. Sea Grant proofed and organized)	SCDNR, S.C. Sea Grant, Clemson Extension & College of Charleston	428
2020	TELEVISION: SCETV and Clemson Extension's "Making It Grow" shares home and garden information for South Carolina residents; a water quality tip is included each week during the broadcast.	SCETV, Clemson Extension	20,939

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
2020	TELEVISION: The 2020-21 Carolina Clear Mass Media Campaign focuses on proper management of fats, oils, and grease (FOGs). If not properly managed, FOGs can lead to costly damage to infrastructure and degrade local water quality. The campaign's television commercial is one minute in length and depicts someone cooking in a residential setting and met with conflicting advice from an angelic plumber and a grease goblin. A complimenting billboard "Can It, Cool It, Trash It" was placed in 3 locations around the region (see BILLBOARD). Commercial was aired on WTAT and WCBD.	WTAT, WCBD, Clemson Extension	382,116
2020	PUBLICATION: A new Pet Waste Infographic was created by Clemson Extension to depict the affects of pet waste on the ecosystem. The rack card is given to the public to help reduce bacteria pollution.	Clemson Extension	146
2020	PUBLICATION: Clemson Extension Newstand offered several water related articles. One in particular provided educational resources to aid in managing toxin producing blue green algae in ponds. The article provided tips and resources for residents on blue green algae prevention and removal. Article was published through Clemson's Newstand including other water related articles. Impact number is based off unique views.	Clemson Extension	2,933
2020	PUBLICATION: 13 New Factsheets were published and added to the the HGIC Website. Topics include <i>Managing Water in the Home Landscape</i> , <i>SC Water Planning</i> , <i>Stormwater Ponds: A Guide for Pond Owners</i> , <i>Submitting an Algae Sample for Identification</i> , and <i>Rain Chain</i> just to name a few.	Clemson Extension	15,204
2020	PUBLICATION: 16 new additional HGIC blog post have been added during the year 2020. These blog posts compliment HGIC factsheets and help to raise awareness of new educational resources. Topics consist of <i>The pesky wet spot in your lawn</i> , <i>What's on Tap: Well Water and Your Health</i> , <i>Dragonflies</i> and more.	Clemson Extension	8,761



DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Continuous	MANUAL: Low Impact Development in Coastal SC: A Planning and Design Guide. This guidance manual is available for download from the SC Sea Grant Consortium's and NI-WB NERR websites. It continues to be a popular download from the SC Sea Grant's site totaling 2,270 copies downloaded from January through December 2020. In August 150 participants attended the LID Workshop Training workshop.	SC DNR ACE Basin NERR, SC Sea Grant Consortium, North Inlet-Winyah Bay NERR, and the Center for Watershed Protection	2,499
2020	BILLBOARD: F.O.G Management "Can It, Cool It, Trash It" billboards were located in high-visibility locations around the ACSEC region: <ul style="list-style-type: none"> <li>Rivers Avenue 0.5 miles W/O Dorchester Road SS – 789,038 weekly impressions;</li> <li>US 17 1 mile S/O SR 162 ES – 735,267 weekly impressions;</li> <li>I-26 0.35 miles W/O US 17 SS – 306,096 weekly impressions</li> </ul>	Clemson Extension	1,830,401
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 Extension, Tri-County Master Gardeners	25
Continuous	PERMANENT EXHIBIT: Rain garden and cistern installed at a Berkeley County library "Pollinator Garden" location in Hanahan.	Berkeley County, Tri-County Master Gardeners, Keep Hanahan Beautiful, Berkeley County Government	1,000
Continuous	PERMANENT EXHIBIT: Clemson REC Urban Research and Demonstration Area showcases native plants, a rain garden, rain barrels, and educational signage; open to the public during daylight hours.	Tri-County Master Gardeners, Clemson Extension	1,000
Continuous	PERMANENT EXHIBIT: Rain garden and rain barrel at a North Charleston park and Keep North Charleston Beautiful office location.	City of North Charleston, Tri-County Master Gardeners, Clemson Extension, Keep North Charleston Beautiful	1,000
Continuous	PERMANENT EXHIBIT: Rain garden and signage installed at Mount Pleasant fire station and recreation area.	Town of Mount Pleasant	800

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Continuous	PERMANENT EXHIBIT: As part of Carolina Schoolyards, a rain garden and rain barrel located at the CREEC School.	Cape Romain Environmental Education School	175
Continuous	PERMANENT EXHIBIT: Rain garden at “Whirlin’ Waters” at Wannamaker County Park.	CCPRC	500
Continuous	PERMANENT EXHIBIT: Rain garden and signage at Caw Caw Interpretive Center.	CCPRC	2,000
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 native plants installed at Fort Johnson Community Garden.	SCDNR	5,000
Continuous	PERMANENT EXHIBIT: Cistern at Mitchell Elementary School’s Green Hearts Project Garden.	Mitchell Elementary School, Green Hearts	350
Continuous	PERMANENT EXHIBIT: Cistern, rain garden, rain barrels, composing 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 doubles as a pollinator garden.	Charleston Parks Conservancy, Clemson Architecture Community Design Build, Clemson Extension	1,000
Continuous	PERMANENT EXHIBIT: 700 gallon cistern and adjacent rain garden installed at the Medical University of South Carolina’s Urban Farm.	MUSC, Clemson Extension	920
Continuous	DEMONSTRATION SITE: Farm pond retrofit at the CU CREC to include best practices of shorescaping and invasive plant management.	Clemson Extension	Upcoming
Continuous	DEMONSTRATION SITE: 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
2020	Keep Charleston Beautiful (KCB), with help from the City of Charleston and KCB sponsors, provides dog waste bag dispensers in City of Charleston Parks. Over 105 dispensers are stationed in City Parks, providing an estimated 600,000 waste bags to residents and visitors in 2020. Waste bags help pet owners pick up after their pets and keep harmful bacteria from entering our waterways.	Multiple	135,000

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Continuous	IN-PERSON (LIMITED), PHONE, EMAIL: In the Tri-County, Master Gardeners answered questions relating to a variety of home landscaping issues, topics including compost, mulch, fertilizers, native plants, irrigation, etc. Due to COVID restrictions volunteers were limited in task and numbers.	Clemson Extension, Tri-County Master Gardeners Association	500
Continuous	IN-PERSON (LIMITED), 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	1,000
Continuous	SOIL SAMPLES: Clemson Extension in cooperation with Clemson's Agricultural Service Lab, processed soil samples for the Tri-County residents and commercial audiences. Impact represents total in Berkeley, Charleston and Dorchester Counties.	Clemson Extension, Clemson's Agricultural Service Lab	2,825
Aug-Dec 2020	Mobile Pumpout Program: This program provides a free pumpout service for boats with marine heads and aims to keep our waterways sewage free. This program is offered in partnership with the South Carolina Department of Natural Resources' Clean Vessel Act Program. Six marinas serviced totaling 5,528 gal waste pumped in year 2020	Charleston Waterkeeper, SCDNR	200
Continuous	VIRTUAL PRESENTATION: Due to COVID, a series of webinars were presented from Clemson Extension. Titles include Value of Stormwater Ponds, SC Adopt-a-Stream Chemical/Physical & Bacteria Training, It's Alive! What's in your watershed?, Preview for Be Well Informed, Town of James Island Managing Water in The Home Landscape, Carolina Yard Series, and Earth Week Series just to name a few. Audience included technical and residential.	Clemson Extension	1,882
1/23/2020; 5/13/2020; 6/3/2020	VIRTUAL PRESENTATION: Coastal Lifestyle for Clean Water (Real Estate Continuing Education Course with Charleston Trident Association of Realtors) - The SC coastal lifestyle is made possible by clean water and a healthy salt marsh. This course will provide attendees with an understanding of how clean water and healthy salt marshes support our favorite coastal activities. Attendees will learn to use the S.C. Watershed Atlas and other online tools to investigate water quality in communities and will leave with a trove of resources and tips to provide to clients about staying safe and healthy while living the coastal lifestyle.	SCDNR/ACE Basin	89



DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
7/7/2020	VIRTUAL PRESENTATION: Wetland Regulations - Session 1: Participants will (1) Gain a current overview of wetland regulations, permitting, and common circumstances that result in violations (2) Learn to recognize basic identifying characteristics of wetlands and how they are used in delineation (3) Hear directly from federal and state agencies about regulation development, permitting processes, roles. Session 2: Participants will (1) Understand wetland ecosystem functions and services (2) Learn the legal basis for wetland protections, including recent changes to wetland rules (3) Hear case studies on local-level requirements and techniques for protecting people and property. and responsibilities.	SCDNR/ACE Basin North Inlet-Winyah Bay NERR	386
2020	VIRTUAL PRESENTATION: "Calling the Coast Home" Real Estate Professionals Courses is a four-two hour continuing education elective courses to provide Realtors® with information about coastal issues and topics including coastal ecosystem/biodiversity, water quality at the neighborhood level, flooding and flood maps, and rebuilding regulations. 13 training events took place. 9 courses were adjusted for COVID-19 restriction.	Clemson University, ACE Basin and NI-WB NERRs, SCDHEC-OCRM, SCDNR, USC	409
2020	VIRTUAL PRESENTATION: "From Seeds to Shoreline" South Carolina Salt Marsh Stewardship Program highlights characteristics, common flora and fauna, ecosystem services and current research of the critically important salt marsh ecosystem. Numbers are based on YouTube views. Use link to see video <a href="https://www.youtube.com/watch?v=q_xbfxDFcf0">https://www.youtube.com/watch?v=q_xbfxDFcf0</a>	SC Sea Grant Consortium, SCDNR, Clemson Extension, College of Charleston	443
Continuous	VIRTUAL YOUTH PRESENTATION: Keep Charleston Beautiful offers environmental education programs to local K-12 schools.	Keep Charleston Beautiful, Charleston County School District, City of Charleston	2,167

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
7/29/2020, 7/30/2020	VIRTUAL WORKSHOP: "From Seeds to Shoreline" New Teacher Workshop provided hands-on virtual experience in growing salt marsh plants and leading activities with students. Each participant recieved material packet to try each project with the group.	SC Sea Grant Consortium, SCDNR, Clemson Extension	22
2020	VIRTUAL WORKSHOP: Healthy Pond Series continued operation by creating virtual interactive workshops for attendees. Topics consist of <i>Shoreline Erosion Solutions for Lowcountry Pond Owners</i> , <i>Pond Talk</i> , <i>Pond Design 101</i> , <i>Integrated Aquatic Plant Management</i> , <i>Upland Management for Healthy Ponds</i> , and more. The Healthy Pond Series is a free networking event for stormwater pond owners in Berkeley, Charleston, and Dorchester counties.	Clemson Extension, SCDNR, ACE Basin NERR Coastal Training Program	202
Summer 2020	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. Starting June 2020, all CSPR certification moved to online synchronous and asynchronous formats, including online certification exams.	Clemson Extension	53
Continuous	ONLINE TRAINING: 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. Starting May 2020, all CEPSCI certification and recertification moved to online synchronous and asynchronous formats, including online certification exams.	Clemson University, Clemson Extension	1104

DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Continuous	ONLINE TRAINING: Clemson's Department of Pesticide Regulation provides training and certification for commercial, non-commercial, and private licensed applicators. Due to COVID-19, only continuing education courses were offered since Aug. of year 2020. Number of impacts represent those in the Tri-County receiving continued educational credits.	Clemson University, Clemson Extension	25
Spring 2020, Fall 2020	ONLINE TRAINING: Master Pond Manager teaches recreational and stormwater pond management training to participants through online classroom and field-based curriculum. We were able to offer MPM in both the spring and fall, however the Fall class was only offered as an online Letter of Completion and there was no in-person field days. We are looking forward to hopefully being able to offer the full course in 2021!	Clemson Extension	58
Fall 2020	ONLINE TRAINING: Carolina Yards Online provides online learning opportunity to focus on environmentally friendly landscaping practices. 68 Yards were certified and 28 were certified through the course.	Clemson Extension, Carolina Clear	556
Spring 2020, Fall 2020	ONLINE TRAINING: Post Construction BMP Inspector; online and field-based training focused on inspection and maintenance of best management practices used for stormwater management. The class was offered in 2020 on a virtual platform.	Clemson University, Clemson Extension	27
Spring 2020, Fall 2020	ONLINE TRAINING: Due to precautions associated with COVID-19, the Master Rain Gardener course took place online only in 2020 with plans to host the associated field day in 2021. Participants enrolled in the class in both the spring and fall of 2020.	Clemson Extension	43
8/19/2020	ONLINE TRAINING: "Using the Low Impact Development in Coastal SC Manual" workshop provided demonstration for site design application and Q&A. This workshop audience consisted of engineers, landscape architects, stormwater and plan review staff, and other design professionals. The Center for Watershed Protection provided the bulk of the training.	Clemson Extension, SC DNR, ACE Basin NERR, SC Sea Grant Consortium, North Inlet-Winyah Bay NERR, and the Center for Watershed Protection	150

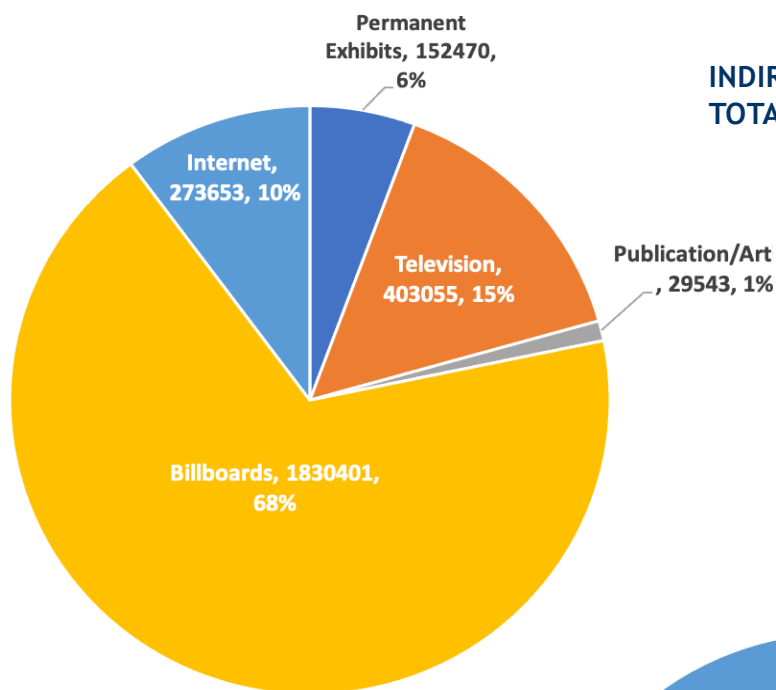


DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Jan-Dec 2020	LITTER SWEEP: Volunteer Corps: This program engages community members in active stewardship of their local waterways through debris removal in and around creeks, rivers, and tributaries. Cleanups were conducted in groups before the onset of COVID and individually after. A total of 24 cleanup events collected 4.9 tons total weight in trash .	Keep Charleston Beautiful, PalmettoPride, Dorchester County, Keep Dorchester County Beautiful	356
2020	LITTER SWEEP: Keep Charleston Beautiful (KCB) hosts litter cleanups year round with volunteer groups of all sizes. Cleanup events are focused on City of Charleston roadways, parks, and marshes. In 2020, KCB worked with 967 to clean 20,652 pounds of litter from our local environment.	Keep Charleston Beautiful, City of Charleston; various	967
Continuous	LITTER SWEEP: Adopt-A-Boat Landing: Volunteers maintain litter removal at boat landings.	Berkeley County Government, Keep Berkeley Beautiful	Unknown
Five per year	LITTER SWEEP: Adopt-A-Highway (AAH) continued to clean throughout 2020, and even added an additional litter date, bringing the total number of highway clean-ups to 5 per year. The all-volunteer based program not only improves South Carolina's scenic beauty, but the also eliminates thousands of pounds of debris from roadsides, which can end up in nearby waterways, ingested by marine life or wildlife. Total pounds collected 98,050. Total number of volunteer groups 108	Charleston County Community Pride, Clemson Extension	1010
2020	LITTER SWEEP: Surfrider of Charleston despite Covid19, the chapter held 16 cleanups and removed 4,514lbs of trash from the roads, beaches and marshes. They also launched their first cigarette litter prevention program on Folly Beach. The goal is for people to place their cigarette butts in the receptacles or use the portable ashtrays instead of flicking them onto the beach.	Surfrider of Charleston	3
2020	LITTER SWEEP: Keep Berkeley Beautiful conducted a series of litter clean-ups in the South Carolina area picking up a total of 970 lbs of trash. Also, performed 211 pickups at 22 boat landings. Locations include Lake Moultrie, Bonneau Beach, Quinby Landing, and Bonneau Beach.	Multiple	20

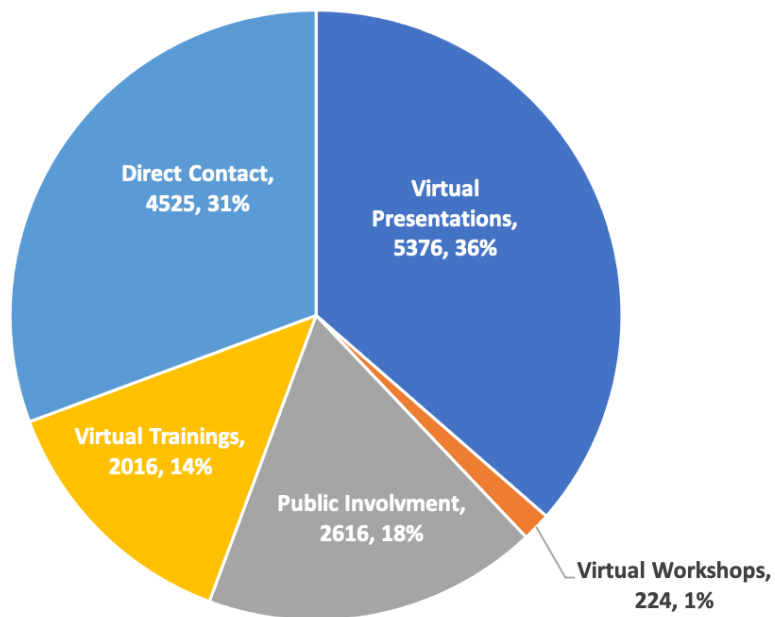
DATE	ACTIVITY DESCRIPTION	PARTNERS	NUMBER OF IMPACTS
Continuous	<b>WATER QUALITY MONITORING:</b> Recreational Water Quality Monitoring Program: This program monitors the recreational quality of local waterways in and around the Charleston Harbor and issues weekly notifications to the public. Volunteers complete annual training to become certified field investigators. Locations of samples Charleston, SC, Mt. Pleasant, SC, Sullivan's Island, SC, and Folly Beach, SC	Charleston Waterkeeper, College of Charleston	25
Jan-Dec 2020	<b>CREEK WATCHERS PROGRAM:</b> This program engages citizen 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. Site locations Charleston, SC, North Charleston, SC, Kiawah Island, SC, Ravenel, SC, Mt. Pleasant, SC, Summerville, SC, and Awendaw, SC	Charleston Waterkeeper	215
Fall 2020	<b>RAIN PROOF CHARLESTON:</b> The City of Charleston's RainProof Charleston Program began a pilot program in the Fall of 2020. The program encouraged the installation of rain gardens in an effort to mitigate the impact of flood events throughout the City of Charleston. Twenty rain garden projects were installed, providing beneficial environmental impacts for residents as well as learning experiences for property owners.	City of Charleston, Clemson Extension (support)	20
1/17/2020	<b>YOUTH INVOLVEMENT:</b> Watershed Workshop at Stallville United Methodist Church in Summerville. Students learn material from 4-H2O workbooks and participated in a outdoor activity. Students created a watershed in a pan by using things found in nature. Students developed a better understanding of the path of water and the importance of protecting our waterways.	Clemson Extension, SCDNR, 4-H	12

# 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. In-person activities were limited due to COVID-19 restrictions. **Total impacts for the Year Twelve reporting year (January 1, 2020 - December 31, 2020) total an estimated 2,706,507 individuals.**



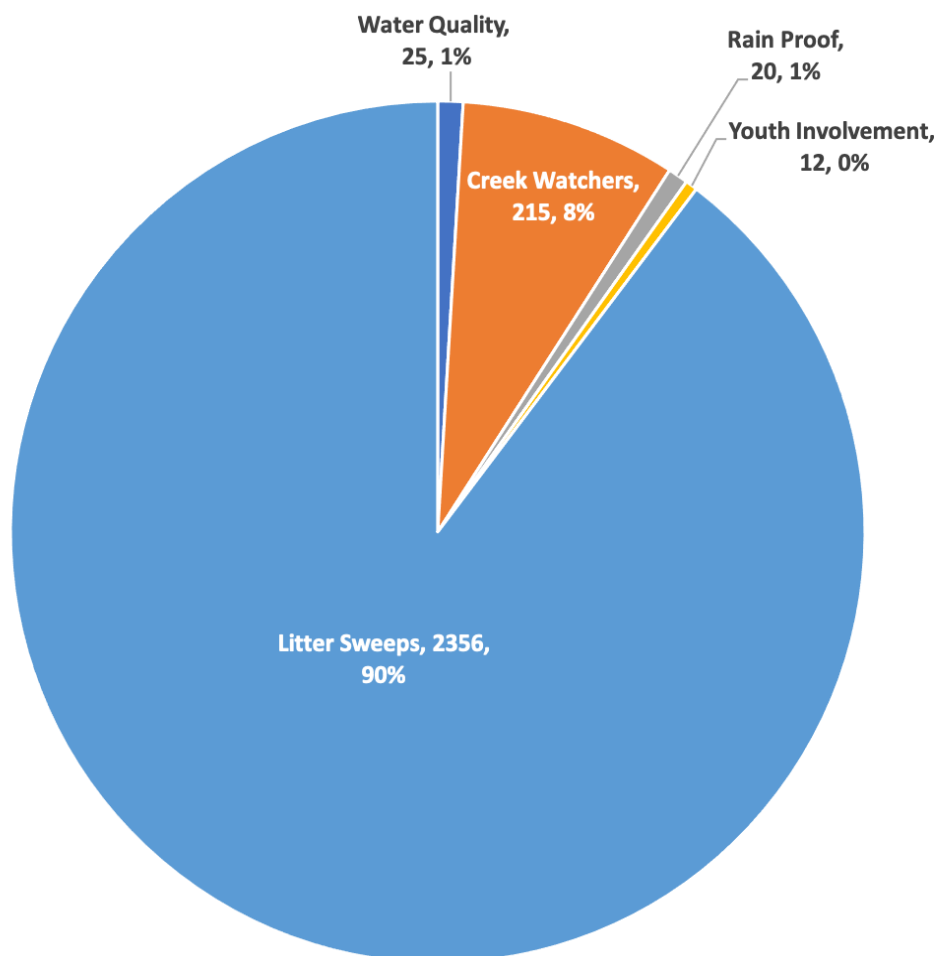
**DIRECT METHODS SUMMARY,  
TOTAL ESTIMATED IMPACTS: 14,757**





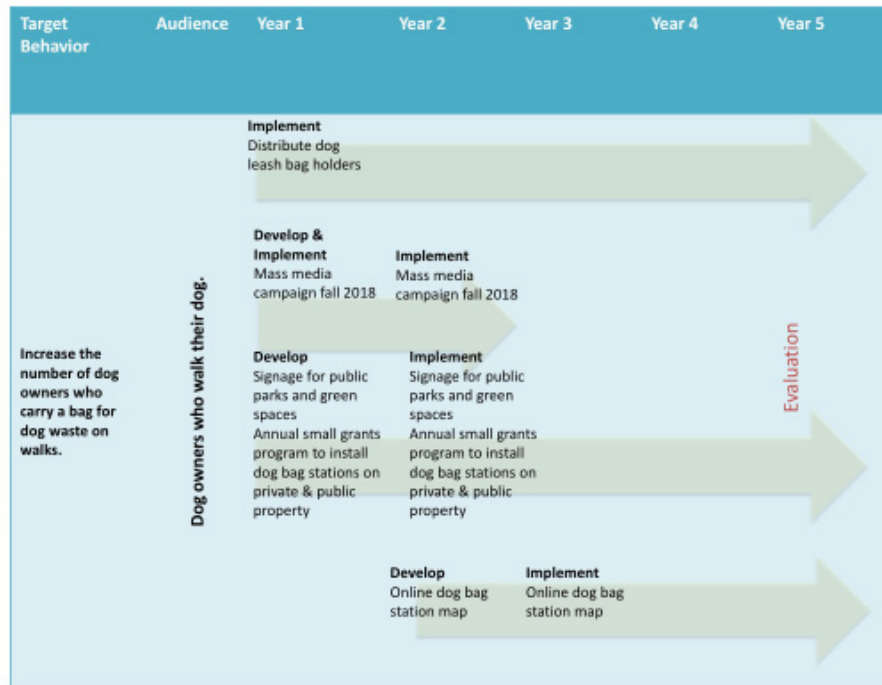
Public Involvement is considered an activity that provided hands-on opportunities for target audiences to take part in stormwater management and pollution prevention. Public involvement opportunities include oyster reef construction, water quality monitoring, litter sweeps, storm drain marking, rain barrel sales, native plant sales, and youth involvement activities. During 2020, activities were limited due to COVID-19 restriction. Estimated impacts attributed to public involvement were 13,139 individuals.

**PUBLIC INVOLVEMENT SUMMARY,  
TOTAL ESTIMATED IMPACTS: 2,628**



## ACSEC 2018-2023 Strategic Plan: Education Timelines

### Bacteria Management

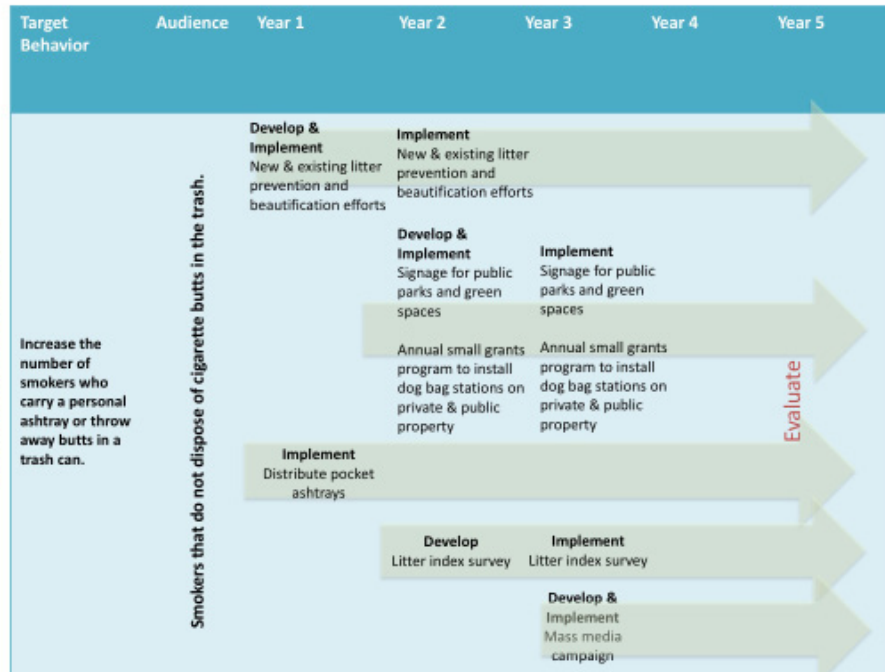


### Bacteria Management

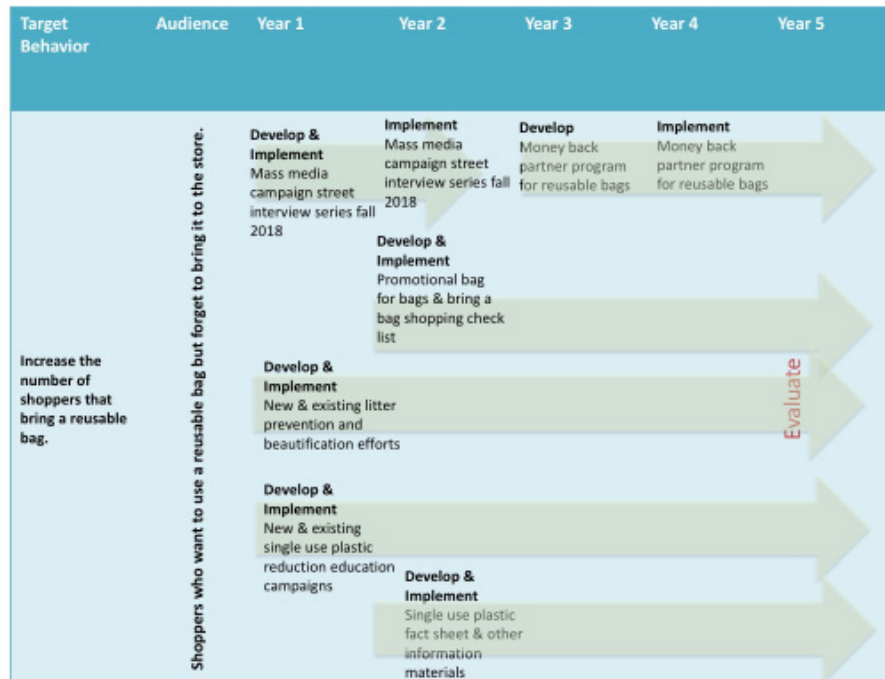


## ACSEC 2018-2023 Strategic Plan: Education Timelines

### Litter Prevention



### Litter Prevention





## 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>Develop &amp; Implement</b> List of landscape professionals that offer soil testing to clients		<b>Evaluate</b>
		<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

**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:

Guinn Wallover, Jeremy Pike, Kim Morganello, Katie Altman, Terasa Lott, Christopher S Burt, Marlo Shedlock, Jamie Gillette, April Turner, Michael Hodges, Elizabeth Vernon Bell, Thurman Simmons, Debbie Eckard, Susan Ferris Hill, Sarah McCarthy Smith, Yaenette Dixon, Devay Dandy, Hollis Lizotte, Steven O'Shields, Haley Parent, Kinsey Holton, Thomas Morgenthal, Miracle Middleton, Mikhayla Beste, Cheryl Carmack, and Abigail Prochaska

## SPECIAL THANKS TO OUR REVIEWERS

Kim Morganello, Karen Jackson 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 03/15/2020

**ASHLEY COOPER**  
STORMWATER EDUCATION CONSORTIUM



*Members of the Ashley Cooper Stormwater Education Consortium celebrate their ten years of collaboration in stormwater education and involvement at the November 2018 meeting.*



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



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