1.0 Introduction

This document outlines the education plan for the Ashley Cooper Stormwater Education Consortium (ACSEC) for year one (2008-2009). The ACSEC was created to coordinate and implement a regional, watershed-scale education strategy to help communities address US Environmental Protection Agency (EPA) mandates to educate and involve the public about stormwater runoff. Public education and involvement are fundamental in the national effort to reduce non-point source runoff pollution, likewise they define the first two minimum control measures of EPA’s Phase II program. EPA recommends this partnership-based regional education approach, identifying the multiple benefits of collaboration to achieve common goals: “Partnerships have many advantages, including providing access to resources; increasing effectiveness, efficiency, and public influence; allowing for creativity and innovation; and improving communication between typically adversarial parties” (EPA, 2003).

The stormwater education consortium model was first implemented in South Carolina in the Myrtle Beach Urbanized Area, under the umbrella of the Coastal Waccamaw Stormwater Education Consortium (CWSEC), and serves as a successful example and affiliate to the ACSEC. Several of the founding partners of the CWSEC are also members of the ACSEC. These include Clemson University Cooperative Extension Service’s (Clemson Extension) Carolina Clear program, South Carolina Sea Grant Consortium Extension Program (SCSGEP) and the South Carolina Department of Natural Resources (DNR) National Estuarine Research Reserve Coastal Training Program. In the Charleston region, the ACSEC was organized by Clemson Extension through the Carolina Clear program, which administers this regional effort.

Two primary groups form the ACSEC: (1) participating EPA designated Phase II small municipal separate stormwater sewer system (SMS4) municipalities and counties in the Charleston-North Charleston Urbanized Area; (2) education providers in the greater Charleston region, which include universities, state agencies and non-profits (see Table 1). As a guidance document, the education plan provides general information regarding the development, goals, strategy and evaluation methods of the program. In the first year, the ACSEC has two primary goals: (1) research and evaluate the current status of the region—specifically the audiences, geography, and pollutants, to create baseline data and guide future programming; (2) to support, implement, and/or expand existing water resource education programs of the member organizations to increase awareness about stormwater runoff pollution, individual actions that contribute to the issue, and alternative behavior recommendations. These goals will be addressed through a regional education strategy that focuses on target audiences and associated target pollutants. Much of the information in this document is based on the guide entitled, Getting In Step: A Guide for Conducting Watershed Outreach Campaigns (EPA, 2003).
Table 1.

<table>
<thead>
<tr>
<th>Ashley Cooper Stormwater Education Consortium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Partners</td>
</tr>
<tr>
<td>Berkeley County</td>
</tr>
<tr>
<td>Charleston County</td>
</tr>
<tr>
<td>Dorchester County</td>
</tr>
<tr>
<td>City of Charleston</td>
</tr>
<tr>
<td>City of Folly Beach</td>
</tr>
<tr>
<td>City of Hanahan</td>
</tr>
<tr>
<td>City of Isle of Palms</td>
</tr>
<tr>
<td>City of Lincolnville</td>
</tr>
<tr>
<td>City of North Charleston</td>
</tr>
<tr>
<td>Town of Sullivan’s Island</td>
</tr>
<tr>
<td>Town of Summerville</td>
</tr>
</tbody>
</table>

1.1 Background

Most substantial coordination efforts begin with involvement of several entities. During the summer of 2002, communities within the Charleston urbanized area received notification from the SC Department of Health and Environmental Control (SC DHEC) of intent to cover activities under the NPDES General Permit for Storm Water Discharges from regulated SMS4’s. In anticipation of coverage, representatives of the affected SMS4 communities began meeting to discuss the potential ramifications. Clemson University Cooperative Extension Service was invited to these meetings early in the process in recognition of regional coordination being demonstrated within other urbanized areas. Among several additional items of consideration, the group recognized the benefits of coordinated stormwater education and public involvement. Even at this preliminary stage, optimizing regional efforts to assist with permit compliance was a universally high priority for all entities involved.
A series of statewide appeals and subsequent judgments related to SMS4 permit implementation interrupted the process of organizing and developing a regional stormwater education strategy within the Charleston urbanized area. Though forward momentum was slowed, the group continued to meet on an irregular basis throughout subsequent years. Appeals were settled in late 2005 and on March 1, 2006 the revised SMS4 general permit became effective throughout South Carolina.

During the remainder of 2006, several driving factors emerged from the group during plan development. First, it was recognized that communication among regional SMS4 communities remained critical. To address this issue, a listserv was established by Clemson to facilitate discussion and better coordinate future meetings. Further, an online survey was conducted to identify and consolidate regional target audiences, priority pollutants, and existing training tools. Survey results provided foundational material for education and involvement planning purposes (Appendix A).

In June 2007, Clemson Extension hired David Joyner as a regional natural resources agent based out of the Charleston County Extension office with the primary responsibility of coordinating the ACSEC. Joyner subsequently met with the SMS4 stormwater managers in July 2007. Following the individual meetings, the member communities had developmental meetings with Clemson Extension on three occasions: August 15, November 6, 2007, and February 12, 2008. These meetings established the mission and goals of the ACSEC, resolution, potential education providers, and general education strategy. Contemporary with these meetings, the ACSEC coordinator began establishing informal partnerships with regional organizations that had similar water resource education goals. Education partners met as a group at the SC Sea Grant Consortium on March 6th, 2008 to get an introduction and overview of the ACSEC. Communities and education partners met on April 1st, 2008 at the Michaux Conservancy in North Charleston, and the education partners presented overviews of their programs for the community representatives. The ACSEC has continued to meet regularly:

- **July 10, 2008** to plan the joint resolution press conference ceremony
- **September 23, 2008** to address DHEC compliance issues and determine a schedule for the education plan and activity reporting
- **November 13, 2008** to finalize the education plan and discuss future events.

In order to ensure acceptance of the regional strategy being developed, the stormwater managers needed the explicit approval of their respective elected officials. This was accomplished through a resolution presented to each County or City/Town council. Each member municipality or county council individually signed the resolution adopting a regional stormwater education strategy, with efforts overseen by the ACSEC. On July 29, 2008, a joint resolution was signed by mayors, council chairpersons, or other elected officials representing the MS4 communities at a ceremony held at the City Gallery in downtown Charleston (see Appendix B). The joint resolution represents a public commitment by the
member communities in the region to address stormwater runoff pollution as partners working with regional education providers.

Figure 1. ACSEC Joint Resolution Signing Ceremony, July 29, 2008
1.2 ACSEC Mission Statement and Overall Goals

One of the first tasks of the ACSEC was to create a mission statement and overall goals that would drive the group effort. These were finalized at the February 12, 2008 consortium meeting by the member communities and reads as follows:

*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*

The following overall goals were established for the ACSEC:

- 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 Ashley Cooper Consortium 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 goal and objectives
- Create an *interactive reporting process* to facilitate information exchange and dissemination among member entities
2.0 Regional Education Strategy

2.1 Phased Approach

The ACSEC regional education strategy incorporates a phased approach that will adjust with each year to address both the information gained from needs assessments and evaluations as well as forecasting new and emerging issues in the region. As this is the first year of a multi-year effort, part of the focus of this education plan centers on data acquisition regarding the audiences, geography, and pollutants in the region and the connections between people, pollution, and their environment. Much of this information will be organized within a geographic information system (GIS) database to facilitate spatial analysis and documentation. Data gathering in the first year is a critical long-term component to gauge program successes and weaknesses as well as providing a baseline for future modifications of the education strategy. After an evaluation of the first year data, techniques such as social marketing can be more accurately incorporated into the education strategy. The overall education strategy for the ACSEC takes a target audience focus, which is recommended by many outreach guidance documents (EPA, 2003). Target pollutants are generally associated with particular audiences and geographies, such as the connection between pet owners, pet waste, and parks/beaches that allow dogs. These connections will be explored in future iterations of the education plan.

The general education strategy focuses on two components of stormwater runoff pollution: (1) Source education and (2) Landscape education. Source education addresses pollution reduction particular to specific actions such as lawn care and fertilization, septic system maintenance, pet waste and hazardous materials management. Landscape education focuses on physical modifications that can be implemented to improve water quality and quantity in urban environments; such as improved land use management, approval of new local ordinances, low impact development (LID), pervious hardscaping, rainwater harvesting, rain gardening/bioretention and construction site sediment and erosion control. These types of education are usually specific to particular target audiences, and existing programs of the education and community partners already address many of these areas. Planned and active programs in the ACSEC incorporate both public education and public involvement activities, and will be documented in an online database and in an annual activity report. The annual activity report will be a document produced in June and will detail specific education activities and their target audiences, target pollutants, and target geographies as conducted by all members of the ACSEC.
2.1.1 Year 1 Goals and Objectives

GOAL 1: *Research and evaluate the current status of the region—specifically the audiences, geography, and pollutants, to create baseline data and guide future programming.*

OBJECTIVES:
- Conduct a needs assessment phone survey in early 2009 that collects information from the region with respect to audience behavior, attitudes, and perceptions. Results of the survey will be collected in a manner so that results are statistically relevant and can be used for future comparisons.
- In early 2009, hire an intern from the College of Charleston, Masters of Environmental Studies (MES) Program [ACSEC partner], to characterize the geography and target audience demographics of the region-culminating with a report for the ACSEC
- Collect and analyze data from the Carolina Clear and ACSEC website, including data from Google Analytics and online surveying as well as any event-specific program surveying.

GOAL 2: *Support, implement, and/or expand existing water resource education programs of the member organizations to increase awareness about stormwater runoff pollution, individual actions that contribute to the issue and alternative behavior recommendations.*

OBJECTIVES:
- Determine existing education providers in the region that currently have or can supplement stormwater and/or water quality elements into their programs and are willing to partner with the ACSEC
- Coordinate with education and community partners to deliver and/or enhance existing water resource programs (*i.e.* technical, financial and media support)
- Develop and implement a mass media campaign in the region that utilizes television, radio, and print advertising
- Facilitate communication among consortium members by conducting bi-annual meetings and internal trainings, utilizing the listserv, and developing ACSEC website
- Define target audiences and potential programs that no organization or program currently addresses

2.1.2 Surveys and Needs Assessments

Identifying general public and target audience perceptions, attitudes, and behaviors is a critical component in the education strategy for year one, especially with respect to long-term evaluation of the program. Previous surveys have been conducted at the statewide level including SC DHEC’s *Public
Perceptions and Concern About Runoff Pollution (2002), as well as particular target audiences, including homeowners by College of Charleston-MES program and Clemson University Community Associations and Stormwater Management: A Coastal South Carolina Perspective (Halfacre et al., 2007). A Needs assessment was also completed by one of the ACSEC education partners, ACE Basin CTP: Training Needs Assessments of Professional Decision Makers in the Coastal Counties of South Carolina (Pollack and Szivak, 2007). These surveys and needs assessments, in addition to the completed needs survey of the ACSEC community representatives, serve as reference for the ACSEC and will be utilized to guide early education strategies. A needs assessment survey for the Charleston-North Charleston Urbanized Area will be conducted by Clemson University in early 2009. This needs assessment will be similar to the SC DHEC statewide survey, but will provide a more focused investigation of the population in the Charleston region. Public surveys are also being conducted on the ground at selected education events in the region and will compliment the other surveys. Together, the needs assessments will provide a window into the region to guide and direct future activities and strategies.

2.2 Target Audiences and Pollutants

The ACSEC education strategy centers on target audiences, and associates target pollutants with those audiences. Target audiences have been segmented into major categories and are based on commonly delineated areas of society. One particular target audience that is not included in year one, but will be more specifically addressed in future years will be visitors/tourists. This is a significant sector in the Charleston region; however, the nature of this audience and their contribution to non-point source pollution needs to be better understood. Visitors will be peripherally exposed to education activities in the form of mass media-public service announcements (PSAs), billboards and event displays, so the audience is not completely avoided, but rather not specifically addressed in year one.

Below is a breakdown of target audiences and particular programs ACSEC partners are or will be implementing. Future revisions of the education plan will refine target audiences into particular segments, such as urban and suburban homeowners, pet owners, households with on-site septic systems and particular commercial industries (i.e. restaurants, automobile repair, and lawn care companies). Outreach mechanisms will include mass media, websites, print materials, individual workshops, and public events (i.e., fairs and festivals).

2.2.1 General Public

The general public target audience will be addressed primarily through the mass media campaign, websites, community newsletters, newspapers, and displays at public events. The general public will also be informed through the use of bill stuffers and at individual workshops. Much of the education for the general public will focus on providing awareness of more broad concepts such as the following:
• watersheds and interconnections between land and water resources
• stormwater runoff is untreated
• people’s actions affect water resources
• urbanization effects on the coastal hydrology (impervious surfaces)

These initial concepts will be followed with specific outreach to targeted audiences associated with high priority pollutants in the region, such as bacteria, sediment, and nutrients. Table 2 provides a list of the proposed activities to reach the general public.

Table 2.

<table>
<thead>
<tr>
<th>Lead Service Provider</th>
<th>Activity--Program (Italics include participation elements)</th>
<th>Target Geography/Land Use</th>
<th>Target Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clemson CES</td>
<td>Develop website for Ashley-Cooper Stormwater Education Consortium--with links to partners and programs. Information clearinghouse for all target audiences, pollutants, and land uses</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Clemson CES</td>
<td>Public Service Announcements (PSA’s) : Radio, Television, Print [messages frequency will vary; will break these out into individual categories once the campaign begins]</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Clemson CES</td>
<td>Adopt-A-Highway/Community Pride programs</td>
<td>State/County Roads</td>
<td>Litter</td>
</tr>
<tr>
<td>Clemson CES</td>
<td>Watershed Signage Program (proposed, probably not implemented in year 1 but down the road…)</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Clemson CES</td>
<td>Develop and provide one (1) digital copy of a bill stuffer appropriate for reproduction and inclusion with water and utility bills or as special mailings.</td>
<td>Homeowners, Renters, Businesses</td>
<td>All</td>
</tr>
<tr>
<td>Clemson CES, ACE Basin CTP, CBD Soil &amp; Water, LEF</td>
<td>Present WQ/Stormwater Displays for Fairs and Festivles [i.e. Earthday, Coastal Carolina Fair, Berkeley Paddle Fest, Estuaries Day, etc.]</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>SC DNR-SCORE</td>
<td>Oyster habitat restoration and water quality monitoring</td>
<td>Marine Coastal Waters</td>
<td>Bacteria</td>
</tr>
<tr>
<td>SCSGC-SC DNR</td>
<td>Beach Sweep/River Sweep</td>
<td>Beaches, River Borders</td>
<td>Litter</td>
</tr>
<tr>
<td>SCSG/Clemson CES</td>
<td>Develop and assist in the distribution of general education materials</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>
2.2.1.1 Mass Media Campaign

Producing mass media that will result in improved water resource awareness, inquisition for more information and changes in personal behavior is a complex process. The mass media campaigns that will be produced with the ACSEC will be multi-faceted, so that a repetitive theme can be used in each media type, always directing the audience member to seek out more information through the ACSEC.

The initial campaign will feature a general stormwater awareness message that lets the audience know that what each individual does in their yard and at their home affects downstream water quality. The target audience of this initial campaign is thus the homeowner and pet owner. Target pollutants include household hazardous waste, car oil, fertilizer and pet waste. The message will be put forth through 30-second spots for television and radio as well as the repeated theme featured in a billboard. The television spot is set to be aired on three local stations; the radio spot will be aired on seven local channels (both AM and FM radio); four billboards will be placed strategically on major thoroughfares. The first billboard is depicted in Figure 2. As well as these three mass media outlets, other potential mass media outlets include newspapers, bus stations, benches and local street banners in downtown Charleston. Availability, cost and number of impacts will guide the selection and use of additional media outlet types.

![ACSEC Stormwater Awareness Billboard](image)

**Figure 2.** ACSEC Stormwater Awareness Billboard, Fall/Winter 2008

Given that these messages are for the overall public good, and that Clemson University is a non-profit, these water quality-related messages qualify for public service announcement space. Therefore, Carolina Clear has opted to utilize this free space for the mass media campaign so that messages can be aired and displayed for a longer period of time and so that a greater number of impacts can be achieved.

2.2.2 Elected and Appointed Officials and High-Level Staff

The South Carolina NEMO (Non-Point Education for Municipal Officials) program administered by the SC Sea Grant Consortium Extension Program has a long history of developing programs that specifically address this target audience. NEMO is a national program developed by Connecticut Sea Grant to provide information to elected and appointed officials and high-level staffs so that more informed land-
use decisions are made at the local level. In the ACSEC, SC NEMO will be the primary program that will address this particular audience, in addition to internal trainings for staff at the municipalities and counties, and ACE Basin CTP workshops. Individual workshops and presentations are the primary outreach mechanisms to reach this audience.

Table 3.

<table>
<thead>
<tr>
<th>Lead Service Provider</th>
<th>Activity</th>
<th>Target Geography</th>
<th>Target Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC SGC</td>
<td>Conduct/Deliver SCNEMO program workshops for local government officials (elected &amp; appointed) and staff, focusing on NPS pollution and land use management</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>ACE Basin CTP</td>
<td>Multiple workshops with water quality/stormwater runoff education elements (e.g. wetlands, regulation, zoning, buffers, water quality, land use)</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>BCD Soil &amp; Water</td>
<td>Ashley Scenic River Outing and Event to inform and educate local leader, officials, and homeowners about conservation and preservation of Ashley River</td>
<td>Ashley River Watershed</td>
<td>All</td>
</tr>
</tbody>
</table>

2.2.3 Coastal Resource Managers

Although Coastal Resource Managers make up perhaps the smallest audience targeted by the ACSEC, they manage a large percentage of the land area and likewise have a significant influence on stormwater runoff. This audience overlaps to a degree with the professional audience. Much of the focus of this audience centers on nutrient and sediment management, as well as ponds and wetland management and policy. Programs are listed in the following table.

Table 4.

<table>
<thead>
<tr>
<th>Lead Service Provider</th>
<th>Activity</th>
<th>Target Geography</th>
<th>Target Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEMSON CES</td>
<td>Various workshops on stormwater ponds/wetlands; harmful algal blooms; Watershed Academy</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>ACE CTP</td>
<td>Conduct workshops for Coastal Resource Managers on a variety of water quality/stormwater issues</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>
2.2.4 Youth (K-12) and Teachers

The youth target audience is addressed by a majority of education partners, including Spirit of South Carolina, Clemson University Carolina Clear, SC DNR Soil and Water Conservation District, the Michaux Conservancy and Lowcountry Earth Force. Each of these organizations focuses exclusively on this audience or has youth education programs. This audience will be well-served as a result of the established programs and experience of the education providers and the synergy resulting from working collaboratively through the ACSEC. Teachers are included with K-12 education, but they will be segmented in future education plans as trainings and planned online water resource/stormwater curriculum and activities are created. Table 4 provides a summary of programs.

Table 5.

<table>
<thead>
<tr>
<th>Lead Service Provider</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Youth / K-12 / Teachers</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Target</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Geography/Land Use</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Target Pollutant</strong></td>
<td></td>
</tr>
<tr>
<td>Clemson CES</td>
<td>4-H2O Pontoon Classroom Summer Camps (ages 10-15)</td>
</tr>
<tr>
<td>Multiple (LEF, Soil and Water, Michaux, Clemson)</td>
<td>In Class or After School Water Quality/Stormwater/Enviroscape presentations</td>
</tr>
<tr>
<td>Michaux Conservancy</td>
<td>Develop a Volunteer H2O Quality Monitoring Program around Noisette Creek (manage as well if resources are available)</td>
</tr>
<tr>
<td>Spirit of SC &amp; Michaux Con.</td>
<td>Boat trips where North Charleston students test H2O quality using Spirit of SC &amp; Project Oceanica teaching methods</td>
</tr>
<tr>
<td>Lowcountry Earth Force (LEF)</td>
<td>Develop and Implement GREEN (Global Rivers Environmental Education Network)</td>
</tr>
<tr>
<td>BCD Soil &amp; Water</td>
<td>Coastal Carolina Adventure--annual weekend long camp focusing on watershed health and conservation. Designed for 9th and 10th graders.</td>
</tr>
</tbody>
</table>
2.2.5 Residential (Homeowners and Renters)

Many established programs currently address education of the Homeowner/Renter target audience through Clemson Extension and the Carolina Clear program and SC Sea Grant Consortium Extension Program. Residential makes up a large percentage of the total land use in the region and likewise, represents a very important audience to address. The residential landscape also accounts for the greatest suite of pollutants that can be transported to waterways via stormwater runoff including oil and grease, nutrients, bacteria, hazardous materials, and litter. Future iterations of the educational plan will segment this audience, such as by geography, septic/sewer system, and pet owners.

Table 6.

<table>
<thead>
<tr>
<th>Lead Service Provider</th>
<th>Activity</th>
<th>Target Geography</th>
<th>Target Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEMSON CES/SC SGEP</td>
<td>Conduct Coast-A-Syst Workshops throughout the region</td>
<td>All</td>
<td>Sediment, Bacteria, Pesticides, Heavy Metals</td>
</tr>
<tr>
<td>CLEMSON CES</td>
<td>Conduct Carolina Yards and Neighborhoods workshops</td>
<td>Suburban/Urban</td>
<td>All</td>
</tr>
<tr>
<td>CLEMSON CES</td>
<td>Master's series (Gardener, Wildlifer, Naturalist, Tree Farmer)</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Michaux Conservancy</td>
<td>Develop a Volunteer H2O Quality Monitoring Program around Noisette Creek (manage as well if resources are available)</td>
<td>Urban</td>
<td>All</td>
</tr>
<tr>
<td>LEF</td>
<td>Support &amp; initiate contact for student-led presentations of findings from water monitoring / water quality / stormwater management service-learning projects (SLPs)</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>
2.2.6 Professionals: Contractors, Engineers, Developers and Public Works

Education partners and internal community programs currently address this audience primarily through training and education workshops. The professional audience is specifically addressed by SC DNR NERRS ACE Basin Coastal Training Program and Clemson University-SC Sea Grant Clearwater Contractor Program. Education and outreach typically focuses on construction site management of sediment and landscape level hydrology, water quality management techniques including LID, and understanding current policy. Considering the historic trends and the predicted future development of the region, this represents one of the most significant target audiences of the ACSEC. Likewise, they were identified in the ACSEC survey by the stormwater managers as one of the highest priority audiences. The needs assessment conducted by ACE Basin CTP and the internal assessment of the ACSEC county and municipality stormwater managers serves as a guide to delivering education opportunities to this audience. Table 6 lists the ACSEC programs.

Table 7.

<table>
<thead>
<tr>
<th>Lead Service Provider</th>
<th>Activity</th>
<th>Target Geography</th>
<th>Target Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEMSON CES</td>
<td>Conduct Certified Erosion Prevention and Sediment Control Inspector (CEPSCI) classes for MS4 staff as well as regional contractors</td>
<td>All</td>
<td>Sediment</td>
</tr>
<tr>
<td>CLEMSON CES</td>
<td>Examine feasibility of conducting Clear Water Contractor courses as a non-regulatory educational substitute for CEPSCI</td>
<td>All</td>
<td>Sediment</td>
</tr>
<tr>
<td>ACE Basin CTP</td>
<td>Conduct Bioswale demonstration seminars covering design and installation of bioretention swales</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>ACE Basin CTP</td>
<td>Conduct seminar on Low Impact Development and the economics of different BMPs</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>

2.2.7 Commercial

In the first year, the commercial audience will be investigated to delineate particular industries in greatest need of stormwater runoff pollution education and the most effective mechanisms to reach them. Lawn and pond maintenance companies have been identified as a high priority and this industry will be targeted in year one for outreach. Additional industries will be reviewed for education program development in year two of the ACSEC.
2.3 Annual Reporting and Program Evaluation

2.3.1 Annual Reporting

The ACSEC will produce a comprehensive annual report that provides a summary of education activities for each community partner. Activity reporting will be organized through the use of an online database (see Appendix C). The database will house detailed information from each education activity conducted by ACSEC partners. The database will be available online through the ACSEC website in January 2009, and will provide an efficient method for each partner to easily enter information pertaining to their education activities. The database can also be queried to analyze or review particular program elements, such as the location and type of event, number of people reached, and specific pollutants targeted. The online database will be complimented by a GIS database, which will enable the user to view activities in a spatial context and relate the education activities to regional characteristics (i.e., demographics, land use, septic systems, impaired watersheds, etc.). The online database will also have the capability of producing interim reports by individual members as well. The first annual activity report will be completed in June of 2009.

2.3.2 Program Evaluation

An essential part of any successful outreach program is the evaluation process, which provides feedback mechanism to guide adaptive improvements to the campaign. Improving water quality by its very nature is a particularly complex issue. Although education is an essential component in a broader effort to improve water quality, determining the impacts of a stormwater education outreach campaign directly on water quality is difficult to discern. Even though the mission of the ACSEC is to improve water quality in the region, the evaluation process will address smaller-scale quantifiable results associated with specific goals and objectives set forth each year. Evaluating the ACSEC education campaign will focus on three primary indicators: process, impact, and context (EPA, 2003). Process indicators are related to the execution of the outreach program; impact indicators are related to the achievement of the programs goals and objectives; and context indicators relate to community perceptions and effects of the program. The following measures will be conducted in year one to evaluate the program:

- Document number of people informed by outreach efforts, including mass media, workshops, fairs/festivals, website, etc. and compare to population.
- Conduct pre- and post-program surveys for educational events.
- Record quantifiable results for applicable programs (i.e., pounds of litter removed during sweep events, number of storm drains marked, number of bill inserts delivered, etc.)
APPENDIX A: Community Stormwater Manager Survey

<table>
<thead>
<tr>
<th></th>
<th>Which organization, community, stakeholder group, or agency are you affiliated with?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Berkeley County</td>
</tr>
<tr>
<td>2</td>
<td>City of Folly Beach</td>
</tr>
<tr>
<td>3</td>
<td>Charleston County Government</td>
</tr>
<tr>
<td>4</td>
<td>DORCHESTER COUNTY</td>
</tr>
<tr>
<td>5</td>
<td>City of North Charleston</td>
</tr>
<tr>
<td>6</td>
<td>Town of Summerville</td>
</tr>
</tbody>
</table>
1. General Information

1. What is your name?

2. Which organization, community, stakeholder group, or agency are you affiliated with?

3. How long have you been in your current position?

2. Audience and Training Topic Priorities
### Survey Summary

4. Please indicate the three (3) TARGET AUDIENCES that you consider to be the highest priority for stormwater education in the BCD urbanized area.

<table>
<thead>
<tr>
<th>Audience</th>
<th>Response Percent</th>
<th>Response Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-12 Students</td>
<td>50%</td>
<td>3</td>
</tr>
<tr>
<td>Homeowners</td>
<td>33.3%</td>
<td>2</td>
</tr>
<tr>
<td>Engineers and Landscape Architects</td>
<td>16.7%</td>
<td>1</td>
</tr>
<tr>
<td>Construction and Land Disturbance Community</td>
<td><strong>83.3%</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td>Developers</td>
<td>16.7%</td>
<td>1</td>
</tr>
<tr>
<td>Tourism Industry</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Retail Businesses</td>
<td>16.7%</td>
<td>1</td>
</tr>
<tr>
<td>Marinas</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>General Public</td>
<td><strong>83.3%</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Respondents</strong></td>
<td><strong>6</strong></td>
<td></td>
</tr>
<tr>
<td>(skipped this question)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. What TOPICS related to stormwater education do you consider to be the highest priority in your urbanized area?

<table>
<thead>
<tr>
<th>Topic</th>
<th>Response Percent</th>
<th>Response Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm drains and outfalls</td>
<td><strong>83.3%</strong></td>
<td><strong>5</strong></td>
</tr>
<tr>
<td>Pesticide and fertilizer use</td>
<td>50%</td>
<td>3</td>
</tr>
<tr>
<td>Pet waste</td>
<td>50%</td>
<td>3</td>
</tr>
<tr>
<td>Septic tanks</td>
<td>16.7%</td>
<td>1</td>
</tr>
<tr>
<td>Sediment control</td>
<td>33.3%</td>
<td>2</td>
</tr>
<tr>
<td>Vehicle/boat maintenance</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>General watershed information</td>
<td>33.3%</td>
<td>2</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Respondents</strong></td>
<td><strong>6</strong></td>
<td></td>
</tr>
<tr>
<td>(skipped this question)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3. Training Tools
ASHLEY COOPER STORMWATER EDUCATION CONSORTIUM

Education Plan

2008-2009

Survey Summary

6. What existing tools or mechanisms does your organization or agency have that could help deliver our stormwater message in the BCD urbanized area?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web site</td>
<td>100%</td>
<td>6</td>
</tr>
<tr>
<td>Newsletter (or access to Newspaper)</td>
<td>83.3%</td>
<td>5</td>
</tr>
<tr>
<td>Regular billing statements</td>
<td>66.7%</td>
<td>4</td>
</tr>
<tr>
<td>Public access TV or radio</td>
<td>16.7%</td>
<td>1</td>
</tr>
<tr>
<td>Staff</td>
<td>50%</td>
<td>3</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>33.3%</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Respondents: 6

( skipped this question ) 0

7. Are there any educational efforts or materials (e.g., public service announcements, newsletter) generated by your organization that have been particularly successful? If so, please explain below.

Total Respondents: 3

( skipped this question ) 3

4. General Feedback

8. Are you satisfied with the title of our organization being the ASHLEY-COOPER STORMWATER EDUCATION CONSORTIUM?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>83.3%</td>
<td>5</td>
</tr>
<tr>
<td>NO</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>I’d rather it be called:</td>
<td>16.7%</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Respondents: 6

( skipped this question ) 0
### Survey Summary

9. We are currently excluding several communities from participating in forming the strategic direction of the Consortium who are NOT affiliated with the Carolina Clear program. Do you agree with this strategy?

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, only those that pay should benefit from activities.</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>NO, a truly regional approach is better.</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>I agree, but would like the opportunity to revisit this issue at a later time.</td>
<td>100%</td>
<td>6</td>
</tr>
</tbody>
</table>

Total Respondents 6

10. We have been holding meetings at the Charleston County office complex. Is this a suitable location for future meetings? If not, please indicate your suggestion for additional locations.

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES, the Charleston Co. office is centrally located and meets our audio-visual needs.</td>
<td>100%</td>
<td>6</td>
</tr>
<tr>
<td>NO, I'd rather hold them at:</td>
<td>0%</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Respondents 6

(skipped this question) 0
Open-Ended Results Detail

Filter Results
To analyze a subset of your data, you can create one or more filters.

Share Results
Your results can be shared with others, without giving access to your account.

Total: 6
Visible: 6

Status: Enabled
Reports: Summary and Detail

Page Size: Show 10 per page
Displaying 1 - 2 of 2

What existing tools or mechanisms does your organization or agency have that could help deliver our stormwater message in the BCD urbanized area?

1. Folly Beach City Council, Folly Beach Civic Club
2. County PIO Officer

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Open-Ended Results Detail

Filter Results
To analyze a subset of your data, you can create one or more filters.

Total: 6
Visible: 6

Share Results
Your results can be shared with others, without giving access to your account.

Status: Enabled
Reports: Summary and Detail

Page Size: Show 10 per page
Displaying 1 - 3 of 3

Are there any educational efforts or materials (e.g., public service announcements, newsletter) generated by your organization that have been particularly successful? If so, please explain below.

1. The County has a recycling program that has been very successful. The Project Impact program as been able to get information and educational issues out.
2. HOA MEETINGS BROCHURES
3. No
APPENDIX B: ACSEC Signed Joint Resolution

JOINT RESOLUTION
ADOPTING A REGIONAL STORMWATER EDUCATION STRATEGY

WHEREAS, population growth, residential and industrial development, and the resulting changes to the landscape have led to stormwater quantity and quality concerns throughout the Ashley and Cooper river watersheds, and

WHEREAS, these impacts cannot be entirely avoided or eliminated but can be minimized, and

WHEREAS, it is currently recognized that control of stormwater quantity and quality is most effectively implemented when people and organizations understand the related causes and consequences of polluted stormwater runoff and flooding, and the actions they can take to control these, and

WHEREAS, the need arises not only from the regulatory requirements of EPA NPDES Phase II Stormwater rules, but also from the recognition that local decision makers, citizens and elected officials will require more than a rudimentary grasp of stormwater pollution and flooding concerns in order to make effective decisions that will have a positive impact on stormwater issues, and

WHEREAS, the development and implementation of effective, outcomes-based stormwater education and outreach programs will meet the related federal stormwater pollution control requirements and those of the communities they serve.

NOW, THEREFORE BE IT RESOLVED that Berkeley, Charleston, and Dorchester Counties, with the municipalities of Charleston, Folly Beach, Hanahan, Isle of Palms, Lincolnville, North Charleston, Sullivan’s Island, and Summerville fully support the development and implementation of a regional watershed stormwater education strategy. Efforts will be overseen by the Ashley Cooper Stormwater Education Consortium and their respective municipal and county representatives. This approach seeks to coordinate use of local resources and expertise to achieve economy of scale by jointly addressing common needs of the cities and counties and provide uniformity in educational message to enhance learning.

ADOPTED this 29th day of July, Two Thousand and Eight.

[Signatures of officials from various cities and counties]

[Signatures of officials from various cities and counties]
APPENDIX C: Online database structure

CLEMSON CAROLINA CLEAR DATABASE

November 2008

The following outline includes fields to be used within the Carolina Clear Activity Database. This database will house activity numbers that we report to our clients and to the Department of Health and Environmental Control. The users of this database will consist of Clemson Extension agents as well as partnering organization (grassroot, communities and other universities). The final result of this database will be a report format that can be included in an annual activity report that tabulates characteristics or values entered in the fields below.

Users will access this singular database, though they are partnering with different Carolina Clear consortiums across the state. I would like for everyone to enter information into a single database so that I can easily have access to statewide numbers. However, for the most part, the users and the final reporting will be focused on the different geographic partnerships (consortiums).

1. **CONSORTIUM/COMMUNITY:** This should be a drop down that can be added to in the future and limited to one of choices below. I would like for this to be the first step before entering in a different password (per consortium/community selection).
   a. Ashley Cooper Stormwater Education Consortium
   b. Coastal Waccamaw Stormwater Education Consortium
   c. Lexington Countywide Stormwater Consortium
   d. Richland Areawide Stormwater Consortium
   e. Florence-Darlington Stormwater Consortium
   f. Sumter Areawide Stormwater Consortium
   g. Pickens County Regional Stormwater Education Partners

2. **LEAD SERVICE PROVIDER(S):** this should be a text box limited to 75 characters.

3. **ADDITIONAL PARTICIPATING PROVIDERS:** this should be a data entry field for other partners involved in the activity. 150 character limit.

4. **ACTIVITY TYPE:** this should be a radio button, only one option allowed from the following choices. I would also like a hyperlink enabled to lead to a larger explanation or example of each of the following options. Only one option should be selected.
   a. Exhibit/poster
   b. Webpage
   c. Television/Video
   d. Radio/Audio
   e. Billboard/bulletin/poster
   f. Publication/Article
   g. Newsletter
   h. Brochure/Outreach Material
i. Conference  
j. Presentation/Workshop  
k. Council/Committee/Meeting  
l. Community Clean-up  
m. Installation/Demonstration  
n. Volunteer Monitoring  
o. Other – when clicking the “other” radio button, a text box should appear allowing for a 50 character entry.

5. ACTIVITY DESCRIPTION: data entry box, 80 character limit, with an example written into the webpage above the text box.

6. GEOGRAPHIC TARGET: Would it be possible if different locations were available based on the Consortium group chosen in #1. Also, I am hoping that an Other option would be available with a text box (does not have to appear if “other” is clicked). More than one option is allowed.

a. Ashley Cooper Stormwater Education Consortium  
i. Berkeley County  
ii. Charleston County  
iii. Dorchester County  
iv. Charleston  
v. North Charleston  
vi. Hanahan  
vii. Summerville  
viii. Folly Beach  
ix. Lincolnville  
x. Isle of Palms  
xi. Sullivan’s Island  
xb. Other

b. Coastal Waccamaw Stormwater Education Consortium  
i. Horry County  
ii. Georgetown County  
iii. Myrtle Beach  
iv. North Myrtle Beach  
v. Conway  
vi. Surfside  
vii. Briarcliff Acres  
viii. Atlantic Beach  
ix. Murrells Inlet  
x. Other
c. Lexington Countywide Stormwater Consortium
   i. Lexington County
   ii. Lexington
   iii. Cayce
   iv. Pine Ridge
   v. Other
   d. Richland Areawide Stormwater Consortium

d. Richland County
   ii. Forest Acres
   iii. Arcadia Lakes
   iv. Other
   e. Florence-Darlington Stormwater Consortium

e. Florence County
   ii. City of Florence
   iii. Darlington County
   iv. Other

f. Sumter Areawide Stormwater Consortium
   i. Sumter County
   ii. City of Sumter
   iii. Other

g. Pickens County Regional Stormwater Education Partners
   i. Pickens County
   ii. Easley
   iii. Liberty
   iv. Other

7. START DATE/END DATE: this represents the first day that an event/activity occurred and the end date of that activity. Can this be a drop-down for date, month, year? The end date should default to what the start date is, but can be modified if the event lasted more than 1 day.

8. NUMBER IMPACTED: this field should only allow a numerical data entry with no zeroes allowed. This should also be a mandatory field.

9. ASSESSMENT TYPE: The following radio buttons should be listed, with only one option able to be selected. There should be a “Results of the assessment (optional)” text box with a 150 character limit.
   a. Pre- and post-surveys
   b. Written post surveys only
   c. Telephone or web survey
   d. Feedback (Quotes should include name and title of source of quote.)
10. **MINIMUM CONTROL MEASURE:** only one of the following radio buttons should be allowed.
   a. MCM 1: Public Education/Outreach
   b. MCM 2: Public Involvement/Participation
   c. MCM 1 & 2
   d. Other MCM (i.e., one of the other MCMs as defined by the NPDES Phase II Program)

11. **TARGET AUDIENCE:** more than one of the following sections should be allowed. Other should have an adjacent text box, 60 character limit.
   a. General Public
   b. K-12 students/Youth
   c. Teachers
   d. Elected & Appointed Officials
   e. Directly-Involved Staff (Maintenance, Facilities, Custodians, Grounds-keepers, etc.)
   f. Supervisory Staff (Administrators, Stormwater Managers, etc.)
   g. Contractors and/or Engineers
   h. Developers
   i. Landscapers or Landscape Architects
   j. Marina Owners and/or boat owners
   k. Other

12. **TARGET POLLUTANT:** more than one option can be allowed. Other should have an adjacent text box with a 25 character limit.
   a. Stormwater in general
   b. Bacteria – failing septic systems
   c. Bacteria – failing sewer lines
   d. Bacteria – pet waste
   e. Bacteria – runoff from livestock pastures and feed operations
   f. Toxic contaminants, petroleum products, pesticides, and heavy metals
   g. Sediment from construction sites
   h. Sediment from agricultural operations
   i. Sediment from forestry-related activities
   j. Sediment in general and from diffuse sources
   k. Nutrients from agricultural operations
   l. Nutrients from horticulture industry operations
   m. Nutrients from residential properties
   n. Pollutants resulting in low dissolved oxygen
   o. Debris
   p. Temperature
   q. Other

13. **ACTIVITY LOCATION:** This is the physical address of the activity. 80 character limit text entry field.
14. **NOTES:** any additional information that the user wants to provide about the activity. 100 character limit.

15. **PHOTOS AND PHOTO CAPTIONS:** Two photos should be allowed per activity. A caption per photo is mandatory; caption should be less than 40 words. The user should also check that permission to use the photo has been granted by all of those permitted; can this be a mandatory check box stating that permission has been acquired to utilize this photograph? Without checking the box, the photo will not be allowed? The photo also needs to be resized to meet a certain limit, and that should be explained at the point of upload on the webpage. I am unsure of photo size restrictions.