

Executive Summary
Results for the 2014 Carolina Clear Stormwater Survey
Charleston Area
Overview of Research Effort

In Spring 2013, Carolina Clear of the Clemson University Restoration Institute contracted with researchers from George Mason University (Dr. James Witte) and Clemson University (Dr. Catherine Mobley) to conduct a telephone survey of residents of Charleston, Berkeley and Dorchester counties in South Carolina. The main goal of the survey was to obtain information about residents’ attitudes, knowledge, behaviors, and intentions as they relate to the environment. The results can serve as a baseline for measuring the success of future environmental and stormwater education efforts.

The survey was conducted from in Fall 2013 and Spring 2014. Data were collected from 451 residents from the following 72 zip code areas in the tri-county area of Charleston, Berkeley and Dorchester counties:

29401	29414	29426	29466	29450	29434	29479	29484
29402	29415	29429	29470	29453	29436	29492	29485
29403	29416	29439	29482	29456	29445	29420	
29404	29417	29449	29487	29461	29450	29437	
29405	29418	29451	29410	29468	29453	29447	
29406	29419	29455	29430	29469	29456	29448	
29407	29422	29457	29431	29476	29461	29471	
29409	29423	29458	29434	29410	29468	29472	
29412	29424	29464	29436	29430	29469	29477	
29413	29425	29465	29445	29431	29476	29483	

The resulting data were weighted to be more statistically representative of the broader population. The weighted results are presented below.

Main Findings

Survey results reveal a complex picture of the environmental views of Charleston residents. The summary below presents some of the main research findings. Where relevant and statistically significant, comparisons between 2009 and 2013 results are presented.

- **Residents of the tri-county area are concerned about water quality and the proportion of residents who expressed such concern increased between 2009 and 2013.** Just over one-half (50.8%) of respondents indicated they were “very concerned” and 36.0% were “somewhat concerned” about pollution and the environmental quality of local streams and waterways. This represents a statistically significant increase for “very concerned” from

2009, when 31.9% of respondents indicated they were “very concerned” about water quality ($X^2=38.725$; $df=3$; $p<.001$).

- **Nearly all Charleston-area residents surveyed felt that clean water is important to South Carolina’s economy and tourism.** Nearly every respondent (a total of 99.3%) felt that clean water is important to the state’s economy, with 87% of respondents indicating that clean water is “very important” and nearly 12.5% indicated clean water is “somewhat important” to the state’s economy and tourism.
- **Residents have a good level of understanding about the various causes of poor water quality.** In 2013, when asked about the impact of humans on the environment, 63.5% of respondents indicated that what people do on the land affects the quality of their local streams and waterways “a great deal”; an additional 32.7% indicated that such activities impact water quality “somewhat.” These responses in 2013 represent a statistically significant change from the 2009 responses, when 46.8% indicated that activities impacted water quality a “great deal” and 21.7% indicated “somewhat” ($X^2=117.871$; $df=4$; $p=0$).

In 2013, approximately 74.7% “strongly agreed” or “agreed” that pet waste is a source of bacteria pollution in local waterways (as compared to 67.4% in 2009); 5.0% of 2013 respondents indicated they did not know if this was the case (as compared to 11.6% in 2009). These data indicate that citizens’ level of knowledge for these two survey items has improved since 2009 ($X^2=32.496$; $df=4$; $p<.001$).

Regarding beliefs about the treatment of stormwater, 67.9% of respondents did not believe that stormwater was treated before reaching lakes, rivers and streams, as compared to 77% in 2009. Also, there was an increase in the proportion of respondents who indicated “do not know” for this survey item (an increase from 4.3% in 2009 to 11.9% in 2013) ($X^2=17.71$; $df=2$; $p<.001$).

- **Less than 1/3 of respondents chose the correct definition of the term “watershed.”** There was a decrease between 2009 and 2013 in the proportion of respondents who indicated “do not know” when asked to select the correct definition of the term watershed (from 21.5% in 2009 to 11.0% in 2013). However, in 2013, only 31.1% of respondents actually selected the correct definition of the term (“area that drains into a specific river or lake”). Interestingly, the proportion of respondents who selected the incorrect definition of “reservoir that serves as municipal water source” nearly doubled between 2009 (14.7%) and 2013 (26.7%) ($X^2=30.265$; $df=5$; $p<.001$).
- **Results indicate some improvements in respondents’ engagement in positive actions, or avoiding negative actions, that impact water quality. However, there is room for improvement.** There was an increase in the proportion of respondents who indicated they “never” cleaned up after their dog (from 8.6% in 2009 to 13.2% in 2013). In 2013, 61% of respondents who indicated they owned a pet said they “always” cleaned up after their dog, as

compared to 82.5% of respondents in 2009 who indicated they “always” cleaned up after their dog ($X^2=24.452$; $df=3$; $p<.001$).

There was a slight increase in the proportion of respondents who indicated that they “never” dispose of oil, paint or other chemicals down the storm drain ($x^2=7.506$; $df=1$; $p<.01$, although the sample size was too small in some response categories). Similarly, there was a slight increase in the proportion of respondents who indicated they “never” washed dumped grass clippings or leaves down storm drains, backyard creeks or ditches ($X^2=8.811$; $df=1$; $p<.01$, although the sample size was too small in some categories).

- **Respondents use a variety of sources of information to learn about local and regional news.** In 2013, the most popular source of local/regional news was “TV-evening news” with 58.7% of respondents indicating this source as one of their top three sources. Nearly half (49.3%) of the respondents indicated that they use the Internet to receive local/regional news. The third most frequently mentioned source of local/regional news was “TV-morning news” (mentioned by 46.1% of respondents).
- **As expected for a coastal town, a fairly large proportion of respondents indicated they eat locally caught fish.** Nearly 1/3 (33.5%) of respondents indicated that they ate locally caught fish on a weekly or bi-weekly basis, with another 1/3 (33.3%) indicating they ate locally caught fish several times a year. Approximately 28% eat locally caught fish on a monthly basis. It is also important to note that nearly 86% of respondents indicated that they were “very” or “somewhat” concerned that shellfish can be affected by failing septic systems, wildlife and pets, and other sources of pollution.
- **There was a decrease in the proportion of respondents who indicated they were familiar with Carolina Clear.** In 2009, only 1.5% of respondents indicated they were “aware of Carolina Clear and were familiar with its programs.” By 2013, there was a slight increase (to 6.9%) in the proportion of respondents who indicated this was the case. Relatedly, there was a decrease in the proportion of respondents who indicated they had never heard of Carolina Clear (from 92.2% in 2009 to 85.0% in 2013) ($x^2=16.311$; $df=2$; $p<.001$).