

**Executive Summary**  
**Results for the 2014 Carolina Clear Stormwater Survey**  
**Grand Strand / Myrtle Beach**  
**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 Fall 2013 through Spring 2014. Data were collected from 410 residents from the following zip code areas in the Grand Strand/Myrtle Beach area:

29526	29566	29575	29577	29582
29527	29572	29576	29579	29585

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 Grand Strand 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 Grand Strand/Myrtle Beach area are concerned about water quality and the proportion of residents who expressed such concern increased between 2009 and 2013.** In 2013, nearly 61.4% of respondents indicated they were “very concerned” and 32.7% “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 45.3% of residents said they were “very concerned” about water quality ( $X^2=42.054$ ;  $df=3$ ;  $p<.001$ ).
- **Nearly all Myrtle Beach-area residents surveyed felt that clean water is important to South Carolina’s economy and tourism.** In 2013, nearly 90% of respondents indicated that clean water is “very important” and another 9.2% indicated that clean water is “somewhat important” to the state’s economy and tourism; only 1.4% of respondents indicated that clean water was “not at all important.” In another part of the survey, respondents were asked “how important do you feel that local waterway health is to your quality of life?” Nearly 91% of respondents indicated “very important” (79.9%) or “somewhat important” (10.6%) for this survey item.

- **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, 69.7% of respondents indicated that what people do on the land affects the quality of their local streams and waterways “a great deal”; an additional 23.3% indicated that such activities impact water quality “somewhat.” These responses in 2013 represent a statistically significant change from the 2009 responses, when 53.4% indicated a “great deal” and 25.7% indicated “somewhat” ( $X^2=38.338$ ;  $df=4$ ;  $p<.001$ ).

In 2013, approximately 82.8% “strongly agreed” or “agreed” that pet waste is a source of bacteria pollution in local waterways (as compared to 75.4% in 2009); In 2013, 15.1% indicated they “strongly disagreed” or “disagreed” that this was the case, as compared to 19.0% in 2009. In 2013, approximately 2.1% of respondents indicated they “did not know” if pet waste is a source of bacteria (as compared to 5.6% in 2009). These data indicate that citizens’ level of knowledge for these two survey items has improved greatly since 2009 ( $X^2=36.841$ ;  $df=4$ ;  $p<.001$ ). Also, in a question that appeared later in the survey, just over 91% of respondents indicated that the best way to dispose of pet waste was to scoop it/bag it and then dispose it in the trash (as opposed to scooping it and leaving it at the curb or disposing it down the storm drain).

Regarding beliefs about the treatment of stormwater, in 2013, 77.3% of respondents indicated they did not believe that stormwater was treated before reaching lakes, rivers and streams, as compared to 87.9% in 2009. Also, there was an increase in the proportion of respondents who indicated “do not know” for this survey item (from 6.0% in 2009, to 12.0% in 2013) ( $X^2=23.133$ ;  $df=2$ ;  $p<.001$ ).

- **In 2013, nearly 37% of respondents chose the correct definition of the term “watershed.”** This represents an increase from 2009, when only 25.6% of respondents selected the correct answer to the definition. There was a decrease, then, in the proportion of respondents who indicated “do not know” when asked to select the correct definition (from 15.7% in 2009, to 9.3% in 2013). There was a small increase in the proportion of respondents who selected the incorrect definition of “small building where water is stored”, from 16.9% in 2009 to 17.8% in 2013 ( $X^2=22.048$ ;  $df=5$ ;  $p<.001$ ).
- **Results indicate some improvements in respondents’ engagement in positive actions, or avoiding negative actions, that impact water quality. However, there is room for improvement.** In 2013, 64.3% of respondents who indicated they owned a pet said they “always” cleaned up after their dog, as compared to 65.1% of respondents in 2009 who indicated they cleaned up after their dog; this represents a small decrease from 2009 to 2013. However, there was a significant increase in the proportion of respondents in 2013 (17.2%) who indicated they “nearly always” cleaned up after their dog, as compared to 2009 (6.0%). Correspondingly, there was a significant decrease in the number of respondents indicated they “never” cleaned up after their pet: 25.4% of respondents in 2009, as compared to 15.4% in 2013 ( $X^2=15.13$ ;  $df=3$ ;  $p<.001$ ).

- **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 69.6% of respondents indicating this source as one of their top three sources. Nearly 63% of respondents selected “TV-morning news” as one of the top three ways that they receive local/regional information and news. The third most frequently selected source of information was the Internet, selected by 54.3% of respondents.
- **Respondents were not very familiar with state and regional stormwater education organizations.** Between 2009 and 2013, there was a decrease in the proportion of respondents who indicated they were aware of Carolina Clear and its programs (from 6.3% in 2009 to 3.2% in 2013). However, there was a slight decrease in the proportion of respondents who indicated they had never heard of Carolina Clear (from 82.4% in 2009 to 81.7% in 2013). And, there was a slight increase in the proportion of respondents who indicated they had heard of Carolina Clear, but were not familiar with its programs (from 11.3% in 2009 to 15.1% in 2013)( $X^2=6.129$ ;  $df=2$ ;  $p<.05$ ). Regarding the regional stormwater education organization, between 2009 and 2013, there was a decrease in the proportion of respondents who indicated they were aware of the Coastal Waccamaw Stormwater Education Consortium and were familiar with its programs: 9.0% of respondents indicated this was the case in 2009, as compared to 5.2% in 2013. Just over 2/3 (67.0%) of respondents indicated that they had never heard of the consortium in 2009, as compared to 77.4% in 2013, representing nearly a 10% increase between 2009 and 2013 in those who are had never heard of the consortium ( $X^2=11.856$ ;  $df=2$ ;  $p<.002$ ).