

METHODOLOGY

The Town of Cary’s 2018 Biennial Citizen Survey was conducted from March 3 through March 25 of 2018. BKL Research administered the telephone survey to 401 residents of the Town of Cary. This resulted in a ± 4.89% margin of error. Both listed, unlisted and wireless telephone numbers within Cary census tracts were included in the sampling frame and contacted using a random selection process. This year, 87.8% of the numbers contacted were wireless. A minimum of four callbacks was attempted on each number not screened from the sampling frame. The potential respondents were screened with regards to Cary residence and over the age of 18. The average survey completion time was between 13-17 minutes, and the refusal rate was 24.6%.

The survey instrument consisted of 35 core questions with related subparts to several of the questions (Appendix A). Respondents were asked to rate the Town Government staff, Police Department, Fire Department, Parks & Recreation programs, solid waste services, perceptions of safety, quality of life, service quality/value and Cary as a place to live. The survey also examined respondent information sources, information dissemination, opportunities to participate in decision-making and social media usage. Another series of questions examined Town Council focus areas, such as keeping Cary the best place to live, environmental protection, transportation, planning and development and recreational facilities. They are also asked if they would recommend Cary as a place to relocate and the importance of giving back to their community. Finally, questions were included to examine neighborhood strength and housing choices. The respondents were primarily asked to use a 9-point scale. There were open-ended questions examining streets/roads and public areas needing attention and most important issues. The survey incorporated nine demographic questions.

DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE

Figure 1. Sample: Age Distribution

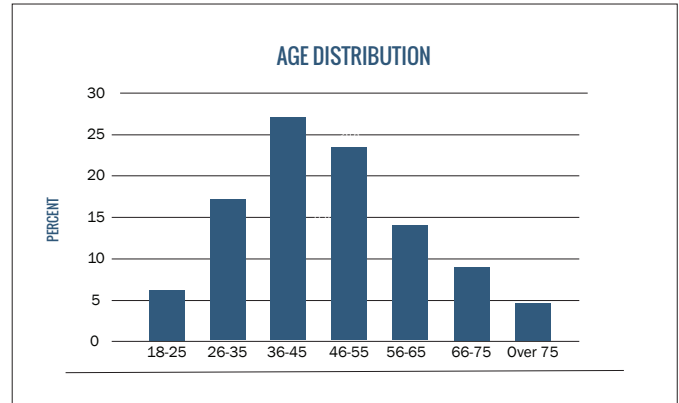


Figure 2. Sample: Years Lived in Cary

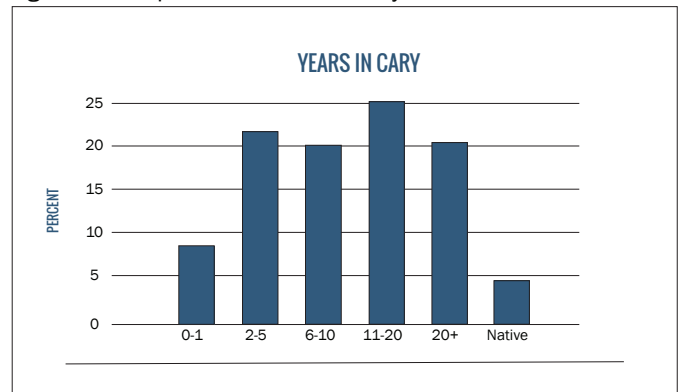


Figure 3. Sample: Education Level

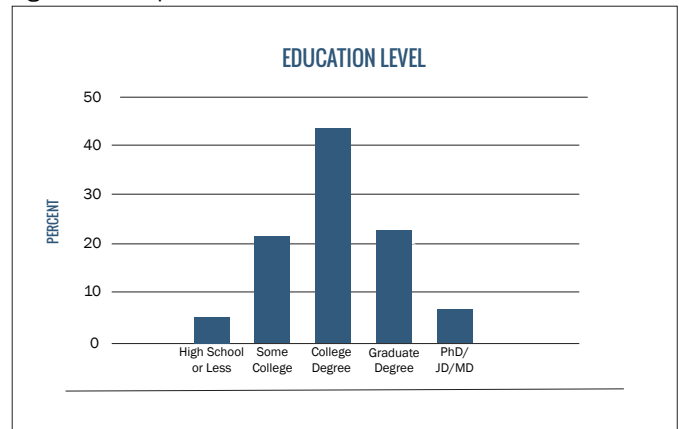


Figure 4. Sample: Race

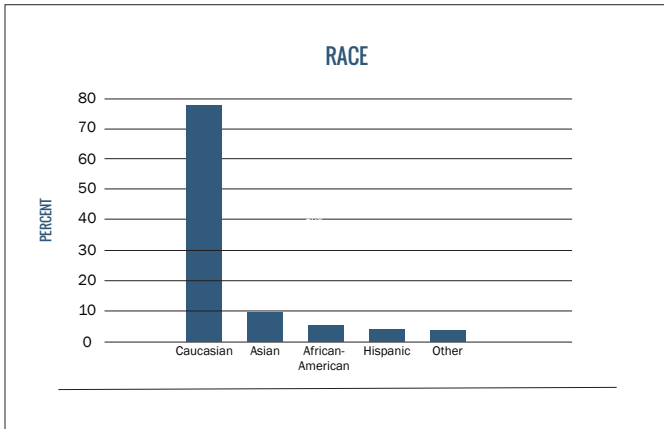
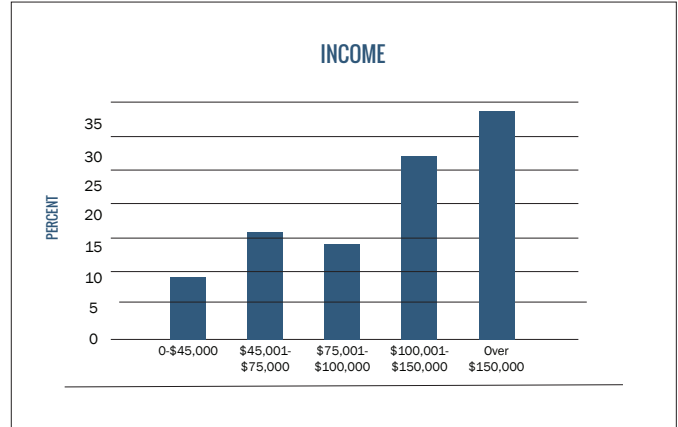
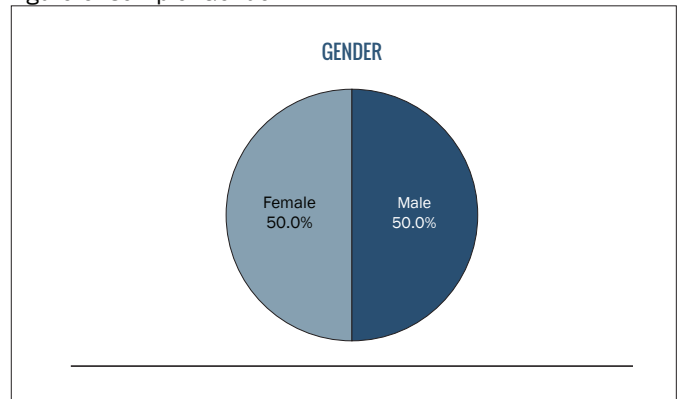


Figure 5. Sample: Income



The demographic profiles of the sample are exhibited in Figures 1-6. The age profile of the sample is illustrated in Figure 1. A large percentage of the respondents (67.1%) fell between the ages of 26 to 55 with the largest portion in the 36-45 (26.8%) and 46-55 (23.3%) age categories. Figure 2 shows the number of years the respondents had lived in Cary. There were large percentages for living in Town for 11-20 years (24.8%), 2-5 years (21.5%), and over 20 years (20.3%). In addition, there were 20.0% who lived in Cary for 6-10 years, while 4.8% were native to the Town. In terms of education, a large percentage (73.2%) of the respondents graduated with a college degree, including 22.9% earning a graduate degree and 6.8% a PhD, JD or MD degree (Figure 3). The racial breakdown shown in Figure 4 illustrates 77.7% of the respondents were Caucasian, 9.7% were Asian, 5.4% were African-American and 3.8% were Hispanic. There were high levels of household income for the sample (Figure 5). This is illustrated in the large percentage of respondents in the over \$150,000 (33.8%) and \$100,001-\$150,000 (27.1%) income categories. In terms of gender, 50.0% of the sample were male and 50.0% were female (Figure 6). Most of the respondents (76.8%) resided in single family homes, 11.6% in a townhouse/condominium and 9.3% in an apartment. This year, there were 90.5% (91.9% in 2016) of the respondents who indicated they were registered voters, and 56.6% (50.0% in 2016) of those voted in the 2017 local elections.

Figure 6. Sample: Gender



Selected demographic crosstabulations on age (B462-B467), education (B468-B473), gender (B474-B478), housing type (B479-B484), income (B485-B490), race (B491-B496), voter status (B497-B503), voted in 2017 local elections (B504-B510) and years in Cary (B511-B516) are included in Appendix B.

Several of the means for the service dimensions in the survey were converted into grades. The mean score was changed into a percentage (using 9 as the denominator) and compared to the grading scale shown in Table 1. This was done for those questions that rated the services on the 9-point scale using the very poor (1) to excellent (9) response set. Grades tend to be easier to understand and use in setting goals. The respondents were also asked if they would agree to participate in a focus group session to give Cary even more insight into their citizen's opinions and attitudes with 46.0% of the respondents agreeing to participate in a session.

The report will include selected crosstabulations expressly chosen by the Town for specific questions in the survey (Appendix B). It is important to exercise caution in the interpretation of crosstabulations. They will act to segment or partition the sample size and, in turn, increase the margin of error for a question. For that reason, it is difficult to interpret crosstabulations with small sample sizes for a specific demographic subgrouping.

Table 1. Grading Scale

RATING (%)	GRADE
97-100	A+
94-96	A
90-93	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
Below 60	F

The percentages in the tables are rounded off to one decimal place. Due to rounding, this may result in row totals that do not always add up to exactly 100.0%. The demographic recodes for the crosstabulations were age (18-25, 26-55, 56-65, over 65), education (high school degree/some college, college degree, PhD/JD/MD), housing (single family, apartment, townhouse/ condo, other), income (0-\$45,000, \$45,001-\$100,000, \$100,001-\$150,000, over \$150,000), race (Caucasian, Asian, African-American, Hispanic, other) and years in Cary (0-1, 2-5, 6-10, over 10, native). For clarification, other housing includes mobile homes, duplexes and any other living arrangement such as assisted living. Other races include all respondents selecting other as to their race and Native Americans due to their limited number. All the tables are displayed in percentages unless otherwise stated.

In regards to the $\pm 4.89\%$ margin of error, this reflects the level of sampling error for the survey. Sampling error indicates the difference in measurement which will invariably occur when using a sample instead of surveying the entire population (i.e., census). The degree of sampling error is minimized by larger sample sizes. In this instance, the sample size of 400 indicates the likelihood the results of the survey are within $\pm 4.89\%$ of what one would expect to obtain if the entire population were surveyed. The 95% confidence level refers to the probability that the observed results from the survey were not the product of sampling error alone. In other words, if we repeated the study 100 times with random samples, then 95 of the samples would demonstrate similar results. In summary, we are 95% confident the results are within $\pm 4.89\%$ of the population parameters.

The results between the survey periods may show an upward or downward trend between the survey periods. However, it is important to examine these changes for statistical significance. For that reason, significance tests were conducted on the mean differences for the 2016 and 2018 surveys. Any question with a mean score which was measured in both years was compared with statistical analysis. No assumption of homogeneity of variance was assumed since the sample sizes for the service dimensions generally differed for the two measurement periods. For that reason, a Welch's t-test was utilized with a two-tailed test at the .05 significance level to determine significance. This statistical method will test the null hypothesis that the two population means are equal while correcting for unequal variances. A two-tailed test was employed due to the fact the mean difference could be higher or lower. A significant result would indicate the differences in the two means would be more (or less) than would be expected by chance. An asterisk will be placed after any means in the tables that are statistically significant such as 8.53*. Appendix P lists the significance tests for all the Town's service dimensions comparing changes from 2016 to 2018.