

South Carolina Department of Natural Resources



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Timothy Gillette
Operations Director, Tega Cay
7725 Tega Cay Drive
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Dear Tim:

Thanks for your efforts related to the deer spotlight survey conducted at Tega Cay on September 14. My comments and those of Don Cockman concerning the survey and the deer situation on the property follow.

On September 14, 2022 the spotlight transect method was employed to estimate the deer population at Tega Cay located in York County, South Carolina. The spotlight transect technique is widely used by biologists in the Southeast as a technique for estimating the relative abundance of deer on a given area. Although I will provide a population estimate, please keep in mind that the survey technique should be used only as an index to relative abundance rather than an actual count of deer on the area. In other words, it is best to look at population trends (up, down, stable) over time rather than getting locked into specific estimates at a given time.

The Tega Cay survey lasted 2.75 hours (8:30 pm-11:15 pm) and was carried out over 7 transects (survey lines) totaling 5.2 miles which should have provided for good coverage of the representative habitats on the property (see map of survey routes). Total acreage surveyed was estimated at 214 acres of 1,600+- acres encompassed by the property. A total of 117 deer were sighted which calculates to an estimated one deer per 1.8 acres surveyed (349 deer per square mile) and extrapolated to approximately 850 deer on the entire property. These figures are slightly higher than the survey in March of this year which is not surprising because fawns have since been born. Please see the attached table which summarizes the data associated with the survey.

Recall that during the March survey observational data related to sex ratios and doe to fawn ratios were impossible because adult males had no antlers and fawns were too large to differentiate from adult females. That was not the case during this late summer survey during which nearly 90 percent of the deer were identifiable as to sex and age. The observed antlered (adult) buck to doe ratio was 1:2.5 or 41 bucks per 100 does and the doe to fawn ratio was 1:0.7 or 70 fawns per 100 does. Note the doe to fawn ratio is a minimum number as some solitary does were observed with full mammary glands, indicating they probably had a fawn(s) bedded down somewhere out of view. Both ratios are good as were observations of physical characteristics of

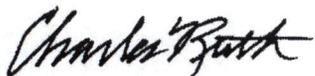
the deer. As was the case during the March survey, there was significant browsing damage noted on the property which is indicative of a very high deer population. It is important to note that even though the population is very high the doe to fawn ratio is indicative of a population that is capable of further increase and apparently has done so following this fawning season. Fawns alive at this time of year are considered as recruitment into the deer population as they are likely beyond the initial danger of predation and malnourishment. We also note that no coyotes (primary deer predator) were observed during either survey.

At this high population level deer-human conflicts such as homeowner complaints of landscape damage, vehicle accidents, and overall reduced tolerance to deer are likely. Based on experience from numerous resort/residential properties located primarily on the South Carolina coast, the deer population on Tega Cay is extremely high. Many communities initially have densities of one deer per 3-5 acres (100-200 deer per square mile) prior to management activities (sharpshooting). Following an initial reduction in the population it seems that communities generally try to keep the density lower than one deer per 15 acres (40 deer per square mile). Also, communities can vary with respect to the level of tolerance they have for deer with some having higher or lower tolerance. This can affect the desired deer density brought about by management actions.

We encourage you to continue monitoring the population with these surveys and it would suffice to conduct only the late summer (August/September) survey. We suggest doing two late summer surveys no more than a week apart. For data consistency, the same survey routes and procedures that we utilized will need to be followed. As previously mentioned, conducting surveys in late summer will allow for sex ratios and doe to fawn ratios to be observed. Doe to fawn ratios can provide an estimate of productivity and potential for population change. We will be glad to analyze and interpret data from your future surveys.

I hope you find these comments satisfactory. Please do not hesitate to contact me if you have questions concerning the survey or analysis.

Sincerely,



Charles Ruth
Certified Wildlife Biologist®
Big Game Program Coordinator

Cc: Jay Cantrell
Don Cockman
Sam Stokes, Jr.