

Most landowners in the state of Texas that are involved in white-tailed deer management go to extraordinary lengths to ensure that their herd is in pristine condition. Management strategies such as supplemental feeding, intense culling and installing supplemental water sources are just a few of the many strategies that can be done to assist and improve your white-tailed deer herd. However, after all the time and effort that landowners place into managing their deer herd, the pressing question is always asked. “How many deer do I have on my ranch?” Good question.

When deciding to survey your property and determine your estimated white-tailed deer density, there are three main survey procedures that are most used in Texas. These surveys include spotlight, game camera and aerial surveys.

Out of all the surveys techniques, spotlight surveys tend to be the most used throughout the state. One of the main reasons that this survey is appealing is because it tends to be quite cheap to implement. Usually spotlight surveys can be conducted with minimum expenses if conducted by the landowner, and maybe a few friends. The items needed to conduct the survey are 3-4 people, 2-3 spotlights and a recording sheet. Another reason for spotlight survey’s popularity is because the survey is an acceptable and most advised method by the Texas Parks and Wildlife Department (TPWD) to determine deer density on your property. This means landowners can determine deer density on their property at a minimum cost and still obtain their Managed Land Deer Permits (MLDP) for the hunting season. However, there are drawbacks to spotlight surveys. Spotlight surveys tend to be the most time consuming of all the surveys as they take three to four weeks to conduct correctly. That also means these surveys are subject to weather delays which can push back survey times. Lastly depending on your environment and property size that you are surveying, getting a glimpse into every part of your property is unrealistic. Spotlight surveys are designed so that when you survey and acquire your density estimate, you can then extrapolate your data to compensate for those areas of the ranch that you did not see. This can be tricky and makes it difficult to accurately estimate white-tailed deer abundance, especially in dense habitat where visibility is 5-10 yards or less.

Game camera surveys are also a very popular means of surveying for white-tailed deer. Ultimately how game camera surveys work is by identifying individual bucks within your population. By identifying individual bucks within your herd, you are then able to conduct a simple ratio on the number of times those unique bucks show up on your camera to how many bucks you see total during your survey period. With this ratio, you then can



apply the same ratio to your doe and fawn population. You would count the number of does that you see total and multiply this total count by the ratio that was determined from your buck cohort. The same strategy would be applied to your fawn cohort. Basically, one is assuming that the ratio at which bucks were seen will be the same with you doe and fawn cohorts. Now, this strategy is not foolproof by any means but it is a quick and easy way to gain insight into your white-tailed deer population

numbers. Unfortunately, it does have an expense aspect to it. If the landowner does not already have game cameras, buying enough to cover your entire ranch can be pricey. But, as I mentioned above, this type of survey is an easy indirect method to acquire a white-tailed deer density.

Lastly there are aerial survey which are my personal favorite and are very popular for landowners in the South Texas Plains, Gulf Coast Prairies and Trans-Pecos ecoregions. This type of survey is used in high aerial visibility areas where a helicopter or fixed winged aircraft can be flown above the tree line to allow surveyors to count animals as they fly. Usually you would need about 4 individuals to fly this survey. You would of course have the pilot flying, a recorder marking the data



and two observers, one on each side of the aircraft, counting as transects are flown. Each observer counts animals that are within 100 yards of the helicopter. Any other animals that are beyond this point are not counted as they will more than likely be identified incorrectly and will also be counted on the next helicopter transect pass. Using the aerial survey method also provides the option to survey the entire property if desired. Another real positive of an aerial survey is the option to count and estimate other species while in the air. Specifically, I always find it

useful to estimate quail numbers while you are in the air. As you are flying, count the number of coveys that flush and the estimate the number of birds within each covey. This can give you a quick and easy estimate of the number of quail that you have on your property. Lastly one of the best parts of the aerial survey is that it can be done generally in one day, if your property isn't too large. Usually anything under 15,000 acres can be surveyed 100% in one day. Anything over that you will need to either fly only a portion of your ranch and extrapolate your data or extend your survey over two or more days. The one big draw back with aerial surveys is the cost. Most pilots charge between 600 and 800 dollars an hour. That can add up to be an expensive bill depending how long you are in the air.

All three of these surveys are useful in determining white-tailed deer density on your property. I want to finish and note that these surveys estimators do just that, ESTIMATE. None of these survey techniques will provide you with an exact number of white-tailed deer, exotics or quail on your property. They will merely provide you with an estimate. The key to using these tools is to use them over an extended period of time. Decide on a survey method to use and use it consistently every year, same time of year and with the same surveyors. Doing so will ensure that the same margin of error that you placed into your very first survey is located within every subsequent survey. Performing yearly white-tailed deer surveys will provide you as a landowner with trends as your deer density fluctuates and allow you to make proper wildlife management decision regarding your population.



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ABOUT

Kolbe Ranches & Wildlife, LLC is a holistic range and wildlife management company which specializes in providing wildlife consultation and ranch real estate services to private and public landowners across Texas

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GAME/NON-GAME SPECIES SURVEYS

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RANGE MANAGEMENT PROJECTS

MLDP, TTT, TTP, DMP
IMPLEMENTATION & MGMT.

WILDLIFE MANAGEMENT PLAN
CONSTRUCTION

AG/WILDLIFE EXEMPTION APPRAISALS

EXOTIC SPECIES MANAGEMENT

RANCH REAL ESTATE SERVICES



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