



2013-14 North Carolina Avid Grouse Hunter Survey

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Since 1984, an annual avid grouse hunter survey has been conducted by the North Carolina Wildlife Resources Commission (NCWRC) to estimate long term grouse hunting trends and to provide annual insight into avid grouse hunting demographics throughout the mountains of North Carolina. Volunteer grouse hunters participate by recording and submitting their annual hunting trip activity throughout the fall/winter hunting season. Grouse hunting activity is recorded by county and landownership type (Private Land or Game Land) within the two grouse management regions (Northern Mountains and Southern Mountains, Fig. 1). Reported hunting trips typically consisted of a single day per hunting party.

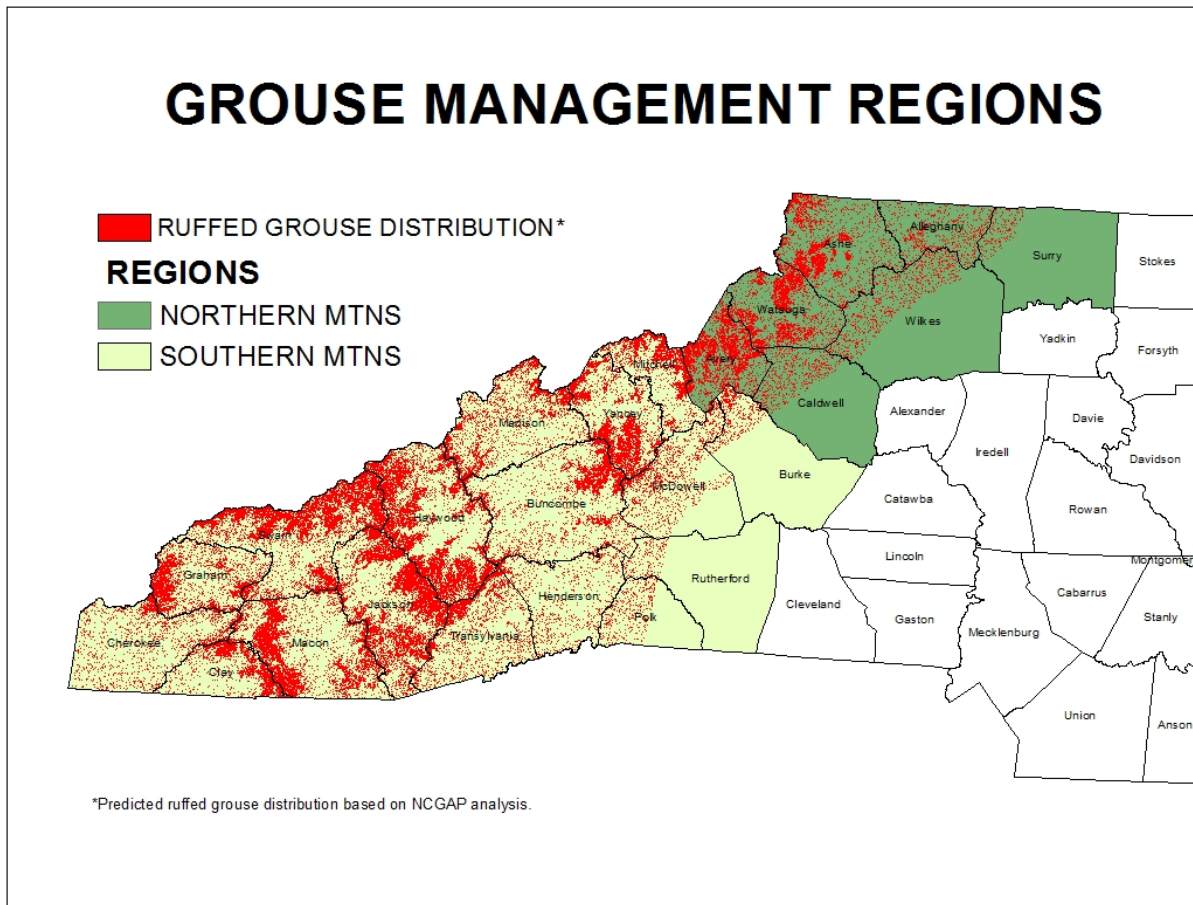


Figure 1. – North Carolina Ruffed Grouse Management Units and Predicted Grouse Population Distribution. Predicted ruffed grouse population distribution based on NCGAP analyses.

Sixty-three avid grouse hunters reported information during the 2013-14 survey season, providing grouse hunting statistics for 833 hunting trips (Fig. 2). Most reported avid grouse hunting was reported in the Haywood, Macon, and Madison counties within the southern mountain management unit (Fig. 3). The gradual annual decline of total reported grouse hunting trips has primarily been a function of less survey respondents and less hunting trips taken per hunter. Corresponding declines of total statewide grouse hunters and hunting days have also been observed in NCWRC state hunter harvest surveys (Fig. 4).

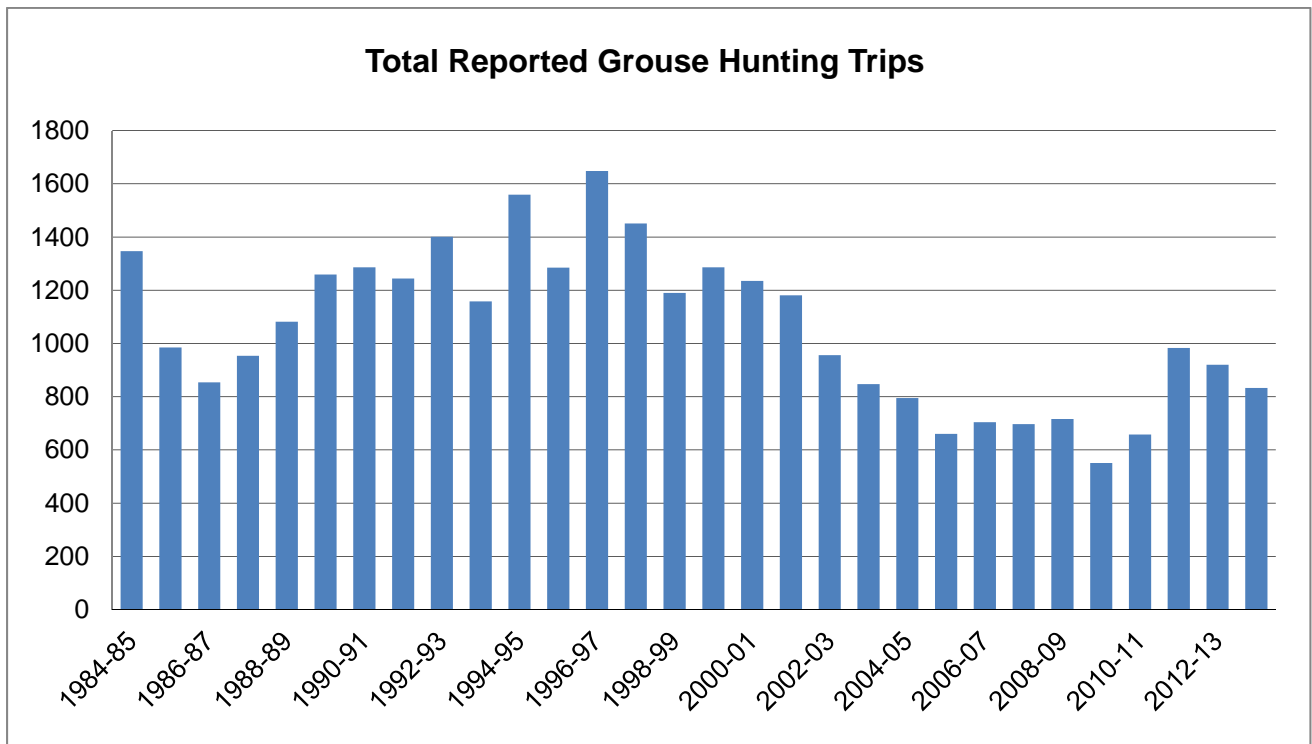


Figure 2. - Total Number of Reported Hunts by Volunteer Avid Grouse Hunter Survey Participants, 1984-2013.

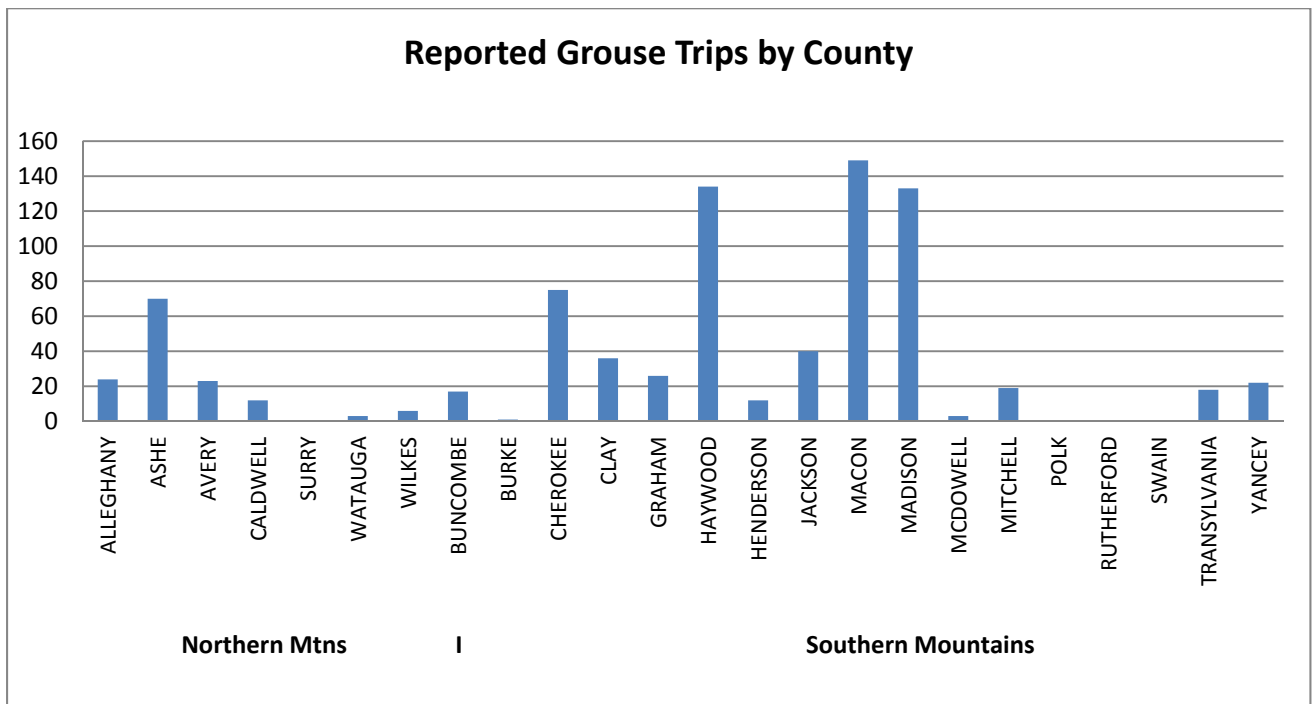


Figure 3. – Total Number of Reported Hunts by County during the 2013-14 Hunting Season by Avid Grouse Hunter Survey Participants.

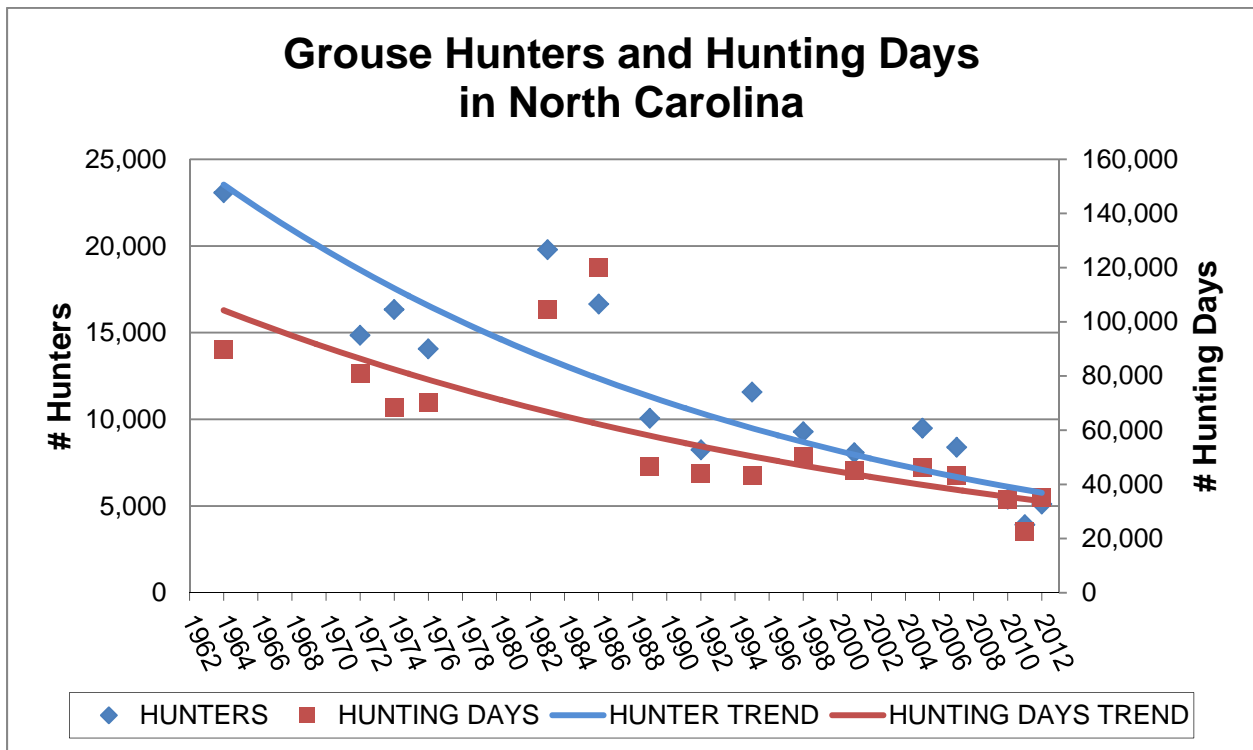


Figure 4. – Estimated Total Number of Grouse Hunters and Hunting Days in North Carolina, 1964-2012. NCWRC Hunter Harvest Surveys, 1964-2013.

Since 1984, the long term trend for the number of trips continued to decline; while average time spent hunting remained relatively stable. Avid grouse hunters went afield an average of 13.2 trips and hunted 3.8 hours per trip during the 2013-14 season (Fig. 5). Party size averaged 1.5 hunters per hunting trip. Despite the long-term increase in avid quail hunter survey respondent’s age, average age has appeared to stabilize at approximately 56 years old over the last 10 years (Fig. 6).

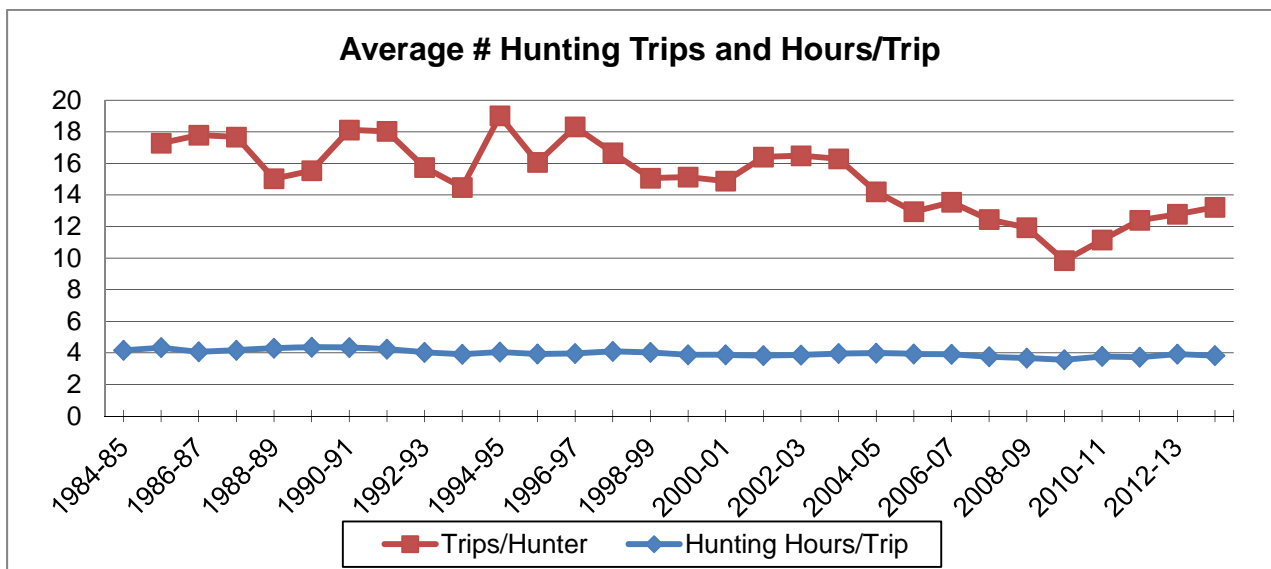


Figure 5. - Average Number of Hunting Trips Per Hunter and Hunting Hours Per Trip based on Avid Grouse Hunter Survey Participants, 1984-2013.

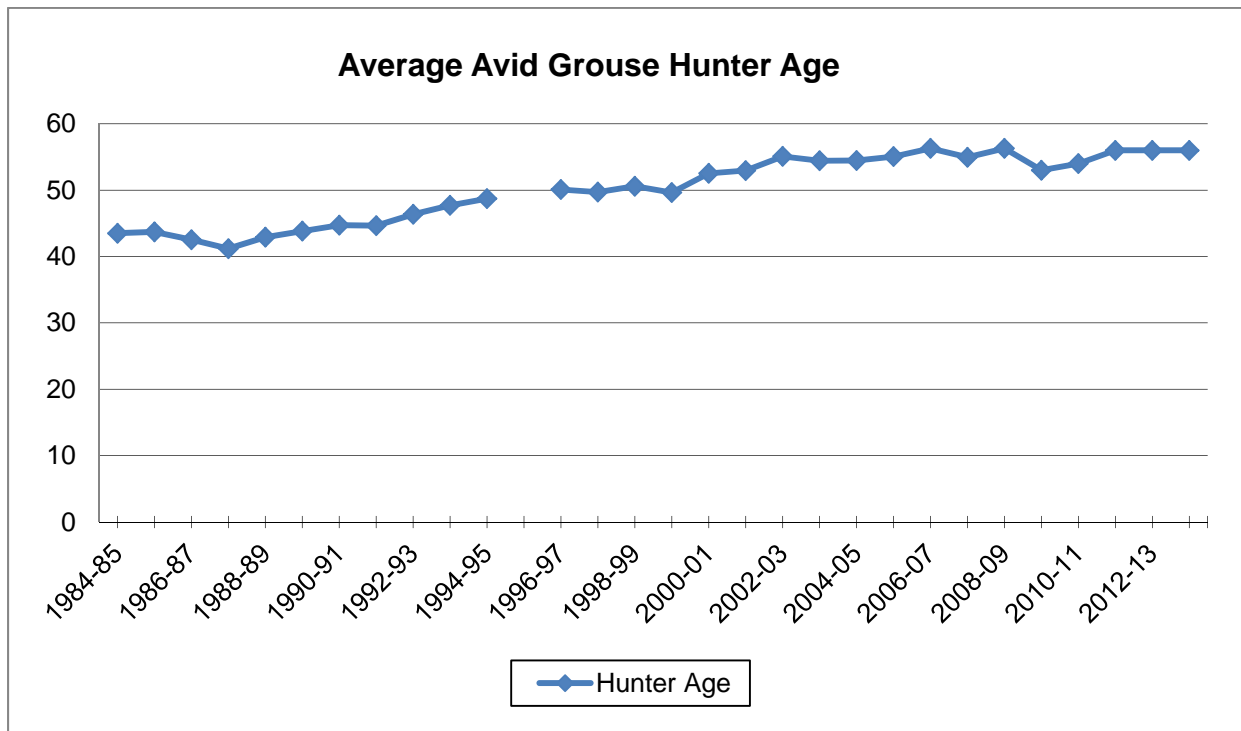


Figure 6. - Average Avid Grouse Hunter Age based on Avid Grouse Hunter Survey Participants, 1984-2013.

Flush rates are presented both by hunting trip and by hour hunted in this report. Flush rates by hour may provide more precise index to grouse abundance, while flush rates by hunting trip are more applicable from grouse hunting perspectives. However it is recognized that hunters will change their hunting locations over time to areas with relatively more grouse. This selective hunting behavior by avid hunters has a tendency to skew trend estimates and may not represent actual annual abundances or changes in abundance across the full landscape.

Since the inception of the survey, long term reported hourly grouse flush rates have declined in both grouse management regions and both land types. Flush rates continued to be higher on private land versus public game lands with both types declining approximately at the same rate (Fig. 7). Historically more grouse were typically reported in the southern mountain region, however flush rates for both regions have been similar over the past five years (Fig. 8). Reported flush rates for the 2013-14 season were highest in Allegheny, Graham, Mitchell, and Madison counties (Fig. 9).

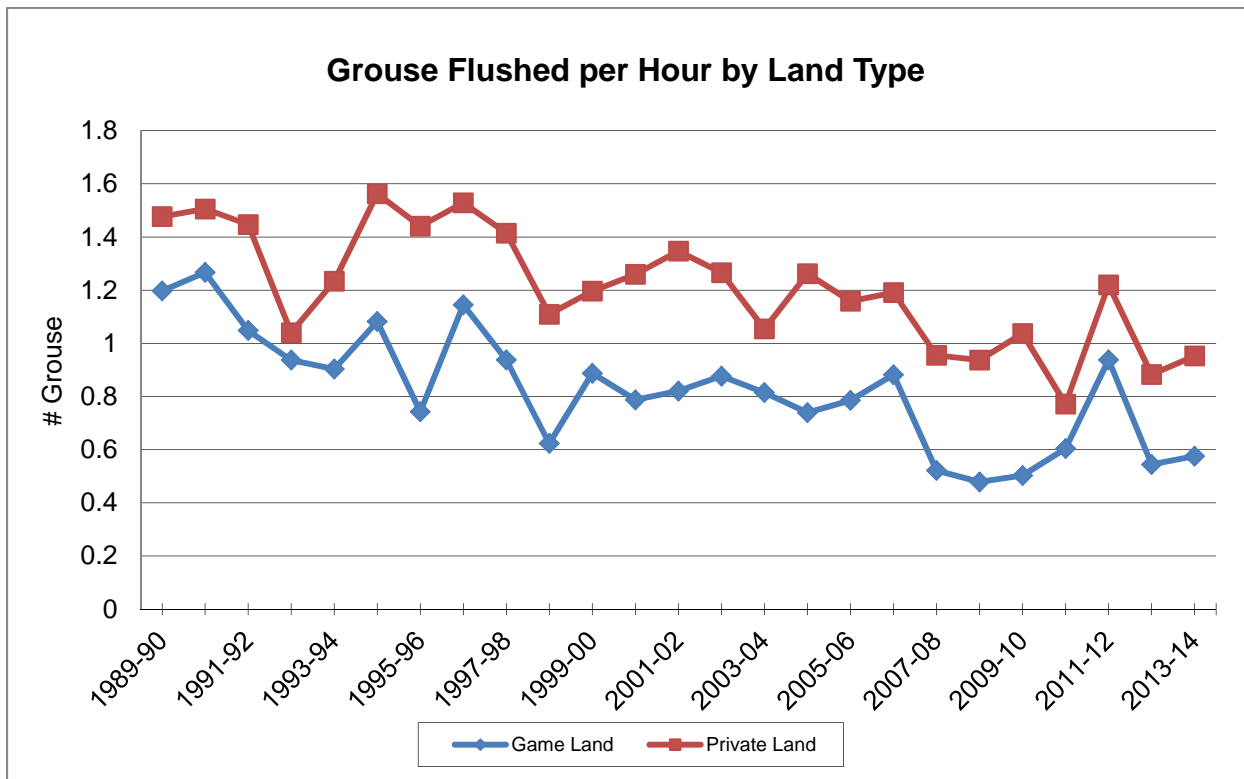


Figure 7. - Average Grouse Flushed per Hour by Land Type by Avid Grouse Hunter Survey Participants, 1989-2013.

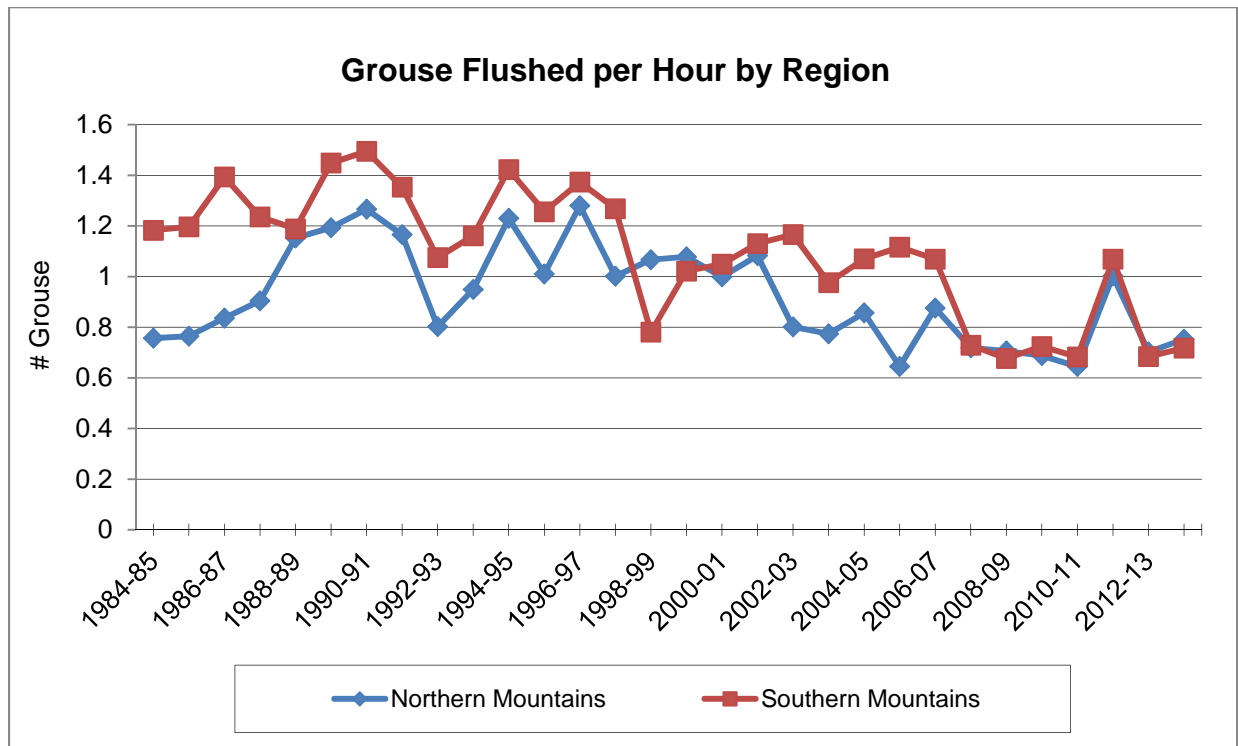


Figure 8. - Average Grouse Flushed per Hour by Region by Avid Grouse Hunter Survey Participants, 1984-2013.

Grouse Flush Rates By County

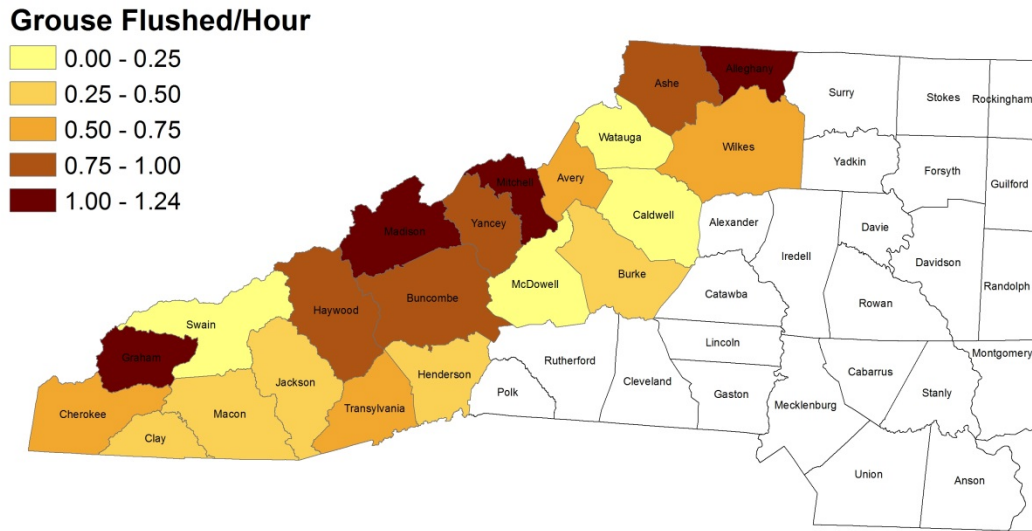


Figure 9. - Average Grouse Flushed per Hour by County, North Carolina Avid Grouse Hunter Survey, 2013-14.

Associated with flush rates, harvest rates have also declined (Fig. 10). During the 2013-14 season, avid hunters flushed on average 2.8 grouse and harvested 0.3 grouse per hunting trip which was consistent with previous trends. No grouse were flushed on 29% of the reported hunting trips (Fig. 11).

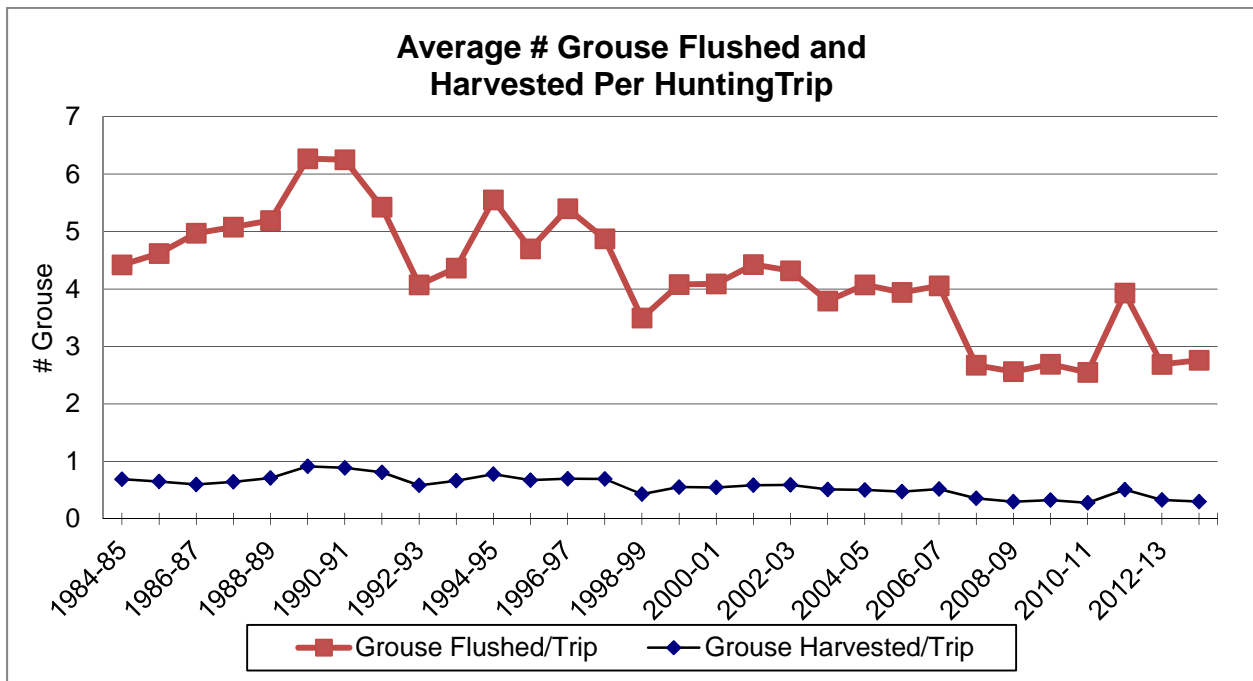


Figure 10. - Average Number of Grouse Flushed and Harvested Per Hunting Trip by Avid Grouse Hunters, 1984-2013.

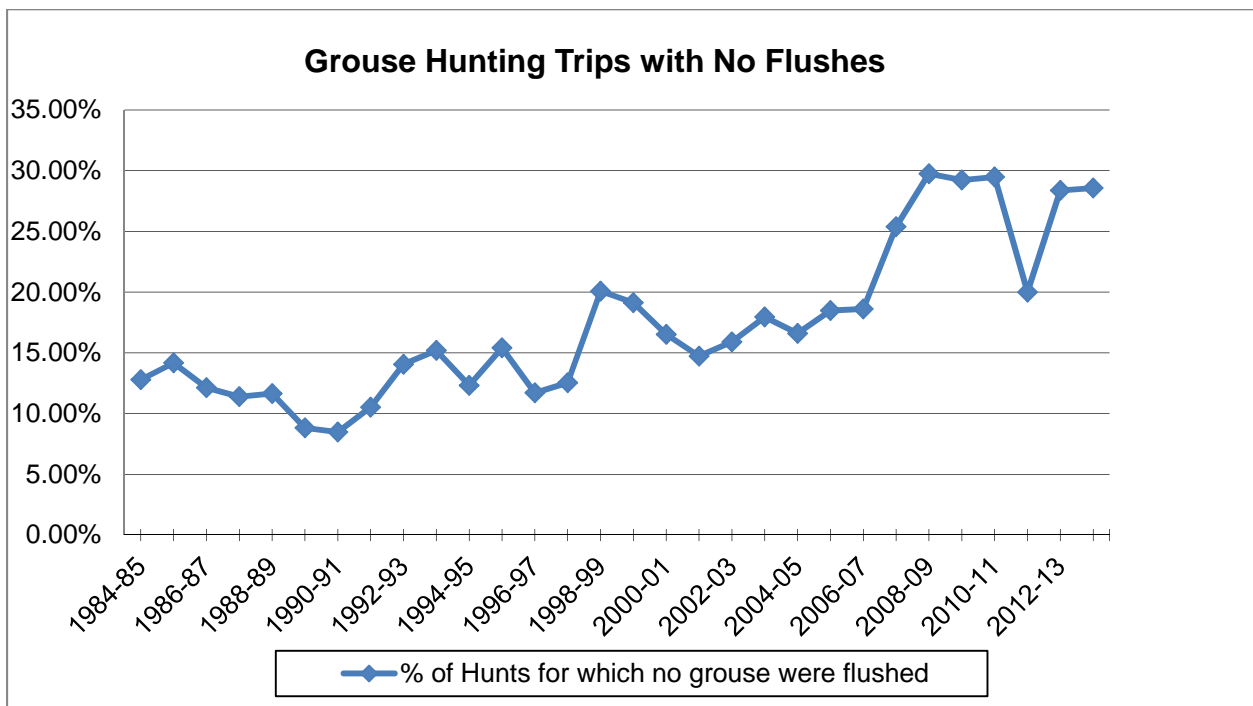


Figure 11. - Percent Reported Grouse Hunting Trips with No Flushes by Avid Grouse Hunters, 1984-2013.

For the 2013-14 hunting season, avid hunters typically reported more hunting activity and harvests later in the winter season within the months of January and February after big game hunting seasons (Fig. 12). Flush rates averaged 2.76 flushes/party trip, but increased throughout the season (Fig. 13). Annual harvest rates averaged 11% for each flushed grouse and were relatively stable throughout the season. Increases in flush rates later in the winter season were likely correlated with the loss of cover after the leaves dropped from the trees.

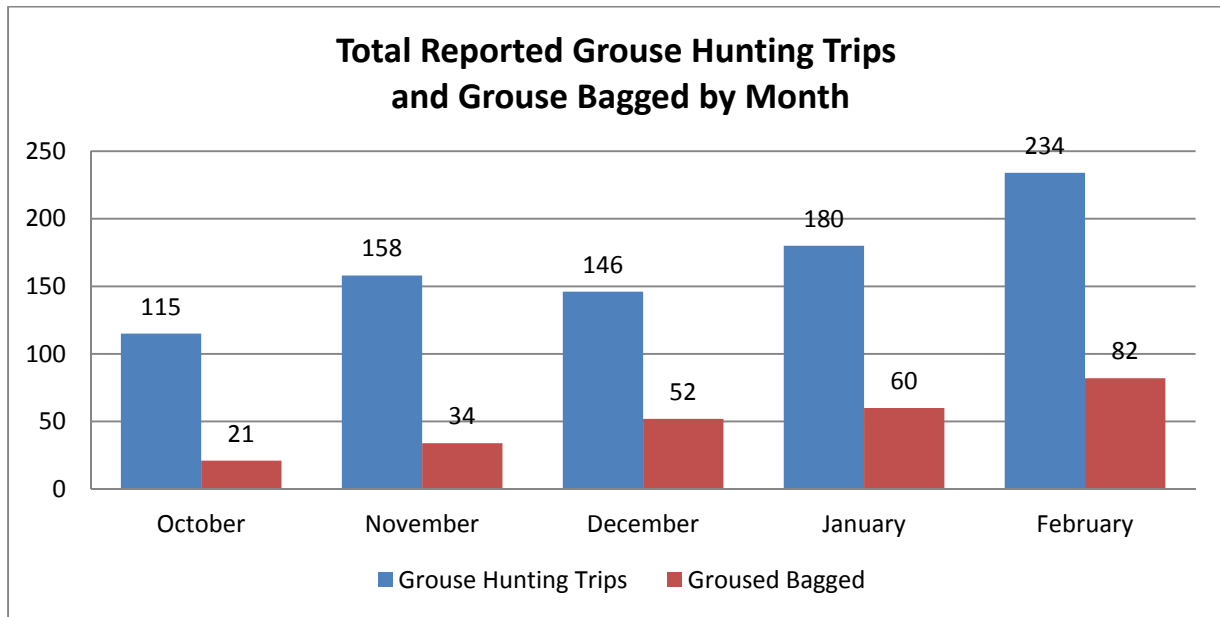


Figure 12. - Total Reported Grouse Hunting Trips and Harvests during the 2013-14 Hunting Season by Avid Grouse Hunter Survey Participants.

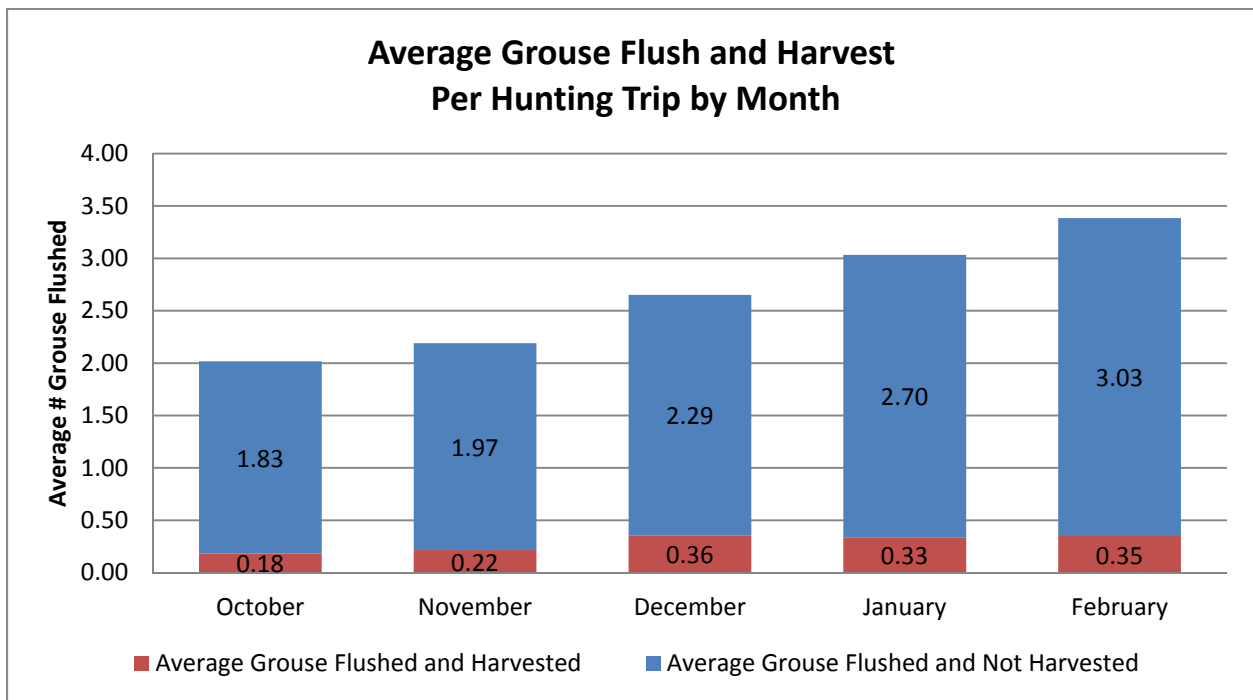


Figure 13. - Average Number of Grouse Flushed and Harvested per Hunting Trip by Month during the 2013-14 Hunting Season by Avid Grouse Hunter Participants.

Funding for the avid grouse hunter survey report was partially provided through a Pittman-Robertson Wildlife Restoration Multi-state Grant. The Federal Aid in Wildlife Restoration Act, popularly known as the Pittman-Robertson Act, was approved by Congress on September 2, 1937, and began functioning July 1, 1938. The purpose of this Act was to provide funding for the selection, restoration, rehabilitation and improvement of wildlife habitat, wildlife management research, and the distribution of information produced by the projects. The Act was amended October 23, 1970, to include funding for hunter training programs and the development, operation and maintenance of public target ranges.

Funds are derived from an 11 percent Federal excise tax on sporting arms, ammunition, and archery equipment, and a 10 percent tax on handguns. These funds are collected from the manufacturers by the Department of the Treasury and are apportioned each year to the States and Territorial areas (except Puerto Rico) by the Department of the Interior on the basis of formulas set forth in the Act. Funds for hunter education and target ranges are derived from one-half of the tax on handguns and archery equipment.

Each state's apportionment is determined by a formula which considers the total area of the state and the number of licensed hunters in the state. The program is a cost-reimbursement program, where the state covers the full amount of an approved project then applies for reimbursement through Federal Aid for up to 75 percent of the project expenses. The state must provide at least 25 percent of the project costs from a non-federal source

