Rylee’s requested notes for USGS/ADCNR coop meeting 4/23

***GameCheck:***

[Game Check and Harvest Record Information | Outdoor Alabama](https://www.outdooralabama.com/hunting/game-check-and-harvest-record-information)

“Deer and turkey hunters must record their harvest immediately using a harvest record (paper or app) and report their harvest within 48 hours through Game Check”

To report a DEER you MUST have:

1. Date of Harvest
2. County of Harvest
3. Type of Land (Private or Public)
4. Antler Point Count

“Data collection is an extremely important part of any deer management program and should be the primary item affecting deer management decisions. Data collection allows managers to monitor trends in the deer population’s physical condition, deer population numbers, deer harvest numbers, hunter success rates, and many other measures of a deer management program and effectiveness.”

GameCheck is the most effective and cost-efficient way for large-scale deer harvest data collection in Alabama. ADCNR automatically receives harvest data separated by county, sex, and type of land by using this method.

***DMAP: (little bit of WMA too)***

[Deer Management Assistance Program | Outdoor Alabama](https://www.outdooralabama.com/wildlife-management-programs/deer-management-assistance-program)

“The Deer Management Assistance Program (DMP) is a comprehensive  program, consisting of data collection and cooperator education with which the WFF tries to put the  landowner/cooperator in a better position to manage their lands for a healthy deer herd, while maintaining habitat integrity. Data from the program are used to develop site-specific harvest recommendations, and have prompted numerous research projects to help better understand deer biology. Collecting harvest information including sex, age, weight, lactation rates and other attributes should be a facet of an active deer management plan.”

“WFF biologists provide deer related technical assistance to managers on private and public lands, conduct seminars, speak publicly, write articles for professional publications, conduct statewide disease surveillance, and cooperate with Auburn University deer research projects to ensure Alabama's deer resources are managed appropriately.”

“WFF biologists also provide technical assistance on various local, state, and federal public lands across the state.  Some of the assistance provided to the Wildlife Management Area (WMA) program includes habitat modification recommendations, deer harvest analysis, reproductive health evaluations, population surveys, deer disease surveillance, and regulation recommendations.”

DMAP gives age, weight, and lactation rates which will not be collected by GameCheck. WMA data will be the same, even though it will vary greatly due to mandatory/non-mandatory harvest check in stations depending on the public land.

***Hunter-Harvest Report (2024):***

[Microsoft Word - AL 2024 Hunter Harvest Report](https://www.outdooralabama.com/sites/default/files/Hunting/Surveys-Reports/2023-2024%20Alabama%20Hunter%20Harvest%20Survey%20Report%20-%20Final.pdf)

“Responsive Management conducted this study for the Alabama Department of Conservation and Natural Resources (hereinafter referred to as the Department) to determine Alabama licensed hunters’ participation in hunting and harvest of various species, the amount of harvest reporting compliance, and other characteristics of their hunting in Alabama in the 2023-2024 seasons. This marks the seventh annual hunter harvest survey conducted by Responsive Management for the Department, starting with the 2017-2018 hunting seasons. The study entailed a scientific, probability-based telephone survey of Alabama licensed hunters.”

“In 2023-2024, there were more than 235,000 hunters who hunted deer during the deer seasons in Alabama. These hunters hunted deer for more than 5.4 million days. Over 314,000 deer were harvested during the 2023-2024 seasons.”

“Overall, 78% of deer harvesters reported all of their deer. Further analysis shows that 87% of all deer that were harvested by licensed hunters were reported.”

“The sample was stratified based on residents/nonresidents and by lifetime license holders/non-lifetime license holders (i.e., lifetime versus any other type of hunting license). Within each of these sub-samples, a probability-based selection process ensured that each eligible hunter had an equal chance of being selected for the survey.” = randomized survey

***For Past Info:***

I am not really sure what to say about that besides refer to Steve’s paper of his notes from talking to ADCNR. I can send a copy if you do not have one already.

***Population Estimation:***

ADCNR does not explicitly say how they get their population estimates, however, with what I can tell (and what I have been told), they just use the harvest estimates as an index trend for population dynamics.

Enjoy this ¾ page of my proposal talking about index trends and their flaws:

“More commonly, estimations are made from population index trends and count-based indices by using harvest data (Schmidt et al., 2015; Messmer et al., 2020; Clawson et al., 2022) This is an especially frequent practice in white-tailed deer and other big game species with online harvest reporting (LaBonte and Kilpatrick, 2017). Indices are typically assumed to be proportional to the abundance of the study population or a sample of the population (Shertzer et al., 2008). Currently, the ADCNR is using index trends in deer harvest and hunter effort collected by Responsive Management to monitor changes in the state’s deer population at both the county and state levels (Responsive Management, 2024). Indices are a good baseline for understanding hunting and population trends but should be supported with other monitoring methods due to biases found in the data (Schmidt et al., 2015; Clawson et al., 2022). The assumption that harvest indices are truly representative of the population is likely flawed (Fukasawa et al., 2020) given the practice of selective harvest criteria (SHC) by the majority of deer hunters and state managers (Gulsby et al., 2019). This will lead to a greater harvest of mature age class bucks, rather than an equal chance of harvest on all bucks (Gulsby et al., 2019). Hunter-harvest indices do not account for non-harvest mortality such as predation, vehicle collisions, and disease (Ganz et al., 2024). There is also the potential of not fully understanding the demographic ratios throughout the population over time (Leclerc et al., 2016). Most hunter-harvest online forms do not require age estimates, which are commonly done by examining tooth wear (Cook and Gray, 2003). Sex ratios primarily based on hunter-harvest will also be biased since hunters are legally allowed to harvest more does than bucks in Alabama (Outdoor Alabama, n.d.-a). Indices are an effective tool for basic population interpretation but lack the statistical and analytical power of demographic population models (Gove et al., 2002).”