

***Impact of Increased Harvest Levels on the Distribution and  
Harvest of Deer Within a CWD Control Area***

**Principle investigators:**

Marcella Kelly (Virginia Tech), William McShea (Smithsonian Institution)

**Summary:**

Two important components of the Virginia Department of Game and Inland Fisheries' (VDGIF) strategy to manage Chronic Wasting Disease (CWD) are deer population reduction and citizen outreach in and near the Containment Area (CA) of Frederick and Shenandoah Counties, Virginia. This study provides a baseline dataset to examine whether liberalized hunting regulations significantly reduce white-tailed deer densities over time and whether public information about CWD increases public awareness of CWD. The majority of land in Frederick County is privately owned and, as a result, there is a patchwork of attitudes toward deer harvest across the containment area. In this study, we determined current deer harvest levels on private and public property throughout western Frederick County and a control area in Rappahannock County. We also determined deer densities in the study area before and after the annual harvest. Our intent with this report is to establish a baseline of information on density, harvest intensity and landowner attitudes that can be used for future comparisons.

The study was composed of two parts: landowner surveys and spotlight surveys. Landowners were approached by knocking door to door, as well as through telephone calls, direct mailings, public forums, voting stations, and CWD deer check stations (in Frederick County only). Landowners were asked a series of questions regarding hunting patterns and local knowledge of CWD. In 2010, 85% percent of surveyed landowners in Frederick County and 56% in Rappahannock County were familiar with Chronic Wasting Disease. For landowners familiar with CWD, 68% in Frederick County knew about the state's CWD management program. Only 34% of Rappahannock residents familiar with CWD knew of the state's program. Spotlight surveys were conducted on eight nights in October (pre-regular firearms season) and eight nights in January (post-hunting season), between the hours of 8:30 PM and 2:00 AM using a method known as "distance sampling."

The initial year of this study was successful. Landowners were receptive to surveyors and interested in the project. It provided us with very useful information on the public's knowledge of CWD and attitudes towards hunting, and deer densities were determined to decrease after the hunting season. However, it must be pointed out that this study was conducted to investigate the current deer density level, which can be used later for comparison of deer densities years after hunting regulations were changed due to the confirmation of CWD. Future studies of this sort are feasible and will help wildlife managers determine how deer populations respond to changes in hunting regulations.

[2010 Study Report](#)

[Final Report](#)