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Bobcats (*Lynx rufus*) are listed in Appendix II of the Convention on International Trade in Endangered Species, which requires state agencies to affirm stability of their populations before granting exportation authority to international markets. The West Virginia Division of Natural Resources (WVDNR) has been using survival and reproductive data collected in the 1970s to guide management decisions. With current high harvest rates, it is critical to use updated demographic data. Our primary research objectives are to estimate age distribution, recruitment, and survival of West Virginia bobcats. Results will be used directly by WVDNR to update or modify the current change in population model used to determine harvest limits. Following mass public outreach, hunters and trappers across West Virginia donated 296 bobcat carcasses to the project over the 2014–2015 hunting and trapping season. Lower canines (n=296) and female reproductive organs (n=147) were collected during necropsy to estimate age at mortality and reproductive success. Age was estimated by counting cementum annuli of canines, and implantation rates were estimated by placental scar counts. Preliminary results indicate that yearling (1 - 2 years) bobcats represent 20% of the 296 bobcats collected, with juveniles (<1 year; 20%) and adults (+2 years; 60%) representing the majority of the population. Preliminary implantation rates resulted in 2.18 kittens per adult female (n=88) and 0.63 kittens per yearling female (n=30). Accurate change in population data, along with density estimates, will provide WVDNR with the necessary data to ensure sustainable harvest of bobcats in West Virginia.