

Elk Management Program Annual Update March 19th, 2020

In 2000, a multifaceted study by Virginia Polytechnic Institute and State University (Virginia Tech) assessed the biological and cultural feasibility of elk restoration in Virginia. This study was the initial step in planning for elk in Virginia in modern times. In 2010, following public input on a draft elk restoration plan, DGIF staff was directed by the Virginia Board of Game and Inland Fisheries (Board) to translocate up to 75 elk to a suitable release site in Buchanan County. In cooperation with the Kentucky Department of Fish and Wildlife Resources and other partners, DGIF staff trapped and relocated 71 adult animals to a reclaimed mined area in Buchanan County between May 2012 and April 2014. Rigorous disease testing was conducted on all animals before they were brought into Virginia.

Elk Management Planning

The public has shown a passionate interest in elk and elk management. The DGIF began convening elk stakeholders in 2016 to provide a forum to exchange ideas and information with interested stakeholders in southwest Virginia. In response to stakeholder input, DGIF has updated and expanded elk content on the agency website to include information addressing disease testing of translocated elk, damage management, viewing guidance, and other topics. Information regarding elk disease testing protocols and results was provided to partners in southwest Virginia.

In March 2019, a 10-year management plan for elk in Virginia was adopted by the Board of DGIF. The goals of this plan were developed through public input that was facilitated and quantified in collaboration with Virginia Tech. Public values associated with elk were collected by Virginia Tech in three ways. First, representatives from various stakeholder groups met with Virginia Tech investigators in 10 interest (stake)-based focal groups throughout the region to discuss the values, opportunities, challenges, and solutions associated with elk challenges in southwest Virginia. DGIF staff were available to provide technical expertise as necessary. Second, data was collected from a Stakeholder Advisory Committee (SAC) that helped assess and describe the public values to be included in the management plan. Finally, Virginia Tech conducted 3,200 surveys (roughly 300 from each of the southwest counties, and 600 more from around Virginia), to evaluate the range of public opinions regarding elk.

The management plan directs DGIF on how to manage elk for the next ten years, including addressing unanswered questions about elk biology and behavior in Virginia. The plan specifically challenges DGIF staff to have a harvest management strategy in place by 2024, the only five-year goal within the tenure of the plan. Additionally, DGIF staff have drafted a staff guidance document on managing conflicts between elk and humans.

Elk Population Estimation

Most elk released during the three-year restoration period that ended April 2014 continue to remain within 9 km–12 km of the original release site in Buchanan County. Staff estimate that there are currently about 250 elk in southwest Virginia. This estimate is based upon known released animals that can still be identified, estimated elk immigration from Kentucky, estimated births, as well as known and estimated deaths (mortalities). With this year's recruitment of calves, DGIF estimates there are approximately 200 elk in Buchanan County, 20 – 40 elk in Wise and a few elk in Dickenson. There are some small isolated populations of 3 – 20 individuals in Lee,

Russell, and Tazewell counties. There are also unconfirmed reports of elk in Washington, Scott, and Bland counties. The DGIF knows of a minimum of 30 calves that were born in spring 2019. Staff documented nine mortalities during calendar year 2019; two mortalities were from vehicle strikes with no human injuries; three were dispatched due to suspected brain worm, and four died from unknown causes. Of these nine animals, six were disease tested for Chronic Wasting Disease, Tuberculosis and brucellosis; no test results indicated disease presence. The remaining three carcasses were too decomposed for sample collection.

Staff are evaluating multiple techniques to assess population status through trail cameras and the use of radio-collared animals. The department has also contracted with Virginia Tech to develop mark-recapture population estimates by making use of individual elk's uniquely identifiable characteristics, including ear-tags, antler characteristics, and any other uniquely identifiable qualities.

Elk Movement and Resource Use – Monitoring Efforts

DGIF staff and volunteers use trail cameras and visual observations of elk to monitor herd health, activity, and reproduction. Local volunteers continue to expand elk habitat on public and private lands around the release site. These efforts have improved habitat quality and created some excellent viewing opportunities. DGIF recently radio-collared an additional 12 cow elk to monitor herd movement, evaluate calving areas, and assess other biological factors associated with the herd.

Elk Movement and Resource Use – Elk Habitat and Diet

The elk spend much of their time in forested areas, primarily as a refuge from heat, and likely, to avoid human disturbance. They use wooded areas to feed on a variety of understory plants and leaves of browse species; however, the majority of their diet consists of grasses and forbs, which they find in field openings on private lands and reclaimed strip mines. In summer, the elk rarely feed in openings during the heat of the day. Instead, they bed down under cover and begin to feed shortly before dusk and continue through the night. During the cooler months, they feed in open areas throughout the day. Many of the open areas that elk use for foraging are in high quality habitat maintained through plantings, fertilizing, and mechanical removal of woody vegetation. These habitat modifications are aided by the processes that are undertaken during and after coal-mined land reclamation, which has encouraged Virginia's elk herd to remain stable in small home ranges of less than 9,000 acres.

Since April 2018, staff have been collecting elk fecal samples to determine dietary resource use across seasons. These samples are being stored to evaluate at a later date.

Elk Damage Management

There were three reported instances of elk damage to property in calendar year 2019. One incident attributed to elk involved damage to tree growth on mine land restoration sites. However, a DGIF biologist visit to the site determined that deer, rather than elk, were primarily responsible for damaging the trees. Kill permits were issued for deer, with the understanding that harvest pressure in the area would also deter elk from damaging regrowth. No kill permits for elk were requested or issued in this instance. The second elk damage incident involved elk knocking over headstones in a family grave yard. In this case, information about elk behavior and effective hazing techniques was provided, and the managing family was offered assistance to right the stones. The third

incident involved elk damaging a golf course. Information and hazing materials were provided to the course managers and DGIF staff visited several times to aid in hazing the animals.

Additional Virginia Elk Program Accomplishments

The Virginia elk cam was launched and logged over 160,000 viewers from 40 states and 40 different countries. The elk cam will run annually through the rut (August through October) and showcase DGIF's elk restoration accomplishment and successes. The live feed for the elk cam is available 24 hours a day thanks to the addition of infra-red lights allowing for night viewing of the elk. There are also several viewing options to optimize visitors' chances of seeing elk when they log in. A final addition this year will allow elk cam viewers to directly connect to DGIF's Restore the Wild website to encourage membership and support.

This year, three groups of undergraduates from Virginia Tech analyzed elk data and used it in senior capstone research projects. The groups analyzed female elk movements and estimated calving dates, bull movements and habitat use, and also compiled hours of elk camera data into short highlight films that focus on educating viewers about specific elk behaviors. One such highlight reel will hopefully be added to the current year's live elk cam display.

A cooperative grant application between Southwest Virginia Sportsmen, The Nature Conservancy and DGIF was initially approved for \$2.25 million to restore elk habitat in the Elk Management Zone (EMZ). These funds will be used to improve habitat and create public access to over 2,500 acres within the EMZ. All properties associated with the grant have abandoned coal-mined land features that will be improved for the betterment of the environment and the economy of the region.

The Elk Technical Committee convened (August 2019) to discuss elk hunt lottery systems, application processes, and harvest considerations surrounding the potential for a future hunting season within the EMZ.

A Look at the 2020 Elk Project Plans

A federal grant in the amount of \$2.9 million was awarded to DGIF to improve public access to lands in southwest Virginia. This grant will partner private landowners with DGIF to allow public access for hunting, fishing, trapping, and wildlife viewing opportunities in the region. This grant will likely have major implications for the future of elk hunting and viewing.

The Virginia Legislature approved a bill (HB388) authorizing DGIF to create a separate elk hunting license within the EMZ. The bill passed both Houses (97-0, and 38-0) and was approved by the Governor on 3/12/2020. The bill will become effective July 1, 2020.