Black River Elk Herd Update (January–December 2019)

Population Status: As of December 2019, the population estimate (maximum) of the Black River Elk Range (BRER) herd is 79 elk. This includes animals that are not collared and whose current fate is ultimately unknown, making a more realistic population range of 75-79 elk. The current population compares to 61 elk in December 2018. Based on the composition of the herd, up to 25 calves are expected to be born in 2020 if cow survival remains high during the winter of 2019/2020. Thus, the BRER herd could exceed 100 elk in 2020, and 200 elk by 2024 if the current growth rate is maintained.

Recruitment and Mortality: An estimated 20 calves were added to the BRER herd in 2019, helping the population to peak at approximately 80 elk. This compares to peaked estimates of approximately 67 in 2018 and 64 in 2017. The 19% growth in the population from 2018 to 2019 was the highest annual growth rate in the BRER since the initial release in 2015 thanks to increased pregnancy rates, high calf survival, and reduced mortality. In 2019, only one confirmed mortality event (cause undetermined) of an adult cow occurred in the BRER. This mortality (September) was the first documented since the illegal harvest of two elk during November of 2018. During 2018, 11 mortality events were documented.

Local Relocation Efforts: Trapping and relocation has proven to be a useful tool during the early stages of reintroduction and will continue to be used in the future when necessary. The majority of the elk have settled into established home ranges, and exploratory movements by elk have become far less frequent than during the initial years of the reintroduction. In January 2019, only two cows and their calves born in 2018 remained outside of the BRER and were located approximately eight miles from the nearest cow/calf group. Elk project staff targeted these elk for relocation with a goal to re-unite them with the nearest herd. Both cows and their calves were captured in January and held for several weeks within an acclimation pen back within the BRER. Upon release, they re-united with the main herd that they originated from and remain with that group as of December. Currently, all cows and calves within the BRER are found within two groups; one located near the Lake Wazee County Park and one located near County Highway O east of Millston.

Winter trapping/collaring: Similar to past years, elk project staff, partners, and volunteers conducted winter trapping efforts to replace failed radio collars and to collar any uncollared elk. Staff remain committed to maintaining radio collars on a high proportion of the herd during the early stages of the reintroduction to monitor elk movements, survival, habitat use, and conflict potential. Adults may receive a new GPS collar if the current collar is malfunctioning or has come off the elk. Yearlings are fitted for a new GPS collar, replacing their existing calf collar. Winter trapping is also a time to identify and collar new calves that may not have been located or captured during the spring calf capture efforts. The newly captured calves will receive an expandable collar that grows with the calf. In 2019, 13 adult elk and 8 calves were collared during winter trapping efforts.

Spring Calf Searching: To monitor the herds productivity, calf survival, and population growth, collaring newborn calves continues to be a priority tool used in the BRER. Approximately 24 breeding age cows were monitored daily using GPS locations between mid-May and the end of June to gauge birthing activity. With the help of over 100 dedicated volunteers, DNR staff were able to successfully locate and collar twelve calves between May 25th and July 18th, with the peak number of births occurring during the first week of June. Based on observations and trail camera images, an additional eight calves are estimated to have been born that were not collared during spring collaring efforts. In total, approximately twenty calves were estimated to have been born in 2019, a few more than were
documented in 2018 (17). The condition of the calves continues to be exceptional, with a second straight year of calf birth weights averaging over 42 pounds! This high birth weight indicates both calves and cows are in excellent physical condition and has resulted in exceptionally high calf survival rates. After the conclusion of the spring calf collaring effort, 55 of the estimated 80 elk in the herd were wearing tracking collars.

**Elk Research on the Black River Herd:** The University of Wisconsin – Stevens Point is collaborating with the WDNR to initiate a drone-hazing pilot study to determine the effectiveness of drones for hazing elk in nuisance and agricultural damage scenarios. The project is still in the preliminary trials, but hazing events started in September 2019 and will continue into 2020 as opportunities arise.

The University of Wisconsin has also initiated two graduate level research projects focusing on the two elk herds in Wisconsin. Although still in early development, these projects aim to evaluate elk/predator interactions and their influence on population growth rates and habitat use by elk within each elk range.

**Education and Outreach:** Throughout 2019, the Black River Falls wildlife team has continued to take all opportunities to educate the public and various groups about the elk reintroduction. This includes school groups, county fairs, sports shows, conservation clubs, and other similar opportunities. There continues to be high interest in the elk reintroduction and many opportunities exist to continue to educate the public and promote elk the reintroduction efforts. Elk-related outreach efforts are well accepted by the general public and help to promote the resource, the WDNR, and partners of the reintroduction effort.

**Habitat Management:** Elk project staff and partners continue to add and improve highly beneficial elk habitat throughout the BRER. Multiple projects funded by Rocky Mountain Elk Foundation (RMEF) were underway in 2019, all with a primary goal of improving early successional habitat through prescribed fire, planting, and invasive species control. Some of the highlights include prescribed burns that reduced brush competition and improved forage growth on over 750 acres of prime elk habitat, a private landowner program that has resulted in many acres of newly created elk habitat on private lands, and woody invasive species control on one of the highest quality barrens habitat sites in the state. RMEF has also partner with the WDNR to “adopt” the Dike 17 Wildlife Area through the Adopt a Wildlife Area program. In 2019, funds through this partnership were used to control invasive species on Dike 17.

Following the completion of the Kentucky reintroduction efforts, the original 8-acre quarantine pen on the Dike 17 Wildlife Area was mostly dismantled in 2019. A small portion of the pen remains for future elk project needs if they arise, but otherwise the pen site is once again available for use by elk and other wildlife. The pen materials will be recycled and used to construct future acclimation pens for assisted dispersal efforts.