

**KENTUCKY
STATE REPORT**
June 11, 2019

WILDLIFE

Black Bear Program

The Bear Program continues to build the foundation of a long-term black bear monitoring project to validate the population viability models used to set harvest quotas in core black bear areas within Kentucky. Currently 28 adult, female black bears are wearing radio-tracking collars. During the past two winters, researchers have documented an average of 2.5 cubs per adult female and 100% cub survival to one year of age. During 2017, the Bear Program assisted with the development of and began the implementation process of BearWise, a Southeastern Association of Fish and Wildlife Agencies bear awareness website (www.bearwise.org). The goal of this web site is to present a common message of bear awareness across the southern U.S. We hope to further embrace and disseminate the messages of the BearWise web site in the summer of 2019.

Deer and Elk Program

Kentucky hunters harvested 145,753 white-tailed deer during the 2018 season. Although the 2018 deer harvest is the second highest on record, 2018 was the first year of major modifications to deer hunting seasons, hunters had a 6-day increase in the modern firearms season in 1/3 of the state and modified bag limits. 710 total permits were available for the 2018 elk hunting season. Participation in the random drawing increased and 35,704 hunters submitted 80,188 total applications to hunt elk in Kentucky in 2018. Kentucky elk hunters harvested 196 males and 172 females for a total harvest of 368 elk amongst all available permit types. We recently completed the final season of a 5-year translocation project with the Wisconsin Department of Natural Resources. On April 3rd 2019, 48 elk were shipped to northern Wisconsin to help augment the existing Clam Lake herd. A total of 144 elk were translocated to Wisconsin.

Small Game

Published later this year, the final Statewide Quail Plan reflects on the successes and failures from the Department's momentous 10-year effort. Small game harvest and management continues to be the focus of the program, as required hunter check in/out with harvest and effort data continues to be collected. A private lands effort in the program continues in Madison County, with almost 200 acres of wildlife friendly forage planted this year with efforts for much more in the coming years. A special issue of *Wildlife Society Bulletin* has been dedicated to private lands conservation in the United States, planned and initiated by program personnel. A new campaign to promote prescribed fire in Kentucky kicks off with two fire-inspired wrapped department trucks this year.

Turkey and Grouse Program

KY monitors turkey populations by harvest statistics and brood surveys. Harvest reporting is mandatory by phone (Telecheck) or internet; additionally, we are implementing hunter surveys to estimate hunter effort to better evaluate trends in populations. KY's spring wild

turkey harvest has stabilized around 30,000 bearded birds per year for the past several years. The 2019 spring harvest of 29,495 was 8% higher than spring 2018, and harvest increased in 80 of 120 counties. Better weather during the spring season likely led to greater hunter effort and subsequent harvest. The 2018-19 fall-winter harvest of 2,303 turkeys was 24% higher than fall-winter 2017-18. Reproduction in summer 2018 was 68% higher than in 2017, which likely accounted for higher fall harvest.

KY monitors ruffed grouse populations by a hunter survey and drumming surveys. Unfortunately, the index from our grouse hunter log survey for the 2018-19 hunting season was the lowest-ever at 0.15 grouse flushes per hour. Drumming surveys declined from the 1980s to 2016, after which time we discontinued standard roadside surveys and shifted to conducting drumming surveys in areas of high quality habitat. So far results show that grouse are persisting where habitat present. Concerning grouse habitat management, we are working to implement forest habitat improvement strategies outlined in a ruffed grouse management plan. Implementation of commercial has increased and we hired our first-ever forester within KDFWR. Northeast Regional staff have improved over 1,200 acres on focal WMAs through prescribed burning, timber stand improvement, timber harvest, invasive plant treatments, old-field setbacks, and herbaceous plantings.

Wildlife Diversity

Avian staff have continued MAPS stations, BBS counts, and netting in post-management monitoring plots. Loggerhead Shrike trapping is in its 3rd year and birds have been captured each year. Freshwater mollusk propagation and restoration efforts continue with phenomenal success. In addition to propagation and restoration efforts, a study looking at impacts of *Corbicula* is ongoing to investigate the impacts of this invasive, non-native mussel. White-nose syndrome (WNS) has been detected throughout the state since the winter of 2011. Biologists continue to monitor impacts on susceptible species. Decontamination procedures are still being followed. This is the final year scientists will be investigating the reproductive success of Indiana bats. Biologists are encouraged by study results thus far. Once completed, results will be published. Staff have been heavily involved with the implementation of our State's Monarch Conservation plan. All elements defined in the plan have had actions applied, and staff are involved with the regional efforts as well. Work continues on the final stages of the Reptiles and Amphibians of Kentucky publication, which is scheduled to go to press in December.

Migratory Bird Program

Banding, waterfowl surveys and wetland habitat enhancement and management continue to be the priority for the Migratory Bird Program. In preseason banding, Kentucky banded 1,703 wood ducks, 1,050 mourning doves, and 1,643 Canada geese. Ohio River flooding put waterfowl banding sites underwater for the entire winter waterfowl-banding season. Four separate mid-winter waterfowl surveys were flown the first week of January. The mild winter weather conditions resulted in below average numbers of ducks and geese compared to the most recent 10-year average. We continue to work with WMA staff to improve and enhance wetland habitat throughout the state, and four wetland enhancement projects were completed on private land using the KY Partners for Wetland Wildlife program. Multiple shorebird, colonial wading bird, and secretive marsh bird surveys were conducted across the state as well.

FISHERIES

Habitat Program

KDFWR's habitat branch plans and coordinates small and large-scale fish habitat projects across the state. Each year, with the assistance of the habitat branch, the seven fishery management districts focus on small-scale projects on their state owned and managed lakes along with larger reservoir projects limited to small areas. Small-scale projects in 2018-19 covered many lakes across the state. Several habitat types are used to create habitat. Annually, several thousand donated Christmas trees, thousands of feet of donated scrap gas pipe, pallets, and concrete bricks are used to build habitat structures and sites. The habitat branch is assessing the effectiveness of the different habitat types. GPS coordinates and habitat types are provided in Google maps format for the public on the KDFWR website. Habitat placement has become more efficient through the construction of several pontoon habitat barges by district staff.

Large-scale projects require critical coordination and teamwork as they involve several state and federal agency interests along with angler and county tourism impacts. Project plans bring together a multitude of partners to provide project planning, habitat structure acquisition and construction, heavy machinery donations, and ultimately staging and placement of the structures in large reservoirs. In 2018-19, the habitat branch completed work on the Carr Creek Lake Large-scale Fish Habitat Project resulting in 33 new fish habitat sites built from 1,726 individual habitat structures. Greater lake coverage was made possible through the use of partners and volunteers, as well as heavy machinery. All habitat locations were marked with GPS and are provided to the public on the KDFWR web site.

Committee meetings have also begun to discuss plans for a large-scale habitat project at Barren River Lake in southwestern Kentucky in 2019 and beyond.

Non-Game Fisheries Assessments

KDFWR's Ichthyology Branch continued its efforts to collect and compile distributional records, obtain population trend information, and develop procedures to attempt to preserve, enhance, or restore Kentucky's native ichthyofauna.

Specific projects include a) a survey of fishes of the lower Ohio River drainage to assess distribution and status of fish species of greatest conservation need (SGCN); b) a survey to assess the current status of 19 fish SGCN, including 6 at-risk species, in the Barren River Drainage in Kentucky; c) population genetic research on SGCN including the Barcheck Darter, Buck Darter, Cumberland Darter, and Relict Darter; and d) monitoring of reintroduction efforts for the Kentucky Arrow Darter in Long Fork, Red Bird River Drainage and the Cumberland Darter in Cogur Fork, Upper Cumberland River Drainage.

Continued research will include sampling more sites in the Barren River Drainage, additional targeted surveys of prioritized fish SGCN in other drainages to update their current distributional status, evaluate population densities, and habitat conditions, and continued monitoring efforts to assess reintroductions of Kentucky Arrow Darters and Cumberland Darters.

Kentucky Wetland and Stream Mitigation Program -Sponsored by KDFWR

The KDFWR has sponsored an in-lieu fee mitigation program under an agreement with the US Army Corps of Engineers since 2002. The program recently expanded to provide services statewide by including the rapidly developing northern Kentucky region in the agreement. The program is actively developing and constructing new stream and wetland habitat restoration sites across the state. To date, the program is funding over 168 miles of stream and wetland improvement projects in various stages of development or completion.

Most recently, the program completed a stream restoration project on Minor's Creek in the Kleber Wildlife Management Area in Owen, Scott, and Franklin counties in Kentucky. The project restored over one mile of Minor's Creek, a tributary to Elm Fork also on Kleber WMA where FILO previously completed another stream restoration project. Several thousand feet of small tributaries also were improved and additional property added to the management area by the project.

Program staff representing KDFWR and the Association of Fish and Wildlife Agencies served as co-facilitator at the 2019 National Mitigation & Ecosystem Banking Conference in a state regulatory forum on mitigation permitting, compliance, and coordination with Interagency Review Teams.

Asian Carp

Since 2013, Kentucky has worked with several other agencies and developed unique programs to decrease potential for ecologic and economic impacts of Asian carp. The invasive fishes are being confronted on two fronts with a coordinated, multi-state effort on the Ohio River and in western Kentucky's Kentucky and Barkley lakes. The Ohio River effort is funded by mainstem states and the USFWS grants associated with the 2014 Congressional amendment to the Water Resource Reform and Development Act (WRRDA). The WRRDA amendment by Congress increased funding to the USFWS' general fund with stipulations that the Service work with states to address expanding populations of Asian carp up the Ohio River. The multi-agency efforts in the Ohio River at or above Louisville Kentucky employ several strategies against the carps. They include monitoring population demographics, examining the invasive fishes' use of tributaries and movements among pools, early detection in Ohio River pools in West Virginia and above, and removing all Asian carp collected in the Ohio River from the Cannelton Pool and above. Only Asian carp used for telemetry purposes are released. The effort expended to date has revealed much information concerning movement, habitat use, and densities of Asia carp as well as removal of thousands of pounds of the invasive fish; mostly in pools associated with the McAlpine Lock and Dam at Louisville. This year contract fishing effort will be implemented in the Cannelton pool in order to reduce propagule pressure on upriver pools where successful recruitment is not thought to have occurred.

In Western Kentucky, Tennessee, Kentucky, and the USGS are hoping that sound barrier technology can be implemented in the Tennessee and Cumberland Rivers. Efficacy of the sound system is planned for testing below Barkley Dam in July. Additionally, telemetry work with Murray State University and Tennessee Tech University has increased in scope in an effort to assess Asian carp movement patterns in the reservoirs. We are also working with the USFWS

using electrified Paupier nets to assess relative population sizes of bighead and silver carp in the two reservoirs. Kentucky continues to work with the commercial fishing industry targeting Asian carp to help processors and commercial fishermen. The Commonwealth has partnered with the Kentucky Fish Center to encourage increased commercial harvest in Kentucky. As part of the partnership, Kentucky is investigating a potential increase in another Asian carp harvest subsidy and a commercial fishermen training module. In order to facilitate the fishing harvest, Western Kentucky's Critical Species Western Branch has increased removal efforts, and they also provide oversight of the harvest efforts, sample year around for Asian carp, and investigate experimental harvest methods. Kentucky opened access to a commercial grade, 7-ton flake ice machine in June 2018, which will be used to get ice to its Asian carp processors and commercial fishermen at no cost.