

**KENTUCKY  
STATE REPORT**  
*May 2023*

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**Fisheries Division**

***Public Waters***

In 2022, KDFWR fisheries management districts worked to standardize and simplify (when possible) black bass regulations across the state. New regulations were proposed and are now in effect for the 2023 fishing season.

The Fisheries Division is in the process of collecting genetics data from public lakes statewide to determine the extent of introgression among Florida Bass and northern Largemouth Bass as well as determining if Alabama Bass are present in the state.

The Northeastern Fishery District has been continuing its Good Neighbor Agreement Partnership with the US Forest Service. This partnership has allowed increases in KDFWR's fish habitat projects on Cave Run Lake and has allowed KDFWR staff to maintain access on boat ramps for anglers despite heavy aquatic nuisance species infestations. The Northeastern District has also maintained a partnership with local community business, county tourism, the US Forest Service, and the US Army Corps of Engineers to put on one of the largest kids fishing events in the state at Minor Clark Fish Hatchery. This event draws in around 700 kids annually to learn about the outdoors and fishing.

In western Kentucky, district staff are looking at the impacts of bass spawning structure improvements in Kentucky Lake. Spawning benches and artificial concrete and plastic spawning beds have been placed by the Western Fisheries District staff and are monitored to assess usage by largemouth and smallmouth bass. Contribution estimates from spawning are ongoing.

***Fish Stocking (Hatcheries)***

In 2022, a total of 4.6 million fish weighing 127,695 lbs. were produced and stocked from our two state fish hatcheries. The species produced includes Channel Catfish, Blue Catfish, Hybrid Catfish, Sauger, Walleye, Saugeye, Muskellunge, Hybrid Striped Bass, Striped Bass, blacknose Black Crappie, Smallmouth Bass, Largemouth Bass, Bluegill, Redear Sunfish, and Lake Sturgeon. A total of 750,000 trout weighing 263,000 lbs. were stocked by KDFWR hatchery staff across the state from Wolf Creek National Fish Hatchery. The species stocked were Rainbow Trout, Brown Trout, Brook Trout, and Cutthroat Trout.

### ***Reservoir and Urban Fisheries***

During 2022, 120,500 catfish (Channel Catfish and Channel Catfish x Blue Catfish hybrids) and 120,750 Rainbow Trout were stocked in the Fishing in Neighborhoods (FINs) lakes. These stockings of large keeper-size catfish (15-in avg) and trout (10-in avg) provide anglers with quality fishing opportunities close to home. The program currently includes 45 lakes in 28 counties. A memorandum of agreement is in place with all lake owners enrolled in the FINs program giving Kentucky Department of Fish and Wildlife Resources (KDFWR) the authority to manage fish populations and set standardized regulations for all lakes in the program.

Advertising and marketing efforts were employed in a continuing attempt to raise awareness of the FINs program, increase participation, and recruit new anglers. Furthermore, exploitation studies, creel surveys, and time-lapse cameras have been used to assess angling pressure at FINs lakes. Time lapse cameras have been deployed at 42 of the 44 lakes for a 12-month period to survey fishing pressure in recent years. Timelapse Image Analyzer was used to assist personnel with image analysis.

### ***Habitat***

Northwestern District Fisheries staff continue the strong partnership with the U.S. Army Corps of Engineers (USACE) at Nolin River Lake and Rough River Lake in expanding the Reef Ball production program. Funding provided through the Reservoir Fish Habitat Partnership and other USACE grants has allowed for the purchase of additional molds to allow for increased production of reef balls. Reef balls were originally used in marine environments to mimic natural reefs. Additionally, the hollow design and interstitial space reduce bank erosion from wind and wave fetch and encourage natural sedimentation over time. Agency staff work together throughout the summer to pour and form reef balls in three different sizes for future placement in lakes. To date, over 140 reef balls have been deployed in Nolin and Rough River Lakes to aid in bank stabilization and increased fish habitat. Reef ball production was a portion of a previous project on Nolin River Lake that included longitudinal peak stone toe protection of eroding banks, re-sloping shorelines, hydro seeding shorelines, artificial fish habitat placement, and live stake vegetation planting. Plans for 2023 include the construction of over 150 reef balls for future deployment.

### ***Invasive Species***

The Critical Species Branch continued its coordinated, multi-state effort on combatting the influx of invasive carp in Kentucky waterways. Staff continue to work to assess relative population sizes of bighead and silver carp in the Ohio River, Kentucky Lake, and Lake Barkley by working with the USGS to assess the invasive carp population with fisheries dependent models. Kentucky continues to work with the commercial fishing industry targeting invasive carp to help processors and commercial fishers. In 2022, over 9.5 million pounds of invasive carp were harvested in Kentucky through the Asian Carp Harvest Program. Since 2013, over 40 million pounds of invasive carp have been harvested by commercial fishers in Kentucky.

KDFWR continued the Asian Carp Experimental Gear Master Agreement with two entities that are testing new methods for capturing invasive carp in Kentucky waters. With new methods, vendors harvested nearly 251,000 pounds of invasive carp in just 20 days. In 2022, KDFWR continued to support USGS staff with mass harvest and telemetry projects by tagging 1,132 fish. Studies associated with fish reaction to the Bio-Acoustic Fish Fence (BAFF) will continue through 2023. This effort is a partnership between the USFWS, USGS, KDFWR, USACE, and Fish Guidance Systems.

KDFWR started a new partnership with Murray State University's Bauernfeind College of Business Center for Economic and Entrepreneurial Development to work with industry partners to improve methods to industrialize the harvest of invasive carp and develop new processing infrastructure in the region.

### ***Nongame Fisheries***

The Ichthyology Branch continues its efforts to update distributional records and assess population levels and trends for fish species of greatest conservation need (SGCN), listed in Kentucky's Wildlife Action Plan (SWAP). Staff biologists completed 94 fish sampling events in 33 watersheds throughout the state in 2022.

Lake Sturgeon restoration monitoring in the upper Cumberland River was accomplished by trotline sampling at established locations within the project area, with continued success recapturing and tagging stocked individuals. Post-reintroduction sampling of Kentucky Arrow Darter and Cumberland Darter populations continues to show natural reproduction and successful recruitment in watersheds where hatchery propagated individuals were tagged and released annually from 2008-2015. Sampling was conducted throughout the Kentucky range of the Shawnee Hills Cavefish to assess population genetic structure and diversity in collaboration with surrounding states and the University of Alabama in Huntsville. Surveys for the Buck Darter, a restricted range upper Cumberland endemic, revealed a new population occurrence outside of its known current distribution. A conservation strategy for the Buck Darter is being developed in collaboration with USFWS and other conservation partners. A collaborative sampling effort between the Ichthyology Branch and the Department's Critical Species Investigations (invasive species) Branch in lower Ohio River tributary and floodplain habitats in western Kentucky documented a new occurrence of Black Carp young-of-year and examined overlap in distributions of invasive carps and native fish SGCN.

### ***Wetland and Stream Mitigation***

The Kentucky Wetland and Stream Mitigation Fund acquired over 1,400 acres in fiscal year 2022, most of which has been opened to the public as the Ferguson Creek Wildlife Management Area along the lower Cumberland River near Smithland, Kentucky and the Gabbard Branch Wildlife Management Area in Butler County Kentucky. For more information on location and use regulations of Kentucky's public wildlife management areas go to [Hunting - Kentucky Department of Fish & Wildlife](#). Habitat improvement will be completed on 240 acres of wetlands and 14 miles of streams on these properties.

## **Information and Education Division (I&E)**

### ***Kentucky Afield Television***

Kentucky Afield is the longest running outdoor show in the world and is the third longest running show of any kind in the world. This weekly television program is shot, edited, and produced by the Kentucky Department of Fish & Wildlife Resources. Kentucky Afield has over 30 television affiliates across several states, and online viewership of the show continues to increase. Total viewership since the department started posting the show on YouTube is over 94,000,000 views, and the channel has over 159,000 subscribers. The Kentucky Afield Facebook page has over 250,000 followers, and the shows Instagram account has over 18,000 followers.

### ***National Archery in the Schools Program (NASP)***

During the 2022-2023 instructional year, over 850 schools participated in Kentucky's National Archery in the Schools program. The school programs introduced approximately 150,000 students to archery during the school day as part of their curriculum.

The culminating event, the 2023 KyNASP® State Tournament, had 7,911 archers participating from 409 schools across the state of Kentucky. In addition to the state bullseye tournament, 2,271 student archers, representing 153 Kentucky schools also participated in the 2023 KyNASP®/IBO 3D Challenge State Tournament at the Exposition Center in Louisville, KY on March 17-18, 2023.

In conjunction with the 2023 KyNASP® State Tournaments, 182 Kentucky NASP Alumni, coaches, and friends of NASP® enjoyed their own friendly competition. The alumni competition was sponsored by Centershot Ministries.

### ***Recruitment, Retention and Reactivation Program***

Employees of KDFWR can participate in hunting, fishing, trapping, and/or shooting while on the clock. The new Employee Mentor Program (EMP) allows each employee up to 15 hours of work time per fiscal year to participate in a program or mentorship! Staff can either (a) take someone (mentor) or (b) be taken (mentee) afield or on the water in this program.

The EMP launched in the fall of 2021, and there were 5 staff mentors, 3 staff mentees, and 2 public mentees that accounted for 61.5 hours of time. For 2022, the program has grown to 9 staff mentors, 11 staff mentees, 1 public mentor, and 3 public mentees. Mentors and mentees upload pictures and testimonies in post-survey after going out afield or on the water!

Kentucky has established an "I am R3" course where all new and current employees will be required to take a short online course. The course will be a part of each employee's mandatory annual training. Agency employees will learn more about what R3 is and how it applies to their specific job. The course also explains different R3 programs the agency provides (Hunter Ed, NASP, BOW, Hook and Cook, and Field to Fork). The course also shows agency employees how to get started to be part of the Employee Mentor Program! (See above) The course will launch in 2023 for employees to start taking.

Additional R3 Efforts:

- Increased the use of GovDelivery (email) to promote Hook and Cook Classes, Learn to hunt, fish, and shoot Webinars, and Kayak Mentor Program

- Mentor-to-Win Program continued for the 4th year. This is a recruitment program designed so that members of the public can take someone new or lapsed fishing and enter a kayak giveaway contest. The program will be reviewed after its 5th year to assess the impact on recruiting and retaining anglers.

- Added specific Shooting Range Access Planning Team goals to Kentucky's established R3 Strategic Plan

- Completed a statewide shooting range listing. This is an informative resource that is available to the public. The map shows shooting ranges in Kentucky based on location.

- Online Programming and In-Person Events continued in 2022 with: Field to Fork – Learn to Squirrel Hunt Workshop; Field to Fork - Venison Preservation and Cooking Workshops and – Deer Processing demonstrations in partnership with the University of KY Cooperative Extension; Teachers Tackle Box (train the teacher) workshops; in-person fall BOW Weekend; Beyond BOW events; Field to Fork – Learn to Turkey Hunt for women Workshop, Hook and Cook workshop for women; multiple Hook and Cook events in partnership with University of Kentucky Cooperative Extension Offices; and bowfishing and catfishing webinars.

- The 5th annual Kentucky R3 Summit was held virtually. It hosted a diverse collection of partners.

- Established a Mentoring Best Practices Guide

- Established an R3 program list for hunting, fishing, recreational shooting, and non-harvest activities.

### ***Conservation Education***

Department of Fish & Wildlife educators delivered 5 different regularly scheduled programs both in person, virtually, and pre-recorded to 4th, 5th, and 6th-grade students across the Commonwealth. Due to the ongoing COVID pandemic, the department's 3 weeklong residential summer camps each had to be closed for two of the nine-week sessions, which resulted in 3,091 campers attending conservation camp. Of those campers, 2,578 successfully completed their Hunter Education certification requirements.

## **Marketing Division**

### ***In-Person Shows and Events are back!***

The department returned to the Kentucky State Fair this past August with great fervor to unveil a fresh booth setup with the addition of revamped Law Enforcement section complete with a new ATV and life jacket loaner station. The pandemic did not slow the interaction and sales at the booth, as total revenue across license sales, prize wheel donations, Kentucky Wild memberships, and merchandise sales were up. Customers were happy to purchase newly branded merchandise including stickers, hats, and dry bags, with the "Reel World" logo and Kentucky Wild branded items. Staff from across the department were able to work to share their passion and knowledge with guests of all ages and backgrounds from across the Commonwealth.

The department also was able to attend 3 various shows across the state in January to promote the sale of hunting and fishing license along with Kentucky Wild memberships and to get customers to enter the Kentucky Elk Hunt Drawing. New this year, was the promotion of the *Hunt Starts*

*Here* - bringing recognition to the 25th Anniversary Celebration of the Reintroduction of Elk to Kentucky (begun in 1997).

#### ***Department-level Social Media - continued growth***

- Facebook: 200,256 followers
- Instagram: 20,200 followers
- Twitter: 11,800 followers
- YouTube: 4,420 agency subscribers

#### ***Kentucky Wild Memberships***

The Kentucky Wild program, garnering funding for wildlife diversity conservation in Kentucky through memberships and sponsorships, currently has about 4,000 active members representing all 50 states. All time total members have surpassed 10,000 and have voluntarily contributed more than \$400,000 toward research and restoration of species of greatest conservation need. The rapid growth of the program continues to be fueled by the addition of new members and has resonated deeply not only with Kentuckians, but across the country.

### **Wildlife Division**

#### ***Elk Program***

Kentucky offered 594 elk permits through the general drawing for the 2022 elk season. Additionally, 10 Commission permits to competing nonprofit conservation organizations, 46 landowner-cooperator permits, 2 voucher-cooperator permits, and 2 elk restoration program permits were issued in 2022 bringing the total number of elk permits to 654. Harvest success rates for drawn hunters (497 permits sold out of a total of 594) was 37%. When the success rates for all permits are considered (557 permits sold out of a total of 654) the success rate increases to 40%.

Wrapping up the third year of our elk calf survival project with the University of Kentucky in the summer of 2022, over 220 elk have been captured to date with 93 vaginal implant transmitters deployed in pregnant adult cows. These transmitters are used to study calving sites and calf survival. These survival metrics will allow researchers to better inform our statistical population reconstruction model to manage elk into the future. Results of this three-year project and the completion of a final statistical population reconstruction model will be available in late summer 2023.

Furthering our initiative to improve habitat on reclaimed mine lands in eastern Kentucky, 2,623 acres were modified with the use of prescribed fire in the winter of 2023. This brings the total acres of prescribed fire in the elk zone to 5,399 since 2018. The KDFWR elk program, supported by regional staff and in partnership with the state's Division of Forestry, has been involved in this effort and greatly increased our prescribed fire capacity over the last two years. The mined areas where these prescribed fire activities have been performed are important for elk habitat, but are also of great importance for other grass and scrub obligates such as quail, short eared owls, and a host of other game and non-game species

#### ***Bear Program***

For the 2022 Kentucky bear season, the total harvest was 121, representing a record harvest year. This increase in harvest was the result of removing the harvest quota and regulating the season as a set number of days, in order to increase hunter opportunity and harvest. With recent research indicating a 20% annual rate of population increase in one large population of black bears in Kentucky, this increase in harvest is inconsequential to population sustainability. Of the 121 bears harvested in 2022, 49 were female. This 40.5% female component of the bear harvest is higher than desired but offset by solid population growth. Harvest by weapon/hunt type was as follows: 43 archery/crossbow, 44 with the use of dogs, and 34 with modern firearms.

### ***East Kentucky Habitat Initiative***

In the spring of 2022, we kicked off our East Kentucky Habitat Initiative. The main goal for this project is to utilize prescribed fire to help maintain grassland habitat, which is predominantly associated with reclaimed coals in the portion of the state. For multiply reasons prescribed fire in eastern Kentucky has always presented challenges for our agency. So, in the first year we focused our efforts on removing hurdles so that we could effectively use prescribe fire in this landscape.

We set off with a goal of burning 2,000 acres throughout the KY elk zone in the spring of 2022. We identified and wrote plans for 2,300 acres but feel short of our goal and only completed 11 units making up 1,028 acres. The main reason for not reaching our goal was that some of the units we originally thought where released from bond still had restrictions in place, and secondly, we ran out of time to install control lines. Going into our second season (spring 2023) we took what we learned from our previous season and started planning earlier to ensure we only planned units in areas with no bond restrictions and we had equipment on the ground in the fall installing control lines in preparation for burning in the spring. By making these changes we planned 23 units making up 2,757 acres and completed them all, surpassing our goal of 2,000 acres.

### ***Non-Game/Endangered Species***

KDFWR and state conservation partners are finalizing the second comprehensive review and revision of Kentucky's State Wildlife Action Plan (SWAP). During this revision, Kentucky species of greatest conservation need (SGCN) increased to 527 species, including selected plants, invertebrates, aquatic snails, and data-deficient species. We intentionally structured data collection during this revision to identify action-focused, trackable objectives with a goal to create a streamlined, user-friendly final product. The SWAP Advisory Team is currently refining eleven Conservation Opportunity Areas that offer the best opportunities for SGCN conservation with our partners across the state. Once Kentucky's revised SWAP is approved, we will continue efforts towards an interactive, searchable SWAP Dashboard that provides species and spatially specific information for conservation partners and SWAP users. Kentucky's revised SWAP will be submitted to USFWS for approval by October 1, 2023.

### ***Turkey Program***

KDFWR monitors the statewide wild turkey population with data from mandatory turkey harvest reporting, formal surveys of and anecdotal reports by staff and the public, and field research studies of marked turkeys. Spring turkey harvest has varied considerably over the past 5 years, at a level lower than the peak harvest years 10-12 years ago. This harvest variability

reflects variability in annual reproductive success based on summer turkey brood surveys. Post-season surveys are providing estimates of hunter participation, success rates, take-per-unit-effort, behavior, and opinions. Two ongoing research projects are being conducted by Tennessee Technological University (TTU) student researchers under the direction of assistant professor Dr. Bradley Cohen.

The first research project involves agency staff capturing and banding turkeys (1) to assess current hunting pressure and potentially related landscape, biological, and regulatory variables, and (2) to collect blood and other biological samples during those captures to screen for various diseases for a baseline turkey population health assessment. The Tennessee Wildlife Resources Agency is also banding male turkeys, allowing for a multistate analysis of spring gobbler harvest rates by a TTU master's student. To date, KDFWR staff have captured 246 and 548 turkeys statewide during 2021-22 and 2022-23, respectively. After two more field seasons, this study will wrap up in 2025.

The second research project, based in western Kentucky on and around the Peabody Wildlife Management Area (WMA), will address various objectives related to the reproductive ecology of wild turkeys. These include nesting chronology, behavior, space use, movements, habitat selection, and survival of female turkeys during pre-nesting, laying, incubating, and brood-rearing periods; habitat characteristics and landscape factors associated with nest sites and areas used by brooding females and their influence on brood survival, including agricultural and forest management practices; and spatial and temporal patterns in gobbling activity and relationship of gobbling activity to nesting chronology of females. In the first field season (2023), the PhD student and technician team deployed GPS/UHF transmitters on 75 captured wild turkeys (51 females, 24 males), as well as 40 autonomous acoustic recording units to monitor gobbling timing and intensity. After two more field seasons, this study will wrap up in 2026.

### ***Public Lands/ Wildlife Management Areas***

Passed legislation, Senate Bill 217 (2022 legislative session) and Senate Bill 241 (2023 session) which affirmed KDFWR's authority to acquire a perpetual public conservation and public access easement on a ~54,000-acre property in southeast KY (currently open for public hunting by voluntary agreement by the landowner). Funds for purchasing the easement will come from state general fund which will provide the 25% nonfederal match for the Wildlife and Sport Fish Restoration grant program. The property is in Knox, Bell, and Leslie counties and is owned by CF Ataya LLC and managed by the KY Chapter of The Nature Conservancy in partnership with KDFWR and with support from the Rocky Mountain Elk Foundation. The Rocky Mountain Elk Foundation was instrumental in securing a grant for the project through the National Fish and Wildlife Foundation's Acres for America conservation program.